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THE FARMER'S ADVOCATE

AND HOME

PERSEVERE

SUCCEED

MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

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Vol. LIII.

LONDON, ONTARIO, MARCH 21, 1918.

No. 1330

START THE DAY RIGHT

BY USING



PURITY OATS

FOR

BREAKFAST

For Sale by all Grocers

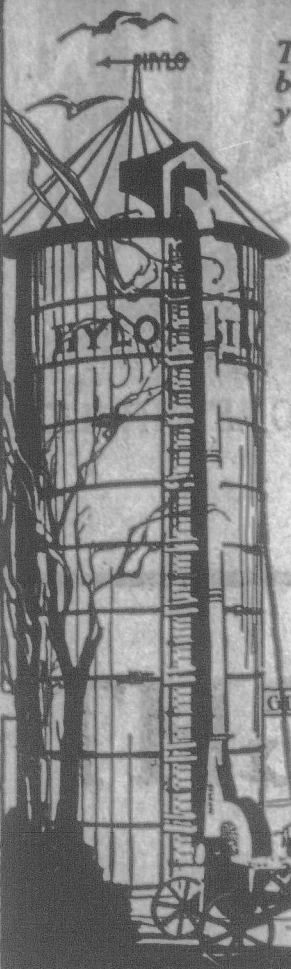
Manufactured by

WESTERN CANADA FLOUR MILLS CO., LIMITED

Toronto

Winnipeg

THE HYLO SILO



The cheapest Silo you can buy—because it will make you the most money.

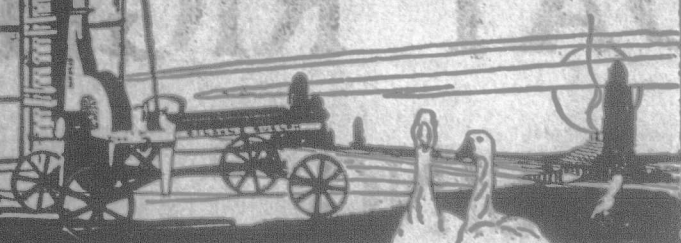
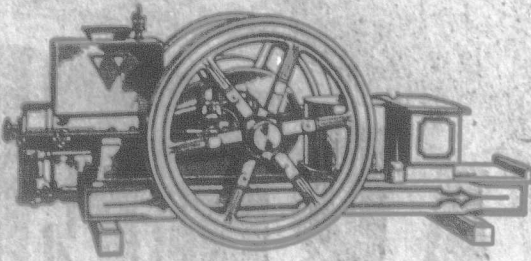
ENTIRELY different and infinitely superior. Made of specially selected Imported Southern Long Leaf Yellow Pine—stronger than White Oak—equipped with patented automatically expanding and contracting hoops, patented ladder, etc.

The Hyllo is chosen by men of discriminating judgment—who use their own brains in buying a silo. The Hyllo is so plainly a silo of outstanding quality and is equipped with new patented service features, of such great value, that no one, wanting value for his money, will have anything else.

A Hyllo Silo erected now on your farm will pay for itself the first winter you use it. Thereafter it will yield you 100% profit on your investment each season—year after year, indefinitely, for all your farming days. It is a permanent improvement—a monument to your good business judgment.

Write for free silo book to-day. 30A

GILSON MFG. CO. LTD. 250 A YORK ST. GUELPH, CAN.

“The man you can hire to work on a farm for nothing will just about earn his wages”—Josh Billings

IT'S the same with cheap farm engines as with cheap farm help. You can buy a poorly designed, cheaply made engine for less than the price of an Alpha, but you will find that a cheap engine is always “balking” or getting out of kilter just when you need it most.

And there will be endless expense for repairs.

You will practice real economy by buying an ALPHA GAS ENGINE

which runs along day after day, without giving you any trouble. You can always depend on the Alpha.

In the Alpha there are none of the trouble-making contrivances that render so many “farm” engines impracticable. It contains no delicate electric batteries, but runs on a simple, low-speed magneto, guaranteed for the life of the engine.

Alpha Gas Engines are made in twelve sizes, 1½ to 28 H. P., and each size is furnished in stationary, semi-portable or portable style, with hopper or tank-mounted cylinder. Write or call up the nearest Alpha selling agency today, or if you don't know who they are, write us direct.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.
Sole manufacturers in Canada of the famous De Laval Cream Separator and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butterworkers. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

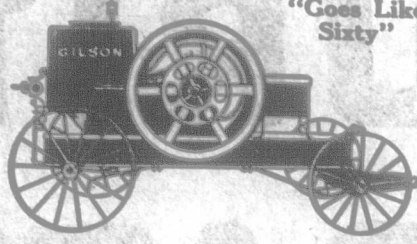
The Wonderful—Light-Running Gilson Thresher
“Goes like Sixty”



Save Time—Money—Labor. Be independent of the gas. Keep your farm free of weeds. Do your threshing when you please, with a 6 to 12 h.p. Engine and the Wonderful Light-Running Gilson Thresher. Furnished with or without Blower. Send for full particulars. GILSON MANUFACTURING COMPANY LTD. 250 York St., Guelph, Ont.

“Goes Like Sixty”

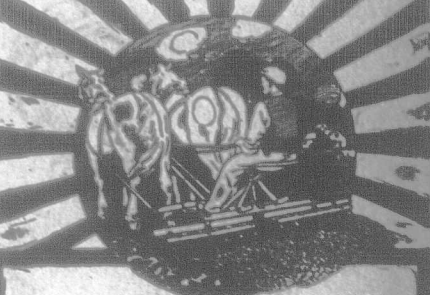
This Engine Will Cost You Nothing



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.



Crushes the Clods

cuts, levels, and turns the soil twice—all in one operation. That's the way “the clodders do the work” when you use the “Acme” Pulverizing Harrow.

Works deep into the soil leaving a compact below and with a nice finish on top. Light draft and comfortable seat. Endorsed by Experiment Stations. Size 3 ft. to 17½ ft. wide. Send today for our new free book, *The Acme Way to Crops That Pay*.

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FISH NETS

WE SELL NETS AND NETTING

GUNS, TRAPS, SPORTING GOODS
JOHN HALLAM, Limited
751 HALLAM BUILDING, - TORONTO

Since 1914 the price of Hogs, of Cattle, of Wheat has more than doubled. The price of

MILTON BRICK

has advanced VERY LITTLE. NOW is the time to improve your farm by building an attractive, warm, substantial Milton Brick house.

MILTON PRESSED BRICK CO., LIMITED
Head Office: Milton, Ont. Toronto Office: 50 Adelaide St., West

Steel Wheels

Made to Fit Your Old or New Wagon



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



PERFECTION Seed & Grain Separator

(Patented 1901)

The best and latest mill for cleaning and grading all kinds of Seed and Grain.

See nearest Agent or write for Catalogue to
THE TEMPLIN MFG. CO., FERGUS, ONTARIO

NORTHERN ONTARIO

Millions of acres of virgin soil, obtainable at 50c. an acre in some districts—in others, free—are calling for cultivation. Thousands of farmers have responded to the call of this fertile country and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations and settlers' rates, write to:

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



LONDON CONCRETE MIXER No. 6

Capacity, 60 cubic yards per day. Price, \$375.00, complete with gasoline engine. Pays for itself in 20 days' use. Built to last a lifetime. Send for catalogue No. 1 B. London Concrete Machinery Co. Dept. B London, Ontario

World's Largest Mfrs. of Concrete Machinery

HAY

SHIPPER! Consign your carloads to
The E. L. RICHMOND CO. DETROIT
The Old Reliable Firm, business a quarter of a century. References—any bank.



Steel Horse Stable Fittings Last Forever

Steel Horse Stalls Posts withstand the kicking of the horses. Steel Guards and Steel Mangers are not injured by cribbing. These Steel Horse Stable Fittings last as long as the barn and always look well.

You will be proud of your horse stable if you fix it up with BT Steel Fittings. You will be proud to show it to a neighbor or buyer. Best of all your horses will show up to best advantage. Horses never look well in dark, rickety stalls. In a stable like that above, where lots of sunlight floods through the steel guards and everything is neat as a pin, a buyer will always see your horses at their best.

Send For The New Barn Book

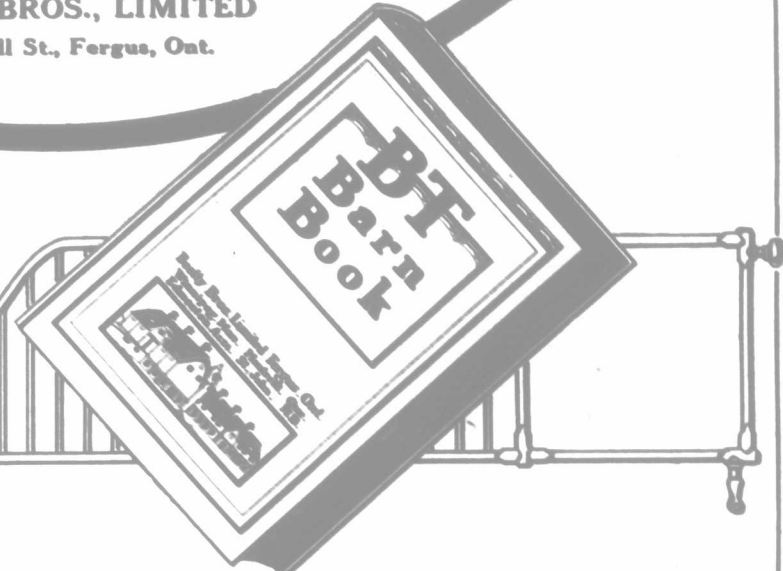
It tells how to fix up your Horse Stable. It shows dozens of photos of Stables fitted up with the Steel Guards, Steel Posts, Steel Columns so you can see for yourself just how well these steel fittings look. It illustrates all sorts of handy arrangements for the Horse Stable, such as steel swinging front, steel ventilators, steel wall troughs, blanket racks, and steel harness pegs. It tells how to build the barn, how to make the foundations, measurements for concrete and how to build the upper structure.

IT IS FREE

This big book—352 pages, illustrated in colours and bound in hard covers and worth \$1.00—is free to any man who is building or remodelling his barn. It is free to any man who wants to improve the appearance of his horse stable.

Simply send the coupon. As the cost of printing the book is great, we have not printed a great many, so be sure to send the coupon at once for your copy. We want to place a copy in the hands of every farmer who is building his barn or who wants to improve his old barn.

Send Coupon to
BEATTY BROS., LIMITED
 K331 Hill St., Fergus, Ont.



FREE COUPON

Beatty Bros., Limited K331 Hill St., Fergus, Ontario

Gentlemen: Send me your new 352 page barn book, giving full particulars about Horse Stable Fittings, without charge or obligation. I have filled in the blanks below.

Are you thinking of building a barn

If not are you going to remodel your Horse Stable

When will you start How many horses do you keep

Put an X after the kind of equipment you are interested in.....

Steel Horse Stable Fittings..... (Manure Carrier.....)

Steel Stalls..... (Water Bowls.....) (Hay Carrier.....)

Your name.....

P. O..... Province.....

Township..... Lot..... Concession.....

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Ltd.

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for our new
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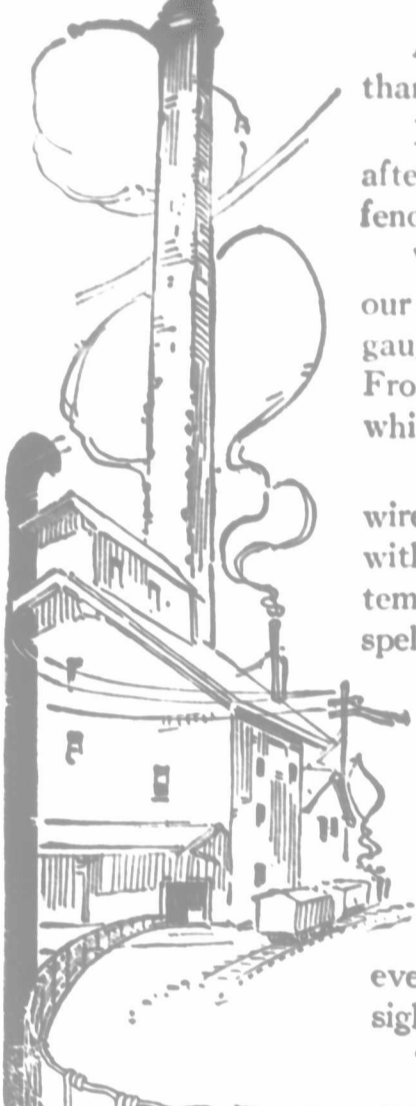
to Fit Your
New Wagon

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for a set of
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-any bank

Frost Supremacy



A fence cannot give any more service than the quality that is put into it.

Never was QUALITY so well looked after in a woven fence as it is in FROST fence.

We buy the raw steel rods and make our own cold drawn wire. Wire not true-gauge is reduced in size for other uses. Frost Fence is full gauge No. 9 Wire, which is one-seventh inch in diameter.

During the process of making, the wire is cleaned with sulphuric acid, baked with lime, annealed to make it tough, air-tempered, galvanized in a vat of zinc spelter heated to 860 degrees, and then run through asbestos smoothers.

That is why FROST wire looks so smooth and clean and defies rust and weather.

The fence is then woven slowly through special machines so that every stay is straight and true and every space precisely even—a handsome, sightly fence.

The famous FROST tight lock, differ-

ent in design and stronger than any other woven fence lock, is applied without kinking or weakening the lateral.

It is impossible to apply the ordinary fence lock without kinking the lateral. As the life of an ordinary fence is no greater than its weakest spot—its kinks—it is easily seen that in this one thing alone FROST fence has many extra years of service built into it.

But in addition to that, FROST fence has the proper hardness, toughness and temper, and the right amount of pure galvanizing to give a degree of service not found in any other fence.

The final proof of the supremacy of FROST fence is in the judgment of farmers and stock raisers. They have proved the true worth of FROST QUALITY.

Besides Frost Woven Farm Fence we sell Lawn Fence of both woven wire and iron, also Gates with welded frames, and all kinds of wire.

If you do not know the name of a nearby dealer, write us direct.



105

Frost Fence First
first in service—first in sales
FROST STEEL AND WIRE CO. Limited
 HAMILTON, CANADA

PEERLESS PERFECTION

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

PEERLESS Perfection is one of the easiest fences to erect, because it stays "put." It can be erected over the most hilly and uneven ground, without buckling, snapping or kinking, or run through streams without rusting.

Every intersection is securely clamped with the famous Peerless lock.

Animals can't break through it no matter how hard their attacks. It simply can't be broken. Just springs back in shape like a bed spring. It's made of heavy Open Hearth steel galvanized wire with all the impurities taken out and all the strength and toughness left in. Will not corrode or rust. Top and bottom wires are extra heavy. Will not sag. Requires less posts than ordinary soft wire fence. Absolutely guaranteed.

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

The Sanwell-Hoxie Wire Fence Co., Ltd.
 WINNIPEG, MAN. HAMILTON, ONT.

Will it be a Dry Season?

You don't know—nobody knows. But if you take the precaution of proper tilling you will have as little to fear from insufficient moisture as hundreds of users of Peter Hamilton Cultivators last year.

Good seed deserves better treatment than simply planting it haphazard. Work up your soil with a

Peter Hamilton Cultivator

and you'll get improved results. All teeth cultivate to the same depth and thoroughly work up every inch of the ground.

Every tooth reinforced, each section of heavy steel. See this splendid implement before investing in any cultivator.

The Peter Hamilton Company, Ltd.
 Peterborough, Ont.

Agents wanted in open territory

SILVER
 The Savings
 No. 5
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 Write now
STANDARD
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Early O
 in existence; a
 Price \$1.50 per
 W. R. DOUG

SIMONDS

The Saw Makers

NO Sawyer worries about the cost of a saw that gives satisfaction. He is far more interested in the time it takes to make a cut—in the muscle required. Experienced lumbermen know that Simonds Crescent Ground Cross-Cut Saws are best. They quickly pay for themselves by their increased cutting ability and time—and labor-saving qualities. Write for Booklet.

SIMONDS CANADA SAW COMPANY, LIMITED,
St. Paul St. and Acorn Ave.,
MONTREAL, Quebec.
Vancouver, B.C.
St. John, N.B.

"Guaranteed to Cut 10% More Timber."



BIG MONEY IN TRAPPING THIS YEAR

Trap Muskrats

Prices will be much higher this season than ever before, and if you want the most money for yours you will ship your pelts to the old established and reliable JOHN HALLAM LIMITED.

FREE—Hallam's Trappers' Guide, 96 pages, tells how, when and where to trap. Hallam's Trappers' Supply Catalog, 96 pages, also Hallam's Raw Fur News, giving latest fur prices and market reports. All free to you.

Ship your RAW FURS

Write to-day to **John Hallam Limited**
1331 Hallam Bldg., Toronto

5% INSTEAD OF 3%

Your money can earn 5% just as easily as 3% if you invest it in the debentures of the Standard Reliance Mtg. Corp'n.

Our booklet, entitled "Profits from Savings," tells you all about it. Write now for a copy. It's free.

STANDARD RELIANCE MTG. CORP'N.
82-88 King St. E., Toronto, Ont.

Early Oats—O. A. C. No. 3 variety, the earliest and thinnest hulled oat in existence; suitable to sow with barley for feed. Price \$1.50 per bus. Bags free.
W. R. DOUGALL, R.R. No. 1, Hensall, Ont.

Use Power in the House as well as in the Barn

Runs by Motor or Engine

YOU know how much farm work is saved by electric motors and gasoline engines. Why not adapt the same idea in the house? Backaches from washing are out-of-date. Successful housekeepers everywhere insist on washing machines, and the best idea of all is the power washer, because it does all the work itself and needs no attention whatever.

Maxwell
Power Bench Washer

—has proved itself a wonderful friend to others. Let it help you. It will even do the washing! Handles the largest or smallest wash, heaviest or lightest clothes with no tearing or wearing. Pays for itself over and over. Made in three sizes. Write for particulars.

MAXWELLS LIMITED, Dept. W - St. Marys, Ontario 40

The Protection and Savings Policy OF THE

Excelsior Life Insurance Co.

Is a Low-Rate Limited Payment Contract

If you need Protection, write for pamphlet. Dept. F

Head Office: Toronto

IRON AGE

GARDEN TOOLS

Answer the farmer's big question: How can I have a good garden with least expense? How can the wife have plenty of fresh vegetables for the home table with least labor?

IRON AGE Combined Hill and Drill Seeder solves the garden labor problem. Takes the place of many tools—stored in small space. Sows, covers, cultivates, weeds, ridges, etc., better than old-time tools.

A woman, boy or girl can push it and do a day's hand-work in 60 minutes, 30 combinations, \$4.50 to \$20.00. Write for booklet.

THE BATEMAN-WILKINSON Co., Ltd.
41 Symington Avenue, Toronto, Can.

BE YOUR OWN BLACK SMITH

FARMERS! SAVE REPAIR BILLS & VALUABLE TIME. ONE OF OUR BLACK SMITHING OUTFITS WILL PAY FOR ITSELF. CATALOG FREE

THE HALLIDAY COMPANY, LTD. HAMILTON
FACTORY DISTRIBUTORS CANADA

En-ar-co National Motor Oil For Farm Service

SCIENCE produced this dependable oil for extraordinary service. Time has proved it more economical, more satisfactory for every type of motor.

Where duty demands utmost power—in field, in air or on the road—there En-ar-co conquers the resisting force of friction and lightens the load.

Used in any tractor or automobile, a new and increased power is quickly developed. Try it now and note the higher compression. Note how it stands up day in and day out, month after month. And note too, its freedom from excessive carbon.

All other En-ar-co Petroleum Products for farm use are of equal high quality. The name En-ar-co identifies the dependable and guarantees quality. For better service, try

En-ar-co Black Beauty Axle Grease En-ar-co White Rose Gasoline
En-ar-co Black Star Harness Oil
En-ar-co National Light Oil For Lamps, Stores and Incubators
En-ar-co Motor Grease

Canadian Oil Companies, Limited
Branch Offices in 36 Cities
Dept. L4, 2-12 Strachan Ave., Toronto, Canada

Our Gift to You

Send the coupon now for an En-ar-co Handy Oil Can. It's FREE.

Canadian Oil Companies, Limited
Dept. L4
2-12 Strachan Ave.
Toronto, Ont.

I own _____ (Give name above)
automobile or tractor and enclose one 3-cent stamp. Send me Handy Oil Can FREE. Please give nearest shipping point in this province and quote prices on the items I have marked. I will be in the market about _____

(Give Date Above)

I use...gals. gasoline per year. I use... auto grease per year.
I use...gals. motor oil per year. I use...gals. kerosene per year.
I use... lbs. axle grease per year. I use...gals. tractor oil per year.

My Name is _____
Address _____
County _____ Range _____ Section _____
Postoffice _____ Province _____

Rogers Cement

never cost the farmer less

1918 should be the record money-making year for farmers.

In the history of the world, there has never been a time when the farmer's labor and the farmer's investments reaped such a golden harvest.

Prices of all foods are high. This year, the demands of a hungry world will tend to send them higher.

These prices cannot come down through over-production in Canada, because every pound of surplus grain, every pound of pork, every pound of beef, every bag of potatoes is needed to supply the nations at war.

Under these conditions what farmer with sound business sense will hesitate to spend money to increase his crops?

If a machine of any kind is needed, that machine is cheap at any price. For, it should make un-thought-of profits.

If stable-room is needed to winter stock, that room should be provided at once. For, at the price of beef, it must prove a money-maker.

If a silo is needed for next winter's feeding, this is the year of all years to build.

If any improvement is needed about the farm; if anything can be secured to lessen labor and increase the crops; immediate investment in those improvements should be made.

The time of the farmer's golden opportunity is NOW. The big farm profits are to be made now. How long these conditions will last no one can tell.

To delay is to lose a big opportunity for gain, at least for this year—perhaps, forever.

Farm Produce Never Brought So Much Before

This year the farm can afford every kind of sensible improvement.

It is true building materials are higher in price than they were four years ago.

But, look at the prices of cement as an example. In 1914 a barrel of cement cost the farmer $2\frac{1}{2}$ bushels of wheat. To-day the same barrel costs $1\frac{1}{4}$ bushels! Almost every class of building material can be secured for half the wheat or half the potatoes, that it would have cost four years ago.

The farmer can pay for his improvements this year out of the money those improvements earn. He can increase his money-making capacity for years to come. When the days of lower food prices come he will be better prepared to make money than the man with a poorly equipped farm.

The farmer who can see the sound business sense of preparing, this year, for greater crops; who is ambitious to make big profits; who wants to make his farm a better farm; should get in touch at once with the man in his locality who sells Rogers Cement. This man, who knows the many uses of cement will show him how to install those everlasting improvements that not only add to the beauty and value of the farm, but lessen the labor and drudgery of farm life.

If you don't know the Rogers Cement man write us today and we'll gladly send his name.

ALFRED ROGERS LIMITED
TORONTO





All Classes are Liable

Under the

Dominion War Tax Act

Returns covering 1917 details must be filed on or before 31st March next

THE Income War Tax Act applies to every class of person residing or ordinarily resident in Canada.

Every unmarried person, or widow or widower without dependent children, whose income exceeded \$1,500 for the calendar year, 1917, and all other persons whose income exceeded \$3,000 for the same period, must fill in and file the necessary forms.

All persons engaged in farming of any kind, who are liable under the provisions of the Act, must get three copies of Form T-1 and answer in detail all questions asked. Special attention is called to the following points as well as to those specifically mentioned in the Form:

Gross Income Must Include all income from the sale of produce, stock, or other products whatsoever, as well as monies received from other sources, such as Dividends, Interest, etc., as provided in the Forms.

Personal and Living Expenses must not be deducted in determining gross income—the figures must include the value of all food and other necessities of his own production, consumed by the taxpayer or his family.

Depreciation.—In giving figures under Depreciation, particulars of the value of implements, machinery, and outbuildings on hand January 1st, 1917, upon which depreciation is claimed should be shown, but must not include any amount for dwelling occupied by the taxpayer.

The amount expended for labor in the preparation of land for crops and in the cultivation, harvesting, and marketing of the crop should be stated, as well as the cost of seed and fertilizer and the amount expended for labor in caring for live stock, cost of feed, repairs to farm buildings, but not cost of repairs to dwelling. The cost of small tools and material which is used up in the course of a year or two, such as binder twine, pitch forks, spades, etc., should be shown as these are deductible.

The cost of labor may include board of hired men, but no amount as wages for the taxpayer himself will be allowed.

Penalties.—Default in filing returns renders the person or persons liable on summary conviction to a penalty of one hundred dollars for each day during which the default continues. Any person making a false statement in any return or in any information required by the Minister of Finance shall be liable on summary conviction to a penalty not exceeding ten thousand dollars or to six months imprisonment, or to both fine and imprisonment.

Don't forget to fill in three copies of the Form. Keep one copy and file the other two with the Inspector of Taxation for your District.

Forms may be obtained from the District Inspectors of Taxation and from the Postmasters at all leading centres.

Postage must be paid on all letters and documents forwarded by mail to Inspector of Taxation

Department of Finance,
Ottawa, Canada

INSPECTORS OF TAXATION.

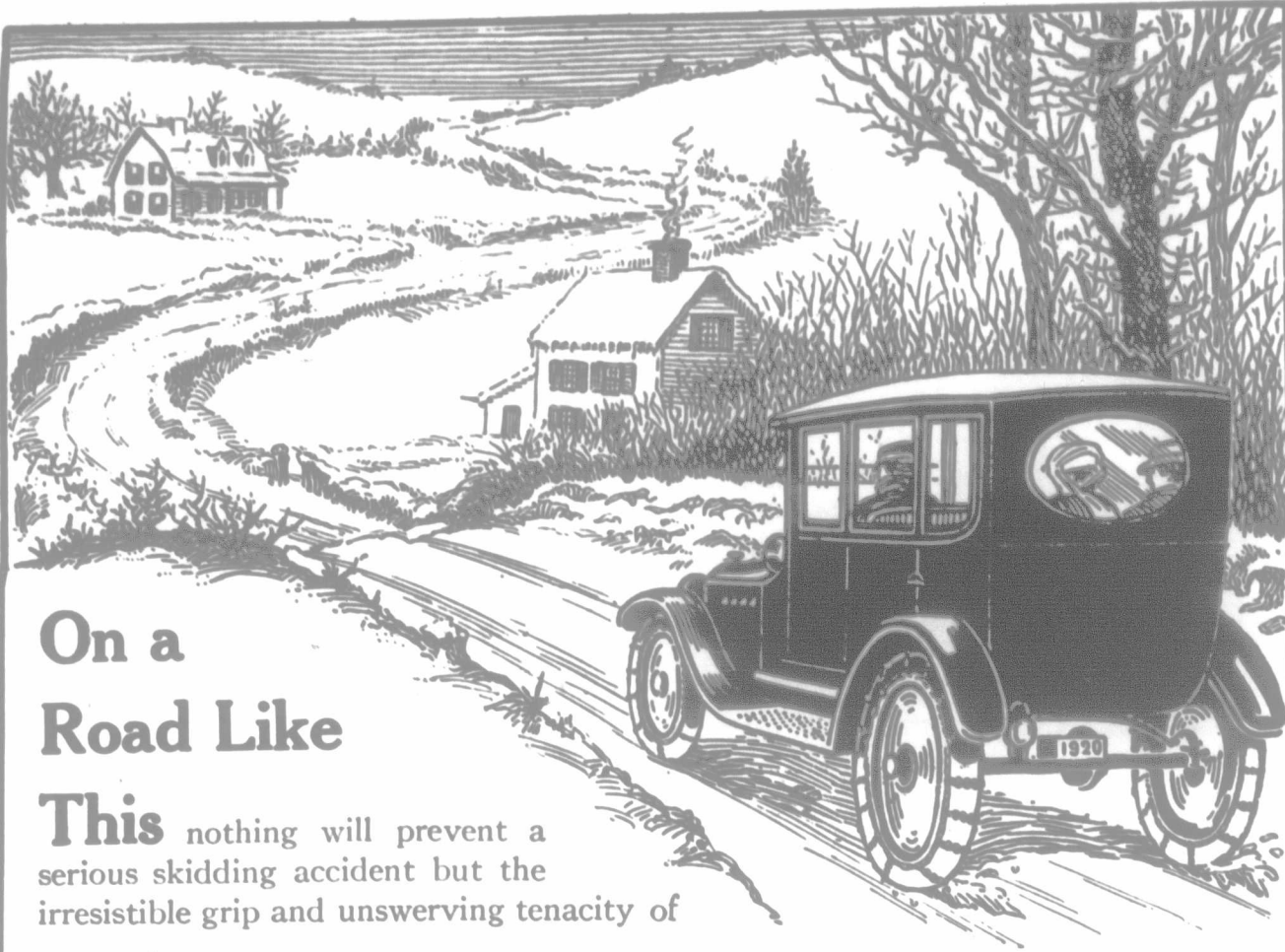
For Ottawa and District — K. Fellowes, Cor. Bank St. & Laurier Ave., Ottawa, Ont.

For Kingston and District — G. A. Macdonald, Kingston, Ont.

For Toronto District — Hugh D. Paterson, 59 Victoria St., Toronto, Ont.

For Hamilton and District — Berkeley G. Lowe, Customs Building, Hamilton, Ont.

For London and District — George R. Tambling, London, Ont.



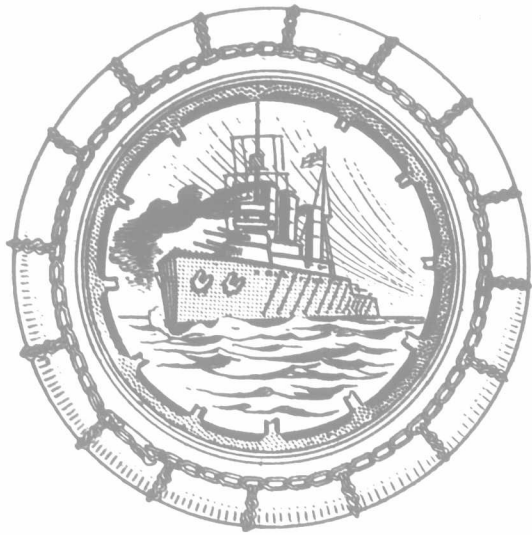
On a
Road Like

This nothing will prevent a serious skidding accident but the irresistible grip and unswerving tenacity of

Dreadnaught

TIRE CHAINS

With a set of Dreadnaught Chains on your tires you can travel with perfect safety over almost unbelievably bad roads.



An exclusive feature of these chains is the Long Lever Fastener which makes them easy to attach. Cross chains are case hardened, electric welded and copper plated. The rim chain is rust proof. They are built for hard wear and long, satisfactory service.

Dreadnaught Chains will not injure tires. They are securely, but loosely applied and have play enough to work themselves around the tire, thereby distributing the strain to all points alike.

Stow a set under your cushions for bad road emergencies. Ask your supplyman or write us for price list and descriptive circular.

Made in Canada by

McKinnon Columbus Chain Limited

Manufacturers of Electric and Fire Welded Chains
ST. CATHARINES - - ONTARIO

O. A. C. No. 72 Oats

Registered, germ. test 99%, \$2.00 per bushel. Improved O. A. C. No. 72 oats, germ. test 100%, \$1.60 per bushel. Registered O. A. C. No. 21 barley, germ. test 97%, \$2.50 per bus. Improved O. A. C. No. 21 barley, germ. test 98%, \$2.00 per bushel. All true to variety and free from smut and noxious weed seeds. Small, white field beans, extra quality, \$10.00 per bus. Samples on request. Sacks free. Prices f.o.b. Alliston, C. P. R. or G. T. R.

RUTHVEN BROS.

R. R. No. 2 Alliston, Ont.

Steel Rails

for Reinforcing Bridges and Barn Driveways.

CUT ANY LENGTH

JNO. J. GARTSHORE
58 Front Street West Toronto

To Provide Protection

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JOHN DOWNHAM, STRATHROY, ONTARIO

The Farmer's Advocate and Home Magazine

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1866

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LIII.

LONDON, ONTARIO, MARCH 21, 1918.

1330

EDITORIAL.

The spring equinox is here; seed time draws near.

The sun's power grows and the heatless days are banished.

Have you sold all the pigs from your spring litters to the back-yard pig feeders?

Choosing beer before bread can never make for greater strength in any nation.

Canada's great farming need is more high-class live stock. Better sires is the shortest road to the goal.

We venture a guess that all the seed grain is not thoroughly cleaned yet, and it will soon be the first of April.

Breed more mares than usual. Unless all signs fail, draft horses will, ere the colts mature, be selling at record prices.

Trotsky trotted out Russia and gave it to the Germans, then he trots off the scene. It is always wise to go while the going is good.

In Great Britain, almost within sound of the great guns as they boom in Flanders, pure-bred stock is selling at record prices. There is not enough of the right kind to go around.

Some young men are taking life more seriously than ever before. They have to show their papers in order to stay in the country, and the only road out is the Khaki trail.

Grow the biggest possible acreage of grain this year, but put it all in well. There is no use of straining for great acreage at the expense of the necessary cultivation. A heavy average yield is just as necessary as is the large acreage.

The daylight saving agitation is again to the front. Who wants it other than those who have an extra hour or two of leisure to golf, bowl, motor, or loaf every afternoon? We thought this was to be a year of "greater production."

A daylight-saving law will work against the best interests of farm production, and because other countries have adopted such a plan is no reason why Canada should. We are too ready in these times to do things because someone else does.

The Kaiser evidently agrees with Pat, who, when asked how he would solve the world problem, averred that we should have a world democracy with an Irishman for King, only the Prussian War Lord would substitute Wilhelm for the Irishman.

No doubt a few of those who get the profits made on hides the farmer sells before he buys them back again in boots, harness, etc., will be knighted for their great work for their country. We would suggest as titles: Lord Skincem, Lord Fleecem, or Lord Cheap-pelt.

The Dominion Government in controlling packing-house profits allows seven per cent. profit free of tax, takes half between seven and fifteen per cent., and all over fifteen per cent. There is another clause which leaves it with the Finance Minister to deal with increased capital. Boosting capital stock might give a fine opportunity to cover up profits.

The Canadian Farmer's Greatest Spring.

Springs come and go and linger in our memory as "late", or "early", "wet", or "dry", but that of 1918 will be remembered not only in this connection but as the greatest spring for the Canadian farmer. He feels he must do his utmost with less help than ever before. His acreage of cereal grains so necessary to the Allied cause must be the largest possible. He hopes for fair weather, good health and a spring sufficiently early to allow him to put in all the grain he would like to. Some people say the farmer does not have to take chances. He takes the biggest chances, as a class, of any in the country. Bad weather, insect pests, uncertainty as to prices, etc., make his work one great guess, but guessing with nature is not a bad job after all, and in the year 1918 farmers will go about their work understanding fully that the safety of democracy depends upon the food they are able to produce. They will pray for favorable weather and will back up their prayers with energetic action to put choice seed in a thoroughly prepared larger acreage than they would attempt were it not for the urgency of the call. They require no exhortation or scolding from anyone. They do need help, and there is little use of attempting to get men in large numbers for the farms until returns from the farm are sufficient to warrant the farmer paying wages to compete with city industry. Attempts to arbitrarily keep down prices of farm produce can never make for increased production. Low prices will never put farming on the plane that will ensure great production, because low prices drive labor away from the farms. It is not price that matters so much now, it is food. If the consumer will not pay a price which leaves a fair margin of profit, the producer is forced to stop producing that particular line. The law of supply and demand cannot be set aside by any Board of Controllers yet extant. The more price control we get the fewer farmers we have. Price control increases consumption and decreases production. The only solution for the food problem is to get more food, and to get more in 1918, farmers must have help and deserve an assurance that price control is not going to be such as to force them in the end to produce at a loss. An unusually good season, more farm labor, and fair treatment, are all the farmer asks. He is going in to make 1918 a record year, and let no one hamper his efforts.

Who is Getting Big Profits on Hides?

A few days ago we received a letter from a correspondent complaining that while our market report quoted green hides at a flat rate of 20 cents per pound in Toronto, he was only able to get 12 cents per pound in the country. Some few days had elapsed between the time our market report was written and the time it reached our readers, as is always the case with a weekly paper. During those few days the price of hides went down 5 cents per pound on the Toronto market, but had not struck bottom then. On March 9 they were forced down another three cents per pound, and beef hides,—that is, green butcher hides—were quoted at 12 cents per pound; which means that the farmer gets 10 cents per pound at his country market place. Let us look back a little. This price for hides is the lowest at this season in the past ten years. Last year at this time green country hides sold at 17½ cents, while in 1916 they were 14 to 15 cents; in 1915, 15 to 16 cents; in 1914, 13 cents; and in 1913, 13 cents, with the flat rate 2 or 3 cents above these figures in each case. This takes us back to pre-war days when leather goods such as boots and shoes, harness, etc., that the farmer and other consumers have to buy were less than half present prices. What is the reason for the drop in hide prices? We have taken the trouble to look into the United

States market reports for this commodity. The New York Journal of Commerce and Commercial Bulletin for Saturday, March 9—the very day green hides went down to 12 cents per pound on Toronto market—quotes country slaughter steer hides, 60 or over, at 24 to 25 cents per pound, and country slaughter cow hides at 18 to 19 cents per pound, while city slaughter special were 27 cents per pound, and country slaughter, butts, 16 to 17 cents per pound. Moreover, it was stated in that report that buyers considered the low level had been reached and there was a possibility of a steady recovery to the position of the clearing purchases last fall. Reports were all to the effect that the outlook was brighter for the hide and leather market. While these reports were being made in New York, Toronto dealers were asserting that lower levels may yet be reached, and that the easier trend is due to the lack of demand on the part of tanners and to the over-production due to the big kill, which, they say, has been induced by the high price of beef and the higher cost of foodstuffs. It is further claimed that there is less demand for leather for shoes and for repairs, as, owing to high prices, people are practicing economy. This excuse reads like pure buncombe to the man who has to sell a good beef hide at 10 cents per pound, considerably below pre-war price, and then is compelled to pay anywhere from one and a half to two and a half times as much for a pair of the same make of boots he purchased before the war, only to find that they are not as good quality as they were when bought at the lower price. There has not been any great rush of cattle to market since the war began. Canada at the present time is estimated to have more cattle than when the war broke out. Market figures show that receipts for 1917 were about on the level with those of 1916, and those of 1916, 1915, and so on did not show any rush of cattle to the market. It does seem strange that, if there are so many hides available and if there is a decreased demand for boots, harness and all leather goods, that the consumer of these goods should have to pay unheard-of prices while the man who has hides to sell must take such low rates. There is a nigger in the wood pile somewhere. If there are so many hides available so cheap, and if the demand for leather has fallen off, then we should get pre-war prices for all finished leather goods. But no, prices of these goods steadily advance. The fact is there has been only the steady flow of cattle to the slaughter houses; demand for leather goods is keen; profits in the tanning business have been high, and someone, or group of someones, not satisfied with big returns wants more. Unless some better explanation is forthcoming, the public will not believe that hides should sell as low as 10 cents per pound when the shoe repairer pays \$1 per pound for his leather, and the harness maker buying wholesale in large quantities pays nearly 80 cents per pound on the lowest market he can find, and the general public finds leather goods up anywhere from 150 to 250 per cent. compared with pre-war prices when hides were higher in price than now. There is a "skin" game some place in the hide and leather trade, and it should be put a stop to. Hides should be worth as much in Canada as in the United States.

Private Breeding Records Are Essential.

All breeders of pure-bred live stock would find a complete private record of incalculable value. The National Live Stock Records are, of course, available at all times, but there is much that a breeder needs to remember concerning his herd that never gets into the files at Ottawa. When making application for registrations, the private record is essential. A large percentage of applications are returned on account of errors which are mostly unnecessary, but arise out of the lack of definite information set down at the proper time.

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.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers of any publication in Canada.
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.—Single insertion, 20 cents per line, agents' flat rate.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
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13. ADDRESSES OF CORRESPONDENTS ARE CONSIDERED AS CONFIDENTIAL and will not be forwarded.
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The innocent attempt to register offspring on the wrong parents is a mistake that is frequent enough to demonstrate the common absence of adequate private records. In the majority of cases there appears to be no evidence of intent to falsify statements, but the information supplied on the applications very often indicates some irregularity which can be easily straightened out. The individuals of the breeding herd or flock should each be allotted space in a suitable book, with a sufficient number of columns to permit of several different entries. It is unnecessary here to name the items to be entered. Any practical breeder knows from experience what information is necessary, and this can be set down to suit the person in whose hands it will be used. The name, number, description and disposition of the offspring entered on the same sheet with items concerning the dam are valuable, for in this way the produce of all females can be traced. Some system of ear marking, combined with private records, places a breeder on a superior footing in regard to his business.

Industries Should be Classified.

If this war were to last for ten years, which God grant it may not, our Legislative bodies might get this country organized in some kind of a way, and perhaps we then would be able to see signs of efficiency. As it is, the unexpected is always happening which throws the machinery out of order and halts production till the matter is adjusted. How much better it would be if these untoward events could be anticipated so when a monkey wrench got into the gears the new parts would be at hand to slip on immediately. Production is the cry in this country, but officials outside the agricultural departments are apparently unable to realize upon what production depends, and their rulings are too often based on a very superficial survey of the problems which confront them. As an example of the conditions to which we allude, the recent Order in regard to gas in Western Ontario may be cited. Industries were cut off and while this one Ordinance, caused in part by exceptionally cold weather, did not excite consternation, those affected were unable to get any assurance in regard to the future. A number of tile manufacturers throughout Western Ontario are users

of this kind of fuel, and, with kilns fitted for burning gas, they were unable to continue without supply. The Province of Ontario annually spends around \$30,000 in educating the farmers and assisting them in regard to drainage. One million dollars is also set aside from which loans are made; and this is all very good, but with an inadequate supply of tile available the Government propaganda leads up to that all-important part of the scheme, namely, getting the tile into the ground, and there it stops. Of the \$134,000 loaned last year under The Tile, Stone and Timber Drainage Act, 91 per cent. was used in the counties of Essex and Kent. Lambton, Essex and Kent need tile most, and farmers are willing to drain if they can get the tile. However, all the public moneys, education, ditching machines, etc., are of no use without tile. The actual operation depends on that specially-prepared bit of clay which is getting scarcer and scarcer. A speaker at the recent Clay Workers' Convention, held in London, made the statement that one domestic consumer of gas used enough in one year to burn sufficient tile for 50 acres. He also asserted that 5,000 furnaces in the city of Windsor could burn some kind of fuel other than gas, and thus in times of necessity liberate a very appreciable supply for essential industries which are not equipped to burn anything else.

This is a local matter, more or less, but there is a principle involved which is capable of a very broad application. There can be no doubt as to the necessity for production, yet, when matters arise which disturb the equilibrium of things in general, the requirements of agriculture are lost sight of and kindred industries are classed with the non-essentials, to the detriment of the country's chief purpose. All departments of Government should become acquainted with the aims and requirements of agriculture and then devote their efforts, each branch in its own sphere, to that all-important matter before the world to-day. This is a period of stress and great issues are at stake. It is time industries were classified and the preference given to those which contribute something to the winning of the war.

Sandy Gets Out of a Hole.

By SANDY FRASER.

"Sandy," says the auld wumman tae me the ither night after I'd got in frae daein' the chores an' wis sittin' by the stove readin', "Sandy, dae ye mean tae tell me that ye went to the theatre the time ye were in New York, there. I hae just had a letter frae Jennie an' if she's no' jokin' I'm thinkin' I'd better not be lettin' ye rin loose in a hurry again. Ye need a guardian yet, Sandy, auld an' all as ye are."

"What kind o' stories has Jennie been tellin' on me the noo?" says I, tryin' tae look innocent, "It wis hersel' took me tae the 'movies,' so it canna be that there's muckle wrang wi' them. My but ye ought to see them," I went on, "they hae the pictures in their natural colors noo, and ye dinna need to hae muckle o' an imagination to mak' ye think ye've been tae the ither side of the world an' back takin' in all the sights, after ye come oot o' one o' these shows. It wad dae ye good Jean," says I, "to be where ye could tak' in one o' these things about once a week or so. They're quite an education in their way."

"I dinna hae the time tae spend in that way," answered Jean, takin' her knittin' doon frae the shelf, "but it wisna the 'movies' I wis referrin' to when I asked ye about gaein' tae the theatre. Sandy, tell me, did ye or did ye not gang tae the regular theatre where they hae girls in short dresses dancin' and cuttin' up on the stage an' all that sort o' thing?"

"Weel Jean," I replied, "ye ken I woulna' tell a lie for less than a dollar an' a half any way, so I may just as weel say to ye right noo that I'm guilty. Jennie an' I went to see a couple o' plays that week I wis in New York, an' if ye're thinkin' o' takin' measures to hae me pit oot o' the church I canna help it. Ye ken it's a lang time since I objected to anything ye'd made up yer mind to do. At the same time," says I, "I suppose ye'll dae like any ither judge. Ye'll gie the prisoner at the bar a chance tae speak a word for himsel' before ye pass sentence on him. Noo ye ken as weel as mysel' that I wis always given tae understand that people that went to the theatre got harm by it. Weel, it's a fact. They do. An' a lot mair people that I ken get harm by eatin' an' sleepin' an' workin', an' a number o' ither things that they carry tae an extreme. Tak' this habit o' eatin' as an example. Up to the present we haven't discovered any means o' livin' without it. It's a necessity. But at the same time they tell us that more men die from the results o' over-eatin' an' under-eatin' an' the eatin' o' the wrang kinds o' food than die frae all ither causes pit together. An' tae my mind the same thing applies tae almost ilka action we are called on tae perform in the course o' a lifetime. It's this gaein' to extremes that plays the mischief wi' humanity, an' we seem to hae inherited a tendency that mak's us gang too far, one way or the ither, nine times for every once we stop at the place called moderation. An' let me tell you Jean," says I, "that I think this principle, or whatever ye like to call it, applies tae the theatre as weel as anything else. There's a chance for

extremes here as weel as anywhere else. It's easy to get the theatre-going habit an' to get to wastin' one's time an' money on it. I'll admit that. But that's the very thing we were given brains to guard against. The only way we'll ever come to amount to anything is by pittin' into practice oor ability to choose between enough an' too much."

"That's all vera weel," interrupted Jean, "but what does your theatre dae for ye supposin' ye hae the gump-tion to stay awa' from it, say sax nights in the week? Are ye ony better, mentally or morally, or onything ahead for the time an' money ye've spent?"

"Ye certainly may be," I replied, "if ye've chosen the right time and place. An' ye don't need to mak' ony mistake on this point. There's no excuse for ony-one wha reads the papers gettin' caught by havin' to listen to a play that maybe leaves a bad taste in his mouth. If ye want to hear the best, ye can hear them, no twa ways about that. An' if ye are the kind o' person that wants to hear the worst ye can hear them too. But ye don't have to."

"I'm going tae tell ye a little about one play I wis at one night in New York. It wis called 'A Tailor-made Man.' The young man o' the play starts oot as an apprentice in a tailor's shop. All the same he has no notion to stay there. He sees oother young fellows a guid deal higher up on the ladder than he is, an' he canna discover ony reason why that is the case unless it's because they hae mair brains than he has, an' he canna believe that. Sae by one dodge an' anither he gets acquainted wi' some business men that he thinks may be able to gie him a boost up the ladder later on, an' although he gets into some pretty tight corners he manages tae wiggle oot an' it ends up as ye have been beginnin' tae expect it would, by the young fellow becomin' the head o' the business concern that had employed him, to say naething about his marryin' the retiring president's daughter, which wis rin into the story as a sort o' a side issue, as they will aye be doing in these plays. But the moral o' the whole thing wis brought oot in the last scene juist before the curtain went doon, an' it wis this: 'It don't matter so much where you started from as where you get to.' The idea and aim o' the play was to show the spirit o' American business, an' it seems to me that it is a pretty guid spirit, if I ken onything about it. What dae ye think Jean?" says I, for she had got pretty quiet, for her.

"Oh, I dinna ken Sandy," she replied, "I've never thought muckle o' the theatre an' when I see oor lads an' lassies frae the country drivin' intae the toons nights in their cars, if they happen tae be livin' less than about forty miles from the city, I will be wonderin' what like an education those 'night schools' will be givin' them, an' if it will be makin' better men an' women oot o' them than their parents an' grand-parents were before them, or if they will be as guid."

"Dinna be afraid Jean," I replied, "they'll be a guid deal better than onything that's happened yet, I'm thinkin', an' if they hae the habit o' rinnin' intae the city once in a while to see a play all that need concern us is that they may ken where to go to hear an' see something clean an' wholesome an' that will perhaps gie them a chance to dae some thinkin' as weel. According to the way this world has been made ilka body that comes intae it an' stops here for ony length o' time has to choose between what is good an' what is bad. It was the only way to mak' men an' women, sae far as I can see. An' all that we can do is tae put oot a danger signal here an' there an' leave the steering o' the course to the owner o' the boat. Isn't that right noo Jean?" I concluded. "Oh sure," says she, and she started in on her knittin' juist as though the question had been settled for guid.

Nature's Diary.

A. B. KLUGH, M. A.

Canada From Ocean to Ocean—XII.

Continuing our journey across the prairies we come to the Rocky Mountains and when we get to the mountains we find a fauna and flora entirely different from that of any other region.

The trees are all evergreens and are quite distinctive in shape—tall, slender spire, and grow so thickly that seen at a distance they give the impression of a field of wheat rather than of a forest. The main species are the Lodgepole Pine, Alpine Fir, and Engelmann's Spruce. There are many species of alpine plants, but most characteristic are the Heaths; the White Heath with its white nodding bells, the Red False Heather with its deep pink flowers, and the Crowberry with its large, round, dull black berries. These low-growing plants form a perfect carpet under the conifers.

Of the many animals found in the Rockies the most noteworthy are the Hoary Marmot, Grizzly Bear, Mountain Sheep, Mountain Goat, Franklin's Grouse, Clarke's Nutcracker, Rock Wren and Dipper.

The Grizzly is truly a large bear, but it is not the gigantic animal it is usually supposed to be. A very large Grizzly will measure nine feet from nose to tip of tail, stand four feet at the shoulder and weigh eight hundred pounds. Average specimens are about 6½ feet long, stand 3½ feet at the shoulder and weigh from 500 to 600 pounds.

The color of this species is deep brown, darkening to brownish-black along the spine, on the limbs and on the ears, and grizzled, or frosted, over with a white tipping on the hairs on the upper parts of the body. It is this grizzled appearance which gives it its name.

The voice of the Grizzly shows a good deal of variation. It growls, grunts, roars and sniffs. Its warning and threatening call is "Woo! Woo! Woo!". A fighting Grizzly says "Aw-aw-aw!". The call of the cub for its

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mother is "Row! Row!" and the distress call is "Ew-wow-oo-oo-oo!"

The Grizzly mates in midsummer and the cubs, which are from one to three in number, are born in January, while the mother is in her winter den. At birth the cubs weigh about a pound and a half and are pale pink in color and covered with a very fine, short, gray hair. They are suckled by the mother until spring, and begin to eat solid food as soon as they emerge from the den. They remain with the mother until winter and then den up in the same den. This species reaches maturity in three years and breeds only every second year.

Grizzly cubs frequently climb trees but the adults never climb. The Grizzly is omnivorous. In the days of the Bison herds it used to hunt these animals in the foot-hills, and to-day in some districts it sometimes attacks cattle. Its most usual food, however, is mice, ground-squirrels, insects, berries and roots. Speaking of the way in which it digs out ground-squirrels Seton says, "For procuring these, its armed feet are a perfect combination of crane and crow-bar, pick and shovel, rake and forceps. Like the elephant's trunk, their might-force in heaving a huge log or boulder is only equalled by their dexterity in picking up edible mites. I have seen a Grizzly use two claws exactly as a Chinaman might use his chop-sticks. I have further noticed that it never uses two claws when one will serve better."

The strength of the Grizzly is very great. It can drag a full-grown steer half a mile or more, and a single blow is sufficient to disable a horse or steer.

When an old Grizzly has established a hunting-range for himself he writes his challenge with his massive claws and tusks on the trunk of a tree as high up as he can reach. If another bear, wandering in search of better hunting-grounds happens along his trail, he is certain to see these warning signs, and rising on his hind feet he also strikes the bark in a similar manner. If he fails to scar the trunk as high as the other bear has done, he continues his travels, leaving the first in undisputed possession. But if the new-comer finds that he can reach as high or higher than the one who first left his challenge there, he is more than likely to remain in the immediate vicinity, scarring other trees here and there, and hunting when and where he pleases. Unless the first bear has observed the challenge of the new-comer, and losing courage, retires from the neighborhood, the two are bound to meet sooner or later and a tremendous fight ensues, after which the vanquished, if not killed outright, leaves the locality.

The speed of the Grizzly is far greater than one would suppose from its rather solid and heavy build. For a hundred yards it can go as fast as a horse, and in rough country it can go faster than any horse and can keep it up indefinitely.

The Grizzly in early days was monarch of his range, fearing neither man nor beast, but in common with all other large wild animals he has learned the power of modern guns, and flees from the scent or sight of man. "The fallen monarch is become a fugitive in his own kingdom", says Seton. "And, I, for one would gladly see the total abolition of all bounty laws on the Grizzly's head. His day and his sceptre are gone; right well he knows that; he is harmless to-day, and is moreover a magnificent animal, whose extinction would be just such a loss to zoology as the destruction of St. Peter's would be to the world of art."

(To be continued.)

THE HORSE.

Wounds—IV. Contused Wounds.

A contusion is an injury inflicted by some blunt object, without perforation of the skin, and the consequences are: (1) A degree of concussion or benumbing which may be quite severe without further trouble, as, for example, when a horse strikes his leg with the opposite foot, goes lame for a few steps, but very soon goes sound again. This is called *brushing* or *interfering*, and a frequent repetition of it will cause some structural alteration in the part contused. Horses that interfere should be shod so as to prevent the act if possible; where this cannot be done a boot made for the purpose should be worn. This trouble is more frequently seen in the hind legs than in the fore, and it is well that this is the case as it is much more serious in front. Horses that brush or cut with their fore legs (the act is known as *speedy stroke*) are generally those which stand with their toes turned outwards—soldier-toed. Some consider that such a horse should be considered unsound, as there is danger of them stumbling to the ground at any time if the limb be severely struck. We are of the opinion that such a horse is not unsound, unless there be scars or abrasions on the knees, indicating that he has stumbled at some time. Many out-footed horses do not strike or cut, and are very serviceable animals and while the conformation is decidedly undesirable we do not think that it constitutes unsoundness. The second effect of contusion is a structural injury, varying in degree. First, there may be rupture of the smaller blood vessels, and infiltration of the blood into the surrounding tissues, constituting what is known as *ecchymosis*. Second, a large blood vessel may be ruptured and the blood extravasated in considerable quantity, tearing up the tissue in which it coagulates; or if an artery be cut, a false or diffused aneurism may be

the result. The third effect may be the formation of a serous abscess, in which case there will be a soft, fluctuating tumor of greater or less size, which when lanced will discharge a greater or less quantity of serum, a fluid of about the consistence of water but containing a percentage of blood. The fourth effect may be the pulpification, disorganization and subsequent mortification of the part contused, not merely of the skin but of more or less deeply-seated structures. Repeated contusions of the coronet, pastern, fetlock joint, cannon or knee, by "brushing, interfering or speedy stroke" are often succeeded in cold weather by violent inflammation of the skin and underlying tissues, and the formation of abscesses in the parts, which sometimes endanger the life of the animal by the severity of the accompanying fever; while in rare cases the inflammation extends into the joint, rendering the case very serious and sometimes hopeless.

Treatment.—The treatment of bruises or contusions should be directed to suppress inflammation and if possible prevent sloughing. When the contusion is slight, as in cases of ordinary interfering, no treatment is necessary, except the removal of the cause. Many young horses when first put to work, especially on the roads, will interfere, but as they gain strength by reason of regular work or exercise and better feeding, the trouble ceases. In such cases where practicable it is well to allow the colt to go without shoes until danger of the accident has passed, but if necessary to shoe, boots should be worn for a time. Some horses, owing largely to conformation, continue to "strike". In some cases they can be shod to prevent it. Some shoeing-smiths have acquired the skill and knowledge to shoe many interfering horses in such a manner that the accident becomes rare. It must be understood that the shoe must be kept level. It will not do to make some of the calkins higher than others, as this causes the foot to be planted in such an abnormal position as to cause more serious trouble than that which it is intended to prevent. When careful shoeing will not prevent more or less frequent contusion, the animal must either be used without shoes or wear boots. If the bruising be very great, whether caused by the opposite foot or otherwise, there may not appear to be much pain in the early stages, and this tends to deceive or mislead the observer; he must therefore take into consideration the character of the accident, and

The Growing of Horse Power.

EDITOR "THE FARMER'S ADVOCATE":

The advent upon the farm of the small gas tractors and they have been bought in very considerable numbers during the past year, has led many people to assert that the days of the farm horse are numbered; but the writer, who farms with both gas tractor and horses, depends upon the latter for reliable duty with any sort of help, especially during the rush of spring work, when breakdowns and land in soft condition would be of serious import, so far as the tractor is concerned. The object of this article is not to "knock" the tractor, or discuss the relative merits of the two powers, but whilst fully recognizing that the tractor is a most valuable adjunct to the existing power on the farm, to urge that efforts should be made to increase the efficiency of the horse.

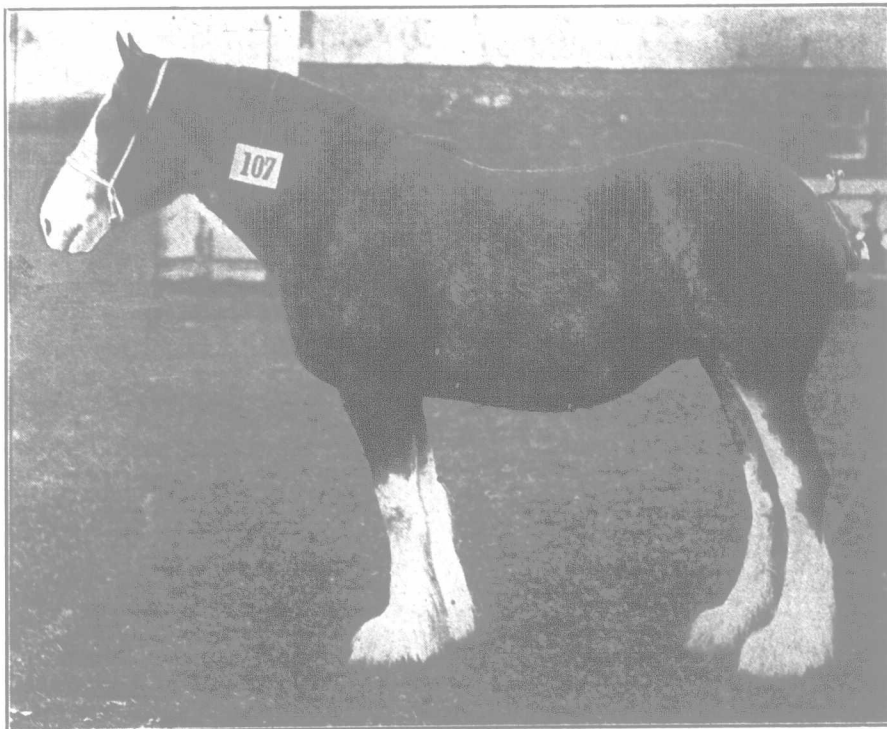
The bulk of the foal crop is raised by the ordinary small farmer, and it is to him that the appeal must be made to improve the standard, and increase the number of the foals he breeds. Whether the sire be Percheron, Shire, or Clydesdale, must be the individual choice of the farmer; but the sire must be the very best procurable in the district. Unfortunately, the question of raising good foals does not rest entirely with the stallion. It is not nearly so easy of accomplishment to grade up the quality of a bunch of horses, as it is to improve a herd of cattle, but it is rendered much less difficult by beginning with a good class of grade mare—taking it for granted that pure-bred mares are out of the question. Now that farmers generally are in a better financial position than formerly, they will be able to afford the weeding out the small ill-bred mares and purchase others of better grade. This course would not only be of a profitable investment, but the quality of the resulting foals would be a source of pleasure.

As to the best time for the arrival of the foals, this must be left to suit each farmer's convenience. Early foals show a most decided advantage over late ones, and the disparity between them holds good for some time; but after two years or so, they begin to balance up, and at maturity there is little difference to be noticed. Most farmers find it necessary to work their in-foal mares, and there is no great objection to this procedure, providing sufficient and intelligent care is exercised in regard to the class of work they are put to. Plowing or draft work on hilly land, where extra power has frequently to be brought into play, is most injurious; in fact, any work that calls for undue stress upon the strength of the pregnant mare is likely to cause harm. One of the most fruitful causes of mares slipping their foals, is watering them when returning in a heated condition from work, especially if the water be very cold. With ordinary care the in-foal mare may be worked, and be none the worse for it, right up to foaling time. Adequate preparations must be made when the term of expectancy is nearing the end. A roomy, dry box is essential, and cramped or wet quarters must be positively avoided. In almost all classes, and there are very few exceptions, the mare requires no help whatever during foaling, and the less she is handled the better.

It is undesirable to attempt any severing of the umbilical cord, but let the mare do what is needful. However, should it be necessary to liberate the foal, do not cut the cord with a sharp knife, but imitate as nearly as possible, the biting process of the mother, and cause the severance of the cord by crushing with a blunt pair of scissors or other blunt instrument, some four or five inches from the foal's body. Further, never tie the cord, unless there is serious hemorrhage. It may be necessary to help in expelling the after-birth and this may be accomplished by firm traction on the cord and membranes. A little assistance may be rendered to the foal in the matter of suckling. Make the mare comfortable, keeping her stall always clean and dry, and give her a month's rest. Ten days after parturition, the mare will take service from the stallion, generally with happy results. When the foal is ten days old, it has practically passed through the danger zone of its young life, and, barring accidents, will do well.

Care should be taken when the mare returns to work that this is of a light description. It is customary to allow the young foal to follow its mother when out at work, but this practice is not to be recommended, it is eminently more satisfactory to confine the foal in a loose box or stall with a few oats to nibble at, and keep it there until the mare returns. During the early months of the foal's existence, the time of separation should not be longer than three hours. If there are more than one foal on the farm, put them in together, and and these occasions may well be used for halter breaking.

Let the weaning develop very gradually. Accustom the youngster to eat oats from the mare's feed box, and



Dunure Myrene.

The type of Clydesdale mare that wins in Scotland.

the general condition of the animal; if there be rigors (shivering), debility or collapse immediately after the accident, he may expect the reaction to be proportionally severe. The local treatment for contusions must be directed to soothe and prevent undue inflammatory action. For these purposes the long-continued bathing with hot water, or the application of hot poultices (which must be kept hot) should be employed. The constitutional treatment during the stage indicating collapse must be directed to stimulate and support, as the administration of one to two ounces of sweet spirits of nitre in a little cold water a drench every two hours for a few doses. If there be much blood or serum imprisoned it is necessary to lance the sac to allow its escape. The animal must be given rest and the cavity or cavities flushed out well twice or three times daily with an antiseptic, as a five per cent. solution of one of the coal tar antiseptics until healed. In the meantime the animal's strength must be supported by a reasonable amount of good food.

WHIL.

The president of the Canadian Manufacturers' Association evidently believes that the average farmer in Canada, over a series of years, makes as large a return upon his invested capital as does the average trader or manufacturer. We would recommend that he read the account of the farm survey which has recently been carried out in a good township of Peel County, Ontario.

to drink water, so that, when weaning does take place at about six months, the loss of the mother's milk will have little ill effect. The foal's rations after weaning should consist of whole oats, good hay, and if available some green feed bundles. The writer lays particular stress upon the virtues of whole oats, as they are always well masticated by foals: whereas, chop is liable to be swallowed hurriedly, with consequent digestive troubles. If roughage is given in liberal quantities, which is advisable, a certain amount of "pot-belly" will become evident amongst some of the foals, but this condition will gradually disappear later on—and it is certainly better to have too much roughage than too little.

One cannot too strongly urge the great importance of giving the foal every advantage during its first winter, as regards warm shelter, good food and clean water, for these benefits will assist in building the foundation of a well-grown horse. Very late foals, unless well looked after during the first winter, will not do so well as the early ones.

When the mare becomes aged, she is much less able to successfully rear a foal, and also perform her farm duties than she was formerly, and this must be remembered. Also, it must be borne in mind that a mare cannot suckle a foal and at the same time do hard work, without falling off in condition, when the foal naturally will not thrive so satisfactorily. Now, it is right there that the advent of the small tractor assists the farmer in a large degree in raising more and better foals. The small tractor, as now put on the market by reputable implement firms, is well constructed, and can be operated by the ordinary farmer, after he has been given a good practical lesson by the expert. The farmer, equipped with both tractor and horse power, can relegate the heavy field work, more especially the early summer breaking, to the tractor, thus giving the in-foal mares the lighter work, and the rest necessary for them to perform their duties as brood mares, and he is enabled to somewhat diminish his bunch of horses by culling out the undesirable, leaving the best grades for breeding purposes.

Alta.

HERBERT D. CROOK.

LIVE STOCK.

The Shorthorn Congress at Chicago.

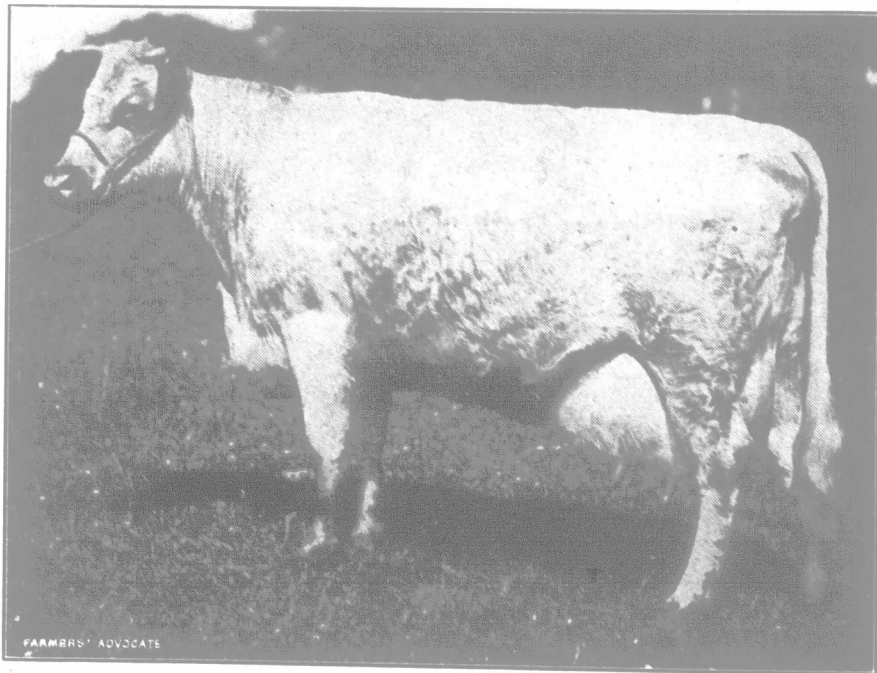
Shorthorn history was made in Chicago during the week beginning Monday, February 13, for this was where and when the American breeders staged their Shorthorn Congress Show and Sale. Cattle to the value of some \$241,639 changed hands between Tuesday morning and Thursday night, at prices indicating a healthy condition on the part of Shorthorn trade. Frenzied bidding was not indulged in, but the cattle sold readily at reasonable prices. The offering was housed in wings of the International Live Stock Exposition Pavilion, and the sale and show were held in the Arena. In the class for bulls calved before April 8, 1915, there were eleven entries. Leslie Smith & Sons, of Minnesota, won first prize on Craven Knight, which sold for \$1,525. Charles Yule, Carstairs, Alta., was the purchaser. The second-prize bull in this class Imperial Mistletoe, realized \$3,000. Thirty bulls, calved between July 20, 1915, and September 6, 1916, were shown. W. C. Rosenberger, of Ohio, won first prize on Sultan Lord, which sold for \$1,300. The highest price paid for any bull in this class was \$3,900. In the class of bulls calved between September 10, 1916, and December 15, 1916, Golden Marquis was the winner. He realized \$2,125. The grand champion bull was Village Clipper, contributed by Hopley Stock Farm, Iowa, and shown in the class for bulls calved between January 1, 1917, and April 15, 1917. His selling price was \$4,500, and he was bought by the South Dakota Agricultural College. The champion female of the show was Viola, contributed by W. C. Rosenberger, Ohio, to the class for heifers calved between June 9, 1914, and February 12, 1916. Her selling price was \$2,800. She was purchased by Frank Scofield, Hillsboro, Tex. Friday was reserved as Milking Shorthorn Day, and fifty-five head of this type were passed through the sale on the afternoon. L. B. May, Pennsylvania, was the most extensive buyer of the females. He purchased two at \$1,000 each, and took eleven in all. The highest price paid in this department was \$1,125. The thirteen bulls averaged \$335, and forty-two females averaged \$517. An interesting feature of the event was the sale of the Red Cross heifer. Red Cross Gloster was bred by W. W. Wright, Illinois, who donated her to be sold for the benefit of the Red Cross at the Illinois State Fair. Carpenter & Ross purchased her then for \$600, but consigned her to the International sale where she sold to Ispedezza Farm for \$1,000, for the benefit of the Red Cross. She was then in turn consigned to the Congress sale, where she sold to B. C. Allen, Colorado, for \$1,200, which amount was donated to the Red Cross, and on re-sale she was bought by her breeder for \$750, the proceeds also going to the Red Cross. Seventy-four breeders at the Congress show and sale made special contributions and raised the amount to \$8,573, which was turned over to the Red Cross fund.

There might well be some "looking into" hide prices in this country. The excuses put forward for forcing down prices of this commodity will scarcely hold water. Hides are said to be the cheapest in ten years on the Toronto market, but boots and all leather goods are the dearest ever. There should be a fine slice in profits somewhere for the Government war tax.

Our Scottish Letter.

The past four weeks have seen many impressive changes in the agricultural world. In the end of January there passed away at the great age of 86, Charles Howatson of Glenbuck, one of the most successful breeders of Blackface sheep. He was a native of the valley of the Afton, one of the streams immortalized in the poems of Robert Burns, and during his whole career was identified with the industrial and rural life of the uplands which constitute the borderland between Lanarkshire and Ayrshire. It was as an Ayrshire man that Mr. Howatson desired to be remembered. He took a very lively interest in everything pertaining to the prosperity of that country, and was closely allied with many of its enterprises. In the agricultural world his hobby was the breeding of Blackface sheep. His farms of Glenbuck, Crossflatt, and Monkshead were always identified with a good class of sheep, but in his hands they were put to the very top as breeding centres for tupes. Mr. Howatson got high prices for his own rams and for twelve years in succession he won first prize at the Highland and Agricultural Society's show for shearing rams. He was the first in Scotland to pay £100 for a Blackface ram, and he was also the first to pay £250 for a Blackface ram. These figures have now been surpassed the record for the breed being held by A. P. McDougall, Craigton, Milngavie, who got £300 for a shearing ram at Perth in September last. I rather think James Clark, who now farms Crossflatt, got the same figure for one a year earlier at Lanark. Mr. Howatson besides being the first to pay three-figure prices and hundreds for Blackface rams, was also the pioneer in demonstrating that the mountain breed of sheep could be bred for early maturity mutton. He gave prizes for the best fat hoggets—that is, castrated lambs six months old—and in this way fostered a new market for the Blackfaces. Altogether he was a man who served his own generation well, and was laid to rest amidst many manifestations of public sorrow in the churchyard of Auchinleck, where his forefathers sleep.

Another notable man has passed away this week in Lord Kennedy, the President of the Land Court. He was a Celt of the Celts, and was in no way prejudiced in favor of landlords and large farmers. He was



Evidences of Both Beef and Milk.

born in a Free Church manse in Sutherlandshire—amidst scenes reminiscent of the Highland clearances which took place in the closing years of the eighteenth and the opening years of the nineteenth century. In his administration of the law in the Land Court the predilections and warm feelings of the Celt were frequently seen, but withal Lord Kennedy was a forceful personality who did splendid work both at the bar and on the bench.

The War in its relation to Food production largely dominates the agricultural outlook. The policy of the Ministry of Food is to put a premium on the production of potatoes and cereals—to increase at all costs the area under the plough—and as this is a drastic reversal of the whole policy that has been pursued by landlords and farmers during the past forty years, naturally it is not viewed in too kindly a way by many. Lord Rhondda and the Boards of Agriculture are doing everything in their power to induce farmers to accept the new policy, as, at all costs, the volume of the home-grown produce must be vastly multiplied. Every sort of argument is being employed to this end. In one week in December, a meeting of farmers was told the German submarines sank 3,000,000 lbs. of bacon, and 4,000,000 lbs. of cheese on its way to the British market. Furthermore, in order to impress farmers with the actual meaning of War as seen in an invaded country a delegation of tenant farmers has been sent to France. They have been taken over the war-devastated areas, and have seen the desolation there caused. They are now giving their experiences and relating their impressions at meetings of farmers, the object being to impress the necessity for extended cultivation on all and to convey to the agricultural mind what War means for an agricultural area. During 1917 through the efforts of Government departments 1,000,000 additional acres were put under the plough, leading to the production of 850,000 ad-

ditional tons of cereals and 3,000,000 additional tons of potatoes. At the close of 1917 the wheat stocks in the United Kingdom exceeded those at the corresponding date in 1916 by 2,000,000 quarters. But the demand is that excellent as these results may have been they are not enough, and the area under the plough this year must be greatly in excess of that under the plough in 1917. In this connection there has been a good deal of writing and speaking regarding the use of motor tractors in ploughing. The general effect of what one hears is not too re-assuring. Apparently there has been a good deal of misspent labor, and the results are not in proportion to the cost. The best work has not been done by men who are experts in handling motor tractors, but after a few lessons, by the better class of ploughmen, who with a natural bent for the study of mechanics also understand ploughing. The city engineer may be useful enough in an emergency, just as is the veterinary surgeon, but it is the man trained to handle the plough who does work that abides and is profitable.

Judging by the results at the Spring sales so far as they have gone, stockowners have plenty of money at their command. Notable auction sales of Ayrshires, Aberdeen-Angus, Shorthorn and British Holstein-Friesian cattle have taken place during the past month and extraordinary prices have been realized. To take the breed last named first—at a sale held at Paisley by Robert Wilson, Son & Laird, 102 head of both sexes were sold at an average price of £56 16s. 2d., and the 33 cows and heifers included in the 102 made the splendid average of £91 19s. 1d. This last figure indicates the costliness of producing milk. Not so very long ago a sale of these cattle of Dutch descent would scarcely have attracted attention in Scotland, now they have enthusiastic patrons in all parts of the country, and make very high prices. The sale just referred to was an ordinary auction market sale, and the popularity of the breed is indicated by the average prices realized. Where land is fairly good and dairying is prosecuted for the purpose of producing milk as distinct from the manufacture of butter and cheese, the British Holstein-Friesian cattle are in high favor. The importation of Dutch-bred cattle of this breed, which was carried through in 1914 before the War broke out, and the members of which importation were sold at Bylleet in November 1914, gave an immense fillip to the breeding of these cattle in Great Britain, and there can be no doubt that the breed has come to stay. Breeders of Ayrshire cattle are, however, in no wise disturbed by the inroads which the Dutch cattle are making in Scotland. Nor need they be. The Ayrshire fills a place all her own in the rural economy of Scotland. She can live and thrive and make money for her owner on land where the Holstein-Friesian and the dairy Shorthorn would starve. Recently all records in Ayrshire prices have been broken. At a sale of dairy cattle held at Torrs, Castle-Douglas, 155 head of all ages made the great average of £72 9s. 9d. each. One cow among these, a seven-year-old, named Torrs Missie 29757, was sold to T. & A. Clement, Nethererton, Newton-

Mearns, at 500 guineas. This is easily the highest price ever paid for an Ayrshire cow. The Torrs herd was known to those who looked into these things as one of the best in the Stewarty, although its owner, Mr. Lindsay, was not given to exhibiting his stock and made little or no noise about them. A few days after the Torrs sale the sale took place at Hillhouse, Kilmarnock, of 19 Ayrshire bull stirks, bred by James Howie. Among breeders of Ayrshires Mr. Howie has long taken a prominent place. He was one of the first to maintain that the ideal way to judge Ayrshires was not for "vessel and teats" only, but for general contour and handling, along with the keeping of well-authenticated milk records. In other words that a dairy breed could not be judged by certain fancy points, but along with excellence in shape must be proved to possess utilitarian properties which will ensure commercial profit. He was, therefore, what is called a patron of the "old stock" variety of Ayrshire, and a strong supporter of the milk-record scheme. He has had his reward. His bull stirks have sold well in the past, but this year's sale eclipses all previous records. The nineteen which he offered made the splendid average of £160 0s. 10d. each. The highest price was 550 guineas or £577 10s. paid by T. A. Clement for Controller 16971, and the next highest 510 guineas or £535 10s. paid by A. W. Montgomerie for Topnotcher 16369. These figures hold the record in the Ayrshire breed.

Great as such prices are, and a new feature in connection with Ayrshires, they pale altogether before the prices that have been going during the past fortnight for Aberdeen-Angus and Shorthorn young bulls. The spring sales conducted by Macdonald, Fraser & Co., (Ltd.), have been held at Perth and Aberdeen, and unprecedented figures have been realized in connection with both breeds. The sale of black cattle is now con-

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The w traordinar would sta Stewart of 3,100 p of Millhill Cupbearer and his d buyer was Trent. A broken. M for the A Proud Con son, Saph Proud Cl has prove She has pr pions at th Aberdeen guineas. F agent for and P. G 3,100 guin capped wi Proud Co Collynie h able invest the world. horn bulls £107 0s. 9 average o stituted th besides Pr 950 guinea made 7000 Rothes K of Millhil Aberdeen, 10 young traordinar Perth. M Balnaben to £753 11 Goldie tri making 2 buyer fro founded th and, there efforts. Lady Cat shire, got against £8 the Janua of the Mi 2,000 guin Cudham g from the 1917 to figure of 1 This was in the clas A. V. Car formidable £493 10s. f £428 8s. f Moray's A Perthshire Polmaive, 5 from N for three S. McWill Keith. At the average of last year. Mr. Ande seven, as last year, group ma was own

trolled by the Breed Society, and the judges are appointed by that body. At Perth, J. Ernest Kerr of Harviestoun, Dollar, had an average of £668 10s. for three A.-A. bulls, calved in 1917. His highest price, and a record for the breed, being 1,400 guineas, or £1,470 for Eileanach of Harviestoun. This youngster was calved on 30th March 1917, so that he was little more than ten months old at the date of sale. He was got by Jason of Ballindalloch 38048, and his dam, Everilda of Harviestoun 49174 was by Prince of the Wassail 23751, a bull which bred amazingly well at Harviestoun. The buyer was Charles Penny of S'illymarno, Strichen, Aberdeenshire. Last year Mr. Kerr held the record with his yearling, Jelly Eric, which made 950 guineas, or £997 10s. which was purchased for export to the Argentine. Eileanach of Harviestoun was champion of the show and sale. The next best average was made by J. F. Cumming of Kinermony, Banffshire, who had £297 10s. for three, and then came Sir George Macpherson Grant, Bart., with the splendid average of £267 6s. for seven. Altogether at the Aberdeen-Angus sale 323 young bulls made an average of £65 5s. 9d. Last year 295 bulls made an average of £64 3s. 7d. One of the rising herds of the breed is that of Mr. Marshall of Bleaton, Blairgowrie. This year he had an average of £188 12s. 1d. for 8 young bulls as compared with £147 last year. Forty two-year-old heifers made an average of £76 0s. 11 and 66 yearling heifers £55 17s. 2d. Last year the average for two-year-olds was £58 9s. 8d. and for yearlings £45 2s. 4d., so that overhead the A.-A. heifers made a much greater relative advance in price than the bulls.

The week that is closing has been marked by extraordinary prices in the Shorthorn world. At Perth on Wednesday, what was supposed to be a record that would stand for many a day was made by Duncan Stewart of Millhills, Crieff, who got the amazing price of 3,100 guineas, or £3,255 for the April calf, Pride of Millhills, the champion of the show. His sire was Cupbearer of Collynie 114960, bred by Mr. Duthie, and his dam, Marigold by Prince Edgar 100036. The buyer was F. W. Wilkinson, Edinstowe, Newark-on-Trent. At Aberdeen on Thursday this record was broken. Mr. Duthie after a keen struggle with exporters for the Argentine gave 3,200 guineas, or £3,360 for Proud Conqueror, a March calf, bred by William Anderson, Saphock, Oldmeldrum, Aberdeenshire, and got by Proud Clarion out of a Killbean Beauty cow which has proved herself to be an exceptionally good breeder. She has produced five first-prize winners and two champions at the Royal Northern Society's summer shows at Aberdeen. Proud Conqueror was champion of the Aberdeen show, and in sale-ring was started at 500 guineas. Bids came fast from Mr. Duthie, Mr. Conacher, agent for Lady Cathcart of Cluny Castle, James Sidey and P. G. Ross, Argentine exporters. Mr. Ross bid 3,100 guineas, the Perth record, and this was promptly capped with another 100 guineas bid from Mr. Duthie. Proud Conqueror goes to be chief stock bull in the Collynie herd. That Mr. Duthie may find him a profitable investment will be the desire of breeders throughout the world. Reverting to the Perth sale, 434 young Shorthorn bulls made an average of £154 7s. 3d. as against £107 0s. 9d. for 411 last year. Duncan Stewart had an average of £1,662 10s. for his three bulls which constituted the winning group, the other two in the group besides Pride of Millhills, being Rothes King which made 950 guineas or £997 10s., and Star of Millhills which made 700 guineas to Mr. Barnes from Cumberland. Rothes King is a white bull and was second to Pride of Millhills in his class. R. L. P. Duncan, Hartmill, Aberdeen, was his buyer. Altogether Mr. Stewart sold 10 young bulls at an average of £698 5s. Some extraordinary advances in averages were recorded at Perth. Millhills rose from £256 4s. in 1917 to £698 5s. Balnaben, Conon Bridge, Ross-shire, rose from £38 3s. to £753 11s. A December calf named Gipsy Lad, of the Goldie tribe, which was placed fifth by the judges, making 2,000 guineas, or £2,100 to Mr. Hartnett, a buyer from America. The late Alex. Campbell who founded the Balnaben herd died during the past year, and, therefore, did not live to see the success of his efforts. His representatives are reaping the benefit. Lady Cathcart of Cluny Castle, Monymusk, Aberdeenshire, got the splendid average of £584 10s. for six, as against £88 9s. 3d. last year. Her first-prize winner in the January class, Cluny Sir Augustus, by President of the Mint, which was bred at Millhills, also made 2,000 guineas, the buyer being A. W. Maconochie, Cudham Court, Kent. Lord Lovat's average for seven from the Beaufort herd, Beaully, rose from £57 19s. 2d. in 1917 to £347 5s. His lordship got the unprecedented figure of 1,650 guineas, or £1,732 10s. for a white bull. This was Beaufort Snow King, winner of fourth prize in the class for bulls calved in April. He was bought by A. V. Cameron, Newton of Stracathro, Brechin. Other formidable averages at Perth were J. Ernest Kerr's £493 10s. for three from Harviestoun; Mastone Graham's £428 8s. for eight from Redgorton, Perth; the Earl of Moray's £499 16s. for five from Doune Lodge, Doune, Perthshire. Colonel Murray's £293 11s. for seven from Polmaive, Stirling; J. J. Mowbray's £261 17s. 5d. for 5 from Naemoor, Dollar; James McWilliam's £763 for three from Garbity, Fochabers, and his son, Ralph S. McWilliam's £370 13s. for four from Stonetown, Keith.

At the Aberdeen sale 234 young bulls sold for an average of £93 17s. 2d. as compared with 284 at £50 8s. 6d last year. The best average was, of course, made by Mr. Anderson, Saphock, who had £688 10s. each for seven, as compared with an average of £56 15s. 4d. last year. The three Saphock bulls in the first-prize group made an average of £1,309. The reserve group was owned by Mr. Cannon, Nether-Coullie, Money-

usk. They made an average of £211 15s., and Mr. Cannon's whole offering of eleven made an average of £111 13s. 8d. as compared with £69 last year. Robt. Copland, Milton Ardlethen, Ellon, had an average of £139 14s. 9d. for twelve, and James Durno, Rothie-brisbane, Fyvie, £130 8s. for eleven. H. McL. Duncan, Letherty, had £151 16s. 7d. for five. The year 1918 is likely to be memorable in the history of cattle-breeding in Scotland. SCOTLAND YET.

Tankage and Roots Proven Useful in Hog Feeding.

EDITOR "THE FARMER'S ADVOCATE":
Probably the winter of 1917-18 presented more difficult feeding problems to the farmer and stockman than

of pigs to compare economy of gains from feeding meal only and meal and tankage. The pigs were 3 months old, there were 5 in each pen, and the test extended over a period of 10 weeks. Oat chop was the only meal used and it was valued at \$50 per ton, which was the price when the feeding began. Each lot was given the same number of pounds of feed daily, and one-tenth of the feed of lot 1 was tankage. The meal was made into a slop with warm water and no milk was given, but each lot got nearly all the roots (sugar beets) they would eat. This averaged about half a bushel each day for the 10 weeks to each lot of 5 pigs. Meal was fed only twice daily, morning and evening, and the roots were always given just before the meal feeds and also at noon. A value of 20 cents per bushel was placed on the roots.

The following table gives a comparison of the 2 lots

Feeding Test No. 2

Group	Wt. pigs Dec. 18 Lbs.	Wt. pigs Feb. 26 Lbs.	Total gain Lbs.	Total feed consumed Lbs.	Cost o. 100 lbs. gain
Lot 1—5 pigs Oat chop, roots, tankage.....	230	530	300	498 chop 50 tankage 2,100 roots	\$7.15
Lot 2—5 pigs Oat chop, roots.....	225	435	210	548 chop 2,100 roots	\$9.85

he ever met before. Every kind of well-known feed was high in price, and this made it necessary to do some careful thinking in order to make any profit or to break even in some cases. In the past there has been a tendency on the part of too many to simply feed oats or barley or whatever grains grown and possibly a little bran and shorts, without giving enough study to the market values of the different feedstuffs. It very seldom happens that such common grains as oats are the most economical feeds, and the farmer should always consider the question of selling some home-grown grains and buying other feeds that will give greater feeding value for the money. In order to do this it is necessary to know the analyses and market value of all the feeds that the farmer might use, whether they are home grown or mill feedstuffs. Then, of course, the feeder should know what the food requirements of the different classes and ages of stock are, and the functions of protein, ash, etc., in the ration.

Some of these commercial feeds that are rich in protein are high in price, and it is a question how far a farmer can go in buying expensive concentrates. With the object of getting some definite figures on this subject the Peel Branch of the Ontario Department of Agriculture conducted tests with several lots of pigs. In Feeding Test No. 1, it was a comparison of tankage and skim-milk as a feed for pigs, also a test to see whether the farmer could afford to buy expensive concentrates this year to feed pigs. Tankage containing 60 per cent. protein was used throughout these tests and was fed in the proportion of 1 pound tankage to 10 pounds of meal; the skim-milk lots received about 3½ pounds skim-milk to 1 pound of meal.

The following table summarizes the results.

Feeding Test No. 1.

Group	Wt. pigs Dec. 3 Lbs.	Wt. pigs Feb. 11 Lbs.	Total gain Lbs.	Total feed consumed Lbs.	Feed cost of 100 lbs. gain
Lot 1—4 pigs Shorts and tankage.....	210	555	345	1,123 shorts 124 tankage	\$7.94
Lot 2—4 pigs Shorts and skim-milk.....	207	556	349	929 shorts 2,920 skim-milk	\$8.67
Lot 3—4 pigs Shorts and tankage.....	82	238	156	503 shorts 50 tankage	\$7.73
Lot 4—5 pigs Shorts and skim-milk.....	106	321	215	508 shorts 1,830 skim-milk	\$8.22

The shorts in this test was valued at \$40 per ton, the tankage at \$80 per ton, and the skim-milk at 40 cents per hundred pounds. The test lasted ten weeks, and records of the weights of the feed and of the pigs were kept in 2-week periods. No house slops or roots were fed, but all the lots received charcoal regularly.

It will be seen by studying this table that the tankage lot did better in each case. Between lots 1 and 2 the difference was 73 cents; and between lots 3 and 4 the difference was 49 cents in the cost of a hundred pounds of gain. The pigs were a very even lot at the beginning of the test, as shown by their weights on December 3. Comparing lots 3 and 4 it will be seen that the skim-milk pigs made slightly larger though not so economical gains as the tankage lot. An interesting observation that is not shown in the figures is that pigs in both the skim-milk lots crippled, while the tankage fed pigs showed no signs of crippling whatever. This is, no doubt, due to the fact that the tankage contains 6 per cent. of phosphates or bone-forming material.

Feeding test No. 2 was made with two different lots

This shows at a glance that the tankage lot made much greater and more economical gains, the difference being \$2.70 per 100 lbs. live weight. Even by charging tankage at \$80 per ton it effected a great saving in feed, and clearly demonstrates that sometimes the most expensive feeds pay the best returns. The tankage lot were thriftier-looking pigs all through, and the difference was clearly noticeable almost from the beginning of the test. The most convincing feature is that the farmers have bought more tankage to feed at \$80 per ton.

Another interesting lesson in connection with these tests is the fact that roots greatly lowered the cost of producing pork. Comparing the economy of gains of the tankage fed lots in feeding test No. 1 with the lot fed both tankage and roots in feeding test No. 2 it will be seen that the lot fed roots additional made gains 79 and 58 cents per cwt. cheaper than the lots fed tankage but no roots. The difference would, no doubt, have been even greater had not the pigs in feeding test No. 2 been somewhat stunted just at weaning time. In lot 1 of feeding test No. 1 it required 361 lbs. of meal and tankage to make 100 lbs. of gain, whereas in lot 1 of feeding test No. 2 it required only 182 lbs. of meal and tankage and 700 lbs. of roots for 100 lbs. gain. In other words, the 700 lbs. of roots made a saving of 179 lbs. of grain, or another way of stating the same thing is that 391 lbs. of roots took the place of 100 lbs. of meal and tankage. There is no doubt that this quantity of roots can be grown much more cheaply than 100 lbs. of expensive meal.

The conclusions from these feeding tests may be summarized as follows:

1. At present prices of feeds the farmer can afford to pay \$80 per ton for tankage.

2. It pays to feed skim-milk to young pigs when valued at 40 cents per hundredweight.
3. Tankage made slightly more economical gains than skim-milk.
4. The pigs in the tankage lot did not cripple.
5. Roots used to replace part of the meal ration greatly reduced the cost of production.
6. Three hundred and ninety-one lbs. of roots were equal to 100 lbs. of meal and tankage.
7. There would seem to be little profit, if any, in feeding pigs a ration of meal only.

Peel Co., Ont. J. W. STARK.

When planning for the spring cropping, it may be well to consider sowing an acre or two of peas and oats to be cut for green feed for the calves, bull, and cows on test. If this crop is not all fed green it may be cut and cured for hay, or be permitted to mature and harvested for grain. A soiling crop of some nature should be sown near the buildings.

Good Reasons For Keeping Sheep.

The first-prize essay in a contest conducted by The American Sheep Breeder contains 30 reasons why sheep should be kept on the average farm. Some of them may appeal more than others, under varying circumstances, but on the whole they constitute a wonderful testimony in favor of sheep husbandry. The reasons follow:

1. The initial investment in foundation stock is small.
2. Expensive buildings are not necessary.
3. Expensive machinery is not required.
4. Less productive land can be utilized.
5. Sheep will eat and relish almost every class of weeds.
6. By eating "Ragwort" the source of "Pictou" cattle disease is eliminated.
7. By cleaning out the fence rows sheep destroy the winter protection of many injurious insects.
8. Due to the fineness of the mastication of their food, very few weed seeds are found in sheep droppings.
9. Sheep are of great value in clearing brush land.
10. Sheep are dual-purpose animals.
11. Crop yields are increased by the constant and uniform distribution of rich manure.
12. The excreta of sheep is rich in nitrogen and potassium.
13. Less plant food is removed from soil by sheep, than by grain crops.
14. The cost of maintenance is small.
15. Sheep make profitable use of fodder left in corn fields after corn is harvested.
16. Sheep can be made marketable without grain.
17. Wool and lambs are more easily transported than grain crops.
18. Rapid and frequent monetary returns.
19. Reasonably large percentages of profits under normal conditions.
20. Wool and mutton advanced in price before the war, and a sudden drop in value is not to be expected.
21. Less labor is required on a sheep farm than on a grain farm.
22. Labor on the farm is more evenly distributed throughout the year.
23. Sheep require little care except during the usual slack periods.
24. Children as a rule like sheep and this is a good time to develop future shepherds.
25. A flock of sheep on the farm furnishes a fresh supply of meat at any time of the year.
26. Because of the comparatively low cost per animal, sheep are more easily improved than most other types of live stock.
27. Sheep are more prolific than horses and cattle.
28. The western sheep ranches are rapidly disappearing, and it is up to the small farmers to make up the deficiency.
29. The population of the United States is increasing, while the number of sheep is steadily decreasing.
30. As a patriotic duty in the present world crisis, we must produce more wool and mutton.

THE FARM.

Examine the Clover Seed You Buy Carefully.

EDITOR "THE FARMER'S ADVOCATE":

Never while out inspecting seed was I more impressed than I was recently, while visiting a country store in Peterboro County. On the night previous to my visit a farmer had left a sample of his seed with the merchant, with a view of his buying it to use for seed in his trade. The seed merchant very wisely had decided to send a sample of it to Ottawa for examination and grading. Not having ordered any clover seed as yet, this lot looked pretty good to him, as it did to me until I began to examine it more closely, when I found a number of the lurking enemy in the seed, viz., some noxious weed seeds of a very bad family—campions. The seeds in question had all the ear marks of bladder campion. In that vicinity I knew that both bladder campion and white cockle were prevalent weeds. As I was fishing out these seeds from the sample, along with an occasional buckhorn, the dealer who is a farmer as well said, "Why, I wouldn't sow that seed on my farm for the world," and he was right, as an estimate indicated anywhere from 100 to 200 weed seeds per ounce. If 200 weed seeds were present in an ounce, it would mean 3,200 per pound. If a man used say even six pounds per acre this year of that seed, see what it would mean on the eight, ten or more acres he might be seeding down. The seed in question was simply beautiful looking seed—plump, purple, evenly graded, well cleaned seed free from the commoner weed seeds, but would be so polluted with noxious weed seeds that it would be unsalable for seeding purposes in Canada. The only place the owner of such seed could legally sell it would be to the trade for reekening. Even then it is doubtful if the best cleaning plant could get sufficient of these seeds out to make it salable for seed purposes. The only other way would be to mix with it pure seed to make it grade. While this method is legal, it doesn't prevent it becoming a curse to the farms, unfortunately. While this seed was under review, two representative farmers of the locality came in and they were both acquainted with the plants, bladder campion and white cockle. They knew the danger of such plants on their farms. Both were invited to examine a fresh sample of the seed, which was spread out for them on white paper, and a magnifying glass given them to examine a lot containing about 1,000

seeds. After taking turns at it, each produced a clover seed with the hull on as a possible impurity. They soon saw their mistake as the hull was rubbed off. They both pronounced the seed clean so far as they could tell, and just such seed as they would be glad to use in seeding down their farms. They looked on while from the same area there were taken ten campions and one buckhorn. One has to look closely to distinguish these seeds from the clover seed proper. The dealer said he would reinforce the lesson as farmers came in, and the owner of the seed would be shown what he was up against. This seed, only for the weed seeds, would retail at \$25 per bushel this year on most any local market, and it could have been made to do it if the crop had only been looked after in the field at the proper time. It would have paid the grower to have taken the time, or even paid as high wages as \$10 per day this year to have hired this field roughed at the proper time. Both these weeds are easily seen when in blossom, and female help could have been employed if male help was out of the question. What, you ask, can the farmers of this locality do to make it possible to grow salable seed on these infested farms? Well, in the first place, hay should be cut pretty green, before these plants mature any seed, or the seed will be spread through the manure. Short rotations, using clean seed on clean ground as after hoe crops, where the land isn't plowed after the hoe crop is removed, and weeding out the rest of the plants in the field, are feasible plans which would mean much to farmers all over the country who may happen to get seed from this or other localities with even what the law allows to be sold for seeding purposes.



A Shropshire that Proved a Winner.

Is it any wonder that weeds of this kind spread all too rapidly where farmers buy seed from their neighbors without knowing what it contains, from personal inspection, or the use of the Seed Branch to help them out? There is a lot of No. 3 seed on the market this year. Remember that No. 3 clover seed may contain as many as 80 noxious weed seeds per ounce, as well as 320 non-noxious. Fortunately, all No. 3 grades are not so impure.

T. G. RAYNOR.

A New Wheat.

EDITOR "THE FARMER'S ADVOCATE":

Dr. Chas. Saunders, Dominion Cerealizer, announces in the March number of The Agricultural Gazette the production of a new wheat, which he describes as follows:

"The new wheat, which has been named Ruby, Ottawa 623, possesses characteristics in ripening and other qualities midway between Marquis and Prelude. It is beardless, possesses hard, red kernels, gives a fair yield, and makes flour of the highest quality in regard to color and strength. Bread made from it ranks in the first class. This wheat is the result of a cross between Downy Riga and Red Fife. Downy Riga was produced from two early sorts, Gehun, an Indian variety, and Onega from Northern Russia. Ruby is recommended for trial where Marquis does not ripen satisfactorily. A very limited distribution of five-pound samples is being made to farmers requiring an early sort. A sufficient crop will be grown this year on the Experimental Farms to provide for a generous distribution next spring."

J. B. SPENCER.

Would Make no More Narrow Sleighs.

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue of "The Farmer's Advocate" a correspondent asks the opinion of the readers re the passing of an Act to make the sleighs wider. The wide sleigh would have some advantages over the narrow one; for instance, it would not be so easily upset, but a wide sleigh would be more expensive, the bunks would be so much longer that they would have to be made heavier to carry up the same loads that are now carried on the narrow ones. Moreover, an Act that would prohibit the use of narrow sleighs would be extravagant. It would be unfair to those that now own good narrow sleighs. There are hundreds of new sleighs in the country now that have only been in use three or four months. Some of those will be good, serviceable sleighs fifty years from now, but under such an Act they would

all have to be thrown in the scrap heap to rot. It would not be a very great hardship to the manufacturer to compel him to make the sleighs wider after a certain date, providing he was allowed to sell what narrow sleighs he had on hand, and allow both narrow and wide sleighs to be used on the road, but not to allow any more narrow sleighs to be built after the aforesaid date.

Kent Co., Ont.

A DOVER FARMER.

Fall Fairs and School Fairs.

EDITOR "THE FARMER'S ADVOCATE":

In your issue of February 28th, I notice an editorial headed "Fall Fairs Should Start Something." It is the opinion of most farmers in Ontario that for nearly one hundred years our fairs have not only been "Starting Something" but doing things that are of value to the farming community which they serve. There may at times have been a falling backward but it is always followed with a rush forward, and each advance reaches a height nearer the summit, and 1917, in all the years, in which Agricultural Societies have held exhibitions was considered, by those who are judges, to be a banner year, and the attendance the largest in their long and creditable history. The classes for horses, cattle, sheep and swine were better filled at the shows than ever before, and the inside exhibits were more neatly staged and of higher quality.

In your editorial you seem to have omitted the point that we were aiming at. Our desire was not to interfere in any shape or form with the School Fairs referred to at our convention. These are doing and will doubtless continue to do good work for our children in the community. The point raised at the convention was that both School and Agricultural Fairs, of necessity were held during the busy fall season, when every day was of vital importance, particularly in the harvesting of our corn, root and fruit crops and preparation of the soil for the next season's crops, when every person on the farm, including the boys and girls, had important work to do. The holding of the School and Fall Fair at different times involved the loss of four full days right in the busy season and after the rural schools had opened. The remedy suggested for this great loss of time and effort in the short fall season was not to bury the School Fair in the one run by the Agricultural Society, but to hold the School Fair on one of the days of the Fall Fair, the boys and girls to have full control of their own exhibits, staged in their own tent as usually done, and they would elect their own officers, have their own prize-list, and be given free admission to the Agricultural Society's Fair.

At the many hundred Fairs held in this Province, both School and Regular, hundreds of judges are required. The railway fares and per diem expenses run into thousands of dollars. By utilizing the Fall Fair judges to judge the School exhibits, both valuable time and money would be saved. By holding the Fairs together the farmer and his family can take them in at one time. The Directors of the three hundred and fifty Fairs in this Province would undertake not to interfere in any way with the operation or conduct of their children's Fairs, and I am of opinion that the fathers and mothers of these children know which would be the better plan, and it might safely be left in their hands. There certainly can be no jealousy existing in so far as the School and Rural Fairs are concerned. Surely the fathers are not jealous of their children's work, but are naturally proud of it. It is well to keep in mind that the School Fairs have been recently organized and enthusiasm in initial stages is usually great. The time will doubtless come, as it generally does, when the primary enthusiasm wanes, but I look forward to resulting good from these two organizations working together in unison. There are, doubtless, a few cases where the joint operation might not be workable. We have already followed your proposition to introduce new blood on the Board of Directors, and in many Societies, ladies have been elected as officers.

Our Societies owe a debt of gratitude to your valuable journal for the splendid reports you have always given us, and I trust that you will yet see the reasonableness of our proposition.

Grey Co., Ont.

W. S. SCARF.

Too Many Agents.

EDITOR "THE FARMER'S ADVOCATE":

In these days of drastic government action I think something might be done to improve our system of agencies of farm machinery. In our local village which might be taken as a fair average there are seven different agents all ready to accept an order for any machine, wagon, or farm implement and, of course, pocket a good commission for doing so. Now this system at a time when every man is needed looks to me to be wrong and wasteful to say the least. Could not one man with possibly a helper at busy seasons do all this work and give better service to farmers, besides releasing a number of men, many of whom are farmers to engage in useful work.

Government action would be necessary because the manufacturers would try to protect their agents, but I think the idea would be of advantage to both farmers and manufacturers and result in better service, and cheaper machinery, because an agent would handle much more business and could do it much more reasonably. Let's hear from some one else on this subject.

Lambton Co., Ont.

FARMER.

Note.—We fear the plan suggested by our correspondent would not be feasible because the various companies manufacturing farm implements and machinery each feel that they are entitled to appoint their own salesmen.—EDITOR.

In the management was Township the Ontario a step ha it was no made to p field oper During business t and thir were item division o acres und sales of c hand at l gether wit and recei an invent estimate o and mach a charge called a charged a was taken the table.

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What the Farm Management Survey Revealed.

In the early part of October 1917, the announcement was made in the farm and daily press, that a Farm Management Survey was about to be started in Caledon Township, Peel County, by the Farm Department of the Ontario Agricultural College. Although such a step had been under consideration for several years, it was not until last spring that an appropriation was made to permit of the carrying out of the work. Actual field operations were commenced on October 8th.

During October and November, records of one year's business transactions were taken for each of one hundred and thirteen farms in Caledon Township. The records were itemized, and included a statement of the subdivision of the farm into woods, waste, pasture land and acres under different crops, yields per acre of all crops, sales of cash crops, feed and seed bought, live stock on hand at both the beginning and end of the year, together with purchases and sales of stock during the year, and receipts from stock products, current expenses, an inventory of buildings and machinery, with an estimate of the value and future life of each building and machine. In the current expenses was included a charge for all labor, save that of one man, who was called the operator. Any unpaid family labor was charged at what it would have cost if hired. No account was taken of what was supplied by the farm directly to the table.

From the figures so obtained, the "Labor Income" for each farm was calculated. From the net receipts of the farm (after deducting all current expenses and depreciation on buildings and machinery), interest at 5% on the total capital was taken. The remainder was termed "Labor Income" of the operator—or the amount of money which he received for his labor and supervision. As the labor income is what the farmer is working for, the purpose of the survey is to determine what influence each factor in the farm business exerts upon it. The basis of study is the comparison of the methods of the men having high labor incomes with the methods of these having low incomes.

Not all of the one hundred and thirteen records, however, were found to be available for study. Owing to scarcity of labor and the general rush of fall work, many men were unable to thresh their crops until very late in the season. For this and some minor reasons in individual cases, only eighty-two records could be used in the final tabulations. With such a small number of farms, only a very limited number of factors could be studied. All comparisons are made for the average farm; that is to say, the individual farms are grouped according to the particular factor under consideration, and averages taken for each group. Now when the number of farms is sufficiently large—say four hundred or more—the "law of averages" will eliminate all factors, save the one being studied. But with a small number in each group, the average may be affected by some other influence. For instance, if the factor of "Live-Stock Efficiency" were being studied, the farms would be divided into several groups according to receipts obtained per live-stock unit. Now with a large number of farms in each group, the average "number of acres per farm" would be approximately the same in each group—the proportions of large, medium sized, and small farms in the group having lowest returns would be the same as those in the other groups. This would get rid of the factor of "size of farm". Likewise, all other factors would be eliminated by this law of averages, save the factor of "returns from live-stock", according to which the farms were grouped. Then, any difference in the average "labor-income" could be attributed directly to the influence of live-stock returns. All other factors may be studied in like manner, and in certain cases the influences of two factors may be studied together. But, it may be seen quite easily that where the total number of farms is small, the "law of averages" cannot play such an important part in the analysis. Hence, the reason for such limited results from the Caledon Township survey. In each subsequent survey, the aim of the department is to make four hundred farms the minimum.

As far as possible, an analysis was made of the facts brought out by eighty-two complete records taken in Caledon Township, and some very interesting results were obtained—results which may be applied to any "mixed-farming" area in Ontario. There is practically no specialization in the surveyed area. Three "cash crops" are grown fairly extensively—wheat, alsike clover seed, and potatoes. Only two of the surveyed farms could be classed distinctly as "dairy" farms, though most of the farmers sell cream during the summer months. Beef cattle and hogs are the main sources of income, while sheep are beginning to occupy a quite important place in the farm business. The percentage of rough-pasture land is fairly high—though certain farms are probably 96% tillable.

Adjusted Tillable Area.

In order to compare farms on which the percentage of waste land, or untillable pasture land was comparatively high, with those which were practically all tillable, a basis of "adjusted tillable area" had to be adopted. It is considered that about four acres of rough pasture or six acres of pastured woods are equal to one acre of tillable land. Hence, to the "tillable area" of each farm was added one-quarter of the number of acres of non-tillable

pasture, and one-sixth of the number of acres of woods pastured. The total was called the "adjusted tillable area" and the grouping according to size was made on this basis.

Influence of Size of Farm on Labor Income
Table 1.

Acres.	Under 85	86-100	101-150	151-241
No. Farms	25	16	22	19
Size—Average	72.3	93.2	129.6	175.3
Capital—Average	6944	8942	12635	16111
Capital in Buildings—Average	2192	2678	3693	4472
Capital in Machinery—Average	422	510	598	789
Productive Capital—Average	4330	5754	8344	10850
Percentage of Capital in Buildings and Machinery—Average	37.7	35.7	34.0	32.7
Crop Acres per Horse—Average	18.8	21.1	20.6	22.5
Crop Acres per Man—Average	46.9	58.0	60.5	63.4
Labor Income—Average	\$507	\$891	\$1091	\$1581

	Average Of All Farms
Receipts per Live Stock Unit	\$74.70
Feed per Live Stock Unit	56.80
Profit per Live Stock Unit (over cost of feed)	17.90
Crop Yields	100%

NOTE:—A Live Stock Unit is 1 mature cow or horse, or proportionate number of smaller animals, maintained for one year—2 head young cattle, 7 sheep, 100 hens, hogs according to weight. (Sometimes abbreviated to L. S. U.)

Table 1 shows one very striking result—that the amount of labor income increases directly with the acreage of the farm, or, otherwise, increases directly with the size of the farm business. All the farms were engaged in practically the same type of farming. As will be seen, the average labor income for the group of farms under 85 acres in extent was \$507, whereas that for the group over 150 acres in extent was \$1581, those of the other two groups ranging proportionately between.

The low average of the "small farms" group indicates on these farms the farm business is too small to pay the necessary overhead expenses, common to all sizes of farms, and leave enough profit to pay the operator more than laborer's wages. In fact, in a year when prices of farm products are normal, these men very probably work for nothing.

Influence of Good Crops and Good Stock
Table 2.

	Live Stock Below Average		Live Stock Above Average	
	No. Farms	Average size	No. Farms	Average size
Crops Below Average	26	108	21	112
Labor Income	\$ 508	\$1047	\$ 977	\$1530
Labor Inc. per acre	\$4.70	\$9.35	\$7.70	\$12.75
Crops Above Average	14	127	21	120
Labor Income	\$ 977	\$1530	\$ 977	\$1530
Labor Inc. per acre	\$7.70	\$12.75	\$7.70	\$12.75

Looking more closely into the matter, we see the explanation for this fact. In the first place, although the capital invested in buildings and machinery varies more or less directly with the total farm capital, it is somewhat higher on the small farms—37.7% as compared with 32.7%. And this higher percentage, deducted from an already small total capital, leaves a much too small amount of productive capital to permit of even a moderately high labor income. In the second place, the man and horse labor is more costly on the small farm than on the large. On the small farms one man performed the labor on only 46.9 acres, and one horse on 18.8 acres, whereas on the large farms one man performed the labor on 63.4 acres and one horse on 22.5 acres. Nor were the small farms farmed more intensively. In fact, the average crop yields per acre on the small farms were 11.8% lower than on the large farms. The highest crop yield averages were on the two intermediate groups, these being about equal, and being 20% higher than on the small farms.

An Individual Farm.

In sending reports to the individual farmers, from whom records were taken, the actual figures for the farm are inserted in Table 1. The figures are inserted in the column in which the farm was placed, and so each farmer may compare the figures of his own farm with

the average figures for that group, at the same time as he compares the averages for the different groups. By inserting the actual figures for one of these farms, this may be demonstrated more clearly:

Acres	Under 85	86-100	101-150	152-241
No. Farms	25	16	22	19
Size—Average	72.3	93.2	129.6	175.3
Your Farm	78			
Capital—Average	6944	8942	12635	16111
Your Farm	4730			
Capital in Buildings—Average	2192	2678	3693	4472
Your Farm	1400			
Capital in Machinery—Average	422	510	598	789
Your Farm	232			
Productive Capital—Average	4330	5754	8344	10850
Your Farm	3098			
Percentage of Capital in Buildings and Machinery—Average	37.7	35.7	34.0	32.7
Your Farm	34.5			
Crop Acres per Horse—Average	18.8	21.1	20.6	22.5
Your Farm	18			
Crop Acres per Man—Average	46.9	58.0	60.5	63.4
Your Farm	54			
Labor Income—Average	\$507	\$891	\$1091	\$1581
Your Farm	\$221			

	Average Of All Farms	Your Farm
Receipts per Live Stock Unit	\$74.70	40.30
Feed per Live Stock Unit	56.80	36.10
Profit per Live Stock Unit (over cost of feed)	17.90	4.20
Crop Yields	100%	40½%

This farm was under eighty-five acres in extent, and hence belongs to the first group. In size it is slightly larger than the average, but the capital investment is somewhat lower. In machinery this farm is but meagerly equipped, which is undoubtedly the cause, to some extent at least, of the crop yields being only 40% of the average for the district. The quality of the live stock is also very low, each unit yielding a gross receipt of only \$40.30, or a profit over feed consumed of only \$4.20. The net result is the pitifully small income of \$221 for the operator's twelve months of hard labor. The figures show clearly that what the operator of this farm must have, before he can make even a moderately high labor income, is sufficient capital at a reasonably low rate of interest that he may be able to equip his farm with proper machinery and better live stock.

Similarly may conclusions be drawn by each man from the actual figures for his farm, shown of the report sent to him; and he may at the same time compare his own figures with the averages for the other groups.

Table 2 shows the relative influences of crop and live stock production on the labor income. Owing to the difference in average size of farm in the various groups, the "Labor Income per Acre" has also been calculated. It will be seen on comparing both groups with live stock below the average, that an increase in efficiency of crop production means an increase in labor income of \$469—or an increase of \$3.00 per acre. Likewise in the groups with live stock above the average, an increase in crop production increases the labor income by \$483—or \$3.40 per acre. But on comparing the two groups with crops below the average, it will be seen that an increase in returns from live stock adds \$539 to the labor income—at the rate of \$4.65 per acre. And comparing the two groups with crops above the average, we find that an increase in stock returns means an addition of \$553 to the labor income—or \$5.05 per acre. Otherwise, if we make a comparison of the group with both crops and stock below the average with the group underneath and the group to the right, we see that with stock the same and crops increased, the rise in labor income is \$469, or \$3.00 per acre, whereas with crops the same and stock returns increased, the rise in labor income is \$539, or \$4.65 per acre. Thus, the conclusion is necessarily reached that in the area surveyed, the greatest opportunity for raising the labor income lies in increasing the quality of the live stock.

To What Extent Does Good Feeding Pay?
Table 3.

Feed fed, per L.S.U.	Under \$43	\$43-50	\$50-60	\$60-70	Over \$70
Average cost per L.S.U.	\$36.46	\$45.90	\$54.21	\$63.74	\$82.62
Receipts per L.S.U.	67.91	70.56	78.74	77.09	78.41
No. Farms.	16	14	19	16	17
Average Size	108	129	129	116	96
Labor Income	991	1241	1104	907	722
Labor Income per acre	9.2	9.6	8.6	7.8	7.5

This table adds further proof to the well-known law that after a certain degree of production has been reached, a higher degree cannot be attained without lowering the net profits. The cost of the final returns is more than the sale price. The amount of feed which may be fed profitably will, of course, depend upon the quality of the stock. With the average of Caledon Township stock, approximately fifty dollars' worth of feed may be fed profitably. It will be seen that the receipts per live stock unit in the last three groups are practically the same. The increase in feed did not increase the returns. Hence, the profit was lowered, with the direct effect of lowering the labor income. In the group which was fed most heavily, each live stock unit yielded a loss of \$4.21 on feed alone. The labor expended on this stock was also lost. As the average size of farm varies somewhat in the different groups here also, the "Labor Income per Acre" has been calculated. It is highest in the second group, where the average feed consumed amounted to \$45.90 per live stock unit.

Summary.

Briefly then, the findings of the survey thus far may be summed up as—

1. The size of the business on the small farm engaged in general mixed farming, is too small to pay all expenses and leave more than a very small labor income for the operator.
2. High profits from live stock have a greater influence on the labor income than have high crop yields.
3. The quality of the live stock determines the amount of feed which may be fed profitably. Heavy feeding to stock of low quality means a loss rather than a gain. In order that the crops grown may be fed upon the farm to keep up the soil fertility, and at the same time yield a profit, the quality of the stock on a great many farms must be increased.—O. A. C. Farm Department Bulletin.

Favors Complete Threshing Gangs.

EDITOR "THE FARMER'S ADVOCATE":

In an editorial in your issue of February 7, you asked the question, "Do you favor threshing gangs?" I would like to give my opinion on this subject. I think you mentioned that the average farmer lost about two weeks each fall by changing works with his neighbors in order to get "hands" to do his threshing. In this part of the country we farmers who have from one to three days threshing lose from two to three weeks of valuable time by the method of changing work to obtain men to do our threshing. While this method has its good points it also has its bad ones. It is a neighborly way of getting work done and also cheaper, at least there isn't so much cash outlay, but is it economical? A farmer loses from two to three weeks of time that is (or should be) money to him. Generally speaking we are called upon to leave our work whether it be plowing, harvesting, sowing wheat or taking in the root crop, and in some cases, such as harvesting, a day lost may mean part of the crop damaged by rain.

Of course it will cost more cash outlay to get the threshing done by a gang, but the time saved would more than offset this. I think that all threshing should be done by the bushel anyway as it is fair to the farmer. He would not have to pay for time lost by minor breakdowns and stops which are sure to occur. I think that the suggestion by the Department of Agriculture re supplying complete gangs is worth considering. I also think that a scheme of this kind might work all right in filling silos.

Halton Co., Ont.

FARMER.

Sleighs Were Wider Years Ago.

EDITOR "THE FARMER'S ADVOCATE":

Some people may not know that years ago sleighs were made much wider than they are today, and the narrow one is the result of selfish people getting theirs made not quite so wide as the ordinary so that it would run easier, and if they were allowed to continue for a few more years we might be getting them with one runner and have to drive tandem. The writer has spent considerable time in N. W. Ontario, where heavy work is being done, and has seen loads consisting of one hundred green logs sixteen feet long drawn on sleighs five feet wide. It is a quarter of that amount we carry on one of our ordinary narrow sleighs every year which has a sleigh knox that the result would be to cut out snow the horse will try to follow the track, and with the narrow sleigh there is only one result—crowding and breaking off. It requires an Act of parliament to make the narrow sleigh removed. In towns of cities the wide or narrow sleigh makes little or no difference. It is the men living on the side lines and concessions. They have to do the ploughing, but then they are only farmers and can get out some way, even if they have to come through

the fields. Before every election we have men tell us how much they are interested in the welfare of the farmer. Here is one opportunity to make good. Let us see which of them will make an effort.
Simcoe Co., Ont. J. G. HASSARD.

A Thresher's Views on Gang Threshing.

EDITOR "THE FARMER'S ADVOCATE":

In reference to your article on gang threshing, would say I am a thresher and also have run a gang for a number of years and find it more profitable to the farmer and thresher alike. It helps the farmer greatly in way of production, for all the time he is away from his work is just while the machine is there. With the gang you can get a better start in the morning than by the old way. We always start at seven or before and thresh as long as we can see. The men have their places, and every one is there as soon as the machine starts. With the old way, if you move in at eleven, or a little before, nobody will come till after dinner, so that time is a complete loss to the thresher. We always take our caboose so all the farmers have to do is board us, and we can go to bed or get up any time we like without any trouble to the people in the house. We take enough men to look after everything but the straw, and when the granary is outside of the barn we furnish one man to carry in bags and the farmer gets the rest. I would like to hear some other thresher give his views on the subject. With regard to the Government sending out men from the city it would be all right, but they would have to start work at seven or before and work as long as we can see, or it will never pay the thresher at the present price of threshing.

A LAMBTON FARMER AND THRESHER.

Lambton Co., Ont.

The Land Settlement Movement.

BY MAJOR G. H. WELD.

Think of the broken guns, shell cases, cartridges, and all equipment of a fighting army left on the battlefields of Europe. What becomes of it? Is it left to rot and waste away and to be of no further use? The answer is "No." The brains of the army see that this equipment can be put to still further use, and with this idea in view salvage corps have been formed. It is the duty of this corps to see that all seeming waste is collected and turned into stores. In this way great stacks of rifles, shell cases, etc., are repaired, cleaned and put into action again.

But what of the salvage of broken men? The Vocational Branches throughout Canada in connection with each hospital are doing their bit. They are re-educating and training these broken men and making them as near hundred per cent. efficient as possible. But are they working strongly enough along the one line that has to do with the real development of any country? The wealth of a country lies in its production and the wealth of Canada, with its millions of uncultivated acres, lies in its land. What's the matter with the old slogan "Back to the land"? At the present time we have the "Land-Settlement Scheme," and a very good one it is but is it enough? In my opinion it is not. Arrangements should be made with the agricultural colleges throughout Canada to accept thousands of these returned men and give them a course in the development and care of land. The information thus obtained from the efficient agriculturists' instruction in these colleges would then go with these men to the betterment of the Land-Settlement Scheme. As many men as possible should be made interested in the development of land, for therein lies the wealth and strength of any country.

Threshing and Silo Gangs.

EDITOR "THE FARMER'S ADVOCATE":

On seeing an article in your valuable paper regarding threshing gangs and asking your readers' opinions on the subject, I thought I would write and tell others how I sized up the situation. Farms on the average consist of a hundred acres, and the threshing on such farms amounts to about one to two days. In order to do such threshing the average farmer has to change with nine or ten neighbors. On helping them back he loses about fifteen days, and in this time he could plant at least twenty-five acres. Or, in other words, it costs him about forty dollars besides paying the thresher twenty dollars a day. A thresher, of course, would have to have about the same number of men in order to have sufficient help to handle the crop and in from the machine, and unless he could do a cheaper job of threshing than the way it is now done there is little to be gained starting. If he could do this he could employ 10 men in farms of one hundred or one hundred and twenty acres, where there are two men and who could do the full work, not having to leave the place for threshing.

As to filling silos by gangs, I think it is all right, as the party with the outfit would be able to run along a couple of teams to move the silos. If these were with the farmer's team could be done by the box going, the driver of each team being responsible to the box, as it is not necessary to have the men careful.

Wellington Co., Ont.

"Profits" and Farming.

EDITOR "THE FARMER'S ADVOCATE":

"To hell with Profits!" says a prominent Canadian, and many of his fellow citizens reply "Amen." "Farmers will not continue to farm unless agriculture is profitable," say others; to which statement we also reply "Amen." Is there any contradiction here? No; because the word profit may be, and often is, used in different senses. When a business makes a fair return on capital invested, pays a fair wage to all those who labor in it, and sets aside enough surplus to provide for wear and tear and normal expansion, it can, in one sense, be said to be profitable. Unless agriculture provides this much it will decline, as will any other business. And yet in another sense there are here provided no "profits," nothing in addition to what is necessary to pay the inevitable cost of production. Has anyone a right to claim more? Are there any legitimate "profits" when the above costs of production are provided for? Doubtless the uncorrupted moral sense of humanity would, in the famous words with which I began, consign all those extra gains to the place where there shall be wailing and gnashing of teeth.

Now there is unquestionably a great deal of confusion in current discussions in which the terms "profits," "profitable," etc., are used; and, therefore, it will be of the greatest utility if we clarify our thought a little in regard to this matter. Is it true that an industry will decline if it is, on the average, operated at a loss? If so, what do we mean by being "operated at a loss"? And also, if so, why? Finally, is there any moral justification for any surplus "profits" over the cost of production?

Take the farming industry, for example. A farmer sells so much grain, beef, pork, milk and fruit. These sales give him a gross return of so much. Over against this he must balance the cost of production. He must provide for interest on his investment, "wear and tear," including depreciation of buildings, fences and implements, and wages for all those who labor in production. In addition there are such things as taxes, insurance, etc., which might be included in the class of general current expenses. Now, if the sum of these expenses or costs of production is greater than the gross revenue, the farmer goes in debt. He cannot permanently borrow money. Taking one year with another the sum of the costs of production cannot be greater than the gross revenue; or, to put it in other words, a farmer cannot spend more than he earns. Now, putting aside the interest on the investment as a fairly constant charge, any decrease in a farmer's revenue must be met by a decrease in the wages of those who work on the farm, or by a decrease in the amount spent on general farm expenses, or by both. Wages cannot be generally and permanently lowered below normal unless labor is forcibly attached to the land; for it will seek and find those avenues in which it gets the greatest reward, provided it is free to move. Ultimately, therefore, the only place where curtailment can be made is in the category of farm expenses, and, therefore, the final result of a reduction of farm revenues below the normal cost of production is the permanent impairment of capital. Immediate inevitable expenses such as taxes, repairs to implements, vehicles, harness, etc., will be met first, and as much as remains will be devoted to maintain or improve the farm equipment. If this which remains is not sufficient, one notices buildings and fences getting dilapidated, obsolete implements kept, breeding stock sacrificed, and all those things happening which reduce the efficiency of labor on the farm and generally curtail production. Take away half a farmer's revenue in taxation and what will be the result? Anyone can see who looks at the fate of the European peasant, if he has not sufficient imagination to picture what would happen to himself or his neighbors. Therefore, when we are bidden "produce at a loss" if necessary, we say that it cannot be done, no matter how willing we are to try it. Any serious impairment of capital is like killing the goose that laid the golden egg; it does not pay.

There is one direction, however, in which a farmer may solve the problem of equalizing a high cost of production with a low revenue. He may be content to accept less than the normal money wage, reckoning as part of his wages the privilege of being his own boss and living in God's great out-of-doors. Many farmers do this and will always do it, for which we may be profoundly thankful. And yet there is a limit to the efficacy of this device. A man's wages (real, not nominal) determine in a general way his standard of living. It is reasonable that a farmer and his family might live in a shack, sleep on hay, eat "potatoes and prairie," and yet be very efficient farmers. The chances are, however, that even if they are good farmers (which is doubtful) they will be pretty poor citizens. "Man does not live by bread alone," and if a farmer shuts out of his life such things as leisure, reading, music, etc., he is depriving his whole nature. There is little question but that a Chinese man can live on a lower wage than the European workman, and that he is in this sense a more efficient producer. And yet in spite of this I do not believe that the level of Chinese. There are, undoubtedly, some directions in which we can live more cheaply without anything of vital importance. Any such directions which any large and wide-spread reduction of farmers' wages will react injuriously upon the general level of status, and ultimately upon his standard of living. There are, in fact, very many directions in which to those here mentioned, why the average farmer's wages should be equal to, or greater

than, those of similarly qualified workers in other occupations.

I take it, therefore, that, while it is every farmer's duty (and every citizen's duty) to adopt the "simple life" in so far as that can be done without sacrificing anything vital, and thereby retain a greater proportion of his income for business purposes, any public policy

which renders agriculture relatively "unprofitable" is unsound and unpatriotic, and ought to be forthwith abandoned.

Now, finally, if every industry was "profitable" to the extent of meeting the cost of production with the revenue from sales, there wouldn't be any surplus "profits." These can exist only where one industry gets

more than its just share, and another industry is thereby compelled to take less. One is rich because another is poor, and vice versa. In this sense of the word "profits," therefore, we are in hearty accord with Baron Joseph when he consigned them—at least—verbally to the abode of darkness.

Brant Co., Ont.

W. C. GOOD.

Automobiles, Farm Machinery and Farm Motors.

Fix Up the Old Car.

Quite a large number of people have become thoroughly imbued with the idea of war-time economy. This does not necessarily mean that you should refrain from spending a cent. It does mean, however, that good value should be received upon every occasion. The motor car is effecting great savings in the transportation of passengers and freight and is enabling business men of the city as well as the farmer of the country to reduce the labor charges and maintenance costs. A new car can be operated for some years for little money but once the machine begins to deteriorate the up-keep bills increase rapidly. If you have decided to run your old car again this season get busy right away and fix it up on the exterior as well as in the interior. Anything you can do to the power plant and its allied parts will certainly make for greater ease of operation and less expense, while anything done to the body itself will tend to maintain the second-hand value of the automobile and secure for you the best market price when the time comes for it to be sold. It is not a difficult matter to paint a car but of course do not look for the same glossy finish that you would get from a job done in a regular factory. To properly paint the old car body a burning process should first be carried out but this is not possible on the farm. You can do the next best thing, however, and that is to thoroughly clean the body with warm water. Make certain that every particle of dust and dirt has been removed and then stand the machine in a room that is not being entered by anyone and that is also away from air currents. You are now ready to apply the paint or varnish which should be done evenly and without circulating any dust. It is a good idea to put an old piece of gunny sack or cloth on your boots in order that small particles of grit will not get in the air and later settle on the car leaving sharp points in the varnish. Remember to keep

the room warm as the drying process does not work out successfully in a low temperature. If you do not feel like going to all this trouble step into a hardware store and get a tin of quick drying paint. This can be "slapped" on hurriedly and will dry in short order. The result is not as entirely satisfactorily but nevertheless will give your car a clean if not wonderfully attractive appearance.

When you are going over the power plant bear in mind that the grinding of the valves is most important. A great many people have this done in garages but there is no real reason why they should not do it themselves. When you are grinding the valves do not turn them continuously in the one direction but rather turn them back and forth. This prevents the cutting of circular rings or grooves on the seats of the valves. If your engine is somewhat antiquated it may not possess any device for adjusting the valve clearance. In such a case you can remedy the excessive space between the stem and tappets by placing one or more small discs upon the stem. These can be held in place with a sheet metal retainer. Clean out all the gummy, oily substances around the power plant because these messy collections have a tendency to carry grit and foreign matter into the bearings and moving parts. After the engine has been thoroughly cleaned up in this way spray it with gasoline and rub all the metal parts to a bright finish with a good stiff cloth. The nickel parts should be treated with a special polish and if you intend to expose them for sometime without attention, a little vaseline rubbed on in an even film will help to maintain their appearance until such time as they can be polished again. When you have cleaned out the many joints in the car cover them up with rubber or leather boots and thus prevent their being soiled readily.

The top of a car often becomes ripped at various places. It is an easy matter to sew up the parts and we would suggest the purchase of fasteners to be attached on each side of the ripped section. "A stitch in time

saves nine". To properly clean the upholstery take off the top in order that all dirt may be removed where the cushions are attached to the body. Any good polish will put a new luster on the wood in your instrument board or any other wooden part of the machine. If you want your demountable rims to look clean and classy use some alluminum paint. This not only presents an attractive setting for the tires and rims but also wears well. In case the bumper becomes black take it to any machine shop and have it re-nickled, but see that you first have a copper coating placed upon the iron as nickel lasts on a copper finish much longer than upon any other. Put some graphite in the threads of the radiator cap and the gas tank caps. This is only a simple matter but it prevents rust and makes for easy opening or shutting. If there are dents in the fenders or skirts of the car do not attempt to pound them out with a hammer but use a cloth-covered piece of wood which you can pound easily but persistently until the rough places are straightened out.

Sometimes the heels wear spots in the floor boards in front of the pedals. If you will get a small sheet of aluminum it will be no trouble at all to make heel plates and also to cut out strips with which to border the edges of the boards. Aluminum looks well in the front compartment of any car and is not hard to keep clean. It might also be advisable to place some strips upon any openings for pedals. You can thus prevent the entry of dust and dirt and in the winter time ride along with the smallest amount of air draft. If the springs in the seats are becoming worn and losing their resiliency make a triangular cushion. Such an article will easily fit the bodily conformation of any passenger and add greatly to the luxury of a ride.

All these little ideas in the fixing up of the old car are not in any sense complex but if followed they will result in your machine being at least clean and tidy if not altogether up to date when it next takes the road. AUTO.

Canada's Young Farmers and Future Leaders.

There is More to Learn.

EDITOR "THE FARMER'S ADVOCATE":

As this terrible conflict keeps raging in Europe it behooves us as farmers to make an extra push in doing our part in winning the war. Governments to-day are calling to the farmers to live up and come forward with increased production. Yes, but some say, the farmer is doing his utmost now, what more can be expected of him? Well, probably he is doing his day's work as courageously as he knows how. But, I venture to say that few of us know it all yet and without that knowledge we are bound to make mistakes here and there. One may think he has plans pretty well revised, but new and better methods are ever coming into practice, and so a person has to keep his eyes and ears open to get the best in everything.

I think that if all things were looked into, it would be found that a great deal is lost through inefficiency in managing the work properly. Even the chores about the barn have a certain bearing upon the final result. Have we things so planned to do the work in order as we come to it, or are we continually retracing our steps and stumbling from one to another? The farm is like a factory, and it makes all the difference between success and failure whether we go at the work systematically or in a sort of haphazard way.

This is a good time of the year for every farmer to brighten himself up and be prepared for the busy season when it comes. During the long winter evenings when work is not necessarily rushing, he should be reading the farm papers and attending as many agricultural meetings as possible. The latter offer a grand opportunity to find out just what your neighbor is doing. By having some expert or professional man to address the meeting, a lively discussion frequently takes place and new ideas are brought home to you in everyday language.

At a recent meeting of our Farmers Institute we had Prof. Clark from the Experimental Farm to address the gathering. The keynote of his talk, as he called it, was Farm Management, particularly in regard to doing the spring work economically and at the proper time. He spoke of different jobs that might be attended to first and of the importance of getting on to the land as soon as possible after it is ready. But, how do you know when it is ready, he asked? There were different answers to this question. Some had good practical ideas while others again were rather nonsensical, and in the main simply tried to follow their neighbors.

The Prof. spoke in favor of ridging up the land in the fall, giving as his reason that it would be ready for the plow somewhat earlier in the spring. By getting to work a few days earlier you retain a larger percentage of moisture and the ground is warmed up quicker. He spoke of one spring the soil on the horticultural plots was quite dry on top where it had been ridged up

the fall previous. He sent the gardener to rake the ridges over a small patch where the frost was out some six inches. This action apparently stopped evaporation, and during the next three days, which happened to be extra fine, the frost line was lowered to eighteen inches. On the other hand where the soil had not been stirred the frost came out a distance of only two inches. While this may be an exceptional case, yet at the same time, it shows what is possible. Surely this has a lesson for every wide-awake farmer, who is desirous of doing his best with what nature has given him.

Another operation the Prof. spoke very warmly on, was the rolling of all new meadows in the spring when the ground has become fairly firm. This action, he said, pressed the roots of the young clover plants down so that they could get moisture from the soil. The sun has not the same chance to dry them out, and the result was generally an increase in the hay crop, as well as an improvement in the quality.

Surely the farmer has something to learn yet. Let us not be too slow in adopting proven ideas.
P.E.I. "FRED L. COOK."

The Influence of One Short Course in Agriculture.

EDITOR "THE FARMER'S ADVOCATE":

The Short Course held in the year 1914 at Markdale by H. C. Duff, District Representative for Grey Co., was a decided success. It is quite evident that the school created an interest for better agriculture in the pupils which is growing with the years. It is helping to make good farmers out of us boys; although we were unable to attend a term at the O. A. C., Guelph, we made the best of an opportunity to gather information near home. The way that my fellow students take hold of new ideas and are practicing them, shows that the value received for the time spent away from home, has been more than repaid in dollars and cents; the extra being received from the better methods employed, better stock raised and the better management of the farms.

Many of the boys who would permit the breeding of their stock to any scrub sire now demand a good bull and are paying the extra charge for the use of it. Some have introduced pure-breds into their home herds. Now, when the boys meet down behind our neighbors' old barn for the quiet after supper smoke, the old line of stories have no place, pedigrees are discussed and the merits or demerits of this and that animal talked over. We do have some very lively debates as to whether O. A. C. 72 or the Banner cats are the best to grow, etc. It is quite evident that nothing but the superior varieties of grain are going to find a place in the grain fields of this locality.

The value of this change cannot be over estimated. We do not need so much increased acreage as better seed and a more thoroughly prepared seed bed. It costs no more to harvest a 50-bushel crop than it does to harvest a 25-bushel to the acre one. Owing to the lack of help we have little choice, we either have to put in two acres poorly or one well. I think most of us will treat our seed and sow, what we do sow, well, because we realize that one acre if properly planted will yield almost twice as much as an acre poorly planted. We are also taking part in the increased hog production idea, in fact, most of the extra sows in this neighborhood will be kept by the Junior Farmers.

Up to this time I have told you what the course did for the fellows who made use of it. I will now give you an instance of where it was of great benefit to me. We had at home tried alfalfa different times, as also had our neighbors, with indifferent results; the plants seemed to grow well during the time they were with a nurse crop but the winter and early spring was sure to kill them, naturally the people became disgusted with the result that alfalfa was dropped and if you started to boom the alfalfa plant you were liable to be called a fool. However, Mr. Duff told us that our failure to get a crop was due largely to the wrong variety and not to the fact that our climate was too severe. He recommending us to get either Grimm's or Ontario Variegated. Thinking over the matter I resolved to try an experiment. In the spring of 1914 three different plots of alfalfa were planted, one of common Southern grown seed, one Grimm's, one Ontario Variegated. In the spring of 1915 the plot of common alfalfa heaved completely out. Grimm's heaved fairly badly. The plot of Ontario Variegated stood the test best of the three. Owing to this experiment in the spring of 1916 we sowed ten acres of Ontario Variegated. Last summer we cut three tons to the acre off this field. It lived through the winter better than our other varieties of clover. We sowed five acres last spring and intend increasing our acreage next seeding. Furthermore some of our neighbors intend giving it a trial and we hope they will have as good success as we have had.

Now these are just a few of the ways in which the Agricultural Short Course of 1914 has been of benefit to the boys who took it, and to their neighbors. It has opened our eyes and we, the members of the Markdale Junior Farmers' Association, realize that proper methods, coupled with the best seed and good stock point onward to success.
Grey County, Ont. J. A. McLOUGHRAY.

Do you offer any encouragement to the boys and girls for helping with the milking and chores? A little appreciation makes for better work. Why not give them a heifer calf for their very own, to feed, show, keep or sell as they think advisable?

THE DAIRY.

Don't Let the Cheese Factory Go.

The present prices of butter, cheese and milk give the impression to consumers of these products that dairymen are reaping a bountiful harvest and should be increasing their herds, rather than reducing them. The problem looks entirely different to the man behind the cows, who is called upon to meet feed and labor bills. True, a quart of milk, or a pound of butter or cheese, does cost considerably more now than in pre-war days, but if one follows the markets it will be found that cows, labor, machinery, concentrates, and other things essential to dairying have advanced to a greater extent than have the dairy products. Cows must be fed if they are to give a heavy production to meet the demand for these essential food products. There appears to be a louder cry about the price of milk, butter and cheese, which are rich in nutrients essential to the growth and health of the human body, than about the increase in price of much less nutritive and wholesome foods. Life can be maintained on milk, but would soon become extinct if some of the articles which enter into the regular diet were used exclusively. Dairymen might well use more milk and cheese on their own tables than is customary, and if they made known the high nutritive value of milk and its products as compared with other foods it might have the effect of quieting the criticism of consumers. "Eat dairy products" might well be adopted as a slogan by dairymen.

The setting of the price of cheese caused a little disquietude among patrons of cheese factories. While the prices surpassed that of previous years, it was felt that it was not commensurate with the increased cost of production. If it was a fair price last year, the same would not give adequate returns to patrons this year, as there has been a considerable advance in feeds, equipment, etc. An effort has been made to have the price increased, and rightly so, but the committee appointed to wait on those in authority should not be too severely criticised if they do not reach their objective. It must be remembered that those having an article to sell cannot always dictate the price and terms to the purchaser. If the purchaser requires the commodity badly enough, he will pay the price asked; if not, he leaves it on the producer's hands. It is well to keep in mind that in the case of food products, supply and demand regulate the price. Great Britain is and always has been Canada's chief cheese market, and cheesemen are obliged to take the price offered or have their goods on their hands. It is well to try and get as high a price as possible within reason, but it can be readily understood that it is not easy to force the market higher unless the demand for that particular article would warrant it. We are led to believe that cheese is an important article of diet for the soldiers. It is in a concentrated form, can be held, and a good deal of nutriment is packed in a small space. But while Ontario produces a large quantity of cheese, there are other countries making the same product. The present transport situation also handicaps the placing of our cheese on the overseas market. The increased cost of production must surely be known to the purchasers of food-stuffs to supply the overseas market, and it is unreasonable for anyone to expect dairymen and their families to produce food at a loss. Few are in a position to do so. It will be unfortunate if, through failure to make ends meet, dairymen and cheese-factory owners are forced to let this important Canadian industry become disorganized. It is but natural that the milk be sold on the highest market, and the fact that condenseries are able to pay more for whole milk than the cheese would warrant has led many dairymen to transfer their patronage from cheese factory to condensery. In some cases the factories have gone out of the hands of their former owners and are dismantled and used as gathering stations; others are standing idle.

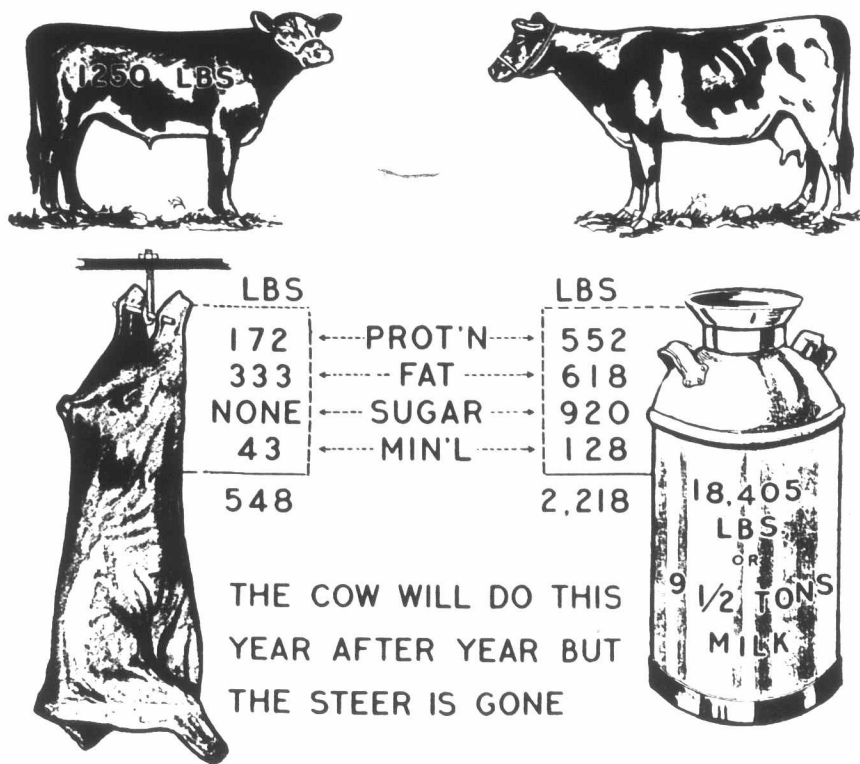
Evidently a high price for condensed products was necessary to induce capitalists to erect plants, and the price was such that they could afford to out-bid creameries and cheese factories for milk. This has worked to the detriment of the small dairy manufacturing plants. The capitalists have forced competition out of the field in many localities, and now furnish practically the only market for milk.

Will the demand for condensed products always remain high enough to warrant the paying of a high price for whole milk, or will the condenseries become over-stocked, as happened a few years ago when they became very rampant about the milk they received and were obliged to let it rot down? The high price now may prove a bonanza to those fortunate enough to be within market distance of a condensery, and no one can blame dairymen for selling their milk on the highest market, but it is well to look to the future. If the demand for condensed milk slumped when the milk flow was at its height, and con-

denseries could or would not handle the milk, what would be done with it? "Why, we will go back to the factory again," someone says. That may be satisfactory if the machinery is intact and a cheesemaker ready to go on with the work, but what if no maker is available, or the factory has passed out of the control of the patrons? The cheese factory has helped many a dairyman to meet his payments and clear his mortgage in days when markets for milk were limited. It will again furnish one of the best markets for milk, as cheese is a food product that is high in energy value and is only beginning to be appreciated as an economical diet. On an energy basis, a pound of cheese equals 1.69 pounds of sirloin, or 18 egg. For this reason the demand for cheese is likely to increase rather than diminish, and the price will be commensurate with the cost of production. It is unfortunate that the price of cheese causes uneasiness among patrons and is influencing many to seek other markets. The price of stock, labor and feed would warrant a higher price being paid, but, as we stated before, if the market absolutely refused to pay more what are we to do? If condensed products are more urgently required than cheese, which fact is indicated by the difference in price, then the logical thing to do is to supply that market, but it should be remembered that cheese is a more staple article of diet than condensed products and when conditions become normal the cheese factory will undoubtedly again be a remunerative market for milk. When comparing prices, don't forget to consider the by-products of cheese factory and creamery as compared with the whole-milk trade. If dairymen believe it to their interest to withdraw their patronage from the factory for the present, they should not allow this important market to be withdrawn from their midst. The more markets the greater the competition, and, as a rule, the better the price.

The Cow a Great Producer.

Of all classes of stock the dairy cow stands to the fore as an economical producer of human food. There



(From I. H. C. Bulletin.)

are certain nutrients essential to the well-being of humans, and these are found in great proportions in the lactic fluid from the dairy cow. The accompanying illustration gives the amount of protein, fat, sugar and mineral matter found in a carcass of a 1,250-lb. steer as compared with the amount in the product of a really good cow. A heifer and steer at two years would have cost about the same in the way of feed, labor, etc. When the steer was ready for the block and weighed 1,250 pounds, his carcass would supply 548 pounds of dry matter as food, and that would be the end of his career. On the other hand, a cow giving 18,405 pounds of milk would yield 2,218 pounds of dry matter ready for use without having to be cooked or prepared. The cow may do about the same thing the next year, and again the next, and keep it up for several years and then her carcass would furnish a considerable amount of food. True, 18,405 pounds of milk is a heavy production, but if a cow only gave one-half that amount of milk, it would yield twice the amount of dry matter that a 1,250-lb. steer would. Milk is one of Nature's best foods, and careful selection of breeding stock is gradually increasing the average milk yield per cow. While meat is essential in the diet, especially of the working man, milk and its products might well be used more freely.

In comparing the price of land in different sections of the country, it will frequently be found that in districts where dairying is a specialty the price of land is considerably higher than in districts where grazing and stall feeding of cattle are engaged in almost exclusively. While cattle feeding is a remunerative business in the average season, it does not compare with dairying if a good herd of cows is kept. True, there is more work in a bunch of steers, but the returns pay for this extra work. There will not be much difference either in the land or amount of feed required by a steer or cow, unless it is that a cow in milk will be fed a little more con-

centrates high in protein. From that feed the cow is able to produce more human food than is the steer, and the beauty of it is she does it year after year.

Sherrick Bros.' Sale.

The dispersion sale of pure-bred Holsteins, held at Spring Brook Farm, Bethesda, Ontario, on Thursday, March 7, brought out a good crowd of buyers interested in the breed. The 33 head sold brought nearly \$4,000, or an average all around of approximately \$119 each. Following is a list of those selling for \$100 or over, together with the purchasers:

Inka Sylvia Bos, Henderson Bros., Owen Sound	\$220
Clothilde Abbekerk Clay, A. Sonley, Whitby	245
Aggie Mechthilde Korndyke, Henderson Bros	170
Nettie Tefsen Korndyke, A. Sonley	195
Peach Dale Lassie, W. J. Turner, Claremont	200
Peach Dale Belle, C. L. Gray, Aurora	120
Mercena of Campbelltown, J. B. Turner, Stouffville	230
Maple Grove Philippe, C. L. Gray	165
Spring Brook Gloss De Kol, F. J. March, Ringwood	125
Pontiac Johanna Segis, L. B. Forsythe, Stouffville	190
Silver Gloss, C. Johnson, Stouffville	200
Spring Brook Lassie Posch, S. P. Foote, Bethesda	170
Kinnellar Blossom, P. Smith, Gormley	185
Spring Brook Belle Posch, T. O. Lowery, Unionville	120
Lilly Cornucopia, J. H. Brillinger, Aurora	117
Spring Brook Gloss Segis, T. O. Lowery	107
Spring Brook Belle Segis, A. Sherrick, Ringwood	115
Silverton Walker Pauline, C. L. Gray	102

The Van Patter Holstein Sale.

On Tuesday, March 12, the Holstein herd of J. M. Van Patter & Sons, was dispersed at Woodland Stock Farm, Dunboyne, Ontario. The herd made a very favorable impression, housed as it was in their modernly equipped stable. While the cattle were not in high fit, they were in excellent working condition and well prepared for the sale. Prices could be characterized as only fair. A number of good cows of excellent breeding did not bring what they should, considering the high price of milk which is likely to rule this coming season. The junior members of the partnership retained fourteen three-year-olds and yearling daughters of their old herd sire, Maplecrest De Kol Champion, and three daughters of other well-known sires which have been used in the herd. The remaining forty-six head, which comprised the offering, realized a total of \$5,895. Van Patter & Sons are to be congratulated on the excellent herd they have developed during the number of years in which they have been actively engaged in this work. The highest priced female was Queen Mercedes Melba, which, as a three-year-old, made a record of 22.81 lbs. in seven days. She was sired by Sarcastic Mercedes Lad and had every appearance of being a wonderful producer. The yearling bull, King Aaggie Fayne, made a favorable impression, and while there was not any great demand for bulls, or for any class of cattle except those giving milk, this young sire realized \$245. Four bulls, over a year old, averaged \$163.74. Twenty-four females, one year old or over, averaged \$173.74; eighteen calves, male and female, averaged \$59.44. In the following list of animals selling for \$100 or over, with the names of their purchasers, the first thirteen were three years old or over; the next seven were two-year-olds, the next one was a yearling, and the last female was a calf.

Females.

Queen Mercedes Melba, A. C. Taylor, Glanworth	\$330
Woodland Banostine Princess, J. B. Bedford, Windsor	195
Aggie Colantha De Kol, T. A. Goodwillie, Welland	185
Arrawanah Posch 2nd, W. F. Smith, Sparta	185
Woodland Queen De Kol, Ernest Martin, Springfield	215
Arrawanah Posch 2nd Teake, W. Sinden, Belmont	255
Woodland Tensen Johanna, George Martin, Belmont	265
Woodland Colantha Mercedes, W. Leverton, Sparta	180
Woodland Banostine Kate, Chas. Pettit, Glanworth	145
Woodland Queen De Kol 2nd, G. G. Gillott, Aylmer	165
Mercedes Calamity, W. F. Smith	215
Aaggie De Kol Sarcastic, Tyler Leeson, Springfield	160
Lady Jongste, J. H. Dyer, St. Catharines	170
Woodland Banostine Beauty, Chas. Pettit	165
Woodland Banostine Perfection, W. Leverton	130
Woodland Banostine Johanna, Geo. Martin	160
Woodland Banostine Sarcastic, W. Sinden	145
Woodland Banostine Teake, G. G. Gillott	195
Woodland Banostine Witzyde, G. G. Gillott	180
Woodland Banostine Violet, Chas. Pettit	170
Woodland Aaggie Banostine, Laidlaw Bros., Aylmer	105
Queen Mercedes Melba 2nd, London Asylum, London	110

Bulls.

King Aaggie Fayne, I. McCallum, Lyons	\$245
Count Midnight Mercena, Jas. Williams, Springfield	130
Woodland Posch Butter Boy, Geo. Feargue, Wilkesport	150
King De Kol Banostine, Clifford Ellis, Aylmer	130
Woodland Champion De Kol, Geo. Martin	135

Is your herd entered in the R. O. P. test? True, some of your cows may not qualify, but is that any logical reason for not testing? If the cows won't qualify you ought to know it and govern your breeding and feeding operations to increase the milk and fat yield.

Initial

The initial Breeders' Club London, March assembled and True, there was thing that had found a ready young calves v changed hands more money, b the average of contributed by Thorndale, at 24.84 lbs. butt She was practic A number of yo around \$50.00 selling for \$100 chasers:

Mollie May's I dale.....
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 Ivy Lodge Mile Princess Helbor Colantha Joha dale.....
 Clothilde Dewo Lilly Alexandra Queen Phoebe Maria Colantha Fannie Veeman Olive Canary C Schuiling Merc Rose Arrawan worth.....
 Lilly Canary P Thirza Canary, Netherland Ori dale.....
 Dorel Netherla Beulah Benton Forest Ridge F Lindley Beauty Aaggie Abbeker Daisy Belle Tea Queen Lillian I Daisy Pledge Z

Finderne June Hengerveld Ab Ormsby Baron

Ourvill

The buyers of Ourv offering and p posed. The o condition. He old, with her s 491.90 lbs. mill ford, for \$375 sired by that Dutchland Co females in mil realized good p by Maplecrest portion of the Twenty-six fem selling for over of the purchase four in the list the remaining t

Helbor De Kol Belle Dewdrop Ourvilla Alice Boutsjie De Ko Ourvilla Canar Ourvilla Canar Ourvilla Calam Ourvilla Bout Aylmer Ourvilla Sarah Ourvilla Belle Ourvilla Calam Ourvilla Susie F Ourvilla Cornel Ourvilla Petuni Ourvilla Susie Ourvilla Susie Prilly Hartog C Ourvilla Wopko Ourvilla Helbor Ourvilla Pietert Ourvilla Aaggie Ourvilla Pachel Ourvilla Helbor Ourvilla Kornd

Initial Sale of London District Holstein Club.

The initial sale of the London District Holstein Breeders' Club was held at the Brunswick Hotel stables, London, March 14. In spite of the rain, a large crowd assembled and purchased the cattle at reasonable prices. True, there were no high values prevailing, but anything that had been tested and had good individuality found a ready buyer. As at other sales this spring, young calves went rather cheaply, but cows in milk changed hands at from \$150 to \$225. Others sold for more money, but in such cases they were usually above the average of quality. Mollie May's Beets De Kol, contributed by H. C. Holtby, went to C. D. Leach, Thornedale, at \$305. At five years of age she made 24.84 lbs. butter and 552.1 lbs. milk in seven days. She was practically a 25-lb. cow and a good individual. A number of young calves were sold, and these averaged around \$50.00 each. Following is a list of the animals selling for \$100 or over, with the names of their purchasers:

Females.

Mollie May's Beets De Kol, C. D. Leach, Thornedale.....	\$305
Lady Segis Ida, Wm. Shore, Glanworth.....	220
Nettie Netherland, Neil Stevenson, St. Mary's.....	210
Asphodal Belle De Kol, C. Mickle, Whitney.....	200
Lady Clay 2nd, Geo. Jackson, Wilton Grove.....	230
Sophia of Hanover 5th, C. Mickle.....	190
Arwanah Netherland 2nd, Geo. Kernohan, London.....	145
Ivy Lodge Mildred, John McMillan, Glanworth.....	295
Princess Helbon De Kol, Warren Bros., London.....	245
Colantha Johanna Belle 2nd, T. E. Bedgood, Thornedale.....	175
Clothilde Dewdrop, J. H. Hann, Belmont.....	145
Lilly Alexandra De Kol, F. G. Seeton, Lakeside.....	175
Queen Phoebe De Kol, J. W. Shoebottom, Ettrick.....	180
Maria Colantha, John L. Arthur, Lakeside.....	205
Fannie Veeman Teake, F. G. Seeton.....	145
Olive Canary Gano, J. Robson, London.....	145
Schuiling Mercena Wayne, Harry Tout, Strathroy.....	125
Rose Arwanah Netherland, Arthur Healey, Glanworth.....	160
Lilly Canary Posch, Harry Tout.....	160
Thirza Canary, Geo. Kernohan.....	155
Netherland Ormsby Hartog, W. A. Bailey, Thornedale.....	155
Dorel Netherland Abbekerk, Neil Stevenson.....	165
Beulah Benton Sarcastic, Harry Tout.....	130
Forest Ridge Fayne Elite, J. C. Seeton, Lakeside.....	250
Lindley Beauty Hengerveld, J. Lewis, Glanworth.....	230
Aaggie Abbekerk Calamity, John Joy, London.....	180
Daisy Belle Teake, Warren Bros.....	250
Queen Lillian De Kol, Chas. Holborne, Shedden.....	100
Daisy Pledge Zeeman, Geo. Kernohan.....	200

Bulls.

Finderne June Beauty, J. E. Wardell, Aylmer.....	175
Hengerveld Abbekerk Prince, G. Harris, Dorchester.....	110
Ormsby Baron Fayne, Neil Campbell, Lambeth.....	175

Ourvilla Holsteins at Auction.

The buyers at the Holstein sale conducted by Laidlaw Bros., of Ourvilla fame, on March 13, appreciated the offering and paid very good prices for the cattle exposed. The offering was presented in good fit and condition. Helbon De Kol 5th, which at four years old, with her second calf, made 24.11 lbs. butter and 491.90 lbs. milk in seven days, sold to E. Plant, of Burford, for \$375. She was a good individual and was sired by that famous getter of R. O. M. daughters, Dutchland Colantha Sir Abbekerk. Several other females in milk were sired by the same bull and all realized good prices. Some of the younger stuff was by Maplecrest De Kol Champion, while another proportion of the offering was by Royalton Canary Alban. Twenty-six females and four bulls were disposed of, all selling for over \$100. The following list gives the names of the purchasers and the prices paid. The first twenty-four in the list of females were three years old or over, the remaining two were two-year-olds.

Females.

Helbon De Kol 5th, E. Plant, Burford.....	\$375
Belle Dewdrop 7th, F. Wilson, Hagersville.....	280
Ourvilla Alice Teake, F. Weaver, Belmont.....	180
Boutsje De Kol, T. G. Brown, Ancaster.....	195
Ourvilla Canary Posch, E. Plant.....	180
Ourvilla Canary Queen De Kol, W. Sinden, Belmont.....	185
Ourvilla Calamity Teake, W. Sinden.....	195
Ourvilla Boutsje Canary, W. H. Baxter & Son, Aylmer.....	120
Ourvilla Sarah Colantha, E. Knott, Aylmer.....	155
Ourvilla Belle Dewdrop, T. G. Brown.....	250
Ourvilla Calamity Queen, E. Plant.....	160
Ourvilla Susie Korndyke, T. A. Goodwillie, Welland.....	185
Ourvilla Cornelia Teake, A. Johnston, Aylmer.....	170
Ourvilla Petunia, A. Hetherington, Glen Meyer.....	210
Ourvilla Susie Spotty, Wm. Dill, Rodney.....	190
Ourvilla Susie, W. Sinden.....	265
Ourvilla Baroness Canary, W. Sinden.....	150
Prilly Hartog Clyde, E. Plant.....	265
Ourvilla Wopke Colantha, B. McCartney, London.....	200
Ourvilla Helbon Colantha, E. Plant.....	295
Ourvilla Pietertje Canary, W. E. Leeson, Aylmer.....	175
Ourvilla Aaggie Korndyke, E. Plant.....	165
Ourvilla Dutchland Colantha, E. Plant.....	295
Ourvilla Pauline Texal, Wm. Wagner, Kingsville.....	145
Ourvilla Helbon Queen, J. Schieb, Rodney.....	265
Ourvilla Korndyke Canary, W. E. Leeson.....	225

Bulls.

Ourvilla Maplecrest Abbekerk, T. Dowler, St. Thomas.....	155
Ourvilla Susie's Prince, T. G. Brown.....	180
Ourvilla Sir Helbon De Kol, C. F. Prong, Aylmer.....	145
Ourvilla Finderne Teake, N. Chalk.....	210

POULTRY.

Poultry Profits.

EDITOR "THE FARMER'S ADVOCATE":

The present high price of poultry feed has, no doubt, been considered by many farmers a disadvantage greater than they can overcome, and consequently they have decreased rather than increased their flocks. The fact that the price of feed has risen since the war in a much greater proportion than has the price of eggs does not necessarily mean that there is little or no profit to be made in keeping hens.

The following figures are a record of the amounts of feed consumed, with its cost, and the number of eggs produced, with their value, in November and December of last year and up to January 20th of this year, by a pen of forty Barred Plymouth Rock pullets at the Ontario Agricultural College, Guelph, and will show that, despite the high cost of the feed consumed, the flock did considerably better than pay its own way. This pen of pullets may be taken to represent an average farm flock, half of them having been hatched on the 28th of April and the remainder on the 10th of May. It must not be supposed that the birds were bred from the very best hens at the College; in fact, the eggs from which they were hatched were selected more with regard to their size and color than to the record of the hens that laid them.

As the record shows, the mainstays of the ration were buttermilk, crushed oats and scratch feed. The milk and crushed oats were kept before the birds at all times, the latter being fed in a dry-feed hopper. The scratch feed consisting of cracked corn, wheat, barley and oats was thrown in the litter every morning and night. Incidentally it might be as well to state that the wheat in the mixture would grade considerably lower than No. 1 northern, or is, in fact, feed wheat. In addition to these three feeds the flock was given sprouted oats at noon every day, and grit and oyster shell were kept before the birds in small hoppers.

The flock just started to lay during the last few days of October, and for the month of November averaged only 9.66 eggs per day, but even at that made a profit. Here are the figures for November:



Natural Incubation.

Feed Consumed	Cost per 100 lbs.	Cost of quantity used.
Buttermilk, 300 lbs.....	\$0.30	\$0.90
Crushed oats, 71 lbs.....	2.80	1.98
Scratch feed, 150 lbs.....	3.60	5.40
Oyster shell, 5 lbs.....	1.00	.05
Grit (for 3 months) 5 lbs.....	1.00	.05
Sprouted oats, 20 lbs.....		.50
Total cost of feed.....		\$8.88

Number of eggs produced, 290.
Value at average price of 50 cents per dozen, \$12.08.
Profit for month, \$3.20.

During the month of December the flock struck its stride and the average daily egg yield for that month was 20.71 eggs. It will be noticed that the birds consumed considerably more feed than they did in the previous month, but this was necessary in order to produce the larger number of eggs. December was a money-making month for this flock, not only because they laid more eggs, but also because they did it at the time when eggs were bringing the highest prices of the year. Here is the record for December:

Feed consumed	Cost per 100 lbs.	Cost of quantity used
Buttermilk, 330 lbs.....	\$0.30	\$0.99
Crushed oats, 63 lbs.....	2.80	1.76
Scratch feed, 260 lbs.....	3.60	9.36
Shell, 17 lbs.....	1.00	.17
Sprouted oats, 20 lbs.....		.50
Total cost of feed.....		\$12.78

Number of eggs produced, 642.
Value at 75 cents per dozen, \$40.13.
Profit for month, \$27.35.

In January it was found that the buttermilk could not be obtained regularly so in order to supply the birds with the protein so necessary for the production of eggs, and which they had hitherto gotten from the buttermilk, a new factor was introduced into the ration in the form of lard renderings secured from a local butcher. This, in addition to protein, contains a large quantity of fat which is of value as a heat-producing food, and this fact gave the renderings a greater value than buttermilk during the exceptionally cold weather of January. The material comes in large, compressed cakes, and these were put through a bone cutter which reduced them to small shreds. The forty pullets were given ten ounces of the renderings per day. It was soaked in warm water for half an hour, dried off and mixed with twenty ounces of laying mash and fed in a wooden trough about ten o'clock in the morning. The laying mash was bought from a milling company at a cost of 3 cents per pound, and the lard scraps or renderings cost 3½ cents per pound. Following is the record from January 1st to January 20th:

Feed consumed	Cost per 100 lbs.	Cost of quantity used
Buttermilk, 100 lbs.....	\$0.30	\$0.30
Crushed oats, 18 lbs.....	3.00	.54
Scratch feed, 110 lbs.....	3.60	3.96
Oyster shell, 8 lbs.....	1.00	.08
Lard renderings, 12 lbs.....	3.50	.42
Laying mash, 24 lbs.....	3.00	.72
Sprouted oats, 15 lbs.....		.38
Total cost of feed.....		\$6.40

Number of eggs produced, 205.
Value at average of 60 cents per dozen, \$10.25.
Profit for three weeks, \$3.85.

The total profit for the two months and three weeks was \$34.40, about 86 cents per hen. It must be admitted that the flock laid remarkably well during the month of December, and it was in this month that the greater part of the total profit was made, but even in November and January when the average daily egg production was approximately only 25 per cent., the birds returned a reasonable profit over the cost of feed. The figures quoted cover only two months and three weeks, but last year's records of similar flocks at the O. A. C. show that they gave an equally good account of themselves in the other months of the year.

It takes very little to lower the egg production, and consequently cut the profits. After the big storm of January 12th and 13th the roads in this district were so badly blocked that farmers could not haul cream into the local creameries, and for six days, Jan. 12th to 18th, our flocks had to go without buttermilk. During that time the trap-nested pullets were all given snow for drink and the mash contained lard scraps in order to keep them supplied with protein, but one pen of one hundred pullets were given only snow in place of buttermilk. The birds that were given the lard scraps continued to lay at about the same rate as they had been doing before the storm, but the egg production in the pen of birds given only snow dropped from 200 eggs for the week preceding the storm to 98 eggs for the week following it. After Jan. 15th they were given lard scraps daily, and after January 18th both lard scraps and buttermilk in an effort to bring the egg yield back to what it had been before the storm. Despite this, in the second week after the storm the flock laid only 79 eggs, and at the time of writing, January 30th, it is laying an average of 23 eggs per day, which would make the yield 161 eggs for the week, and that is still considerably below their former figure? Roughly speaking, those four or five days in which no protein was supplied to the flock resulted in a loss of at least 250 eggs, which, at the prevailing prices of 60 cents per dozen, meant an actual loss of \$12.50. Lard scraps for five days at the rate of one-quarter ounce to a hen per day would have cost not more than 30 cents. As a matter of fact, it would have paid to have given them porterhouse steak for those five days rather than let the egg production drop as it did.

In conclusion, it should be pointed out that not all pullets hatched late in April or early in May can be expected to show profits as large as did those about which this article is written. If all May-hatched pullets laid in December as well as these did the price of eggs would not have been so high. But what has been done once can be done again, and good stock, given good feed and the necessary attention, will still show a reasonable profit even if the price of feed is exceptionally high.

Wellington Co., Ont.

F. B. HUTT.

Care of Eggs For Hatching.

EDITOR "THE FARMER'S ADVOCATE":

Eggs are very often spoiled by careless handling. This is particularly true of eggs that have been shipped some distance. Some people will unpack the eggs at once and place them under a hen or in the incubator, and again some may even go so far as to shake the eggs to see if they will rattle. When air is kept from an egg for a certain length of time it will perhaps rattle a little and still be perfectly good. I would not advise this method of testing as it is too expensive.

When you receive your package of eggs see that the cover is secure and then invert the package and leave it undisturbed for a few hours where the temperature is between 55 and 60 degrees.

If saved from your own flock do not let them get chilled in any way and never gather them with soiled hands. A little oil or grease on the shell of an egg will spoil it for hatching purposes. See that your nests are supplied with clean nesting material so none will get soiled in them, and if you should have occasion to clean any eggs, wipe them off with a damp cloth but never use any soap for this purpose.

The best plan is to set eggs the day they are laid though it is not always convenient to do so. If they are to be kept a week or two they need special care in order to insure a good hatch. A good plan is to wrap them in paper, place them in a box and turn them every day until they are set for hatching. The temperature where they are kept should be neither too hot nor too cold, somewhere around 55 degrees being about right. A damp cellar is not a good place, nor near a fire. If the eggs are not turned the yolks will adhere to the shell and then the delicate membrane may be broken when the eggs are handled when set.

When eggs are properly cared for they will hatch nearly as well as two weeks old as if fresh, that is, if they are good for fertility in the start. Eggs of some fowls will keep in hatchable condition longer than others. Turkeys have shown them to hatch with good results after being kept for three weeks before setting, but it is hardly safe to take these chances.

Turkey eggs will keep all right for three weeks or more but they must not be left in the nest to get chilled. As turkeys generally begin to lay early and nearly always on the ground they will need to be watched in order to get their eggs before being chilled.

Middlesex Co., Ont. W. A. SHANKLIN.

HORTICULTURE.

Dominion-wide Fruit Conference at Ottawa.

The Dominion Fruit Commissioner, D. Johnson, has called a convention of fruitmen to meet at Ottawa on March 26 and 27. The representation is to be Dominion-wide, and matters of importance to all Canadian growers will be discussed. The following subjects will likely be brought forward for consideration:

1. A more definite and explicit definition of the No. 2 grade.
2. A definition of the No. 3 grade.
3. Provision for marking of open packages.
4. Section 321 (c) in regard to over-facing to be made more definite.
5. The proper filling of packages to be compulsory.
6. The standardization of packages:
 - (a) Uniform apple barrel.
 - (b) Uniform apple box for domestic use, with provision for permits for using an export box to comply with the trade requirements of any foreign country.
 - (c) Uniform peach, pear and prune box, and four-basket crate.
 - (d) Uniform apple crate.
 - (e) Standard berry box, preferably the Imperial pint and Imperial quart.
 - (f) Uniform berry crate.
 - (g) Standard basket.

Blossom End or Point Rot of Tomatoes.

EDITOR "THE FARMER'S ADVOCATE":

Last year our tomatoes all rotted, beginning at the blossom end. How can we prevent this? Does the big, green tomato worm cause it?

Ans.—This is the blossom end, or point rot of tomato. The green tomato worm has nothing to do with it. The disease was very prevalent last year and many tomatoes were destroyed by it. Bulletin No. 258, of the Ontario Department of Agriculture, treats it thus:

"This is another of the so-called physiological diseases, not being due to any organism but to some condition within the plant itself, probably induced by its environment. It is sometimes seen in Ontario and has occasionally been reported as causing serious loss by rendering useless tomatoes both under glass and in the field. It was very prevalent this summer, (1917), the fruits only are affected. The first symptom of the trouble is the appearance of irregular, water-soaked areas near the tip of the fruit, usually when it is about half grown. These water-soaked areas later become flattened or sunken, and dark green to dark brown in color, and of a hard, leathery texture. Various fungi and bacteria may gain entrance through these injured spots and induce rot which may destroy the whole fruit. There is very little exact knowledge concerning the cause or the control of this disease. Over-forcing of

the plants, especially in the early stages of their development, irregular watering, and heavy applications of farm-yard manure seem to make the plants liable to develop the trouble. Outdoors it is usually worse on light, sandy soils."

Seed Requirements for the Garden.

The following recommendations in regard to the amount of seed required per foot of drill may be of some assistance when making up the order. This is only approximate for the quantity required will depend, of course, in the way the seed is sown.

- Asparagus.—1 oz. to 100 ft. of drill; 2 lbs. will provide roots for 1 acre.
 Beans.—1 pint to 100 ft. of drill; 1 1/4 bus. per acre.
 Beets.—1 oz. to 50 ft. of row; 4 lbs. per acre.
 Brussels sprouts.—1/4 oz. to 100 ft.
 Cabbage.—1 oz. to 300 ft. of drill; 100 oz. produce 2,000 to 2,500 plants.
 Carrot.—1/2 oz. to 100 ft. drill; 2 1/2 lbs. per acre.
 Cauliflower.—1 oz. to 2,500 plants.
 Celery.—1/2 oz. per 100 ft. drill; 3 lbs. per acre.
 Corn.—1/4 to 1/2 pint to 100 hills; 1 peck per acre.
 Cucumbers.—1 to 2 ozs. to 100 hills; 1 to 2 lbs. per acre.
 Egg plant.—1 oz. produces 2,000 plants.
 Endive.—1/4 oz. to 100 ft. of drill; 4 1/2 lbs. acre.
 Kale.—1 oz. to 300 ft. of drill.
 Kohl-rabi.—1 oz. to 300 ft. of drill; 4 lbs. per acre.
 Leek.—1 oz. to 100 ft. of drill; 4 lbs. per acre.
 Lettuce.—1/4 oz. to 100 ft. of drill; 3 lbs. per acre.
 Melons (musk).—2 ozs. per 100 hills, 4 x 4 ft.; 2 lbs. per acre.
 Onion.—1/2 oz. to 100 ft. drill; 4 to 5 lbs. per acre.
 Onion sets.—1 quart to 50 ft. drill; 8 bus. per acre.
 Parsley.—1/2 oz. to 100 ft. drill; 3 lbs. per acre.
 Peas.—1 to 2 pints to 100 ft. drill; 1 1/2 to 2 1/2 bus. per acre.
 Peppers.—1 oz. produces 1,500 plants.
 Radish.—1 oz. to 100 ft. row; 10 to 12 lbs. per acre.
 Rhubarb.—1 oz. seed to 125 ft. of drill; 3 1/2 lbs. per acre.
 Salsify.—1 oz. seed to 100 ft. drill; 8 lbs. per acre.
 Spinach.—1 oz. to 100 ft. of drill; 5 to 6 lbs. per acre in drills; 30 lbs. per acre broadcast.
 Squash.—8 ozs. to 100 hills.
 Tomato.—1 oz. produces 2,000 to 2,500 plants.
 Turnip.—1 oz. to 200 ft. of drill; 1 to 2 lbs. per acre.

A List of Varieties For the Vegetable Garden.

The season is approaching when one should make a selection of vegetable seeds and obtain them. It may be difficult if left too late to procure the kinds wanted in all cases, and this may lead to some inconvenience or disappointment. The following list are recommendations only, as it is impossible to specify varieties to suit every taste and the varying conditions under which they will be grown in Eastern Canada. In many cases readers have tested them already, but where they have not it would not be a bad idea to consult some neighbor who usually has a good garden and has some idea in regard to the varieties best adapted to that locality. The crops which are more or less permanent in character are mentioned first in this list, then we shall mention the kinds that are usually transplanted, and then will come those crops which are seeded in the garden every spring.

Asparagus.—Palmetto, Argenteuil and Conover's Colossal are staple varieties of a paragon.

Rhubarb.—Victoria and Raspberry are two popular varieties.

Strawberries.—The varieties here depend very much upon soil and local conditions. A good all-round domestic berry is the Senator Dunlap. The Gandy is an early berry, but not an exceptional bearer. Michel's Early is also an early kind. The Glen Mary and Sample are two kinds which are popular in some districts. The Williams and Warfield do well when planted together; the latter is inferior in the flower. The Williams is very popular among growers who ship large quantities. Its green tip helps it to stand up in shipping, but detracts from its value for domestic purposes.

Celery.—White Plume, or Golden Self Blanching, are desirable varieties for the early crop. Paris Golden Yellow comes on in mid-season. For the later kinds, one can choose from Giant Pascal, Evans Triumph and Perfection Heartwell.

Tomatoes.—Chalk's Jewel is one of the best general-purpose tomatoes grown in the garden. Stone and Success are two varieties that are used considerably under field conditions. Bonny Best, Byron Pink, and Early Detroit are other varieties from which selection can be made. Earlianna is perhaps earlier than any of these, but it produces a very rough fruit. Chalk's Jewel, Bonny Best and Stone would make a very good collection.

Melons.—Rocky Ford, Emerald Gem, Huckensuk and Montreal Market are good kinds of musk melons, while Hungarian Honey and Cole's Early of the water-melon type are most likely to ripen.

Cabbage.—Jersey Wakefield is a good early variety of cabbage and Early Winningstadt is another. Copenhagen Market is in many cases considered a melon or autumn kind, while in other districts it is classed as early. For late, use Danish Ball Head or Drumhead Savoy. For a red variety, Mammoth Rock or Red Dutch will give good satisfaction.

Cauliflower.—Early Erfurt and Early Snowball should give good specimens of this crop.

Lettuce.—Make weekly sowings of lettuce and for varieties select from Grand Rapids, Black Seeded Simpson, Hanson, Big Boston, Paris White Cos, and Crisp as Ice.

Radish.—Radishes should be planted at intervals of a week or ten days Rosy Gem, Scarlet Turnip, White-Tip, and French Breakfast are good varieties. White Icicle is a good white radish. It is just as well to have two or three different kinds.

Peas.—For the early crop try Extra Early, Alaska, Nott's Excelsior, American Wonder, or Gradus. For late, use Advancer or Stratagem.

Beans.—For persistency in production try Hudson Wax. The vines produce over a long period and the quality of the product is good. Other suitable varieties are Keeney's Rustless Golden Wax, Detroit White Wax, Stringless Green Pod, Valentine, and Wardell's Kidney Wax.

Cucumbers.—For slicing, use Davis Perfect, White Spine, and Cumberland; for pickling, Westerfield, and Chicago Pickling are good.

Citrus.—Colorado Parsnerving and Red Seed are two varieties likely to give satisfaction.

Beets.—These should be planted for early summer use and again about the first of June for winter storing. Egyptian Turnip is an extra early kind. For moderately early, try Early Model or Eclipse. For late summer and winter, Detroit Red and Long Smooth Blood should be satisfactory.

Carrots.—Every gardener should at least try Chantenoise and he will make no mistake in using it for the main crop. Danvers and Rubicond follow closely for quality and yield.

Parsnips.—Hollow Crown is the standard variety of parsnips, while Guernsey is another one sometimes used.

Turnips.—The winter supply can usually be obtained from the field crop of swedes. For early in the garden try Extra Early, Purple Top Milan, or Golden Ball.

Pumpkins.—Sugar and Jumbo are two good varieties. Squash.—For an early squash see Crookneck, or White Best Scallop. Hubbard is a good late variety.

Corn.—Broadly speaking there is no better variety of garden corn than Golden Bantam. Plantings should be made at intervals of a week or ten days. Country Gentleman and Stowell's Evergreen may be planted for late use.

Onions.—The Yellow Globe Danvers, Prize Taker, Red Westerfield, Southport Yellow Globe, and Southport Red Globe, are the varieties most grown, with preference given to the first.

Spinach.—Try Victoria, Virofly and Bloomfield.

Egg Plant.—Black Beauty and New York Improved are two common kinds.

Kohl-rabi.—Early White or Purple Vienna are good. Vegetable Marrow.—Long White Bush and English Vegetable Marrow are common kinds.

Experience in Growing Turnip Seed.

EDITOR "THE FARMER'S ADVOCATE":

Having seen so much in the papers about the necessity of farmers growing their own turnip seed, we tried it, and I thought our experience, especially in turnip seed, might be of some little interest to some one contemplating raising their own seed, also the results obtained from such seed.

We select our seed turnips when we are pulling them, choosing medium-sized, smooth roots with a small neck and true to type. We find that we have better results if the turnip is left intact, merely breaking off the leaves. Our reason for doing so is this: A turnip with the roots cut off and tops cut close to turnip is much more likely to rot than if left otherwise. Another reason is that we get much more and better seed if left thus. The strongest seed stalks come out of the neck, whereas if it is cut off the only stalks we get are those that sprout out around the neck. These do not yield nearly as much seed, nor ripen so evenly.

The first year we grew seed we put out seed turnips in the orchard, which is a bad place, owing to the likelihood of certain kinds of birds nesting near. In this case the birds took a lot of our seed before it ripened thoroughly, necessitating cutting it or getting none at all. Maybe the birds in other localities would not bother so.

This seed, although not thoroughly ripened, gave a high percentage germination. In comparison with commercial seed of same variety it gave fully as heavy a crop. The roots were smoother, more uniform and had smaller necks and tops. The turnips from commercial seed rotted considerably. These were practically immune from rot. In the cellar late in the winter they were in much better condition than those raised from commercial seed.

Last summer we set out ten turnips from which we got 2 1/2 lbs. of No. 1 seed. The birds did not molest it at all. Last summer being so wet and warm when the seed was ripening caused the seed in the pods that ripened first to sprout, thereby spoiling it. This necessitated cutting the earliest ripened stalks first, leaving the others to ripen properly. Perhaps in a drier time one could cut it all at once.

Care must be taken in handling the stalks and in drying them, otherwise a loss of seed will result. The best way for a small amount is to hang it up somewhere, a barn floor for instance, or where something can be spread under to save the seed that falls out while it is drying.

As soon as the seed stalks attain full height they need to be supported. Wind and rain are very likely to knock them down if not. If turnips are set in rows a board fastened to stakes driven in the ground close

to turnips is them is sufficient apart in a row far apart for them apart, and yield would mean 90¢ price of \$1.50 per acre. Two is an exception probably would yielding so well fine condition. The temperature deal of the time to raise their serious shortage root seed can be Compton Co.

FAR

The Perth

The Perth consignment sale with a fair meat forty-five head the eight-year-old which was priced \$300. A number between \$200 and \$300. Followin over, with the

Abbekerk Tryn St. Mary's. Eliza Pontiac H Annie Abbekerk ford.

Lady Paladin, J Nancy Pietertje Ada Hartog, Jac Bessie Banks M Fairmont Alcart Fairmont Lady Fairmont Pontie Cornelia Kornd Mattie Mechthi Duchess Pontie Mary's.

Inka De Kol Ko Emma Mercena Nettie Grange, Fanny Grange, Greenfield P. W Mavourney Pie Princess Mary's Listowel.

De Kol Pauline Isabel Pietertje Woodland De K Maida Korndyk lanthe Mechthi Dublin.

Rosarden Galdy Molly Schuiling Daisy Schuiling K. S. W. Mechth Vernham Lula C Segis Hengervel May Houwtje P Julia Grange, London.

Colonel Pontiac King Vimy Ridge Imperial Merc Newton Lord Lyons Hen

The Th

EDITOR "THE F

In a recent asked the farm government org tricts threshers article, but here and well-manag sides three or fa talking with far opinion is not fa work." It is F cities and the city help in gen and promises en mer, and almost "worked" satisf very pleased. S of the threshern

In a great m silo filling. Las the bands were value lost. Son good results, b larger outfits in usually been run was so late in o lutely refused to

to turnips is the best. In fact, anything to support them is sufficient. The turnips were set about 3 feet apart in a row. Four feet would surely be sufficiently far apart for the rows. Set out four feet by three feet apart, and yielding at the rate we received last summer would mean 907½ lbs. per acre. This at the present price of \$1.50 per lb. for No. 1 seed would be \$1,361.25 per acre. Two and one-half lbs. seed from ten turnips is an exceptionally large yield. On a large piece it probably would not average as high. One reason for yielding so well is that the turnips came out of cellar in fine condition. They were kept from the light and air. The temperature was but little above freezing a good deal of the time. I think it would surely pay farmers to raise their own seed, especially as there is such a serious shortage because of the war. This shows that root seed can be raised successfully in this province.
Compton Co., Que. SUBSCRIBER.

FARM BULLETIN.

The Perth District Holstein Sale.

The Perth District Holstein breeders held their consignment sale at Stratford on March 13, and met with a fair measure of success. Thirty-seven, out of the forty-five head catalogued, sold for \$100 or over, and the eight-year-old cow, Abbekerk Tryntje De Kol Belle, which was practically a 25-lb. cow, changed hands at \$300. A number of the offering sold at prices ranging between \$200 and \$300, with a few up close to the latter figure. Following is a list of the animals selling for \$100 or over, with the names and addresses of their purchasers.

Females.

Abbekerk Tryntje De Kol Belle, Wm. Bolton, St. Mary's.....	\$300
Eliza Pontiac Hermes, G. C. McIntosh, St. Mary's.....	265
Annie Abbekerk Wayne 2nd, Donald Stewart, Stratford.....	200
Lady Paladin, John Archibald, Seaforth.....	285
Nancy Pietertje, Chas. Baird, St. Mary's.....	175
Ada Hartog, Jacob Kalbfleish, Stratford.....	145
Bessie Banks Mercena, John Archibald.....	165
Fairmont Alcartra Baker, P. Dill, Dublin.....	155
Fairmont Lady Alcartra, C. Keiller, Stratford.....	190
Fairmont Pontiac Maud, Frank Bell, St. Paul's Sta.....	205
Cornelia Korndyke Inka, W. J. Roger, Munro.....	160
Mattie Mechthilde, M. Ballantyne, Stratford.....	255
Duchess Pontiac De Kol, Geo. A. Strathdee, St. Mary's.....	200
Inka De Kol Korndyke, John K. Campbell, Stratford.....	195
Emma Mercena, Wm. Bolton.....	190
Nettie Grange, M. Ballantyne.....	275
Fanny Grange, Wm. Thistle, St. Paul's Sta.....	175
Greenfield P. W. Gertie, Jacob Kalbfleish.....	100
Mavourney Pietertje Beauty, Wm. Bolton.....	170
Princess Mary of Rosarden, J. Percy Davidson, Listowel.....	190
De Kol Pauline Mercedes, John Lowney, Britton.....	185
Isabel Pietertje Posch, John Lowney.....	190
Woodland De Kol 2nd, Reuben Jackson, Stratford.....	265
Maida Korndyke, Wm. Cornish, St. Paul's Sta.....	185
Ianthe Mechthilde Korndyke, Jno. J. Brennan, Dublin.....	130
Rosarden Galdys Canary, L. G. Cornish, Stratford.....	195
Molly Schuiling, M. Ballantyne.....	150
Daisy Schuiling Korndyke, Alex. Stewart, Newton.....	220
K. S. W. Mechthilde, M. Arbogast, Stratford.....	145
Vernham Lula Colantha, John R. Archibald.....	115
Segis Hengerveld Pontiac, C. Keiller.....	275
May Houwtje Posch, M. Arbogast.....	285
Julia Grange, Queen Alexandra Sanatorium, London.....	200

Bulls.

Colonel Pontiac, Reuben Jackson.....	100
King Vimy Ridge Colantha, Geo. C. McIntosh.....	115
Imperial Mercedes Korndyke, Henry Peffers, Newton.....	160
Lord Lyons Hengerveld, J. Mogk & Son, Tavistock.....	185

The Threshing and Silo-filling Problem.

EDITOR "THE FARMER'S ADVOCATE":
In a recent issue of "The Farmer's Advocate" you asked the farmers' opinion of the proposed scheme of government organized threshing gangs. In some districts threshers and machines appear to be a scarce article, but hereabouts we have at least three of as good and well-managed outfits as there are in Ontario, besides three or four others who do very fair work. In talking with farmers about this proposition, the general opinion is not favorable, because as they say, "it won't work." It is proposed to recruit threshers from the cities and the farmer is somewhat cynical regarding city help in general, remembering the manifold schemes and promises emanating therefrom last spring and summer, and almost all ending in promises. If it could be "worked" satisfactorily I think the farmer would be very pleased. Some of us would like to know the opinion of the threshermen on the subject.

In a great many districts the big fall problem is the silo filling. Last year much corn lay on the ground until the bands were rotten and considerable of the feeding value lost. Some tried the small power filler with fairly good results, but the majority have depended on the larger outfits in past years. These larger outfits have usually been run by threshers, but last year the season was so late in opening that they, in some cases, absolutely refused to fill silos. We need the feed as well as

wheat, and silage nowadays fills a big part of the cattle rations. I have heard farmers say they would not build a silo because of the difficulty of getting it filled. And it takes a lot of labor, whether filled by small or large outfit.

Possibly, as you suggested, the same scheme which proposes to help us with our threshing could also be extended to help fill the silos. If something satisfactory along this line could be evolved I am sure the farmers of this section of Elgin County would, as a general thing, hold up both hands for it. Most of our young men are in France and hired help is not to be gotten at any price. If the Government could and would do something for us instead of bombarding us with advice and blue books we would be very pleased.
Elgin Co., Ont. INTERESTED READER.

Experiments With Farm Crops.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1918 they are prepared to distribute into every township of Ontario material of high quality for experiments with grain, fodder crops, roots, grasses, clovers and alfalfas, as follows:

List of Experiments for 1918.

Number	GRAIN CROPS.	Plots
1	Testing two varieties of Oats.....	2
2	Testing O. A. C. No. 21 Barley and Emmer.....	2
3	Testing two varieties of Hulless Barley.....	2
4	Testing two varieties of Spring Wheat.....	2
5	Testing two varieties of Buckwheat.....	2
6	Testing three varieties of Field Peas.....	3
7	Testing two varieties of Spring Rye.....	2
8	Testing three varieties of Soy, Soja or Japanese Beans.....	3
9a	Testing seven varieties of Flint and Dent Husking Corn.....	7
9b	Testing three varieties of Flint Husking Corn.....	3
9c	Testing four varieties of Dent Husking Corn.....	4
ROOT CROPS.		
10	Testing three varieties of Mangels.....	3
11	Testing two varieties of Sugar Beets for feeding purposes.....	2
12	Testing three varieties of Swedish Turnips.....	3
13	Testing two varieties of Fall Turnips.....	2
14	Testing two varieties of Carrots.....	2
FORAGE, FODDER, SILAGE AND HAY CROPS.		
15	Testing the planting of Corn at six distances in the row.....	6
16	Testing three varieties of Millet.....	3
17	Testing two varieties of Sorghum.....	2
18	Testing Grass Peas and two varieties of Vetches.....	3
19	Testing Rape, Kale and Field Cabbage.....	3
20	Testing three varieties of Clover.....	3
21	Testing two varieties of Alfalfa.....	2
22	Testing four varieties of Grasses.....	4
CUINARY CROPS.		
23	Testing three varieties of Field Beans.....	3
24	Testing two varieties of Sweet Corn.....	2
FERTILIZER EXPERIMENTS.		
25	Testing Fertilizers with Rape.....	5
MISCELLANEOUS EXPERIMENTS.		
29	Testing three grain mixtures for Grain production.....	3
30	Testing three grain mixtures for Fodder production.....	3

The size of each plot is to be two rods long by one rod wide.

Any person in Ontario may choose any ONE of the experiments for 1918 and apply for the same. The materials will be furnished in the order in which the applications are received, while the supply lasts. Each applicant should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the county in which he lives.
C. A. ZAVITZ, Director.
Ontario Agricultural College.

The Seed Corn Situation.

EDITOR "THE FARMER'S ADVOCATE":
Supplies of seed corn usually available in Western Ontario for Canadian silage growers are this year insufficient to meet local requirements. The seed corn crop of the more northern states is also insufficient to supply home needs, which leaves as the only source of supply to Canadian silage growers the late varieties grown in or south of Kansas, Missouri, Tennessee and Virginia. These late varieties include Red Cob, Mastodon and Mammoth Southern Sweet which, although giving a large tonnage per acre are somewhat low in dry matter and make silage of rather poor quality. However, the silage growers of Eastern Ontario and the southern part of Quebec may this year consider themselves fortunate in obtaining even late varieties of seed corn. In districts where only the early varieties can be grown successfully, farmers may grow oats and vetches for silage or hay.

Canadian seed corn dealers negotiate their purchases direct with United States seedsmen and send their orders through the Toronto office of our Seed-Purchasing Commission for confirmation and assistance in securing

export permits and transportation. Dealers are allowed a net profit not exceeding five per cent. on car lots and seven and a half per cent. on less than car lots in wholesale quantities. Prices are not fixed, but will depend on the market when orders are placed.—Seed Branch, Ottawa.

The Glenboyle Dispersion.

On Monday, March 11, in the city of Woodstock, Ontario, there was held one of the most successful sales of pure-bred dairy cattle this Province has seen for some time, when the famous Glenboyle herd of high-producing Jerseys, owned by D. A. Boyle, was dispersed by public auction for the splendid sum of \$6,320, or a general average of \$252.80 for the twenty-five head sold. Beauty Maid of Woodstock, the champion R. O. P. four-year-old butter cow for Canada, made the highest price for the day, going to the well-known firm of B. H. Bull & Sons, of Brampton, Ont., while the second and third highest prices were paid by American buyers for the two bulls, Imperial Majesty and Imperialist. The former went to F. J. Kahler, of Plain City, Ohio, at \$500, while R. G. Swigart, of Sheffield, Ill., paid \$600 for the latter. Imperial Beau, another bull and a full brother to Imperialist, also went across the line, going to J. A. Shanklin, of Columbia, South Carolina, at \$225. The four bulls catalogued made an average of \$362; nine cows averaged \$321.65, seven one- and two-year-old heifers averaged \$189.28, and five heifer calves brought \$660, or an average of \$132. Following is a list of the animals sold, together with the names and addresses of the purchasers:

Females.

Beauty Maid of Woodstock, B. H. Bull & Sons, Brampton.....	\$1,200
Belle of Roslin Park, Jas. Isbister, Innerkip.....	210
Flora of Glenboyle, A. W. Moody, Guelph.....	215
Heifer calf, F. J. Kahler, Plain City, Ohio.....	125
Imperial Rose, F. J. Kahler.....	205
Twin Rose, F. J. Kahler.....	205
Imperial Flora, F. J. Kahler.....	270
Heifer calf, R. G. Swigart, Sheffield, Ill.....	150
Spring Bank Butter Girl, E. Craddock, Hagersville.....	275
Heifer calf, Experimental Farm, Ottawa.....	150
Fontaine's B. of Dentonia, J. A. MacPherson, Port Stanley.....	300
Imperial Belle, F. J. Kahler.....	125
Sadie Miss Polo, E. Craddock.....	170
Maid of Dentonia, J. A. MacPherson.....	175
Heifer calf, Experimental Farm.....	155
Imperial Miss Fox, J. Morley, Beachville.....	155
Heifer calf, F. J. Kahler.....	105
Pauline's Golden Gem, B. Blair, Woodstock.....	170
Imperial Golden Gem, R. G. Swigart.....	180
Imperial Gem, S. W. Hatch, Woodstock.....	180
Imperial Ruby, R. G. Swigart.....	150

Males.

Imperial Majesty, F. J. Kahler.....	500
Imperial Beau, J. A. Shanklin, Columbia, South Carolina.....	225
Imperialist, R. G. Swigart.....	600
Imperial Duke, E. A. Smith, St. Thomas.....	125

Special Stocker and Feeder Policy Discontinued.

EDITOR "THE FARMER'S ADVOCATE":
In the fall of 1917 the Dominion Live Stock Branch announced a Special Stocker and Feeder Policy, under which a fifty per cent. freight rebate was allowed on carlot shipments of cattle purchased at the Winnipeg Stock Yards and shipped from there to country points in Eastern Canada for feeding purposes. This action was taken in order to relieve the congestion at the Winnipeg yards and to prevent the exportation or slaughter of unfinished cattle by stimulating trade in the direction of the farms of Eastern Canada where rough feed was fairly abundant. The introduction of the Policy had the desired effect, and between October 15 and December 21, approximately 6,000 head of cattle were shipped East under its terms.

As was clearly intimated at the time of its inception, this form of assistance was regarded by the Department as a special measure introduced to take care of a temporary and more or less critical situation. During the past few weeks, however, the supply of feeding cattle at Winnipeg has barely met local demands and, consequently, it has been decided to discontinue the Special Stocker and Feeder Policy until further notice. Shippers will, accordingly, note that no shipments leaving Winnipeg after April 1, 1918, will be entitled to the fifty per cent. rebate.
Live Stock Commissioner. H. S. ARKELL.

The different dairy breed associations offer liberal prizes to winners in the various tests. Every breeder should strive to win a prize, not alone for its intrinsic value, but for the satisfaction of having a winning animal in his herd. Last year prizes went to some herds that were not in the lime-light, thus showing that the top-notchers are not all in the large herds. You may have a winner in your herd. Competitions are a wholesome method of inducing a breeder to do his best by his stock. Don't be discouraged if you are not in the money, but go after the prize the next year with renewed energy.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending March 14.

Receipts and Market Tops.

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

	CATTLE						CALVES						SHEEP					
	Receipts			Top Price Good Steers (1,000-1,200)			Receipts			Top Price Good Calves			Receipts			Top Price Good Lambs		
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending
	Mar. 14	1917	Mar. 7	Mar. 14	1917	Mar. 7	Mar. 14	1917	Mar. 7	Mar. 14	1917	Mar. 7	Mar. 14	1917	Mar. 7	Mar. 14	1917	Mar. 7
Toronto (Union Stock Yards)	4,199	2,730	5,428	\$12.00	\$10.75	\$12.00	891	681	983	\$17.00	\$14.00	\$17.00	425	299	511	\$19.50	\$15.25	\$19.50
Montreal (Pt. St. Charles)	491	500	924	12.00	11.25	12.00	1,166	732	918	16.00	13.50	16.00	43	56	77	17.00	14.50	17.00
Montreal (East End)	352	713	616	12.00	11.25	12.00	589	705	285	16.00	13.50	16.00	35	89	60	17.00	14.50	17.00
Winnipeg	1,623	2,888	1,002	12.50	10.50	12.25	61	151	184	14.00	10.00	13.50	33	70		17.00		
Calgary	1,552	1,107	1,338	12.00	8.50	11.75							142	300	498		13.00	

Market Comments.

Toronto (Union Stock Yards)

Forty-four hundred cattle were on sale during the week, twenty-four hundred being on sale on Monday, two hundred on Tuesday, and the balance on Wednesday and Thursday. The recent snow storms were responsible for few cars of stock being available for the Tuesday market and, with the moderate receipts on Wednesday and Thursday, a market on Monday which promised a week of slow trading with lower prices, developed into one of considerable activity later in the week. As a consequence, while prices were a trifle lower on most cattle on Monday they advanced fully twenty-five cents per hundred in a very active market Wednesday and held firm, the demand for cattle remaining strong at the close of the market on Thursday. The quality of the stock offered was only fair, many common cattle being on hand; however a better quality of stock is expected next week when shipments for the Easter trade will be made. Only a few heavy steers were on sale; of these the top price on Monday was \$12.25 per hundred for a steer of thirteen hundred pounds weight, while other sales were made during the week as high as \$12.50. Of steers weighing from one thousand to twelve hundred pounds, \$11.80 per hundred was paid on Monday for one load averaging eleven hundred pounds; this level was surpassed on Wednesday when four steers, of eleven hundred and forty pounds weighed up at \$12.50 per hundred, while several loads sold on Thursday at \$11.75 to \$12.25. The majority of this grading moved on Monday at \$11.00 to \$11.75, and at prices twenty-five cents higher on Wednesday. For steers and heifers under one thousand pounds, \$11.50 was about the top on Monday, while an advance to \$11.75 was made on Wednesday, on which day the majority of the sales for the best loads were made from \$10.75 to \$11.50. Cows were about steady at last week's prices, choice cows selling from \$10.00 to \$10.50, one or two reaching \$10.75 and \$11, while those of good quality sold from \$9 to \$9.75, medium from \$8 to \$8.75, and grass cows from \$7 to \$7.75. Bulls were in better demand than was the case last week, one choice bull of twenty-two hundred pounds selling at \$12.75, while another sold at \$11.50; these were exceptional prices however, only a few realizing above \$10. Stockers and feeders were about steady at last week's quotations; there is an increasing demand for this class of cattle. Calves were steady at \$17 for choice veal, and most of the sales were made from \$14 to \$16.50. Lambs and sheep were available in limited numbers and prices remained about steady, \$19.50 being the top for choice lambs, the majority selling at \$18.50 to \$19. Sheep were selling at steady quotations.

Hogs were in keen demand all week with prices scoring a new high level when \$20 per hundred was paid on the mid-week market. On Monday \$19.75 per hundred, fed and watered, was the quotation for selects, although a few sales were reported at \$19.95. On Wednesday \$20 was the ruling quotation, while one deck was weighed up at \$20.15. The market closed with a strong undertone on Thursday, on which day most of the sales were made at \$20 per hundred. Notwithstanding the high prices quite a number of light, unfinished hogs are being marketed.

CLASSIFICATION	No.	TORONTO		Top Price
		Avg. Price	Price Range Bulk Sales	
STEERS				
heavy finished	73	\$11.77	\$11.25-\$12.25	\$12.50
STEERS				
1,000-1,200 good	307	11.31	11.00-11.75	12.00
common	8	10.25	10.00-11.00	11.25
STEERS				
700-1,000 good	1,104	11.05	10.75-11.50	11.75
common	416	9.64	9.50-10.25	10.50
HEIFERS				
good	404	11.14	10.75-11.75	12.00
fair	534	10.20	9.50-10.50	10.50
common	47	9.23	8.75-9.50	9.50
COWS				
good	331	9.73	9.00-10.00	10.75
common	580	7.89	7.50-8.50	8.75
BULLS				
good	105	9.75	9.00-10.00	12.75
common	42	8.14	7.50-8.50	8.75
CANNERS & CUTTERS	183	6.25	6.00-6.50	6.50
OXEN				
CALVES				
veal	887	15.00	14.00-16.50	17.00
grass	4	8.00	7.00-9.00	9.00
STOCKERS				
good	7	9.18	8.50-9.50	9.50
fair	31	8.05	7.75-8.50	8.75
FEEDERS				
good	12	10.00	9.75-10.50	10.75
fair	15	9.65	9.00-10.00	10.00
HOGS				
selects	6,934	19.94	19.75-20.15	20.15
heavies				
(fed and watered) lights	154	18.37	17.75-19.00	19.00
sows	96	18.40	17.75-19.00	19.00
stags	18	15.92	15.75-16.00	16.00
LAMBS				
good	321	18.88	18.50-19.50	19.50
common	16	16.87	15.00-17.50	17.50
SHEEP				
heavy	37	12.00	11.00-13.00	13.00
light	34	14.00	13.00-15.00	15.00
common	17	8.17	7.00-10.50	10.00

No.	MONTREAL		Top Price
	Avg. Price	Price Range Bulk Sales	
68	\$11.25	\$11.00-\$11.50	\$12.00
3			
60	11.10	10.75-11.50	11.75
51	10.00	9.50-10.25	10.50
33	11.00	10.50-11.50	11.50
10	9.75	9.25-10.25	10.25
18	8.60	8.50-9.00	9.00
50	10.00	9.75-10.25	10.75
63	8.75	7.00-9.50	9.50
29	10.75	10.50-11.00	11.50
10	9.75	8.50-10.00	10.25
67	6.40	5.50-6.75	6.75
1,166	14.50	13.00-15.50	16.00
1,203	20.60	20.50-20.75	20.75
342	20.00	19.75-20.25	20.25
22	18.10	18.00-18.25	18.25
1			
19	17.00	17.00-	17.00
8			
8	13.10	13.00-13.25	13.50
8	10.00	10.00-	10.00

Of the disposition from the yards for the week ending March 7th, Canadian packing houses bought 253 calves, 102 bulls, 40 heavy steers, 4,051 butcher cattle, 12,966 hogs and 444 sheep and lambs. Local butchers purchased 427 calves, 489 butcher cattle, 110 hogs, and 123 sheep and lambs. Canadian shipments were made up of 37 calves, 15 milch cows, 21 butcher cattle, 328 stockers and 278 feeders. Shipments to United States points consisted of 26 butcher cattle.

The total receipts from January 1st, to March 7th, inclusive, were 42,697 cattle, 5,217 calves, 78,038 hogs and 8,954 sheep; compared to 43,816 cattle, 6,529 calves, 93,367 hogs, and 9,832 sheep, received during the corresponding period of 1917.

Montreal.

There was a sharp decrease in receipts of butcher cattle following the recent decline in prices and only eight hundred and fifty cattle were offered for sale, compared to fifteen hundred and fifty the previous week. The market opened firm and a very active trade developed largely on account of the strong buying by local butchers; as a result, prices were advanced from 25 to 50 cents per hundred, or almost to the level prevailing two weeks ago. The feature of the market was the sale of an Angus bull weighing seventeen hundred and sixty pounds for \$12.50 per hundred; this animal dressed out from sixty-two to sixty-three per cent. of the live weight. Of the sales made during the

week, eighteen steers averaging eleven hundred pounds sold at \$12 per hundred; the owner of this lot sold twelve head of much better quality steers at a similar figure the previous week. Light steers weighing from eight hundred to nine hundred and fifty pounds sold from \$9.50 to \$10.50 per hundred; those sold at this range would hardly grade as fair stocker cattle on other markets. Heifers sold in mixed lots with steers. Butcher cows were light in number, and under a good demand were readily sold. One cow of exceptional quality realized \$12 per hundred, while the majority sold from \$7 to \$10.75 per hundred; the demand for fat stock of this class is being partly filled by direct shipments from the Toronto market. Butcher bulls were few in number and those offered being of good quality and fair breeding sold around \$11 per hundred. Cannors and cutters were unchanged in price from the previous week, selling from \$5.50 to \$6.75 per hundred. Dry dairy cows in good flesh are still in strong demand. Receipts of calves continue to increase, there being seventeen hundred and fifty-four on hand during the week. The quality, however, is noticeably falling off; prices ranged from \$11 to \$16 per hundred.

Sheep and lambs were few in number; from \$13 to \$13.25 per hundred was paid for sheep of good quality, and \$17 for good lambs.

The market for hogs opened strong at

\$20.50 for selects, fed and watered, on Friday, advanced on Monday to \$20.75, and remained firm during the remainder of the week with indications of a further advance. One picked lot of very choice hogs sold to a local butcher at \$22 per hundred.

PT. ST. CHARLES.

Of the disposition from the yards for the week ending March 7th, Canadian packing houses and local butchers purchased 919 calves, 74 cannors and cutters, 50 bulls, 743 butcher cattle, 1,609 hogs, and 77 sheep and lambs. Canadian shipments were made up of 61 milch cows. There were no shipments made to United States points during the week.

The total receipts from January 1st to March 7th, inclusive, were 6,189 cattle, 3,022 calves, 11,630 hogs, and 4,944 sheep; compared to 7,857 cattle, 3,204 calves, 12,825 hogs and 4,332 sheep received during the corresponding period of 1917.

EAST END.

Of the disposition from the yards for the week ending March 7th, Canadian packing houses and local butchers purchased 762 calves, 477 butcher cattle, 928 hogs and 110 sheep and lambs. Canadian shipments were made up of 39 butcher cattle.

The total receipts from January 1st to March 7th, inclusive, were 6,357 cattle, 1,821 calves, 7,102 hogs and 4,523 sheep; compared to 8,980 cattle, 3,536 calves, 10,688 hogs and 5,714 sheep, received during the corresponding period of 1917.

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Incorporated 1885

The Molsons Bank

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

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

Savings Department at Every Branch. Interest at Highest Current Rate.

Buffalo.

Cattle.—Cattle trade was off last week, prices dropping generally a quarter on shipping cattle and this much decline was noted on common butchering cow stuff balance of the butchering offerings ruling about steady. The hide market of late has taken a good sized tumble, dropping from better than thirty cents per pound on the packers hides to around fifteen, so it was stated by buyers of good cattle. The decline in the hide market no doubt had its effect on the commoner butchering cattle but on the choice and better grades, there were not so many of these offered, as that they could not be readily sold at the previous week's prices. Best shipping steers the past week sold from \$13.25 to \$13.60, with the best handy butchering steers from \$11.50 to \$12.25 generally. Some handy steers on the yearling order reaching \$12.50. Best fat cows sold in straight loads around \$11.50, but they were heavy and very fat. Heifer stuff generally sold at about steady prices. Demand was good for stocker and feeder stuff and orders were not filled, as the killers took most of this class of stuff for slaughter. Bulls of all classes sold at about steady prices, with the trade on milk cows and springers about steady. Offerings for the week reached 3,700 head, as against 3,475 for the preceding week and 4,350 head for the corresponding week a year ago. There were a few Canadians among the week's offerings, best steers, which were on the ordinary order, selling at \$11.10. Quotations: Choice to prime, \$13 to \$13.60; fair to good, \$12.25 to \$12.75; plain, \$11.25 to \$11.75; very coarse and common \$10.50 to \$10.75.

Shipping Steers—Canadians—Best \$12 to \$12.50; fair to good, \$11.25 to \$11.75; common and plain, \$10 to \$11.

Butchering Steers—Choice heavy \$11.75 to \$12.25; fair to good, \$11.25 to \$11.50; best handy, \$11.25 to \$12; fair to good, \$10 to \$11; light and common, \$9 to \$9.75; common, \$7 to \$8; very fancy fat cows, \$10 to \$10.50; best heavy fat cows, \$9.50 to \$9.75; good butchering cows \$8.50 to \$9; medium to fair, \$7 to \$7.50; cutters, \$6 to \$6.75; canners, \$4.50 to \$5.75.

Bulls.—Best heavy, \$10 to \$11.50; good butchering, \$9 to \$9.50.

Stockers and Feeders, \$9.50 to \$10; common to fair, \$8.50 to \$9.25; best stockers, \$8.50 to \$9; fair to good, \$7 to \$8; common, \$6 to \$6.50.

Milchers and Springers.—Good to best, (small lots), \$90.00 to \$120.00; in carloads, \$80.00 to \$100.00.

Hogs.—Prices last week held up better than generally expected. Monday heavies ranged from \$18.60 to \$19.00, bulk of the yorkers and mixed grades moved at \$19, few \$19.10 and pigs reached up to \$18.50 and \$18.75. Tuesday's range was from \$18.50, to \$19 with no heavies above \$18.75, and pigs landed from \$18.25 to \$18.50.

Wednesday's trade was strong to a dime higher, Thursday the market was mostly a dime lower and Friday's trade was steady to a dime higher. The fifth day of the week showed heavies selling from \$18.50 to \$18.75, yorkers and mixed grades landed mostly at \$19, few \$19.10, and bulk of the pigs landed at \$18.75.

Roughs were steady all week, bulk going at \$17., and stags ranged from \$14.50

down. Receipts last week totaled 21,400 head, as against 19,761 head for the week before and 16,600 head for the same week a year ago.

Toronto Produce.

Live stock receipts at Union Stock Yards, West Toronto, Monday, March 18, were: 179 cars, 2,671 cattle, 319 calves, 2,419 hogs, and 113 sheep and lambs. Cattle market, strong, top for loads of butchers thirteen cents, and baby beeves fourteen cents. Cows and bulls 15 cents to 25 cents higher. Stockers and feeders, active, prices steady, milkers and springers slow. Lambs 25 cents higher, top 20 1/2 cents. Sheep and calves, strong. Hogs, \$20.25 per cwt., fed.

Breadstuffs.

Wheat.—Ontario (basis in store Montreal) No. 2 winter, per car lot, \$2.22. Manitoba wheat (in store, Fort William, including 2 1/2% tax)—No. 1 northern, \$2.23 1/2; No. 2 northern, \$2.20 1/2; No. 3 northern, \$2.17 1/2; No. 4 wheat, \$2.10 1/2.

Oats.—Manitoba (in store, Fort William)—No. 2 C. W., 93 3/4%; No. 3 C. W., 93 3/4%; extra No. 1 feed, 92 3/4%; No. 1 feed, 90 3/4%.

Oats.—Ontario, No. 2 white, 95c. to 96c.; No. 3 white, 94c. to 95c., (according to freights outside.)

Peas (according to freights outside)—No. 2, \$3.70 to \$3.80.

Barley (according to freights outside)—malting, \$1.83 to \$1.85.

Buckwheat (according to freights outside)—\$1.83 to \$1.85.

Rye (according to freights outside)—No. 2, \$2.50.

American corn (track Toronto)—No. 3 yellow, kiln-dried, \$2.05.

Flour.—Ontario (in bags, prompt shipment)—War quality, \$10.70, Montreal and Toronto, new bags. Manitoba flour (Toronto)—War quality, \$11.10.

Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$17 to \$18; mixed, \$14 to \$16.

Straw.—Car lots, per ton, \$8.50 to \$9.

Bran.—Per ton, \$35; shorts, per ton, \$40.

Hides and Wool.

Prices delivered, Toronto: City Hides.—City butcher hides, green, flat, 15c.; calf skins, green, flat, 20c.; veal kip, 20c.; horse hides, city take off, \$5 to \$6; sheep, \$2.50 to \$3.50.

Country Markets.—Beef hides, flat, cured, 16c. to 17c.; deacon or bob calf, \$1.50 to \$2.25; horse hides, country take off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$3.50. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solid, in barrels, No. 1, 12c. to 13c.; cakes, No. 1, 14c. to 16c.

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

Country Produce.

Butter.—Creamery butter firmed slightly during the past week but the dairy variety kept stationary with only a very light demand. It is now selling as follows, wholesale: Creamery, fresh-made pound squares, 51c. to 52c. per lb.; creamery solids, 49c. to 50c. per lb.

Oleomargarine, 30c. to 32c. per lb.

Eggs.—New-laid eggs again eased slightly in price selling as follows, wholesale: new-laid No. 1, 46c. to 47c. per dozen; selects at 49c. per dozen.

Cheese.—Old, 30c. per lb.; new, 24c. per lb.; new twins, 24 1/2c. per lb.

Honey.—Honey is off the market none being obtainable on the Toronto wholesale.

Poultry.—Receipts continued to be light, but prices kept practically stationary as there has not been a very heavy demand—the one exception being for live fat hens which have been quite active owing to the near approach of the Jewish holidays: Chickens, milk-fed, 30c. per lb.; chickens, ordinary fed, 24c. per lb.; fowl, 3 1/2 lbs. and under, 22c. per lb.; fowl, 3 1/2 lbs. to 5 lbs., 25c. per lb.; fowl, 5 lbs. and over, 30c. per lb.; ducklings, 25c. per lb.; geese, old, turkeys, young, 25c. per lb.; turkeys, old, 22c. per lb. (These are the live-weight prices now being paid to the producer.)

Beans.—Beans are still scarce and prices quite firm at \$6.75 per bushel for the Japanese hand-picked white variety (wholesale).

Wholesale Fruits and Vegetables.

Apples—Boxed apples continued to

The Road to Independence

Trouble comes to all of us at one time or another.

The man with a snug bank account, is fortified against the "slings and arrows of outrageous fortune".

It is the duty of every man to lay aside something for the inevitable rainy day.

Open a Savings Account today—and take your first step along the road to Independence.



THE MERCHANTS BANK

Head Office: Montreal, OF CANADA Established 1864. With its 102 Branches in Ontario, 32 Branches in Quebec, 19 Branches in Manitoba, 21 Branches in Saskatchewan, 53 Branches in Alberta, and 8 Branches in British Columbia serves Rural Canada most effectively. WRITE OR CALL AT NEAREST BRANCH.

have a ready market at \$2.75 to \$3.25 per box for choice quality Wine Saps, Rome Beauty and Spitzenbergs: The Ontario barreled varieties bringing \$4 to \$7 per bbl., according to variety and quality; Nova Scotias being exceptionally slow at \$2.50 to \$4.50 per bbl.

Montreal.

Horses.—With the exception of some demand from farmers, for ordinary grades, very little is going on in the horse market. Heavy draft, weighing 1,500 to 1,700 lbs., selling at \$250 to \$300; light draft, weighing 1,400 to 1,500 lbs., \$175 to \$225; light horses, \$125 to \$175 each; culls \$50 to \$75, best saddle and carriage horses \$175 to \$250 each.

Poultry.—Receipts of fresh poultry are exceedingly light, and as a consequence the market continued very firm throughout. Turkeys were selling at 35c. to 36c. per lb., and milk-fed chickens at same figure, good stock ranging around 30c. to 33c. Best fowl sold at 27c. to 30c. and ordinary down to 23c. Ducks 26c. to 30c.

Dressed Hogs.—No change took place in the market for dressed hogs. Prices were steady at 28c. to 28 1/2c. per lb. for fresh-killed, abattoir-dressed, and at 25c. to 25 1/2c. for country dressed.

Potatoes.—The tone of the potato market is easy, now that the weather is more favorable for shipments. Prices were lower and further declines were expected. Green Mountains were quoted at \$1.90 to \$2.00 per 80 lbs., ex-store. Ontario whites were \$1.80 to \$1.85 and reds at \$1.75.

Honey and Maple Syrup.—It was said that some new maple syrup had arrived, but it was impossible to find it. Old syrup was quoted at around \$2 per gallon, and sugar at 20c. Honey was unchanged 22c. per lb. for No. 1, and 19c. to 20c. for No. 2, and for brown comb and white extracted.

Eggs.—Prices were tending downward, but were not altered sensationally during the week. Fresh gathered Canadian stocks was said to be selling at 50c. per doz., and some quoted American eggs at the same price, while others made a range of 2c. to 3c. between these two. It is thought that there will be a considerable decline before Easter, because of the present high price, and the mild weather.

Butter.—Although the market for creamery held fairly firm, there was some decline in creamery and finest fall makes were quoted at 49c. with fine at 48c. Current receipts were quoted at 47c. and dairies at 40c. to 41 1/2c.

Cheese.—Commission prices were 21 3/4 cents for No. 1; 21 1/4c. for No. 2 and 20 3/4 cents for No. 3 per lb.

Grain.—No. 3 Western oats and extra No. 1 feed were being quoted at \$1.08 1/2 per bushel, ex-store. No. 1 feed was \$1.06; No. 2 feed, \$1.03 1/2, while Ontario No. 2 white oats were \$1.08; No. 3 being \$1.04, and No. 4 being \$1.03. Ontario malting barley sold at \$1.88 per bushel, ex-track.

Flour.—Prices were unchanged at \$11.10 per barrel, of Government standard Manitoba spring wheat grades, in bags, f. o. b. Montreal, for shipment to country points, and at \$11.20 delivered to city bakers, and \$11.30 in smaller lots. Ontario Standard winter wheat flour sold at \$11.10 to \$11.50 per barrel, in bags, ex-store, while rye flour was firm at \$6.05 per bag.

Millfeed.—Bran was firm at \$35;

shorts \$40; mixed mouille \$60 to \$62; pure grain mouille \$68 to \$70, per ton, in bags, in mixed car lots.

Baled Hay.—The market was firm, No. 2 baled hay selling at \$17; No. 3, at \$15.50; and clover mixture at \$12 per ton, ex-track.

Seeds.—Dealers reported a liberal supply of all classes of hay seed, and a good demand from country points. They quoted as follows, f. o. b., Montreal: timothy 9c. to 14c. per lb.; red clover, 36c. to 40c. per lb.; and alsike 22c. to 29c. per lb.

Hides.—The market for hides was dull, but moderately steady. Some spring lamb skins were selling at 25c. each, while sheep skins were \$4.50. Veal skins were 34c. to 36c. and beef hides 15c. to 16c. and 17c., Montreal inspection, and 19c. for steers, 13c. for cows, and 12c. for bulls, flat. Horse hides \$5 to \$6 each. Tallow 3 1/2c. per lb. for scrap fat; 8c. for abattoir fat, rendered tallow 51c. to 16 1/2c. per lb.

Chicago.

Cattle—Beeves, \$8.90 to \$14.75; stockers and feeders, \$8.25 to \$12.25; cows and heifers, \$7.15 to \$12.10; calves \$10.50 to \$16.75.

Hogs.—Light, \$17.30 to \$18.05; mixed, \$16.90 to \$18; heavy, \$16.35 to \$17.60; rough, \$16.35 to \$16.55; pigs, \$13.75 to \$17.35.

Sheep.—Native, \$11 to \$14.50. Lambs—Native, \$14.50 to \$18.40.

Cheese Markets.

Montreal, finest westerns, 21 3/4c.; finest easterns, 21 1/4c.; New York, specials, 25c. to 26c.; average run, 24 1/4c. to 25c.

Sale Dates.

March 21, 1918.—Henry Arkell & Son, R. 2, Guelph, Ont.—Oxford Ewes and Ewe Lambs, Horses, Implements, etc.

March 21, 1918.—Allison Stock Farm, Chesterville, Ont.—Holsteins.

March 21, 1918.—H. P. Kennedy at Union Stock Yards, Toronto.—Shorthorns.

March 26, 1918.—Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.—Ayrshires, Holsteins, Clydesdales.

March 27, 1918.—Chas. E. Rogers, Ingersoll, Ont.—Jerseys.

March 27, 1918.—Southern Counties Ayrshire Breeders, Woodstock, Ont.—Ayrshires.

March 27, 1918.—Ira B. Vannatter, R. 1, Georgetown, Ont.—Shorthorns, implements, etc.

March 28, 1918.—G. A. Brethen, Norwood, Ont.—Holsteins.

April 2, 1918.—N. S. Washington, Solina, Ont.—Holsteins.

April 2, 1918.—Brant District Holstein Breeders' Club Consignment Sale, Brantford, Ont.—Holsteins.

April 2 and 3, 1918.—Ontario Consignment Sale Company, London.—Shorthorns.

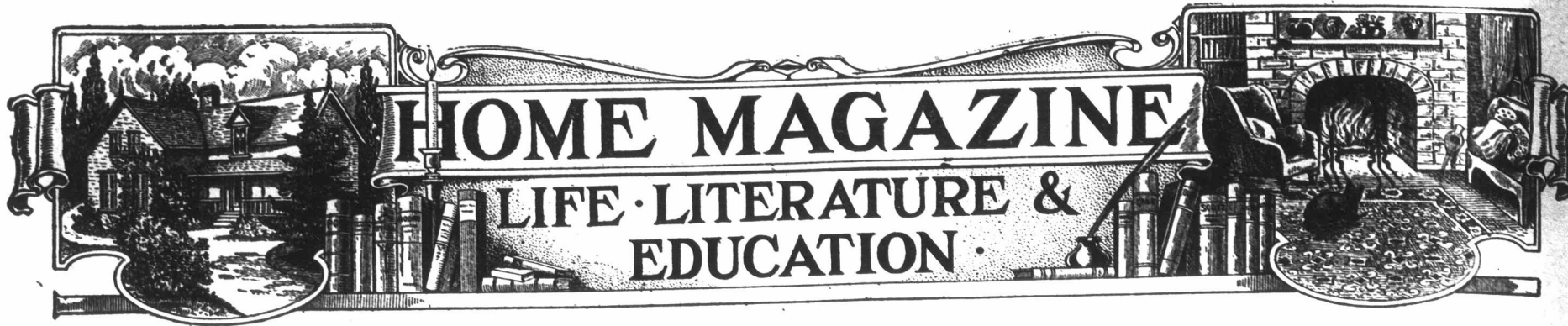
April 2, 1918.—Menie District Ayrshire Breeders' Club, Campbellford, Ont.—Pure-breds.

April 3, 1918.—Belleville District Holstein Breeders' Club Consignment Sale, Belleville, Ont.—Holsteins.

April 5, 1918.—Dunrobin Farms, Beaver-ton, Ont.—Holsteins.

April 10, 1918.—T. G. Gregg, R. 5, Ingersoll, Ont.—Holsteins.

June 11, 1918.—Dr. A. A. Farewell, Oshawa, Ont.—Holsteins.



My Minstrel.

BY GRACE STONE FIELD

Came a minstrel to my window, yesterday;
Blithely sang a rondel, lilting, gay—
Piped of skies that span the southland fair;
Prated, soft, of orange flowers there.
Sang, though northern skies were dun and drear,
Of some sweet to-morrow, almost here!
Robin—troubadour in rusty red—
Fearless of white Winter, scarcely fled;
Bright embodiment of hope and cheer,
Springtime has no herald half so dear!

Agriculture in Ontario Schools.

BY J. B. DANDENO, PH.D. (HARV.), INSPECTOR OF AGRICULTURAL CLASSES IN ONTARIO.

THE term "High Schools" includes Continuation Schools and Collegiate Institutes. At the present time there are 23 High Schools in which classes in agriculture are maintained. Some of the largest as well as the smallest schools are included in this number. The first classes were introduced, under the present arrangement, in 1913 in one or two schools.

The subject is optional and may be used as a bonus at the Departmental Examinations, covering the work of the Lower School. At the present time there are about 800 High School pupils who are taking this subject, but it is handicapped, to some extent, because of a crowded curriculum of obligatory subjects, and because Latin is obligatory for Matriculation, and may also be used as a bonus for Normal Entrance in the Middle School. This difficulty will remain so long as the Universities dominate the schools as they do with respect to the subjects for Matriculation.

The schools that have made a start have already made marked progress in this regard and are giving assistance to the rural communities such as was never given before.

There is little difficulty in introducing this subject, even with what seems a crowded course of study, when the nature and scope of the work are understood.

Moreover, the schools which are conducting classes in agriculture are assisting materially in food production at the present time. See the illustrations here given which explain themselves. The agricultural classes provide also a course of training for pupils, which render such pupils more efficient when called to the farm under the regulations of Circular 27.

Three of these schools have reached out still further and have established Departments of Agriculture which provide more extensive work in this branch, and also provide farm mechanics and short courses during the winter months. These schools are Whitby, Oakville and Drayton.

The grants for either scheme, that is for classes or departments, are quite liberal—in fact, so liberal that nearly all the burden of expense is borne by the Department of Education.

The chief difficulty is to secure teachers qualified for the work. But this difficulty should not be so great in view of the fact that the courses may be taken during summer sessions at the O. A. C., and without expense to the teacher.

Through the Eyes of a Canadian Woman in England.

The miner and the merchant
Are both brave men.
See them both in khaki,
They do not differ then—
One 'mid death and danger,
In deed and daring one,
And these shall still be comrades
When the course of war is run.

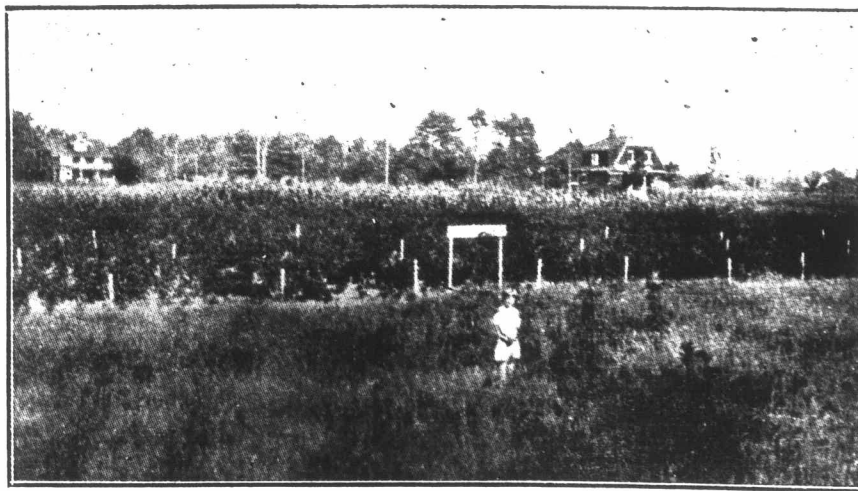
The statesman and the workman
Are both true men.
See them with one purpose,
They do not differ then—
One who guides a nation,
One who makes a gun,
And these shall still be kindred
When the new day greets the sun.

The statesman and the workman
Shall be of one estate;
The miner and the merchant
Shall be as mate to mate;
The sham of caste has crumbled,
Man knows his brother's worth,
And these shall be of one blood
When the new dawn greets the earth.

BY the time this long war is over we look for a new era, when men will be judged by what they are and can do, instead of who they are and what they possess—and the warrior bold, whether the spurs he has won be of gold or some baser metal, will be in possession of the field. There is no distinguishing mark by which one can recognize a duke or a millionaire in the street, but the man in khaki stands on his own. Every soldier who passes by is a hero in the eyes of a child, and old men follow him with envious eyes, regretting that their own youth had gone before their opportunity came. As for the fair sex, everyone knows what they think.

and over the cot-bed in one corner was spread a gay cretonne coverlet to give it the appearance of a couch. All the other necessities of a war-time existence were tidily arranged, and I must not forget to mention the bowls of growing narcissi that stood on a table before the window, whose fragrance met me with sweet welcome as I entered. There was an air of homeliness and rare comfort about this officer's war-time ménage which fascinated me, and I felt that I could be quite content to live the simple life in just such a little shack. The men at this camp have been here so many months awaiting moving orders that the huts seem now to reflect the personality of their occupants.

In proceeding through the "streets" of this big camp it was good to see again so many Canadian boys together, all looking very fit and conducting themselves in a manner which makes one very proud of our army. I spent a very happy afternoon chatting with old friends, and before leaving in the evening took in a performance of Barrie's delightful little play "Quality Street" at the camp theatre. A comfortable little theatre it is, and it is nice to feel that our men have such opportunities of listening to clean, wholesome plays and good music. Almost every night in the week some form of entertainment is provided for them, either free or at very moderate prices. Occasionally they give a concert themselves. I had the pleasure of listening to a splendid one a few weeks ago. It was given by a very well-known band of 35 members belonging to a Maritime Province regiment. Some English musicians who were of our party were unable to conceal their astonishment that "the Colonies" could produce such a band. One turning to me said, "Your Canadian people must be very musical, are they not?" Then a big Sergeant rose and sang with great power and feeling one of the new war-songs, and my interlocutor wanted to know "if he were not a professional singer." The



Oakville High School "Greater Production."

Two and a-half acres of "real estate" made to produce.

One day recently I was very bored, and felt that nothing would refresh me like a visit to camp. So I hurriedly squeezed into the shaky old "bus" and started. It is always inspiring when one draws near a Canadian camp. The quiet country road is changed into a busy street, as soon as "tin-town" is reached. Motors of all descriptions rattle past laden with supplies, and on all sides are men drilling, horses being trained, and bands playing. The hut I visited had a very homely appearance. A bright fire was burning in a tiny stove. On one side of the wall was a long shelf covered with crepe paper but in tenuous design at the edge, which was used for neat rows of books, as well as photographs. Here and there on the white scrubbed floor were pieces of carpet. A large willow chair stood before the fire,

concert closed with a splendid rendering of "O Canada" followed by God save the King. What an inspiration to the battalion this meagre may prove itself to be in the "long haul" in France!

THE food question in England is still the chief one, and it is very difficult to switch on to it. What a pity it is as much depends on the latest days when there were no shortages for all of it. A new way of preparing the latest sensation. You know the butter is cream, they add gradually to it such quantity of milk which has been heated, then added to their milk, as it will

absorb. I saw a block done in this way, after it had been allowed to "set" overnight, and it looked very nice, but being margarine I was not tempted to taste it. It is difficult for Canadians with their fastidiousness in regard to butter to take kindly to the substitute like English people, who have been using it so many years that they have become quite accustomed to it. Fat for frying, of course, is the greatest luck just now, and people are trying all sorts of substitutes, olive oil, which is the best one, being both scarce and expensive. A lady showed me today a pound of cocoa-butter which she had got from her grocer, and which she was taking home to experiment with. I fear she will be disappointed in the result. My landlady treated me to a delicious dish of cherries for supper one evening, which retained the flavor of the raw fruit perfectly. As I am always interested in such things I enquired her method of preserving them. She said she got the recipe from a market woman in the north of England who made a specialty of them for years, but whose conscience prompted her to part with the secret last summer when people were scrambling for some sugar to keep their fruit from wasting. Take a screw-top jar, and pack into it the raw cherries (or other fruit), set it into a larger vessel and pour in cold water till it is considerably above the jar of fruit. When the water becomes perfectly still and free from bubbles, put your hand under the water and screw on the top of the jar securely. In this way there is no chance for any air to get in, and behold the process is complete! When you want to use your fruit, turn it out and add a small quantity of sugar, much less than you would require for cooking fruit in the usual way. "If I were never a good housekeeper before, I shall be by the time the war is over," one often hears people exclaim. The difficult lessons in statecraft and economy which we as a nation are learning will certainly prove of lasting value to us as well as to the next generation. The sad pity of it is that "the dark shadow and valley of death" must be a necessary part of the chastening!

I have often mentioned in my letters the variety of soldiers one meets in a day's walk here, and I thought I had seen samples of every kind in the British Isles, until a day or two ago, when I was suddenly confronted by a body of men the outline of whose head-gear was strikingly unfamiliar. I realized all at once that they were German prisoners. They were being conducted to a large estate where they were to be put to work on the land. All were quite young, of pasty complexion and meek in deportment. Between the shoulders of their tunics was a large circle of blue cloth. I wondered if they were expecting to be hailed as they passed through the streets with torrents of abuse, or to be spat upon or even stoned? People looked at them with mingled curiosity and pity and that was all. I wish we could be sure of the same treatment for our prisoners in Hunland. These men, I learned later, are paid a decent wage, and allowed the same rations as the rest of us. (I was about to comment on this but a verse from the Sermon on the Mount has come into my mind and I refrain.)

HAVE you heard of the wonderful salvage system which is put into practice in our armies in France? After an engagement has taken place, everything that can be used again, such as guns, bayonets, harness and clothing—even a single boot is not left to waste—is collected from the battle-ground and stored in warehouses.

Then the articles are repaired and got ready for future use. I am told that poor, homeless old French women do most of the gruesome sorting out in the first

place. There is a here in England with a hand or piece waste paper. The old empty tin orders all used to shipped out of the not give away section of these), and camp kitchens, even saved until it could be taken from the cigarette and other into balls and re-turer. And only has made a good by collecting used all her friends: a said they were utility of papier-mâché. coming an industr

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BY

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place. There is a salvage going on over here in England too. Every week a girl with a hand or pony cart calls for all our waste paper. The grocers buy back all the old empty tins; according to military orders all used tea-leaves are dried and shipped out of the camps, (but one must not give away secrets as to the destination of these), and all fat is collected from camp kitchens, even the dish-water being saved until it cools, when all grease can be taken from the top. The tinfoil from cigarette and other boxes is saved, rolled into balls and returned to the manufacturer. And only to-day I met a girl who has made a good sum for the Red Cross by collecting used postage stamps from all her friends and selling them. She said they were utilized in the manufacture of papier-mâché. Oh, we are fast becoming an industrious and saving nation!

SIBYL.

Medical Inspection of Schools.

BY "THE OWL."
Paper X.

I had not intended writing on this subject to-day, but public health questions seem to be so much in the air, of late, that the time seems opportune for adding my little word to the general accumulation.

As I see it, medical inspection of schools is not only advisable but an absolute necessity. Every township, at least, should have its paid nurse,—not any nurse who has graduated from a hospital, but one with exceptional qualifications, who has passed high in all tests and is especially skilful in the diagnosis of disease. Upon her recommendation a yearly clinic should follow as a matter of course.

Once I heard a man say, in irate tones: "What do we need a school nurse for? All a useless piece of expense, I call it! I know when my children need a doctor! I don't need no trained nurse to come and tell me when my children are sick!"

A little later someone remarked that his little boy seemed to have a bad cold.

"Oh yes," he said, "Frank has a cold all the time. He's got catarrh, I guess. I spent five dollars on catarrh remedy for that boy last year, but it don't seem to do no good. I guess I'll have to change the medicine."

"Have you ever taken him to a doctor?"

"Oh no. It's catarrh all right. No use takin' him to a doctor."

"It looks to me like adenoids," ventured the other.

"Like what?"

"Adenoids."

"What's them?"

"Why lumps that grow in the back of the nose. When a child has them he has to breathe through his mouth all the time, especially at night. The symptoms often appear like those of cold."

"Are they dangerous?"—evidently he was alarmed, for he was fond of his boy.

"They may be. They are hard on the general health, and are often complicated with throat and lung troubles."

"Hey?"

"With throat and lung troubles. Besides they have a tendency to make it hard for a boy to study. I'd see a good doctor if I were you."

... He did, and afterwards thanked the person who advised him, and who had had no medical training whatever. It almost goes without saying that he would have resented the advice had it come from a trained school nurse. His prejudice would have made his ears deaf to her.

WITH a skilful trained nurse—and a public ready to listen to her—such things as adenoids and diseased tonsils should be kept absolutely under control in any community, general school conditions that make for the health of the children should be established, and eye and ear troubles rectified,—in short, a healthier, happier, more capable people should be built up.

Communicable diseases, too, can be kept under better control where there is a school nurse, but in rural districts, where her visits cannot be made so often as in the city schools, she must secure the active cooperation of the teachers in order to secure results.

In this case one of her duties will be to instruct the teachers, and so make them her assistants in this health detective work, depending upon them to notify parents in case of suspected cases of

measles, whooping cough, scarlet fever, diphtheria. It will then rest with the parents to secure medical attention, and with the doctor to notify the Health Officer of the district. In light cases, e. g., chicken-pox, where a doctor is not called, the parents should understand that they must notify the Health Officer. —Only by such rigid care as this can such diseases be kept within bounds and prevented from becoming epidemic.

There was an old fashioned idea that measles, mumps, chicken-pox and whooping cough were diseases that children had to have, that if they didn't have them then they would be sure to when they grew up, and very much harder at that. It is known that this is arrant nonsense, that neither children nor grown folk should have them, and that, were it only because of the ill effects that may follow, they should be stamped out as any other plague should be.

The first step in checking any epidemic among children is, of course, to keep the affected home from school and Sunday School; and for the help of both teacher and parents it might be well for the school nurse to construct, with the help of a district doctor or the Health Officer, a list of indications of disorders for which a child should be isolated. These, printed on cards, and given to teachers and parents, would do much towards checking epidemics.

As an example, the following, compiled in one district in the United States by a medical committee, and published in the "Journal of Education", may be suggestive:

Indications of health disorders in children for which parents should keep children at home and notify the school: Nausea or vomiting, chill, convulsions (fits), eruption (rash) of any kind, red or running eyes, sore or inflamed throat, fever, acutely swollen glands, cough, running nose, failure to eat the usual breakfast, dizziness, faintness or unusual pallor (alarming paleness of the face), any disturbing change from usual appearance or conduct of child.

The foregoing signs should be used also by teachers as a basis for excluding pupils from school for the day, or until signs have disappeared, or until the proper health officer has authorized the return of the pupil to school.

No child should ever knowingly be exposed to a communicable disease. The older a child is before exposed by accident to a communicable disease the less likely he is to take it. The older a child is before catching a contagious disease the less serious, on the average, it is likely to be. Protect the children from contagion!

Sneezing and coughing spread disease unless precautions are used.

Use your handkerchief to cover a sneeze or a cough.

Try to avoid sneezing, coughing or blowing your nose in front of others.

IN China the old rule (I have never heard that it has been changed) was for each family to pay a doctor for keeping its members in health. If anyone fell ill the pay ceased!

We may not come to that in this country, but as the years go on, we shall, I think see the good commonsense of having doctors paid by the Government to keep the health of the public as free from disease as possible. As things are to-day a doctor in a healthy community can scarcely be blamed if he is rather glad when someone becomes ill enough to send for him; he is only human, and his living depends upon just such cal-

amities. When things move on to the plane which has just been suggested, he will feel badly when a case of illness occurs among his people, while he will regard an epidemic as something of a disgrace—an indication that, somehow, as a detective of public health conditions, he has failed.

Which plan do you think the better of the two?



Whitby High School Boy with His Two Porkers, which Will Be Worth \$70 in Five Months.

Is he not doing his bit?

To a Very Young Gentleman.

BY CHRISTOPHER MORLEY.

My child, what painful vistas are before you!

What years of youthful ills and pangs and bumps—

Indignities from aunts who "just adore" you,

And chicken-pox and measles, croup and mumps!

I don't wish to dismay you—it's not fair to,

Promoted now from bassinet to crib—

But, O my babe, what troubles flesh is heir to

Since God first made so free with Adam's rib!

Laboriously you will proceed with teething;

When teeth are here, you'll meet the dentist's chair;

They'll teach you ways of walking, eating, breathing,

That stoves are hot, and how to brush your hair.

And so, my poor, undaunted little stripling

By bruises, tears, and trousers you will grow;

And, borrowing a leaf from Mr. Kipling,

I'll wish you luck, and moralize you so:

If you can think up seven thousand methods

Of giving cooks and parents heart-disease;

Can rifle pantry-shelves, and then give death odds

By water, fire, and falling out of trees;

If you can fill your every boyish minute

With sixty seconds' worth of mischief done,

Yours is the house and everything that's in it,

And, which is more, you'll be your father's son!

In "The Century."

Hope's Quiet Hour.

The Glory That Excelleth.

And now, O Father, glorify Thou me with Thine own self with the glory which I had with Thee before the world was.—S. John 17 : 5.

What was the glory which our Lord prayed for on that night before the first Good Friday? Was it earthly glory and honor that He desired? We know how small a value He set on earthly glory. Only a few days before—on Palm Sunday—He had been the idol of the people. They carpeted His path with their garments and with every appearance of sincerity, shouted His praises. But He felt no exultation over this royal reception and, instead of rejoicing, broke down in heartbroken weeping over the awful fate which was coming on Jerusalem.

No, the glory He desired was not outward pomp and honor but a far more excellent glory. Listen to Him as He continues that great High-priestly prayer. Again He speaks of the glory which He had with the Father before the world was created, and asks that His disciples may be permitted to behold it: "That they may behold my glory, which Thou hast given me: for Thou lovest me before the foundation of the world. . . that the love wherewith Thou hast loved me may be in them, and I in them."

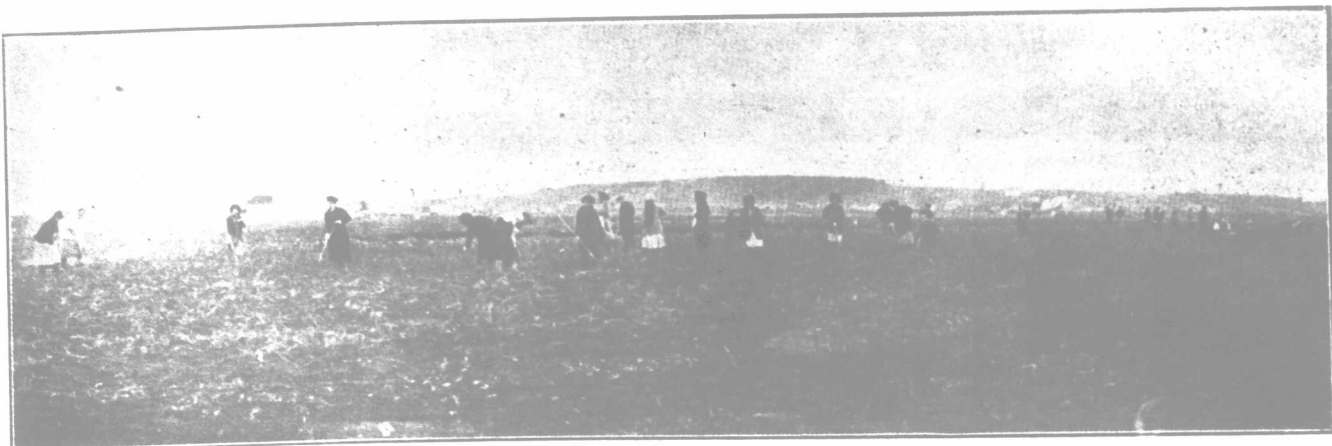
His glory, then, is LOVE. Before the foundation of the world the mutual Love of the Triune GOD had been Eternal Glory.

Facing the terrible agony of body and spirit which was even then pressing upon Him, the desire of His heart was not to escape the ordeal but that He might manifest the Name and Nature of the Father to the men around Him, and to others who should believe on Him through their preaching.

God is LOVE, and the great revelation of that Divine Love was made on the first Good Friday. When we are crushed beneath an almost overwhelming load we can gain courage as the Cross of Christ reminds us of the certainty of God's love for us. He might have met His foes by calling to His aid more than twelve legions of angels—but how, then, could the glory of love have been revealed? He could have prayed the Father to save Him from shame and torture, but He prayed instead for strength to show forth the glory of self-forgetting love. And that splendid prayer was gloriously fulfilled. That day when the Light of the world seemed to have suffered eclipse has lighted with its glory all the ages since.

"Is it not strange, the darkest hour That ever dawned on sinful earth Should touch the heart with softer power For comfort, than an angel's mirth?"

The glory that excelleth, the glory that will last, is Love; and because—on that first Good Friday—JESUS proved Himself the greatest Lover the world has ever known, or can conceive of. He



Harvesting Potatoes, New Liskeard Continuation School.

Girls and boys of this agricultural class undertook, as part of their "laboratory" work, one acre of potatoes.

manifested forth His glory as the true Light of the universe.

His Name is above every name. Even unbelievers dare not assert that any other has poured out love in return for hate as marvellously as Christ did. There is no trace of resentment for undeserved shame and torture in His royal and pitying prayer for those unpitying murderers. Instead of concentrating His attention on His own terrible agony He was eager to reassure the dying thief, and serenely arranged for the welfare of His desolate mother. In order that the prophecy (Ps. 69:21) might be fulfilled He allowed the natural cry, "I thirst!" to break through the stern self-repression which might otherwise have given color to the ancient heresy that He suffered "in appearance only."

Then there was that awful cry which seemed like the expression of hopeless despair: "My God, my God, why hast Thou forsaken me?" That cry was a marvellous proof of Love. It showed that He was really bearing the punishment for our sins—enduring what we deserved, the hiding of the Father's face. It revealed also the glory of His love for the Father. If we are enduring terrible pain of body we feel as if the physical torture crowded out spiritual longings. All our attention is concentrated on the intense pain we are suffering. But our Lord had always lived in the gladness of perfect fellowship with the Father, and any cloud on that light of fellowship was so unendurable that it crowded from His thoughts even the agony of crucifixion. The extremity of bodily torture could only draw from those parched lips one quiet word of appeal; but that awful cry of spiritual suffering reveals—as far as we are able to understand the depths of His nature—His love for the Father and also His love for us. Because there is no sign of giving in. He has put His hand to the plough and will not look back. He came to save mankind from the slavery of sin; to come down from the Cross before that work was finished would mean defeat and the relinquishment of His purpose. He seemed to be helpless to save Himself; but it was Love that held Him there, not helplessness. If He saved Himself how could He save the world? Even if He felt forsaken by the Father He would not desert our cause. His unshaken love for the Father made the black cloud which for a moment hid His face a more terrible sorrow than all the physical torture; yet the love of the Good Shepherd for His lost sheep never faltered.

And so His great prayer was answered, and the love of Christ which passeth knowledge shone out in dazzling glory.

"Feeling forsaken of God, He rushes into the arms of God: and these close around Him in loving embrace."

The fire of love in our hearts is kindled from His Love. May His glory be reflected in our everyday life. He is still able to "teach His brethren and inspire them to suffer and to die."

A soldier at the front—Coningsby Dawson—wrote to his father his conception of "glory". He described a picture in Paris, called "To Glory", in which all the armies of the ages are depicted as charging ahead, with Death riding as their leader. But, he says, "the only glory that I have discovered in this war is in men's hearts—it's not external. We're one to paint the spirit of this war he would depict a mud landscape, blasted trees, an iron sky: wading through the slush and shell-holes would come a file of bowed figures. . . they're wearied to death, but they go on and go on. There's no 'To Glory' about what we're doing out here: there's no flash of swords or splendor of uniforms. There are only very tired men determined to carry on."

In this same letter is revealed how, clearly this brave soldier sees glory—the glory of love—streaming like a pillar of fire above the home armies. "One talks of our armies in the field, but there are the other armies, millions strong, of mothers and fathers and sisters, who keep their eyes dry, treasure mummy letters beneath their pillows, offer up prayers and wait, wait, wait so eternally for God to open another door."

It is no wonder that he has courage—courage born of shining love—to "Carry on", and is able to sing a song of hope and good cheer as he plods determinedly on, through mud and darkness, and watches for the dawn of peace.

Listen! Can you hear the echo of his song?
"And for me, with spirit elate
The mire and the fog I press through,
For Heaven shines under the cloud,
Of the day that is after to-morrow."
DORA FARNCOMB.

Gifts for the Needy.

Three gifts for the needy have this week found their way into the Q. H. P. From A. E. S. came \$2, from Mr. and Mrs. D. \$1, and from "Country Woman" (who first originated the Q. H. P.) came \$2.

Several parcels of papers for the "shut-in" have also arrived. I took all I could carry into the hospital yesterday, and the postman has just brought another package. Your kindness is both an inspiration and a solid help to many who are discouraged. Thank you! HOPE.
52 Victor Ave., Toronto.

The Ingle Nook

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

History Repeats Itself.

(These verses were written during the Civil War in the United States in 1861-65.)

Click, click, click, how the needles go,
Through the busy fingers, to and fro,
With no bright colors of Berlin wool,
Delicate hands to-day are full.
Only a yarn of deep, dull blue,
Socks for the feet of the brave and true.

Yet click, click, how the needles go,
'Tis a power within that makes them so.
In the sunny hours of the bright Spring day

And in the night time far away.
Maid, Mother and grandame sit,
Earnestly, thoughtfully, while they knit.

Many the silent prayers they pray,
Many the tear-drops brush away.
While busily on the needles go,
Widen and narrow, heel and toe.

The grandame thinks with a touch of pride,
How her mother knit and spun beside
For that patriot band in olden days,
Who died the grand old flag to raise.
Now she in turn, knits for the brave
Who would die, that "Glorious flag to save".

She is glad, she says, "the boys have gone,
'Tis just what their grandfather would have done."

But she heaves a sigh, and the tears will start,
For the boys were the pride of the Grand-
dame's heart.

The mother's look is calm and high,
God only hears her soul's deep cry.
In freedom's name, at freedom's call,
She gave her sons—in them her all.

The maiden's cheek wears a paler shade,
But the light in her eye is undimmed.
Faith and Hope give strength to her sight,
She sees a red dawn after the night.

Oh, soldiers brave, will it brighten the day
And shorten the march of the weary way
To know that at home the loving and true,
Are knitting and hoping and praying for you?

Soft are their voices when speaking your name,
Proud are their glories when hearing your fame,
And the gladdest hour of their lives will be
When they greet you after the Victory.

A New Knitting Wrinkle.

AND now I want to tell you something really astounding. I have spoken to you before of "Dorothea", next door. Well, the other day she came into my den knitting a pair of socks on one set of needles! Yes, actually—two socks at once.

The method, she said, was invented by a woman in Australia—in Sydney, where they were knitting 50,000 pairs of socks a month for the British Relief. All of the knitters learned the new method, and in the next month 76,000 pairs were produced. A Miss Brown came to the United States to teach the women there, giving the proceeds from the charge for her teaching to the Red Cross.

Eventually the method found its way from Chicago to Dorothea, who very kindly passes on the directions to you. She worked the socks out from these very directions, so you see they are possible for you, too, if you set to work. Use double yarn, one for each sock.

"The purling for the top of the socks is knitted separately. When one is finished take it off with a darning needle on to a heavy cord. When the other is finished slip the first one inside the second one, right sides together, and with the knitting needle take up from first one and then the other, alternating, beginning with the first stitch from the needle and ending with the last stitch from the one on the cord. Hold the sock toward you, purling the first stitch which is on the sock that was on the needle, and knitting the second stitch from the one that was on the cord; proceed with first purl and then knit, holding the thread over the first finger for purling and over the second finger for knitting, and you will soon acquire a rhythm.

"When you get to the heel, take off as in any sock. As you turn your heel always purl the one next to you and knit the other. To narrow take first and third stitch, purl them and slip the needle out, which leaves one stitch from the opposite sock which slip on to your needle and narrow knitting. There is no slip and bind in this sock. When finished slip the needles out and take up your separate socks and bind off. In purling never put your thread over—always keep it towards you as if you are purling back on your heel.

"The teacher said that after knitting three pair you would become as efficient as in knitting the single sock, and I have proved it in my own experience. At first I used two colors of yarn, but the one great advantage is in having the pair exactly the same size when finished."

This last is a great advantage when knitting for the soldiers, as socks sent to the front must be the same size. As many as ninety women have been at work in one day in the Red Cross rooms here changing toes and making them smooth and the same size.

An Opportunity.

MR. Adams, of the Commission of Conservation, Ottawa, requests us to say that his book on "Rural Planning and Development" recently reviewed in these pages has been supplied free, so far; although so many have been the enquiries that the question of making a moderate charge has come up. It will be well for anyone who wishes to secure a copy to write regarding it to the Commission of Conservation. The Commission would prefer, however, that anyone getting a free copy should make it available for others by handing it, after reading it, to the local library or reading-room.

Mr. Adams states also—and this is very important—that the Commission will provide slides and a descriptive lecture on Rural Development, for use in any rural community that applies for it.

Do not neglect such an opportunity as this. When the Government spends money to help you give it a chance to find where you are. In this case address enquiries to Mr. Thos. Adams, Commission of Conservation, Ottawa.



Schoolboys With Birdhouses They Have Built on the Way to the Bird Exhibition St. Paul Minnesota, Opened by John Burroughs.

This picture shows boys of the St. Paul, Minnesota, Public Schools with their birdhouses on the way to the Bird Exhibition held in the Auditorium, St. Paul. Dear old John Burroughs, who loves birds so much, opened the exhibition, by pressing an electric button at his home at Westpark, New York State. Over 5,000 boys took part in the exhibition. Toledo, Ohio school boys and girls last year built no less than 10,000 houses for the birds. In Canadian schools, also, many boxes were built. We have not the statistics, but shall be glad to hear particulars from anyone who can send them.

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About the "Uniform."

Dear Junia.—I have just read the article from "a hired man pro tem" and feel that I would like to air a few thoughts along that line. This brave girl has some splendid thoughts, but you know that it takes "all kinds of things and weather and people to make up this world, and I do not just agree with one of her lines of thought. I would like to ask, Why is it necessary for women to don men's clothing in order to do their work? You may say I am weak when I say that to see a woman or young girl strutting around the farm in overalls or bloomers takes from her so much of the reserved dignity and modesty that alone belong to woman kind. Some say it gives greater freedom, and is more comfortable—Oh no, I say, more un-comfortable to the real woman, one who possesses all the womanly qualities. I will just here say that I am a married girl, and mother of two babies. I am already trying to teach my little girl her first lessons in modesty, and what good would that do, were she to behold her mother, or any other girl going forth in overalls or bloomers. The idea of the bloomer outfit is better than overalls but why anything but plain neat womanly apparel? It would be a joke if some stranger came upon us unexpectedly. I should blush for shame, and feel like beating it to the house to finish dressing. I know the fashion books are full of it, but to me it seems a matter of show, or some fitting idea for a fanciful butterfly whose garden spot is 8 ft. by 10 ft. I quite agree with you Junia about the puttees—although they might ward off some thistles as the hay comes up on the wagon. I helped my husband take off 75 tons of hay last summer and did not need overalls or bloomers either. Expect to do the same this year—if the hay is a good crop.

What did I wear? Why—for outside apparel I wore a long sleeved blouse and neatly made overall bungalow aprons, high boots, (not slippers) to protect and support the ankles. (Anyone with weak ankles should note this, as a quick jump often results in a broken or sprained ankle.)—Dressed like this I would not have been ashamed to meet the King, should he be walking this way, for many indeed are the field callers we have—agents, tea-peddler, Watkin's delivery man, etc., or even the minister. These aprons are not real full, but just a sensible apron that does not trip us, when we make a quick move, or hinder us from springing up on the wagon to ride back to the field for the next load—good times. Yes, we women are doing a good work and it has been the very making of some women, for they never before knew what they could do and never realized the blessing and help that they could be to their husbands or brothers as the case may be. I speak from experience when I say that this shortage of farm help has made us more independent. Instead of bringing the boy or man from perhaps the farthest field to hitch up our horse, we have learned to do it ourselves, and find we are very happy in being able to do it.

As for our city friends seeing us in our true light, I am sure they are more and more realizing how dependent they are on the farmers ("hayseeds" as they used to say), and are not so ready to say—"they are just farmers"—We are the producers—and they are continually phoning us to guarantee them their winter supply of apples, potatoes, eggs, etc. This awful war has been a great awakening to a great many people in a great many ways. There is so much to write about these days, but I must not take any more of your valuable space this time. Many may not agree with things I have said, but it's this that makes the page interesting by inviting correspondents. Wishing all the girls success, whether they wear overalls or aprons, and with good wishes to this very enjoyable Corner.

I remain,

"YOURS FOR APRONS".

Oxford Co., Ont.

A Letter From Rose Terrace.

Dear Friends of the Ingle Nook.—It is a long time since I made my presence felt, but I have always been an interested reader. No doubt the reason we do not visit the Nook oftener is because we are knitting, knitting, knitting, and our days are full to overflowing.

I was interested in an article which appeared in the "Advocate", not long

ago, written by "A Farm Woman". Among other things, she said that the higher classes in America have begun to see that the life of the novel and the rocking chair, is neither a good nor a happy life, and the war will do great good to them, and through them to society, if it can show a means by which this knowledge can be put to practical use. Then she went on to speak of the busy lives some of our farmers' wives lead, and she enumerated a partial list of the duties which one woman discharged on a certain Saturday, and ended up by saying that after her work was done she was too tired to read, so played the piano for half an hour. "Truly", she said, "music must have charms."

I would like to ask "Farm Woman", if she ever tried sitting down to the piano, when she was too utterly tired and weary to keep going, and just let her fingers wander over the keys, with a soft caressing touch, or if she preferred it, played something lively, with lots of swing and inspiration in it, and see what a wonderful difference it will make. In ten to fifteen minutes she will have forgotten much of the pain and weariness and the tired nerves will have been wonderfully soothed and rested.

So often we hear farm women say, "Oh I never touch the instrument any more. I haven't time"; or "I have forgotten all I ever knew about music." It seems to me that this is a grave mistake. It is an injustice to the father who toiled hard, perhaps, to procure an instrument for us and give us music lessons. It is an injustice to the mother, who carefully shouldered an extra amount of work to leave us free to practice, and it is a great injustice to ourselves.

A few years ago I was embroidering a very elaborate pair of pillow cases. I was very fond of the dainty work, and took great pains with it. The last one was almost finished, and I sat looking at it one day and I wondered in my own mind if it was right for me to spend so much time embroidering those slips, when a pair of plain hemmed ones would have answered the purpose just as well. I could not see at a glance that I had improved in my work, but after all was there anything to be gained by being a skilful embroiderer? Quick as a flash the answer came from the silence of nowhere, as you know it will come sometimes, "perhaps in the years to come you may be accounted worthy to help embroider robes for the King of glory." What a fusilade of thoughts crowded thick and fast after that one. Who knows what shall be required of us over yonder? Eternity is long, and we must be busy. God does not despise embroidery, else why should he take the pains to instruct Moses to have embroidered robes for Aaron, the high priest, which were spoken of in Exodus as garments for glory and for beauty.

We are taught to believe that this life is only a preparation for the life to come. We cannot take any of the material things of this life with us, only the things which we have absorbed as we passed along and made a part of ourselves. St. Paul tells us to hold fast that which is good. In our Sunday School lesson the other day we came to the verse "To him that hath shall be given: and he that hath not, from him shall be taken even that which he hath". It is not a harsh tyrannical punishment but a natural law of the universe. If we cease to make use of our abilities they will in time cease to exist. In spite of the fact that we are to be changed, I believe we shall take up our lives over yonder, just where we lay them down here, and if we neglect all the finer possibilities in our nature we must expect to be the losers. True there are many things of the utmost importance which seem to demand immediate and almost constant attention, but let us contrive some way or another to keep fast hold of that which is good; let us seek to have the long vision, that sees the needs of the future, even while we are busy with the things of the present, and don't let the little bit of music, the little bit of poetry, the little bit of imagination, that gilds our lives, slip out of them, for you may depend upon it that God will find use for them in eternity, and you will be glad to have them ready for his use.

THE MISTRESS OF ROSE TERRACE.

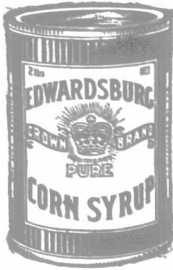
Reply to "One of the Girls."

Dear Junia: Can you spare me a corner of your valuable page? I have read the letter by "One of the Girls" and also

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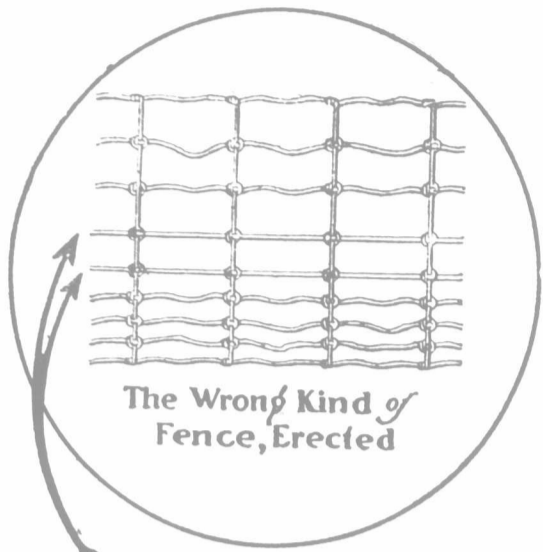
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Her record is 31.94 lbs. of butter and 625 lbs. of milk in 7 days—and she's a show cow. Also note KING GERBEN ALCARTRA, a son of this great cow and sired by King Alcartra Walker, who is a son of the great 34-lb. 4-year-old cow, Keyes Walker Segis. The three nearest dams of this youngster average 33 lbs. of butter in 7 days. He is a beautiful calf and sells with his two sisters, Lily Pietertje Echo and Lily Echo Pontiac. FOR CATALOGUES, SEE THE CLUB ADVERTISEMENT.

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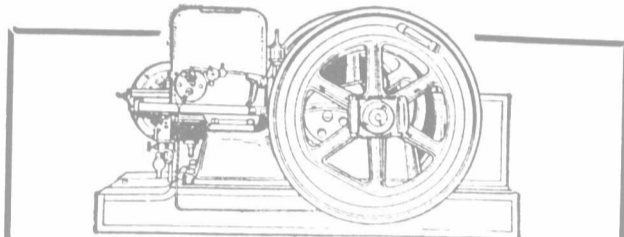
Choose a Page Fence to-day, and your Fence worries are over for all time.

Drop a line to our nearest branch to-day. Let us give you all information about Page Fences and send you price list. Page Gates, like Page Fences, are built to stand the test of time. They are obtainable in every regular size.

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The Powerful Little Page Engine Will Prove Itself

A Thrifty, Paying Investment

You can set it to any job and fit never kicks. It is always ready to pump water for your stock, hoist grain to the mow, run the ensilage cutter, fill the silo, and many other chores that come in a day's work on a farm.

Hitch a governor pulley on it and it will work your wife's washer, turn the churn, and run the separator.

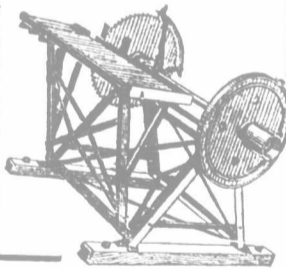
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That enterprising farmers realize the value of our Wood-saws is assured by the above statement.

Strength and convenience are combined to make the Page Wood-Saw the best you can buy. Its strong, rigid, frame will not shake in operation. The tilting table with roller at the front facilitates the handling of poles. Its Pulleys and balance-wheel are interchangeable—yet with all these advantages the price is but \$24. The large quantities we make and sell is the reason the price is so low. Do as your neighbors are doing—buy for yourself a Page Wood-Saw now.



another one in a magazine, by a city girl, who went to the country last summer to get health and also to work in the house for her board.

Oh, the difference in those letters! I wonder if there are other girls on the farm, not by their own choosing, who have the impression that city girl has.

I am a farmer's daughter living on the old home farm. I always was proud to be called a farmer's girl, but the desire of my life was to take a University Course.

During my second year in High School my health failed and I had to give up all that work. Night after night I went to bed to cry myself to sleep. In the morning I got up only to be reminded on every hand of my lost dream. I thought my longing for that one thing I could not have would never end.

As I grew stronger I would wander off into the woods and go over the path I went to public school on and mourn anew. But at last the love of beauty which is in every heart was stirred. I saw the flowers, heard the birds and I grew to love it all.

And now the comfort I find in the out-door world! When things go wrong and trouble comes I can go to the woods and come back with fresh hope.

To-day, at eighteen, I am well and strong but I am not going back to school. I have found my niche right here.

Yes, City Girl, I work, and work hard, but when the work is over I can see the beauties of nature and that is more than you can do. I can pause a moment and look out the door on green fields and a lovely woods and not on a smoke clouded city.

My mother and I do the house work that is necessary to run three hundred acres of land, but we do it gladly.

And it's not all work. We have a car and no wind is too strong or day too cold but what I can go for a cutter ride.

So girls don't be discontented. Somewhere there is a bright spot for you. Hunt it up. I think "One of the Girl's" will find her's may be in the midst of the harvest field, and if my city girl dares to say farm life is all a drudgery well let her come to me.

Dear Junia, have I been a bore? Really I could not help it. No city girl is going to point out the rough parts of country life without some one mixing a few good points with it. And you who are able to appreciate the simple Country Life, Good Luck to you.

"DAD'S FARMER GIRL."
You have not been a bore at all, dear girl. I am delighted to have so many interesting letters for our Ingle Nook.

When the Fruit Jars Are Empty.

At this time of year there are whole rows of fruit jars empty, but they need not long remain so if there are apples and carrots in the cellar, canned tomatoes in the vegetable cupboard, and prunes, lemons and oranges in the store to be bought.

Wash the jars over again, with hot water, washing-soda and a long round brush if you have it, then rinse them in clear hot water and put in a kettle of water to sterilize. Then they will be glisteningly clean and ready for whatever you want to put in them.

Apples with Lemon.—Pare and core the apples and drop into a syrup made with water, sugar and some shreds of the rind of a raw lemon. Cook very slowly so the apples will not break up.

Pickled Apples.—Prepare as above, but add a little vinegar and some whole cloves to the syrup.

Dried Apples.—Wash the apples well and soak over night in fresh water. In the morning cook in the same water, adding sugar and nutmeg or lemon rind (raw) to flavor. Beat to a pulp and serve cold with a little sweet cream on each serving.

Carrot Marmalade.—Cook the carrots and chop fine. Use as little water as possible and drain before chopping. To 2 cups carrot add 4 cups sugar and the juice and grated rinds of 2 lemons. If it seems too dry add a very little of the liquor off the carrots. Cook slowly until the consistency of marmalade then pour into glasses.

Tomato Preserve.—To the canned tomatoes add sugar and whatever flavoring is liked. This may be oranges put through a chopper, rinds and all; lemon in the same way; or a mixture of lemon,

"STOP! HERE'S A DYER FENCE!"

Dyer at it Again
Now—before you buy, write for his prices on fences, all kinds. Means many dollars to you.



"DYER THE FENCE MAN"
359 Yonge St., Dept. O, Toronto

SEED BEANS

This seed was imported from Michigan in 1916; is of the White Field Variety, maturing about ten days earlier than the Native White Field Bean. Price \$9.00 per bush. F. O. B. Wm. A. Kelly, Rodney, Ont.

If you want a gilt-edged investment ask for a Mutual Life Endowment.

This Great Cosy Rocker Only \$9.85



Wonderful value this! Either chair or rocker at this price. Deep, comfortable spring seat, upholstered in fine quality leatherette, choice of black or brown covering. Sent to any station in Ontario at above price.

Catalogue No. 7

shows hundreds of similar good values in furniture for all rooms in the home. Write to-day to

Adams Furniture Co., Ltd.
TORONTO

Canada's Largest Homefurnishers

raisins and until of the Prune Jar 2 lbs. sugar, lemon.

Wash the soak in the the morning about 10 m boil. Cool an and if there is to make up th and put thro the pulp bac sugar and lem very frequent

Beets?— tried recipe I conserve from greatly oblig

The B

I

Uncle Fred is very much That when he have to ta Italian, Hebr menian, He understand ever words Their shoulder fast, their They like my understand

Uncle Francis extremely He talks to all and size; With hens and with horse He chats away put into w He knows their as he goes They love my stands the

I'm proud of clever with I'd be like U could have Instead of lea can find in I'd learn the o woods, by For anyone can and is sma But best-ta way—you lea

Little

Johnnie's hist important perio Johnnie's turn t "Johnnie, wh time?" asked th He answered: "Why, Johnn that?" she asked "Right here in and showed her name was printe

At a certain custom for th blackboard and the janitor to re

One evening, the janitor saw w "Find the g inator."

"Hallo" he e thing lost again

The Com

A

I wonder if the and girls lik as about the open for the las fairly poured in, boxes were more what a time the letters about do cats, hens, duck found it very ha the best. And e ever so many of our rule of givr school, so that v very easily whic Junior Beavers.

However we and selected t

Winners:

raisins and nutmeats. Cook slowly until of the right consistency.

Prune Jam.—Take 3½ lbs. prunes, 2 lbs. sugar, 8 cups water, juice of 1 lemon.

Wash the prunes in warm water, then soak in the cold water over night. In the morning cook in the same water for about 10 minutes after they begin to boil. Cool and drain. Measure the juice and if there is less than 2½ cups add water to make up the amount. Stone the prunes and put through a chopper, then put the pulp back with the juice. Add the sugar and lemon and cook slowly, stirring very frequently to prevent scorching.

Beets?—Can anyone send a good tried recipe for making marmalade or conserve from beets? If so we shall be greatly obliged.

The Beaver Circle

Languages.

Uncle Fred is a professor and he knows so very much, That when he meets with foreign men who have to talk in Dutch, Italian, Hebrew, Russian, French, Armenian, Greek, He understands and answers them, whatever words they speak. Their shoulders shrug, their hands move fast, their eyes begin to glow, They like my Uncle Fred, because he understands them so.

Uncle Francis is a farmer, and he is extremely wise, He talks to all his animals, of every kind and size;

With hens and pigs, with cows and geese, with horses, dogs, and birds, He chats away, though all he says is not put into words, He knows their calls, and they know his, as he goes to and fro; They love my Uncle Francis, for he understands them so.

I'm proud of both my uncles, each so clever with his voice, I'd be like Uncle Francis though, if I could have my choice, Instead of learning languages that you can find in books, I'd learn the ones you find in field and woods, by lake and brooks. For anyone can learn man-talk who studies and is smart, But beast-talk can't be learned that way—you learn it with your heart.

Little Bits of Fun.

Johnnie's history class was studying an important period in history and it was Johnnie's turn to recite.

"Johnnie, who was the king at this time?" asked the teacher.

He answered: "Louis the cross-eyed."

"Why, Johnnie, where did you learn that?" she asked.

"Right here in the book," he answered, and showed her the paragraph where the name was printed: "Louis XI."

At a certain public school it was the custom for the teachers to write on the blackboard any instructions they desired the janitor to receive.

One evening, while cleaning a room, the janitor saw written:

"Find the greatest common denominator."

"Hallo," he exclaimed, "Is that darned thing lost again?"

The Competition About Animals.

I wonder if there is anything that boys and girls like to write about as much as about their pets. During the time open for the last competition the letters fairly poured in, until poor Puck's letter boxes were more than overflowing. And what a time there was reading all those letters about dogs, horses, pigs, calves, cats, hens, ducks, even mice! We really found it very hard to decide which were the best. And the worst of it was that ever so many of the boys and girls forgot our rule of giving their age and class at school, so that we could not always tell very easily which were Senior and which Junior Beavers.

However we did the best we could and selected the following as Prize Winners:

Senior Beavers.—James Thomson, R. 1, Centralia, Ont.; Melvin Carter, Port Lock, Ont.; James Ward, Walter's Falls, Ont.; Helen Gardiner, R. R. 2, Kingston, Ont.; Lucile Glass, R. R. 3, Thorndale, Ont.; Earl Powell, R. R. 4, Ingersoll, Ont.; Essie Graham, R. R. 1, Fenelon Falls, Ont.; Willie Melville, Valentia, Ont.; Elden Stoltz, Auburn, Ont.; Bertha Robinson, R. 1, Victoria Harbour, Ont.

Junior Beavers.—Marian Farr, R. 1, Ostrander, Ont.; Harvey Armstrong, R. 3, Bowmanville, Ont.; Bessie Holm, R. 1, Hespeler, Ont.; Joe Aldington, R. 1, Hensall, Ont.; Clifford Sexsmith, R. 2, Ridgeway, Ont.; Beulah Watkins, R. R. 1, Heathcote, Ont.

Honor Roll.—Nellie Bell, R. 2, Kars, Ont.; Genevieve McPhee, R. 5, Parkhill, Ont.; Ethel Fisher, Barrington, Que.; Grace Dinsmore, St. Mary's, Ont.; Muriel Switzer, R. 1, St. George, Ont.; Pearl Thur, R. 1, Elora, Ont.; Edith Crockett, Sandwick, B. C.; Leslie Cross, R. 1, L'Orignal, Ont.; Hilda Waterbury, R. 1, Selkirk, Ont.; Ethel Norton, R. 1, Alliston, Ont.; Mary McKenna, R. 4, Merrickville, Ont.; June Baird, R. 8, Watford, Ont.; Ruth Palen, Picton, Ont.; Rhea Hubbard, R. 1, Wardsville, Ont.; Lella Nattress, R. 3, Bolton, Ont.; Karl Johnston, Big Lake, Ont.; Isabel Smart, R. 3, Cookstown, Ont.; Iva Gordon, Dobbinton, Ont.; Mabel Martin, Denfield, Ont.; Madeleine Brohman, R. 2, Ariss, Ont.; Edward Morgan, Bedford; Stella McAuley, Lemieux, Ont.

Junior Beavers' Honor Roll.—Sadie Borrowman, Amherstburg, Ont.; Clayton Schwam, R. 2, Port Elgin, Ont.; Evelyn McNeil, R. 2, Kars, Ont.; Isabel Brohman, R. 2, Ariss, Ont.

One Beaver forgot to give either name or post office.

Next time some of the prize letters will be published. In the meantime we are sending out our prizes which are this time, packages of seed, 10 packages to each of the Senior Beavers who won a prize, and 5 packages to each of the Junior Beavers who won a prize.

Senior Beavers' Letter Box.

The Beavers' letters—outside of the competition essays—have also become piled up in great numbers. We can only give a few of them to-day.

Dear Puck and Beavers.—This is my first letter to your charming Circle. I live on a farm. We have about two hundred maple shade trees. We have one hundred acres of land. I have one sister older than myself. My father has taken the Farmer's Advocate for as long as I can remember. My teacher's name is Miss C. Kell from Cookstown; we all like her fine. There are sixteen going to school. I did not go to school for a year because I was sick, I have been going four years. We have to walk two miles to school. For pets I have one cat and two sheep of my own. I will close with a few riddles. My first is a bit of butter; My next is a bit of mutton; My whole is a little matter, Not bigger than a button.

Ans.—Button.

Which is the smallest bridge in the world? Ans.—The bridge of the nose.

Why is satan like a poker? Ans.—Because he belongs to the fire-place.

When is a fellow's eye like a barrel? Ans.—When it's bunged up.

I will close for now, hoping to see my letter in print.

Egbert, Ont. NEIL J. McBRIDE.

Dear Puck and Beavers.—This is my first letter to your interesting Circle. I am having a few holidays being as our teacher has resigned and have not yet got one to replace him. At our Christmas concert we gave him a presentation of a signet ring to show our love for him. I hope to war will soon end so we will be able to look into the faces of our friends once more.

As my letter is getting long I will close with a riddle.

Within a fountain crystal clear, A golden apple doth appear

No doors there are to this stronghold, Yet thieves break in a steal the gold.

Ans.—An egg.

STANLEY MURRAY (age 12).

R. R. No. 1, Arkona, Ont.

Riddles.

Annie Davidson, Markdale, Ont.; wants someone to answer this riddle: "Why is a horse not hungry on its journey?"

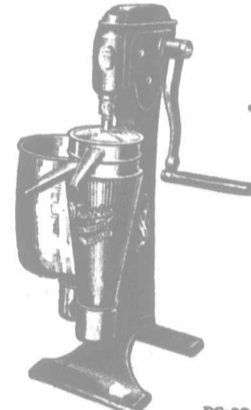
Not made over— Not added to— Built right, basically

That's the Sharples Suction-feed Cream Separator. No loss-alarm tacked onto it to remind you to turn faster.

Sharples skims clean at any speed, so it is not necessary to put on a contraption to prod you up to a fixed speed. You can judge how important this is when tests show that 95 per cent. of all separators are turned under speed much of the time, causing a waste averaging 10 pounds of butter per cow yearly. Sharples saves all this—*automatically*.

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The skim-clean-at-any-speed principle (suction-feed) is built into the Sharples, just as Nature built teeth into you. When you don't have any Nature-teeth, store-teeth are better than none, but they never measure up to the built-in kind. Think that over! Sharples construction has also eliminated troublesome discs—the simple tubular bowl containing but one piece. There are only half as many parts as in other separators—that's why a Sharples lasts longer than any other. Write for catalog to nearest office, addressing Dept. 78



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You can attend to the poultry or do any of the thousand and one things a farmer's wife must do, while the SEAFOAM does the washing. The time spent over the tub can be used for other necessary or profitable work.



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may be operated by gasoline, steam, electric or wind mill power. It works perfectly and requires little attention. All gears are protected with metal shields. All parts touching the water are heavily galvanized. No rust, no trouble, no damage to clothes.

See the Seafoam at your dealer's, or write for particulars.

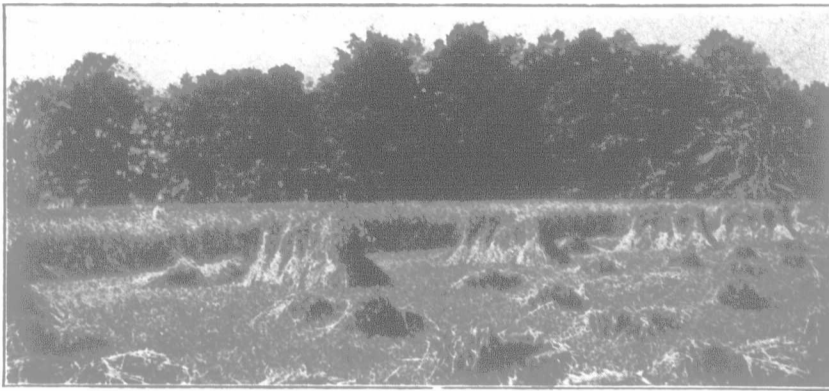
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Grown in Ontario

The splendid wheat yield pictured here was grown in Western Ontario last summer on well-prepared soil, enriched with 300 pounds of fertilizer.



Greater Crop Yields

Greater crop yields in Canada are of world-wide importance. European yields on old soils far exceed Canadian yields on new soils—except when improved methods produce crops like that pictured here.

Announcement: The Canadian Fertilizer Association have established a bureau which will encourage and assist Canadian farmers to achieve greater results in soil tillage, fertility maintenance and crop production. This Soil and Crop Improvement Bureau, under the direction of Henry G. Bell (a native of Ontario and a graduate of Ont. Agr. Coll., later Prof. of Agronomy Univ. of Me.), co-operates with all organizations working for the improvement of Canadian farming. Farmers are urged to take full advantage of this valuable information service, which is free to all.

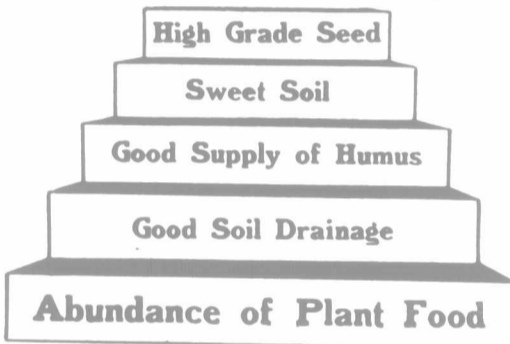
Fertilizer

If the labor problem limits areas under crop you can increase yields 50 to 75 per cent. by careful soil preparation, seed selection and judicious use of fertilizers, and thus use the labor to best effect.

Fertilizers carry exactly the same plant food constituents as are carried by manure, but in more concentrated form.

Dr. C. A. Zavitz reported in 1917 the following results: Complete fertilizer used with winter wheat gave an increase of 5.2 bushels per acre, at a cost of 82c. per bushel (pre-war prices) when applied in the autumn; and an increase of 8.3 bushels per acre, at a cost of 51c. per bushel when applied in the spring.

STEPS TO BIGGER CROPS



What to do Now

Top-dress fall wheat with fertilizers. It is your last opportunity to increase 1918 fall wheat yields.

Prepare to fertilize spring crops. Use fertilizers this spring and profit by high crop prices.

Manure

Manure spread thin yearly (4 or 5 tons per acre) pays better than manure applied in equal quantity at one application every four or five years.

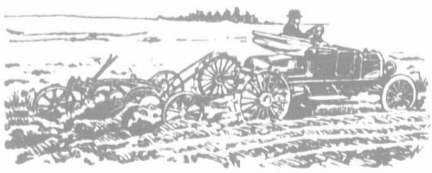
Eight tons of manure (protected from rain and snow) strengthened by 320 lbs. acid phosphate to the acre, increased wheat yields at Ohio Experimental Station 5.38 bushels per acre.

Similar fertilization increased corn yields 11.54 bushels per acre.

If you do not have enough manure to apply this quantity per acre, use complete fertilizers rather than acid phosphate.

SEND POSTAL CARD TO-DAY FOR BULLETIN, "HOW TO INCREASE ONTARIO CROP YIELDS"

Soil and Crop Improvement Bureau
of the Canadian Fertilizer Association
1111 Temple Building, Toronto

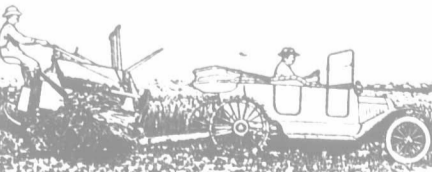


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This machine costs \$240, and when not in use is taken off the Ford car. It does with ease, the field work of 4 good farm horses and supplies an abundance of power at the belt.

We ask you as a practical business man to inform yourself immediately, concerning this popular agricultural implement.

You are doing us a favor if you write for our descriptive booklet which is well worth reading.

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OF 160 ACRES EACH



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Contains valuable and interesting information based on Government Reports.

ENTERPRISE and ENERGY—One Alberta town reports at least 100,000 acres of new land in that vicinity plowed last fall for crop this year; has six elevators now and three new ones and a flour mill under way. The reason—1917 values for wheat, oats, barley and flax seed alone for the prairie provinces is \$613,885,700.00. Start now, share it this year.

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Improved Lands from \$15 UP PER ACRE

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Cur

The surv Contingent week on a th

The maki ing liquor throughout in Montrea Quebec, wh 1st, 1918, i vincial law.

A bill has Legislature M. P. P., physical fit men and wor to marry.

Mrs. Lena who wrote 'ing' was ki raids on Lo

United St has gone to there.

John Dill Redmond as Ireland.

The world ship, the launched at States last w

The most the past forty of aerial rail for the many has been ta right good having a tast in warfare March 13 B on the city the docks at bombed by B encounters taken place French lines airships aga coast, and o great attack not so succ Over 60 plane the city, so going over it killed 34 children, and planes were were driven which appr driven off by arose from th

At stated that started alon surmized th offensive ma 15 Canadian raid in the the past w some trench the America the mile of t by them. At forces betwe erland are a lines. proved bu fear of gene Petrograd ar while the G ferred to M Soviets held the delegate Wilson's not with German at Brest-Lit German troo will find no Nikolaiev, g Cossacks, h center of Sou

Why Binks how Binks m

"No wond —St Louis G

Unintention turned from get yourself dear?"

Hub—"Ye in the ice-box onions I found

Wife—"On my bulbs."

Current Events.

The survivors of the first Canadian Contingent to the war arrive home this week on a three months' furlough.

The making and delivery of intoxicating liquor for beverage purposes stops throughout Canada on April 1st, except in Montreal and a few other spots in Quebec, which will also go dry on May 1st, 1918, in accordance with the provincial law.

A bill has been introduced in the Ontario Legislature by Dr. Forbes Godfrey, M. P. P., asking that certificates of physical fitness be required from both men and women before they are permitted to marry.

Mrs. Lena Ford, the American woman who wrote "Keep the Home Fires Burning" was killed in one of the recent air raids on London.

United States Secretary of War Baker has gone to Europe to study conditions there.

John Dillon succeeds the late John Redmond as leader of the Nationalists of Ireland.

The world's largest reinforced concrete ship, the "Faith", was successfully launched at a Pacific port in the United States last week.

The most outstanding war event of the past fortnight has been a succession of aerial raids. The work of reprisal for the many German air raids on England has been taken up by the British with right good will, and now Germany is having a taste of one more of the novelties in warfare which she herself began. On March 13 British flyers dropped bombs on the city of Freiburg, and also on the docks at Bruges; Coblenz also was bombed by British airmen, while scattered encounters with German flyers have taken place all along the British and French lines. On March 12 German airships again attacked the Yorkshire coast, and on March 11th they made a great attack on Paris which was, however, not so successful as they anticipated. Over 60 planes, in 9 squadrons, approached the city, some of them succeeding in going over it and dropping bombs which killed 34 persons, chiefly women and children, and injured 79. Four of the planes were brought down and the rest were driven off. A number of planes which approached Venice were also driven off by Italian hydroplanes which arose from the sea like angry gnats.

At time of going to press it is stated that heavy fighting has again started along the west front, and it is surmised that the threatened German offensive may have begun. On March 15 Canadian troops made a successful raid in the Lens region, and during the past week the French regained some trenches in the Champagne, while the American troops successfully held the mile of trenches in Lorraine captured by them. At present fully half the German forces between the North Sea and Switzerland are arrayed against the British lines. In Russia conditions have improved but little. It is said that, in fear of general anarchy the civilians of Petrograd are leaving in vast numbers, while the Government has been transferred to Moscow. In the Congress of Soviets held at that city during the week, the delegates, setting aside President Wilson's note, approved the peace terms with Germany as signed by the Bolsheviks at Brest-Litovsk. In the meantime German troops have entered Odessa, but will find no stores of grain there, as Nikolaiev, guarded by a great army of Cossacks, has now become the great center of Southern Russia.

Why Binks Worried—"The Lord knows how Binks made his money!"

"No wonder he always looks worried."
—St. Louis Globe-Democrat.

Unintentional Hooverite. — Wife (returned from overnight visit)—"Did you get yourself a good dinner last evening, dear?"

Hub—"Yes, there was a bit of steak in the ice-box and I cooked it with a few onions I found in the cellar."

Wife—"Onions? Jack, you've eaten my bulbs."—Boston Transcript.

Serial Story.

An Alabaster Box.

BY MARY E. WILKINS FREEMAN AND FLORENCE MORSE KINGSLEY.

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

Chapter XIX.

Rain was falling in torrents, slanting past the windows of the old parsonage in long gray lines, gurgling up between loosened panes, and drip-dropping resoundingly in the rusty pan the minister had set under a broken spot in the ceiling. Upstairs a loosened shutter banged intermittently under the impact of the wind, which howled past, to lose itself with great commotion in the tops of the tall evergreens in the churchyard. It was the sort of day when untoward events, near and far, stand out with unpleasant prominence against the background of one's everyday life. A day in which a man is led, whether he will or not, to take stock of himself and to balance with some care the credit and debit sides of his ledger.

Wesley Elliot had been working diligently on his sermon since nine o'clock that morning, at which hour he had deserted Mr. Solomon Black's comfortable tight roof, to walk under the inadequate shelter of a leaking umbrella to the parsonage.

Three closely written pages in the minister's neat firm handwriting attested his uninterrupted diligence. At the top of the fourth page he set a careful numeral, under it wrote "Thirdly", then paused, laid down his pen, yawned wearily and gazed out at the dripping shrubbery. The rain had come too late to help the farmers, he was thinking. It was always that way: too much sunshine and dry weather; then too much rain—floods of it, deluges of it.

He got up from his chair, stretched his cramped limbs and began marching up and down the floor. He had fully intended to get away from Brookville before another winter set in. But there were reasons why he felt in no hurry to leave the place. He compelled himself to consider them.

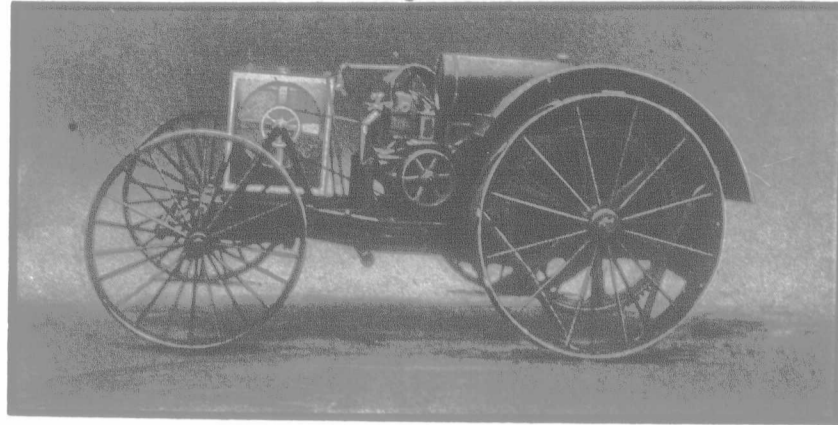
Was he in love with Lydia Orr? Honestly, he didn't know. He had half thought he was, for a whole month, during which Lydia had faced him across Mrs. Solomon Black's table three times a day.

As he walked up and down, he viewed the situation. Lydia had declared, not once but often, that she wanted friends. Women always talked that way, and meant otherwise. But did she? The minister shook his head dubiously. He thought of Lydia Orr, of her beauty, of her elusive sweetness. He was ashamed to think of her money, but he owned to himself that he did.

Then he left his study and rambled about the chill rooms of the lower floor. From the windows of the parlor, where he paused to stare out, he could look for some distance up the street. He noticed dully the double row of maples from which yellowed leaves were already beginning to fall and the ugly fronts of houses, behind their shabby picket fences. A wagon was creaking slowly through a shallow sea of mud which had been dust the day before: beyond the hunched figure of the teamster not a human being was in sight. Somewhere, a dog barked fitfully and was answered by other dogs far away; and always the shutter banged at uncertain intervals upstairs. This nuisance, at least, could be abated. He presently located the shutter and closed it; then, because its fastening had rusted quite away, sought for a bit of twine in his pocket and was about to tie it fast when the wind wrenched it again from his hold. As he thrust a black-coated arm from the window to secure the unruly disturber of the peace he saw a man fumbling with the fastening of the parsonage gate. Before he could reach the foot of the stairs the long unused doorbell jangled noisily.

He did not recognize the figure which confronted him on the stoop, when at last he succeeded in unding the door. The man wore a raincoat turned up about his chin and the soft brim of a felt had dripped water upon its close-buttoned front.

"Good-morning, good-morning, sir!" said the stranger, as if his words had awaited the opening of the door with scant patience. "You are the—er—local clergymen, I suppose?"



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HUBER Light-Four Tractor

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80% of the tractors sold in the United States are *three plow* tractors.

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Buy a tractor like the Huber Light Four. Thoroughly tried and tested. Many exclusive features in design and construction. No freaks or fads.

Easily pulls three 14-inch bottoms, set 8 inches deep. Plows an acre an hour. Runs all farm machinery. 12 H. P. at the draw bar, 24 H. P. at the belt.

Burns gasoline, kerosene or distillate.

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Write for it and our proposition.

ONTARIO WIND ENGINE & PUMP CO. LIMITED

TORONTO WINDMILLS

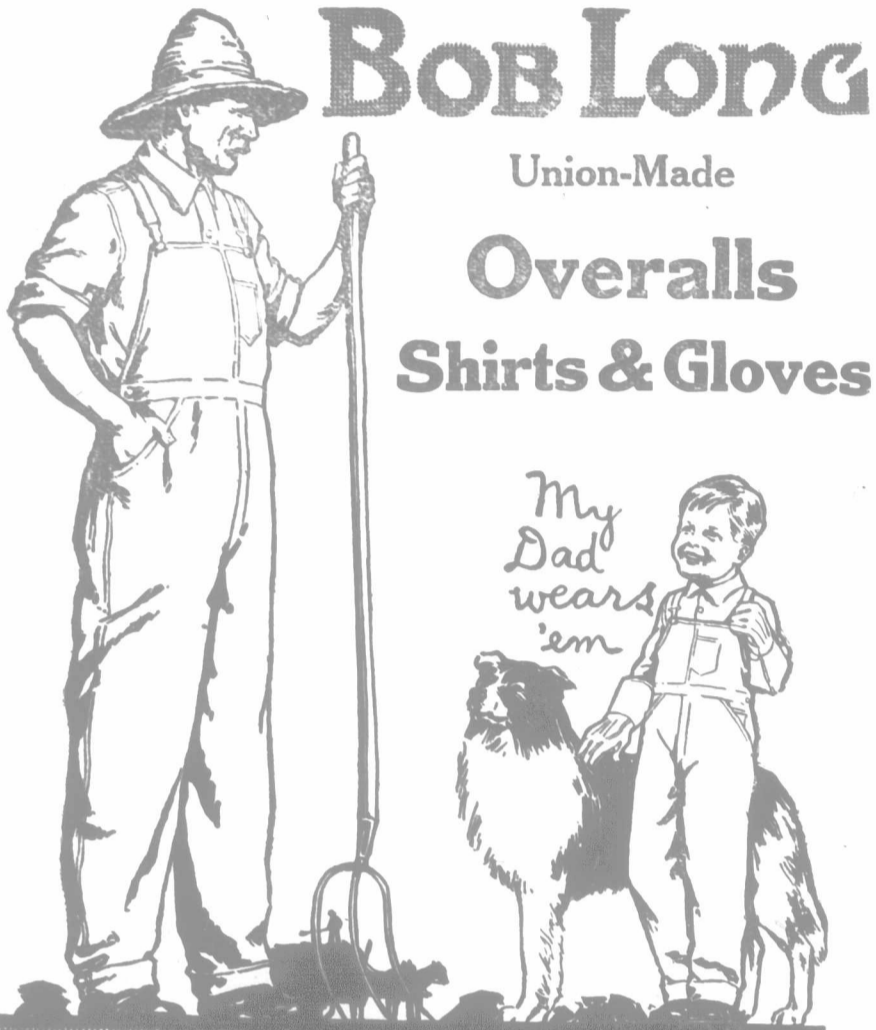
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Insist on "Bob Long" brand. Ask your dealer for Big 11—the big grey overalls—the cloth with the test.

R. G. LONG & CO., LIMITED
TORONTO - CANADA

At uncertain periods Wesley Elliot had been visited by a migratory colporteur, and less frequently by impecunious persons representing themselves to be fellow warriors on the walls of Zion, temporarily out of ammunition. In the brief interval during which he conveyed the stranger from the chilly obscurity of the hall to the dubious comfort of his study he endeavored to place his visitor in one of these two classes, but without success.

"Didn't stop for an umbrella," explained the man, rubbing his hands before the stove, in which the minister was striving to kindle a livelier blaze.

Divested of his dripping coat and hat he appeared somewhat stooped and feeble; he coughed slightly, as he gazed about the room.

"What's the matter here?" he inquired abruptly; "don't they pay you your salary?"

The minister explained in brief his slight occupancy of the parsonage; whereat the stranger shook his head:

"That's wrong—all wrong," he pronounced: "A parson should be married and have children—plenty of them. Last time I was here, couldn't hear myself speak there was such a racket of children in the hall. Mother sick upstairs, and the kids sliding down the banisters like mad. I left the parson a check; poor devil!"

"I see you're wondering who I am, young man," he said presently. "Well, we're coming to that, presently. I want some advice; so I shall merely put the case baldly. I wanted advice, before; but the parson of that day couldn't give me the right sort. Good Lord! I can see him yet: short man, rather stout and baldish. Meant well, but his religion wasn't worth a bean to me that day. Religion is all very well to talk about on a Sunday; broadcloth coat, white tie and that sort of thing; good for funerals, too, when a man's dead and can't answer back. Sometimes I've amused myself wondering what a dead man would say to a parson, if he could sit up in his coffin and talk five minutes of what's happened to him since they called him dead. Interesting to think of—eh? Had lots of time to think. Thought of most everything that ever happened; and more that didn't."

"You are a stranger in Brookville, sir?" observed Wesley Elliot, politely.

He had already decided that the man was neither a colporteur nor a clerical mendicant; his clothes were too good, for one thing.

The man laughed, a short, unpleasant sound which ended in a fit of coughing.

"A stranger in Brookville?" he echoed. "Well; not precisely. But never mind that, young man. Now, you're a clergyman, and on that account supposed to have more than ordinary good judgment: what would you advise a man to do, who had—er—been out of active life for a number of years. In a hospital, we'll say, incapacitated, very much so. When he comes out, he finds himself quite pleasantly situated, in a way; good home, and all that sort of thing; but not allowed to—use his judgment in any way. Watched—yes, watched, by a person who ought to know better. It's intolerable—intolerable! Why, you'll not believe me when I tell you I'm obliged to sneak out of my own house on the sly—on the sly, you understand, for the purpose of taking needful exercise."

He stopped short and wiped his forehead with a handkerchief, the fineness of which the minister noted mechanically—with other details which had before escaped him; such as the extreme, yellowish pallor of the man's face and hands and the extraordinary swiftness and brightness of his eyes. He was conscious of growing uneasiness as he said:

"That sounds very unpleasant, sir; but as I am not in possession of the facts—" "But I just told you," interrupted the stranger. "Didn't I say—"

"You didn't make clear to me what the motives of this person who tries to control your movements are. You didn't tell me."

The man moved his hand before his face, like one trying to brush away imaginary flies.

"I suppose she has her motives," he said, covertly. "And very likely they're good. I'll not deny that. But I can't make her see that this constant espionage, this everlasting watchfulness is not to be done. I want freedom, and by God I'll have it!"

To be continued.

Top Prices For Your HAY AND STRAW

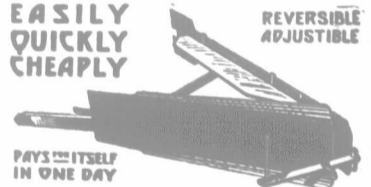
Having your name on our mailing list puts you in a position to command the best market prices. Every week we send you a special report on market conditions, prices and prospects for the coming week. These reports and figures are authoritative and will mean money to you.

Get on our mailing list at once and receive this valuable information each week without cost.

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Our Reference—Bank of Toronto

THE MARTIN DITCHER AND GRADER DIGS YOUR DITCHES GRADES YOUR ROADS EASILY QUICKLY CHEAPLY



REVERSIBLE ADJUSTABLE
PAYS ITSELF IN ONE DAY
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CREAM

We are in the market for Churning Cream. Twenty-five years' experience should count. You'll find it in our service.

ASK FOR PRICES

The figures of yesterday may be too low for to-morrow.
Ship to—

The Toronto Creamery
Church St., (It Pays) Toronto

FOR SALE: Jersey Bull, Calf and Yearling

from Record of Performance dam, grandam, also sire's dam champion two-year-old cow of Canada. I have the dam, grandam and full sister. Cross this yearling with your grade Holsteins for something choice. Come and see them. For full particulars, apply to:

E. A. SMITH, Maplehurst Jerseys
386 Talbot St. St. Thomas, Ont.

Dominion Shorthorn Herd Books

Half price for quick sale.
19 Volumes—1898-1911.

W. DOHERTY, CLINTON, ONTARIO

White Field Beans

FOR SALE

Selected for seed. Ten dollars per bushel
A. C. BECKER, AYR, ONTARIO

SEED

Alske Clover No. 2, \$13 per bus.; Timothy seed No. 2, \$4.75 per bus. New bags 45c. Write for samples. A. BINGLE GRIMSBY, ONT.

43 HEAD THE DUNROBIN FARMS 43 HEAD

Dispersion Sale of

REGISTERED HOLSTEINS

(THE PROPERTY OF COL. JOHN A. GUNN) will be held on

Friday, April 5th, 1918

At The Union Stock Yards, Toronto

Inadequate railway service and scarcity of efficient help compel us to go out of dairying. The herd is being sold in Toronto as train connections for Beaverton are not good for buyers from a distance. Some 30 of the herd are now bred to Echo Segis Champion, whose sire is a full brother of May Echo Sylvia. FOR CATALOGUES (READY MARCH FIFTEENTH) APPLY TO:

THE DUNROBIN FARMS, BEAVERTON, ONT.

HILL CREST HOLSTEINS

Type Breeding Production

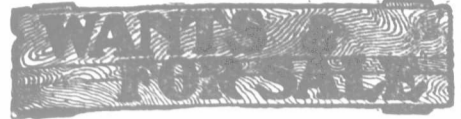
The Union Stock Yards, Toronto
Thursday, March 28, 1918

You are Cordially Invited to Attend

THIS SALE WILL SET THE PRICE FOR YOURS—MAKE IT A HUMMER

FOR CATALOGUE AND ALL INFORMATION WRITE

G. A. BRETHEN, BOX 40, NORWOOD, ONTARIO



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

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—FARM 200 ACRES, FIRST-CLASS buildings and stabling. Brick house, slate roof, modern conveniences. Land all under-tiled; lots of water, good orchard and hardwood bush; also house for hired man. Apply, Box 142, Springfield, Ont.

SCOTCH COLLIE PUPS FOR SALE. APPLY R. G. Rose, R. R. No. 6, St. Thomas, Ontario.

STALLION GROOM—SCOTCH—WILL HIKE to handle in Moore or Sarnia Districts. Box "T," Farmer's Advocate, London, Ont.

WANTED—SINGLE MAN FOR "WELD-WOOD FARM," must be experienced in all branches of farm work; a good milker, and familiar with feeding and caring for cows on record work. Apply Farmer's Advocate, London, Ont.

WANTED AT ONCE—A SINGLE SCOTCH MAN to work on farm by the year, and also who understands feeding and looking after Short-horns. State wages per year. Apply to A. J. Fox, Harrow, Ont.

WANTED—MARRIED MAN TO WORK ON farm; a capable farmer, and good with cattle. Apply, stating wages and references, to Box 7, Farmer's Advocate, London, Ont.

WANTED—SITUATION BY MARRIED MAN on farm, by the year; must be in all kinds of farm work. John Cairns, R.R. No. 3, Beaver-ton, Ont.

WANTED

First-class gardener, one who knows his business—to move to Kingston and work on private garden. Must be fully qualified.
H. W. RICHARDSON, KINGSTON, ONT.

THE FARMER'S SEEDS FIFTY-TWO YEARS SERVICE

1866 1918

Decide What to Plant NOW!

Seeds will be in greater demand this year than ever before on account of the big shortage of good seed and the Government's demand for increased production. Do not delay your order. If you have not received a copy of our catalogue, write for one to-day.

CORN

On account of the severe shortage of seed corn this year, practically none being obtainable from Canada—we will accept orders NOW for seed corn (shelled), Southern grown, subject to our receiving delivery from United States War Board. This corn is of excellent quality and is on the way now. We quote the following varieties:

Bus.	
Red Cob	\$5.00
Early Prince Charlie (will do as a substitute for Wisconsin No. 7.)	5.00
Leaming Improved	5.00
" Fodder	5.00
Mammoth Southern	5.00

CLOVER and TIMOTHY

Government Standard	Bushel
No. 1 Red Clover	\$24.00

Bags for Clover and Timothy, 45c. extra. Bags for Grain Free.
We pay railway freight to all points in Ontario and Quebec on order of \$25 or more

GEO. KEITH & SONS SEEDS 124 KING ST. E TORONTO

We Can Save You Money ON SEED CORN

Leaming, Red Cob Ensilage, Mammoth Southern Sweet; guaranteed 85% to 98% germination

Prices on application. Special inducements on car lots.

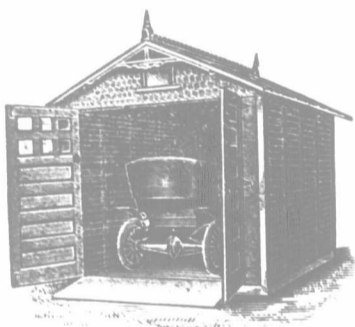
MATTHEWS & CO.
Watford, Ontario

Fernbrook Ayrshires

Young bulls for sale (out of R. O. P. dams) from one to fifteen months old; tracing closely to the world's champions, Gar-claugh May Mischief and Jean Armour.

COLLIER BROS., Beachville, Ontario
(OXFORD COUNTY)

4 DUAL-PURPOSE SHORTHORN BULLS 11 to 13 months of age, good color, sired by "Oxford Butterfly", from good producing dams; also Registered Clydesdale Stallion, rising 3 years, from imported sire and dam.
J. M. McCallum, Shakespeare, Ontario



House Your Auto Under Right Conditions

The ordinary shed is not the place for keeping such an investment as your car represents.

It will be kept under ideal conditions, look better and last longer if housed by itself in a structure for that purpose.

At a moderate price, you may add to your property a handsome, substantial, permanent building in the shape of a

SCHULTZ SECTIONAL PORTABLE GARAGE

You will have a sound, warm, weatherproof structure for use all year 'round; well lighted, solidly built, nicely floored and with a FIREPROOF roof. If necessary at any time, you will be able to quickly take down your SCHULTZ garage and as quickly erect it in a new location. Your car is always under your eye, ready for instant service.

Write for illustrated bulletin and price list NOW.

ESTABLISHED 1869

THE SCHULTZ BROS. CO., LIMITED, Brantford, Ontario

"Bissell"

A NAME THAT HAS BECOME FAMOUS

A good name is the greatest asset any man or any business can possibly have, providing the name stands for quality and thoroughness in the product it represents.



T. E. BISSELL

Experienced farmers in Canada and the U. S. vouch for the name Bissell—they have used Bissell Disk Harrows and Bissell Land Rollers and know that they stand the wear and tear of hard farm work which is the endurance test of any implement. "Bissell" implements are built from the practical farmer's standpoint to do the work properly, and efficiently,—and results show that they do it.

The man who constructed the first "Bissell" Disk Harrow and Roller knew what he was about and has spent over a quarter of a century in perfecting what now stands second to none. He made a life study of this work and is a farm implement specialist. He knew what the farmers needed and the success of "Bissell implements" is due to years of study and experiment with Disk Harrows and Land Rollers that would serve the farmers best.

Bissell Implements are strongly constructed, of light draught and correct proportions, assuring the farmer of standing up to the hardest kind of work, yet being easier than any others on the horses. Built also in sizes for use with Tractors.

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

NEPONSET ROOFS

NEPONSET PAROID ROOFING NEPONSET TWIN SHINGLES

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



NEPONSET Paroid ROOFING

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

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

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

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

BIRD & SON - Head Office, Hamilton, Ont.

—Warehouses:—

Montreal, Toronto, Winnipeg, Calgary, Edmonton, St. John
The Largest Manufacturers of Roofings, Wall Board and Roofing Felts in Canada

POULTRY AND EGGS

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

BEULAH FARM WHITE WYANDOTTES—Winners at the principal egg-laying competitions. Official records over 200 eggs. Hatching eggs from two-fifty per setting. Mating list free. McLeod Bros., Box A, Stoney Creek, Ont.

BRED-TO-LAY BARRED ROCK COCKERELS and Indian Runner Ducks. Bred right. Priced right. John Annesser, Tilbury, Ont.

BARRON'S FAMOUS S.-C. W. LEGHORNS—world's greatest laying strain, stock imported direct. Eggs, \$3.00 and \$2.00 per 15; \$9.00 per hundred. Mating list free. J. Hollingsworth, Milton Heights, Ont.

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

CHEAP—A FEW REGAL WHITE WYANDOTTE cockerels, or trial setting from our recorded pen will convince you, at \$2.00 per 15. Freure Bros., Beamsville.

DAY-OLD CHICKS—EGGS FOR HATCHING—from trap-nested, bred-to-lay S.-C. White Leghorns, White Wyandottes and Barred Rocks. Write for mating list. Brockville Poultry Farm & Hatchery, Brockville, Ont.

EGGS FOR HATCHING FROM OUR NOTED winter layers, O.A.C. Bred-to-Lay Single-comb White Leghorns, \$2.50 per 15; \$4 per 30; \$6 per 50; \$10 per 100. Roseheath Poultry Farm, Richmond Hill, F. R. Oliver, proprietor.

EGGS—PER HUNDRED OR SETTING—nearly all varieties—exhibition, utility poultry, ducks, bantams, geese, turkeys, baby chicks; reasonable prices. Twenty years breeders—exhibitors. Luxton & Sons, Mt. Forest, Ontario

FOR SALE—A FEW CHOICE UTILITY Silver Wyandotte cockerels from my exhibition stock, at \$4.00; hens, \$3.00, 2-year-old. Eggs from my best stock at \$3.00 per 15. Guarantee hatch of 9 or replaced at half price. Look up my winning at Dunnville Poultry Show. Member, Silver Wyandotte Club. J. O. Moore, Grassie, Ont.

HATCHING EGGS, BABY CHICKS, UTILITY Laying Strains, Barred Rocks, Rhode Island Reds, White Leghorns, White Wyandottes. Hatching eggs only from White Rocks, Golden Wyandottes, Non-Bearded Golden Polish. Write for price list. Satisfaction guaranteed. Tay Poultry Farm, Perth, Ont.

NOTICE—I HAVE PURCHASED GEORGE Buttery's entire stock of prize-winning, bred-to-lay White Rocks, White Wyandottes and S. C. White Leghorns. Eggs \$1.25 per fifteen. Satisfaction guaranteed. Jack Buttery, Strathroy, Ont.

ROSE-COMB REGAL WHITE WYANDOTTE Cockerels, \$2.50 and \$3. 15 eggs, \$3. Percy Clapp, Tecumseh, Ont.

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

R.-C. BROWN LEGHORNS—LOOK! SPECIAL sale. Now is the time to invest in good selected laying stock. Trios of 1 cockerel, 2 females, \$10. We must have the room for our young chicks. Eggs \$3 per 15. Galloway & English, Ingersoll, Ont.

SHEPPARD STRAIN S.-C. ANCONAS—TWO dollars setting fifteen eggs; nine dollars a hundred. Order from this advertisement. E. W. Bennett, Victoria Ave., Niagara Falls, Ont.

S.-C. RHODE ISLAND WHITES THAT HAVE the habit of laying when egg prices are high. Also have strong standard points. Eggs, two and three dollars per fifteen. "White" Poultry Yards, Box 296, Preston, Ont.

S.-C. W. LEGHORN EGGS. PEN 1 THESE 16 yearling hens averaged 191 eggs each last year, headed by a cockerel whose dam laid 115 eggs from Oct. 1 to Mar. 1.—\$2.25 per 15. Pen 2.—Hatched from Pen 1 last year, headed by a rooster whose dam laid 232 eggs in her pullet year. \$2.00 per 15. Cash with order. Frank R. Howson, Wingham, Ont.

TURKEY EGGS—WE HAVE 50 HEALTHY Bronze Turkey Hens, mated to strong, husky, young and old toms; eggs ready in season at \$4 per 10 eggs; few toms left. Send in your order, we have the eggs ready for you. Everything in pure-bred poultry—write us first. Stamps highly appreciated. Yamaska Poultry Farms, St. Hyacinthe, Quebec.

WHITE WYANDOTTES, REGAL STRAIN—Hatching eggs from my best pens \$2 per fifteen, \$10 per hundred; utility pens \$1.75 per fifteen, \$8 per hundred. Cockerels four to ten dollars each; one of these will improve your flock. All my stock are Martin's Regal Strain. Satisfaction guaranteed. Book orders quickly. A. Hobbes, Northern Crown Bank, Port Dover, Ont.

WHITE ORPINGTONS—ALDRICH STRAIN, from New York winners, low down, massive kind; hens, pullets, cocks, trio \$15.00. Eggs \$3 and \$5 per fifteen. Wm. Kappler, St. Mary's, Ontario.

32 cents For chickens (dressed)
30 cents For large hens ALIVE
Above price paid by

WALLERS, 702 Spadina Ave., Toronto
Write for price list.

Rose-Comb Rhode Island Reds and Barred Rock eggs for hatching, \$1.50 per 15. Rose-Comb Rhode Island Red cockerels \$3 each. Alex. McKinney, R. R. No. 1, Erin, Ontario

The Dollar Chain

For the soldiers and those who are suffering because of the war.

Contributions from March 8 to March 15: Smith Evans, Guelph, Ont., \$1.00; Mrs. J. M. Lochhead, Centreville, Ont., \$1.00; Percy Marchbank, New Annan, P. E. I., \$1.00; J. E. McIntyre, R. R. 5, St. Thomas, Ont., \$10.00; John Wilcox, Glanford Station, Ont., \$5.00; A. B. M., Woodville, Ont., \$1.00; "Charity", Watford, Ont., \$5; Geo. T. Ham, R.R. 1, Bath, Ont., \$3.50.

Previously acknowledged.....\$5,304.40

Total to March 15.....\$5,331.90

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

Gossip.

Income Tax Forms.

Income war tax forms, announcement of which is made in another column, must be filled out before March 31. War demands have made it necessary to distribute the burden as equitably as possible and so a tax based on ability to pay has been relied upon as a principal source of revenue. The people of other Allied countries, Great Britain, France, and the United States are cheerfully doing their part, and the people of Canada will make of the income tax an opportunity to serve the cause. This graduated income tax on all incomes of \$1,500 and over, enjoyed by all unmarried persons and widows or widowers without dependent children, and of \$3,000 and over enjoyed by all other persons as well as by all corporations and joint stock companies, is looked to by the Government to give the country a large revenue and the time is now at hand to fill in the income forms. See the explanation on another page in this issue.

Brant County Holsteins.

The Holstein Breeders of Brant County and District are now advertising their Annual Spring Sale for Tuesday, April 2nd, which is to be held as usual in Coulter's livery barn near the market square in the city of Brantford. There will be 36 cows and 4 young bulls in this year's sale. The majority of the former are young cows and fresh at sale time. The four bulls offered are also all young and are, we understand, also exceptionally well backed with official records. At the time of writing, the catalogue, although promised by the printer, had not come to this office, and as to the breeding, records, etc., of the females selling we can only presume that they are up to this Club's usual high standard in which event they would be among the very strongest offerings of the year. The Brantford Club usually have a choice offering and the 1918 consignment is not likely to be disappointing. All correspondence regarding catalogues etc., should be addressed to N. P. Sager, St. George, Ont. Mention the Advocate when writing.

The Last Call for the Woodstock Ayrshire Sale.

Ayrshire breeders will have an excellent opportunity of securing choice individuals at their own price at the sixth annual consignment sale held under the auspices of the Southern Counties Ayrshire Breeders' Club, at Woodstock, Wednesday, March 27. The Club is to be complimented on the superior class of Ayrshire cattle it has been putting under the hammer at these sales. Many Ayrshires purchased at these Club sales have been winners in the show-rings at our largest exhibitions as well as being well up to the top in yearly test work. Many of the best-producing families of the breed in Canada come from this district, and a large number of representatives of these families will be found in the sale on the 27th. A good proportion of the females are due to freshen about the time of the sale, or shortly after. There are ten young bulls of splendid utility breeding and forty-one females catalogued. Among the contributors are: MacVicar Bros., Belmont; F. H. Harris, and John A. Morrison, Mt. Elgin; J. L. Stansell, Stratfordville; R. J. A. Smith, Hatchley Station; E. B. Stansell, Vienna; C. M. Howey, Burford; Jas. Begg & Son, St. Thomas; and E. B. Palmer & Son, Norwich. Send to the Secretary, John McKee, Norwich, for catalogue.

25% Better—"Gold Dollar" Calf Meal
CUMMINGS FEED MILLS, OTTAWA
J. A. SIMMERS LIMITED, DISTRIBUTORS, TORONTO



Hatch Chicks with a Cycle Hatcher \$7.50
The Most Wonderful Incubator Yet Invented. Price.....
Free catalogue on request, illustrating Incubators, Brooders, Hoppers, Founts, etc. Make your hens keep you.
C. W. COLLINS, of the Collins Manufacturing Co.
415 Symington Ave., TORONTO

Infantile Paralysis

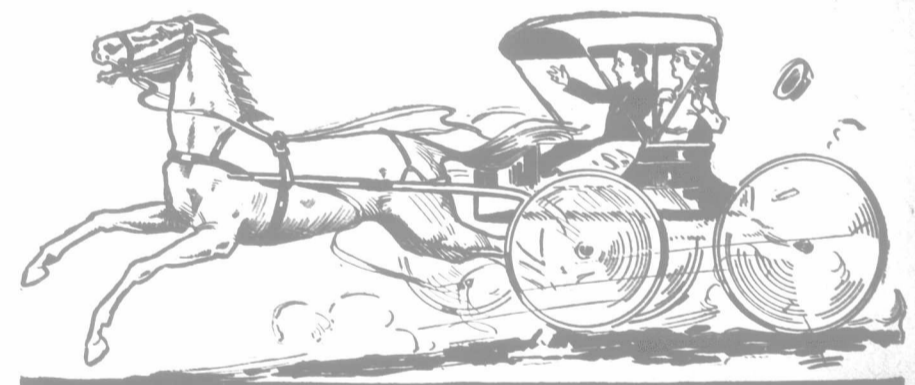
left 8-year-old Evlyn Olson so crippled she had to crawl on her knees. Five months' treatment at the McLain Sanitarium restored her feet and limbs to the satisfactory condition shown in the lower picture. Her mother has this to say:

"We feel it our duty to recommend your Sanitarium. Evlyn was stricken with Infantile Paralysis in August, 1915. March 1st, 1916, we carried her to you. Five months later she could walk without crutches or braces. Words cannot express our thanks."
MR. and MRS. JOHN OLSON,
R. D. No. 7, Grinnell, Iowa.

For Crippled Children

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

The McLain Orthopedic Sanitarium
861 Aubert Avenue St. Louis, Mo.



Bought this Horse for \$50
Sold it for \$175

\$125.00 Profit in 10 Days—My Free Book Tells How

What Others of My Students Are Doing
(See my free book for more amazing successes)
Mr. S. L. Arant writes: "Just to test your methods, I bought the worst looking, kicking, fighting horse I could find. Paid \$50.00 for him. After handling him only a few hours according to your methods I sold him for \$185.00."
Mr. Dell Nicholson, Portland, Me., writes: "I have trained a four year old mare that was given up by everybody. Bought her for \$50.00 and now have her so gentle, my little boy handles her. Wouldn't take \$200.00 for her."
Dean L. Smith, Findlay, Ohio, writes: "By following your instructions I have changed a worthless, dangerous balker into a horse worth \$225.00."
Elliott McEck, Elkart, Ill., writes: "Have just broken a pony to drive and taught it some tricks. Owner bought it for \$12.50. Paid me \$40 to train it. He just sold it to a show company for \$150.00."

Write today for my free book. See for yourself how my system of horse training enabled Chas. H. Mackley of Unadilla, New York, to make \$125.00 profit on a single deal. In my free book Mr. Mackley tells how he took a vicious mare that hadn't been harnessed for seven months and in 10 short days had her as gentle an animal as you could wish to drive. He then sold for \$175.00 the horse he picked up for \$50.00. This is only one of the amazing successes students tell in my book. What others are doing you can do.

I Will Teach You How to Master Any Horse
I will teach you by mail my famous methods of breaking and training horses. In a short time I teach you how to break in the wildest colt; how to cure the meanest kicker and balker; how to cure jumpy horses at a glance; how to cure every bad habit a horse can have. I will make you the master of any horse.

Big Fees in Horse Training
You can pick up nice money like Mr. Mackley does and you can also command big fees for breaking and training horses for others. My free book shows how.

Free Book
Mail the Coupon
No obligation. Just mail the coupon or a postcard.
Write today.
Prof. JESSE BEERY, 480 1/2 Main Street, Pleasant Hill, Ohio.

Free Book Coupon
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483A Main Street, Pleasant Hill, Ohio
Dear Sir: Please send me free and postpaid your book, "How to Break and Train Horses."
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**BOYS AND GIRLS
ON THE FARM**

Improve your odd moments. We have a farmer's boy as a student, who says, "I think over my lessons when going for the cows, watering the horses, doing the chores. I learned 100 lines of 'The Merchant of Venice' while milking." You can study several HOURS a day in this way. We train you to do it.

Courses in:

Beginner's Course, Complete Commercial, Stenography, Special English, Story Writing, Matriculation, Teachers' Courses, Mind and Memory Training, Mechanical and Architectural Drawing, Electrical Course, Engineering (Stationary, Steam Traction, Gas or Gasoline Tractor, Automobile, Gasoline), Civil Service, Journalism, or almost any subject.

WRITE. It costs nothing to FIND OUT.

Canadian Correspondence College, Limited
DEPT. E. - - TORONTO, CANADA

Cash Prize Bulletin

This is the last time we shall give the standing in this competition. The next notice will announce the prizewinners.

PRESENT STANDING:

1. MICHAEL UNVERZAGT
2. T. S. MILLER
3. D. J. COLEMAN
4. W. J. TREBELCO

While the Cash Prize Competition is nearing its final stages, don't forget that you can always make money in an easy and pleasant way by securing new subscribers to The Farmer's Advocate.

If you want to turn waste time into valuable time, write to us, and we will tell you how it can be done.

Ask Your Grocer For

McCormick's
JERSEY CREAM
Sodas

Always crisp and delicious

Don't put your money into any piano until you have fully investigated the

SHERLOCK - MANNING

20th Century Piano - known as

"Canada's Biggest Piano Value"

Write Dept. 18 for free Catalogue "T"

THE SHERLOCK - MANNING PIANO CO.
London, (No street address necessary) Canada

Splendid Farm

In Oxford County, consisting of 215 acres; clay loam, no waste. Suitable for grain or mixed farming. Running water, two bank barns, good brick house. Apply:

Box C, Farmer's Advocate London, Ontario

**ROOFING
AT FACTORY PRICES**

WE ARE THE LARGEST DISTRIBUTORS OF READY MIXED ROOFING IN CANADA. WE SELL DIRECT TO USERS. WE CAN SAVE YOU MONEY. WRITE FOR FREE SAMPLES.

HALLIDAY COMPANY, HAMILTON
FACTORY DISTRIBUTORS CANADA

Baled Shavings for Sale

We have a limited quantity of baled shavings to offer at 15c. per bale, f.o.b. our yard. Place your order while they are going at this price.

All orders promptly carded for.

THE NICHOLSON LUMBER CO., LIMITED
Burlington, Ontario

STAMMERING

or stuttering overcome positively. Our natural methods permanently restore natural speech. Graduate pupils everywhere. Free advice and literature.

THE ARNOTT INSTITUTE
KITCHENER, CANADA

O. A. C. 72 SEED OATS

Registered and Improved, grown on rich, clean soil, large yields. Write for sample and prices.

J. S. HILBORN
Sec. Dumfries and Wilmot Oat Seed Centre
New Dundee, Ontario

Gossip.

Sunny Side Herefords.

Arthur F. O'Neill of O'Neill Bros., the owners of the Sunny Side herd of Herefords and breeders of Clydesdale horses, Shropshire sheep and Yorkshire pigs, states that they have twenty-one grand cows to freshen this spring. They are offering a goodly number of young bulls, ten to eighteen months old, and a few older as well as a number of heifers rising two years. The herd is headed by Donald's Lad, sired by the great bull, Dale. This herd furnished the champion heifer at Guelph and a number of the bulls are winners. See the advertisement in this issue and write Arthur F. O'Neill, Denfield for further particulars.

The Menie District Ayrshire Sale.

The second annual sale of pure-bred Ayrshires contributed by the members of the Menie District Ayrshire Breeders' Club, and to be held on Tuesday, April 2nd, 1918, at Campbelford, will be an event of interest to all breeders of Ayrshire cattle in Canada. For many years this district has been one where that breed of cattle has been the favorite, and into which some of the best blood of the breed from its native land, Scotland, has been imported. At the leading Exhibitions of the Dominion, representatives from this district have time and again carried off the premier honors and it is in this district that Hillside Peter Pan, the champion bull of Canada, is owned and doing much for the breed. There is probably no other district in Canada where there are so many relatives of that great cow, Grandview Rose, the champion cow of Canada. Grandview Rose had for her sire, "Springhill Live Wire", a son of that great bull, Lessnessock Durward Lely, whose reputation as a prize winner and producer of stock is known to all breeders of Ayrshires. Three sons of Lessnessock Durward Lely came to this district, namely, "Springhill Cashier", "Springhill Grit", and "Springhill Gay Boy", and their stock is scattered throughout the whole district. It is safe to say fully one half the Ayrshires owned in the district are descendants of these bulls and thus closely related to the champion Ayrshire cow of Canada. It is also a fact worthy of note that two of these bulls are still in the district, and their stock is more appreciated to-day than ever before. In the sale will be a number of their get and descendants. We might mention one, "Seymour Belle", she will be just five years old, and is of typical, true, conformation with splendid udder and teats. Her dam's sire, "Up to Date of St. Ann's" was by the great bull, "Glencairn 3rd", whose dam was Kirtsy Wallace of Auchenbrair, the best blood of the Robert Reford herd. Her owner says she will be fresh at time of sale and will be one of the plums. Another one in the sale will be "Springbank Rose 36846". Here is another of good Ayrshire type with splendid udder and teats and nice to milk, sired by that famous bull Lessnessock Forest King (imp.), who has several qualified progeny, and whose dam Lessnessock Gem has a record of 9,840 lbs. milk in forty weeks as a four-year-old. She was also the dam of Lessnessock Golden Love, which sold for \$1,000 at the Springfield sale, last June. Rose has just freshened and her owner says of her, "that anyone looking for a first-class cow should not miss her." Space will not permit the mentioning of many but we might refer to another, Stella of the Maples, she will just lack four days of being two years old on day of sale. Her dam was Highland Lass, the same dam as Spicy Lass, the high-priced cow of last year's sale, and she resembles her grandam very much in type. She is of the same blood as Pride of Hume Farm, winner of many first prizes at Toronto and elsewhere, and which produced as high as 65 lbs. of milk per day. She is of true Ayrshire type, very straight in her lines and a promising heifer, and was sired by a son of Auchenbrair Hercules and is thus again related to the Canadian champion. Every animal catalogued will be sold, as the rules of the Club prohibit by-bidding and bidding in. Already those from a distance who obtained stock at this Club sale last year have signified their intention of being present. One buyer who took eight head last year says "they were the best lot I ever purchased." No better opportunity will be afforded the public to get foundation stock or to add to their present herds than by attending this sale.

**EDWARDSBURG
GLUTEN FEED**

**23%
PROTEIN
GUARANTEED**

The Feed for More Milk

This Gluten Feed enables you to feed the cows a properly balanced ration, containing all the Protein they will eat and digest and turn into milk.

We have a book about it. Write for a copy—and learn how many farmers and dairymen are feeding for more milk—and making it pay.

—Fatten Hogs on Edwardsburg Oil Cake. 066

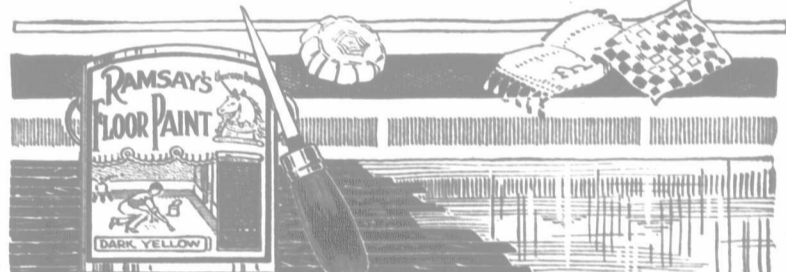
THE CANADA STARCH CO., LIMITED - - TORONTO
WORKS AT CARDINAL, BRANTFORD, FORT WILLIAM

**Ramsay's Fine Floor
Paint—**



is made to be walked upon, that is the floor Paint you want. It is time tried for severe usage. There's a Ramsay dealer in your town; consult him, or write us for booklet.

A. RAMSAY & SON COMPANY
Makers of Paint and Varnishes since 1842
TORONTO MONTREAL VANCOUVER



Big Egg Yield

Royal Purple Poultry Specific is a great egg producer and poultry conditioner. It makes hens lay in the winter almost as well as they do in summer. This is because our Poultry Specific supplies the missing food elements

that fowl need in their winter ration and without which they cannot lay.

Royal Purple Poultry Specific tones up the digestive system, and keeps the fowl active and healthy. It should be fed daily in a hot or cold mash.

Royal Purple Poultry Specific

has pleased thousands of farmers and poultrymen. It has enabled them to get winter eggs without trouble. Read the views of the following users:

Fred E. Bond, Kincardine, Ont., writes:

"I have been feeding Royal Purple Poultry Specific to my hens this winter and I find it beats anything I have ever used as an egg producer. They started to lay right away and kept on gaining. I will never feed anything else as long as I can get it."

T. W. Hale, Toronto Annex, writes:

"I have fed your Specific to poultry, and it is a valuable tonic; increases the production of eggs. Would not be without it; keeps them in good health and I recommend it highly. Any person trying it once will not be without it."

If you want more eggs and healthier fowl, feed Royal Purple Poultry Specific. It is sold in large and small packages.

Ask our dealer in your town for it.

Made only by
W. A. Jenkins Mfg. Co., Limited
London, Canada

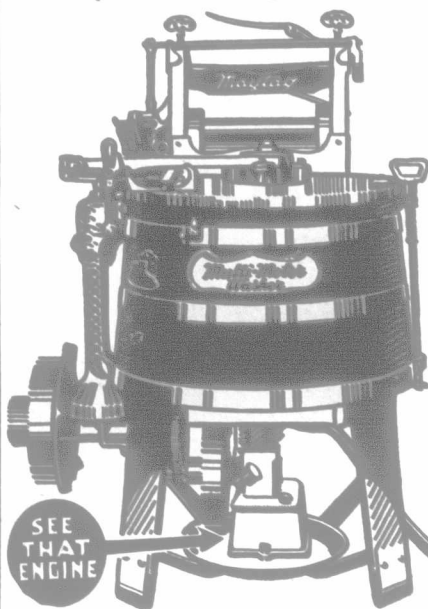
FREE BOOK
This 80-page book describes the common diseases of poultry and stock. It tells how to build and remodel poultry houses, etc., etc. Send for a copy.

SOLVED!

A machine that will do your washing and wringing; drive your churn and cream separator has surely solved your Labor Problems.

Buy a Maytag Multi-Motor

A postcard will bring you full particulars and prices.



SEE THAT ENGINE

WHITES LIMITED
COLLINGWOOD, ONT.

SEED GRAINS

We can supply, on short notice, limited quantities of Choice, High-Quality Field Grains from the following varieties:

- Marquis Wheat, Goose Wheat, O.A.C. No. 21 Barley, Bunker King Oats, O.A.C. No. 72 Oats, Silver Hull Buckwheat
- Centennial Peas
- Also Highest Grades of Clovers and Timothy

Ask for our prices on Mangels, Turnips, Onions, Potatoes, Beets, Corn and garden seeds of all kinds.

If in need of feeds, write us. We can supply Cotton Seed Meal, Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed (23% Protein), Bran, Shorts, Corn, Cracked Corn, Corn Meal, Re-Cleaned Standard Screenings, Ground Screenings, Beef and Bone Scrap, Poultry Grit, Oyster Shell, Alfalfa Meal etc.

We manufacture the well-known "Good Luck" Brands of Poultry Feeds and can supply any quantity. Try our Good Luck Baby Chick Feed. It gives results.

Long-Distance Phone: Day Junction 314 N. St. J. a ton 4534 Write or Phone for Prices.

CRAMPSEY & KELLY
Dovercourt Road, Toronto, Ont.

IRON AGE

Farm, Garden and Orchard Tools
Answer the farmer's big questions: How can I grow crops with less expense and labor? How can I grow fancy fruit at low cost? The

IRON AGE Barrel Sprayer

(horizontal) solves the spraying problem for the busy farmer. Can be used in any wagon, cart or sled. Reliable easy-working pump placed outside the barrel—prevents rusting—all parts easy to reach. 100 to 125 pounds pressure with two nozzles. 50 and 100 gallon sizes. We make a full line of sprayers. Write today for our free booklet.

THE BATEMAN-WILKINSON CO., Ltd.
41 Symington Avenue, Toronto, Canada

ARE YOU BUILDING OR REPAIRING?

OUR CATALOGUE OF BUILDING MATERIALS AND TOOLS WILL SAVE YOU MONEY. WRITE FOR FREE COPY.

THE HOLIDAY COMPANY, LIMITED, HAMILTON
FACTORY DISTRIBUTORS CANADA

Questions and Answers. Miscellaneous.

Swollen Udder.

I have a four-year-old cow due to freshen in May. Her udder has been swollen more or less since the first of the year. It does not appear to be caked nor sore; the swelling disappears for a day and then comes back again. I have been feeding silage and hay and about two quarts of oat chop and bran. I have given her a few small doses of salts. She is giving a small quantity of milk and is in good flesh. F. S. C.

Ans.—It is rather unusual for the udder to swell when the cow is drying off. The symptoms are those of a light attack of mammitis or inflammation of the udder. The quarter should be milked out dry, and hot water applied to the udder, and then rubbing with camphorated oil should tend to reduce the swelling. Care should be taken in giving salts to a cow that is soon due to freshen. Raw oil would be better.

Sweet Clover.

1. I had sweet clover on clay land last year and cut it in August. This year I would like to have it for pasture. Would it be all right for me to sow the same field with sweet clover early this spring? Would it give much feed through the summer?

2. I have a quantity of split beans and would like to know if they could be mixed and chopped with other grains, for hog feed. W. R.

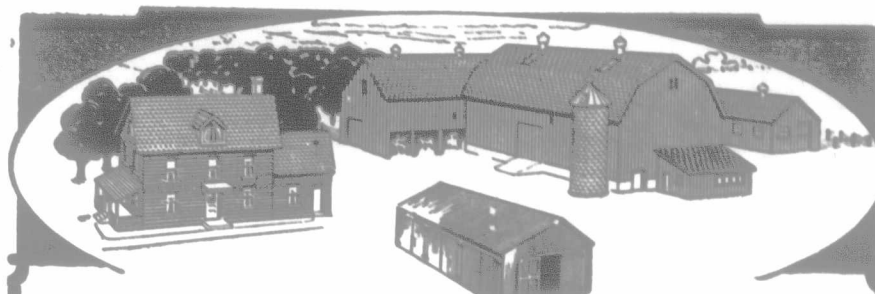
Ans.—1. If the field was seeded last spring and then cut in August, the crop should be at its best this summer. If seeded two years ago, why then there would be no growth this year from the same plants, as the crop is a biennial similar to red clover. However, if you did not cut until August, and it was the year after being seeded, there should have been enough seed ripen and fall to the ground to give you a good catch this spring. If the crop did not mature and drop seed of its own accord, you could re-seed this spring, but you could not count on very much feed until on in the fall from this spring's seeding. If the sweet clover was sown last spring and came through the winter satisfactorily, a field of this crop would carry a large herd through the summer.

2. Beans may be ground and fed to hogs. The amount depends on the size of the pigs. It would not do to mix very many beans with barley and oats for young pigs, but a considerable quantity could be fed for finishing them.

Weak Straw.

What is the cause of oats growing heavy, rank straw and lodging before they ripen? Is there something lacking in the soil? My neighbors have little trouble in this regard, and they tell me my ground is too rich. We used to have a lot of stock on the place and used a lot of soft-wood ashes. Our hay crop is not nearly so heavy as it used to be. I have only been working the place for four years. Is there anything to put on the land to make the straw grow stronger, or to retard the growth of it? Last year I did not have over half a crop of oats, as they did not fill out and they went down. G. E. F.

Ans.—Some varieties of oats grow a ranker, weaker straw than others. From the information given we are inclined to think that your farm is rich in nitrates, which tend to force rapid, strong growth, but it may be lacking a little in potash and phosphates. Many farmers would give a good deal to have their farms rich in nitrates, as it is one of the most expensive elements to get into the soil. Of course, some soils are naturally much richer in certain elements than others, depending a good deal on the soil formation. You should be able to grow such crops as roots or corn to perfect maturity as fertility is concerned. Applying potash is claimed to strengthen the straw, but tend to make the kernel all hard. You might try a variety of oats that do not grow very rank in the straw. Some of the earlier ones are usually so rank that the growth is some of the best.



"METALLIC" stops Fire Losses

and sound business sense demands fullest fire protection for high value crops, stock and implements

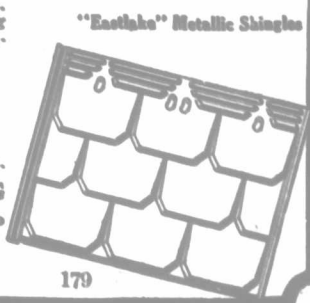
There is no economy in saving a few dollars and losing thousands. Fires cost Ontario Farmers \$943,000.00 last year. "Metallic" would have saved three quarters of this. Do your bit—help cut down the loss—ROOF RIGHT!

"Metallic" is not as expensive as you may think. Do not simply compare prices per square. Compare costs laid on the roof. "Metallic" saves lumber and labor, and it will surprise you what a small difference there is in the laid-on-the-roof cost. Also consider the big difference in life-time—"Metallic" outlasts three ordinary roofs. It costs very little more at first, and is far cheaper in the end. Give us your roof measurements, and let us quote you COMPLETE.

The farmer who has just been burnt out is always our readiest customer for "Metallic". But don't wait till you get burnt out. If you have any building or repairing to do get our folders and prices today on



"Empire" Corrugated Iron



"Eastlake" Metallic Shingles

"Eastlake" Metallic Shingles, "Empire" Corrugated Iron, Metallic Rock and Brick Face Siding, Metallic Ceiling and Wall Plates.

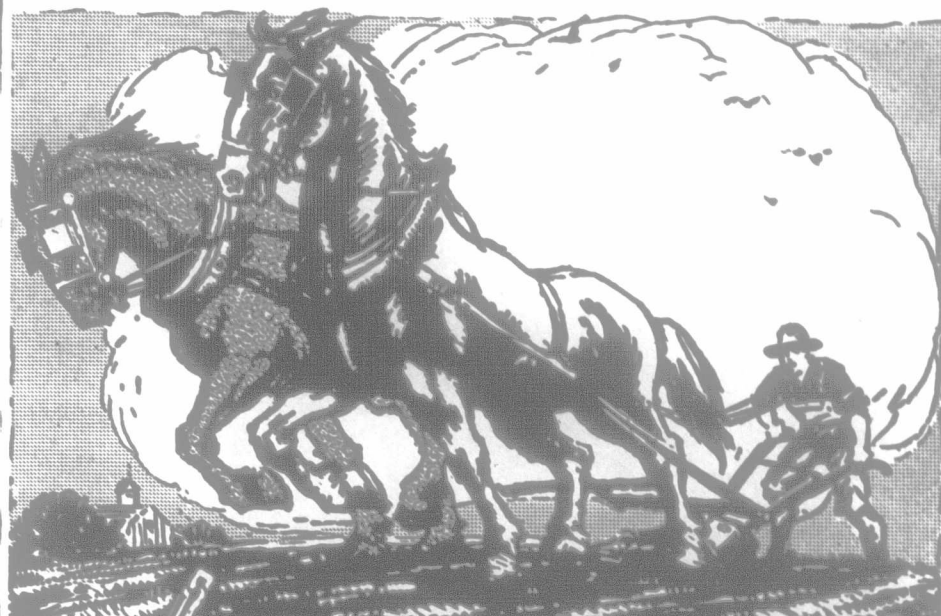
Prompt shipment. Quality first goods.

THE METALLIC ROOFING

Co. Limited, Manufacturers, Toronto

Ventilators, Eave-troughs, Hog and Stock Troughs, etc., etc.

179



DREADNAUGHT TWO-PIECE STEEL HAMES

FOR HEAVY PULLS AND TERRIFIC STRAINS

This two-piece double strength Dreadnaught Steel Hame will not buckle or bend. It is reinforced at each point of greatest strain. It is the strongest hame on the market. In every detail it represents the highest mechanical perfection.

15% Stronger than any other hame.

Draft studs forged steel. Rings electrically welded—will not break; will not buckle or bend; anti-rust treated; Guaranteed to give perfect satisfaction. Correct design, fits collar snugly—no sore shoulders.

Write for our Descriptive Folder

We can furnish low tops and high tops; light hames and heavy hames in all kinds of finishes.

DEALERS: Write for our dealer proposition and selling helps.

McKINNON INDUSTRIES, Ltd.

St. Catharines, Ontario, Canada Dept. B

No. 8000. A hame for extra heavy, hard, rough work. Two-piece, reinforced.

O. A. C. 72 OATS

First-prize seed, \$1.25 per bushel. Bags free. OSCAR KLOPP, Zurich, Ontario

WANTED

Hackney stallion, three years old or over. Apply Box "W," Farmer's Advocate, London, Ont.

Clover Seeds

Government Standard

	Per bus.
No. 1 Red Clover	\$24.00
No. 2 Red Clover	23.00
No. 1 Alsike	17.00
No. 2 Alsike	16.00
No. 1 Alfalfa (northern grown)	17.00
No. 2 Timothy (this seed grades No. 1 for purity)	5.50
No. 3 Timothy	5.00
Mixed Timothy and Alsike	9.00
White Blossom Sweet Clover	18.00
O. A. C. No. 72 Oats	1.50
Marquis Spring Wheat	3.25
Canadian Beauty Peas	3.50
Golden Vine Peas	3.00

Terms—Cash with order. Bags extra, at 4½c. each.
On all orders east of Manitoba of \$25.00 or over, we will pay the freight.
We guarantee seeds to satisfy, or ship back at our expense.
Ask for samples if necessary.

TODD & COOK
Seed Merchants
STOUFFVILLE ONTARIO

Selected Seed Grain

OATS	Per bush.
O.A.C. No. 3	\$ 1.50
Alaska	1.75
O.A.C. 72	1.25
Newmarket	1.25
Abundance	1.20
Early Yielder	1.25
O.A.C. 21 Barley (choice)	2.00
No. 2 sample	1.75
Black Barley	3.50
Early Centennial Peas	4.25
Wild Goose Wheat	\$2.75 and 3.00
Red Clover—No. 1	\$25.00
No. 2	17.00
Alsike No. 1	16.00
No. 2	17.00
Timothy, No. 1 for purity	5.75
Alfalfa (Northern Grown)	17.00
White Blossom Sweet Clover	18.00

We have a car of New Brunswick Irish Cobbler Potatoes to offer. The best early potato in existence. Write for prices.

Terms—cash with order. All prices ex-warehouse, Guelph.

Cotton bags 50c. each; sacks 15c. each.

HEWER SEED CO.

90 Macdonnell St. E., GUELPH, ONT.

CLOVER SEEDS

(Government Standard)

No. 1 Alsike	\$16.00
No. 2 Alsike	15.00
No. 1 Red Clover	25.00
No. 1 Alfalfa (Northern)	16.50
No. 2 Timothy (No. 1 Purity)	5.50
O.A.C. 72 Oats	1.25
Silver Mine Oats	1.25

Terms:—Cash with order. Bags extra 50c. each, Jute bags for Oats, 20c. We will pay freight on Clover Seed.

We guarantee our seeds to satisfy you or you may ship back at our expense.
Ask for samples if necessary.

Caledonia Milling Co.
LIMITED
Caledonia, Ontario

Choice O. A. C. 72 Oats

for sale, from prize-winning field—\$1.30 Bushel. Sacks free.
Fred. Bodkin, R. R. No. 2, Wilton Grove, Ont.

Gossip.

Anyone looking for Holstein cattle will be able to buy them at their own price at the Union Stock Yards, Toronto, on Friday, April 5, where the Dunrobin Farms, of Beaverton, Ont., will hold their dispersion sale of 43 head. Some 30 of the herd are now bred to Echo Segis Champion, whose sire is a full brother of May Echo Sylvia. Catalogues are now ready, and may be had on application to the Dunrobin Farms, Beaverton, Ont.

Another opportunity will be provided on March 27 to obtain Shorthorns at auction sale. Ira B. Vannatter, R. R. No. 1, Georgetown, will on that day disperse his Shorthorn herd, which includes some R. O. P. cows, one of them being a three-year-old which beat 1,100 pounds of milk a month. Six cows are in calf, three are yearling heifers, and two are heifer calves. Four bull calves will also be offered. Seed potatoes, barley and oats are included in the sale. See the advertisement for particulars in regard to transportation, and write at once for a catalogue.

When looking over the advertisements of Holstein sales, do not overlook that particular one to be held by N. S. Washington, Maple Lane Farm, Solina, Ont. It is a complete clearing sale to be held on Tuesday, April 2. The herd is small in numbers but very select, and consists of high-testing females. Sires from high-record families have been used and the names of some of them are given in the advertisement elsewhere in this issue. A number of the cows will be freshening soon. Write for a catalogue and full particulars.

Maple Lane Farm is two miles from Solina Station, C. N. R., Toronto and Ottawa main line, or six miles from Oshawa. All trains will be met at Solina on day of sale. The terms of the sale are cash, but seven months' credit may be obtained on bankable paper bearing interest at seven per cent. per annum.

Soil and Crop Improvement Bureau.

Believing that the agriculture of Canada has very great possibilities of development, and that increase in food production—so greatly needed at the present time—can be brought about by a wider knowledge of improved methods of soil tillage and fertility management, the Canadian fertilizer manufacturers have established a bureau to be known as the Soil and Crop Improvement Bureau of the Canadian Fertilizer Association. The object of this bureau is to collect and disseminate reliable information which will lead to the increase of Canada's crop yields and the improvement of the quality of farm products; and to encourage Canadian farmers to give greater attention to soil drainage, rotation of crops, use of lime, selection of seed, conservation and wise use of stock manure, and the judicious use of fertilizers. The bureau aim to accomplish this task by co-operating with the Dominion and Provincial Departments of Agriculture, colleges of agriculture, schools teaching agriculture, railroads, the farm press, farmers' organizations and such other institutions as are endeavoring to improve the agriculture of the Dominion. The work of the bureau will include the issuance of publications dealing with better methods of building up and maintaining soil fertility, and the producing of maximum crops; lectures and demonstrations dealing with soil tillage, soil fertility and seed improvement, and general publicity of successful agricultural methods employed by leading farmers in the Dominion. The work is under the direction of Henry G. Bell, who six years ago established and has since successfully conducted a similar campaign in the United States. Mr. Bell was formerly Professor of Agronomy at the University of Maine, and Assistant Professor of Farm Crops at Iowa State College. He is a native of Ontario and a graduate of the Ontario Agricultural College. His wide experience in all matters pertaining to soil management and crop production, in connection with the lines of work mentioned above, equip him to interpret Ontario conditions so that the bureau may render the greatest amount of assistance to Canadian farmers. The headquarters of the bureau are 1111 Temple Building, Toronto.



Second Street, Oakville, Ont. Constructed with "Tarvia-X" in 1915.

How Good Roads Reduce the Cost of Living —

GOOD roads are like oil in machinery—they reduce friction-resistance.

Without good roads a community rusts—sticks—stagnates.

With good roads the wheels of industry spin and produce.

Good roads multiply the earning power and value of remote farms. They bring a new flood of produce to the freight-station. They increase the community's buying power and make for prosperity.

Bad roads add to the cost of every ton that drags its weary way over them, while good roads set the farm-wagon, automobile and motor-truck rolling smoothly to market.

Government statistics prove

that the people of backward counties often waste, in a few years, in excessive hauling costs, money enough to build a big system of modern roads.

Good roads used to be expensive to construct and keep up. To-day they are not.

Built and maintained with Tarvia, modern roads are made automobile-proof, frost-proof and durable.

Over a period of years Tarvia Roads are less costly than any other form of good-road construction.

They are a delight to owners of horse-drawn vehicles and motor-cars alike. They give horses perfect traction.

A system of Tarvia Roads in your community will do much to increase its prosperity and reduce the high cost of living.

We have booklets about Tarvia which we would be glad to send you if you are interested.

Made in Canada

Tarvia

Preserves Roads Prevents Dust

The Barrett Company

MONTREAL TORONTO WINNIPEG VANCOUVER
ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.

Doubling Crops is Doubling Dollars

comparing with the results. Crops have advanced in price more than Fertilizers have. A Bushel of Corn will buy 50 per cent more Fertilizer now than before the war. You certainly will never increase crop production until you use fertilizer.

There is serious shortage of farm products, so order your Fertilizer now for this year, when your effort to increase crops is so much needed. Explain your soil to us and state what crops you want to put in and we will advise you what kind of fertilizer and how much you need. Special rates to farmers who club together and order in car lots. Recommend a good reliable agent for us in your district, if you can.

Reliable Agents Wanted
Write for our Free Book on Plant Food

CANADIAN FERTILIZER CO., Limited
12 Market Chambers, CHATHAM, ONT.

Doubling crops is more than doubling dollars, it is often trebling dollars and the soil is permanently improved every time you put fertilizer on it. Fertilizers are inexpensive

"Best-by-Test" FERTILIZERS



Gasoline and Kerosene Engines

Saw Frames, Saw Blades, Grain Grinders, Straw Cutters, Belting, Scales, Farm and Lawn Fence. Write for price list.

A. R. Lundy, 251 West King Street, Toronto

Artificial limbs are admitted DUTY FREE. SOLDIERS and others should get the best

Erickson Artificial Limb Co., 30 Wash. Av. N., Minneapolis, Minn.
Does Not Chafe Overcast or Draw End of Stumps
Write For Catalogue

Questions and Answers.
Miscellaneous.

Color in Percherons.

Is there any difference in the breeding of black and gray Percherons? H. M.

Ans.—Pure-bred Percherons are most commonly black or gray in color and the difference in color does not indicate difference in breed but may be the result of difference in strain of the breed.

Collecting Damages.

A friend of mine borrowed my cutter. I asked him to return it the same night; he did not do so, so after a week's time had elapsed I went after it but found it badly broken. Can I collect damages? J. T.

Ans.—Under the circumstances, you should be able to collect damages.

Mortgage Interest — School Teacher.

A person has a mortgage due and wishes to raise the interest. Would it be legal to get an agreement in writing for the increase in interest, or would he have to get a new mortgage?

2. Would it be legal for a school trustee to engage his own son in his own school? H. S.

Ans.—1. The suggested agreement would be legal.

2. Yes.

Wet Battery.

How is a wet battery made? F. W. S.

Ans.—There are several forms of wet cells, and to begin with it is necessary to have a glass or earthen vessel as a container: then you must have two metallic plates, of which zinc is always one. Sometimes the other is of carbon or of copper, or a copper compound, depending on what salt is to be used in the solution. Some of the common solutions used are caustic potash, copper sulphate and sal ammoniac. Almost any solution will make a wet cell of the strength suited to that particular salt and the plates in it.

Taxation of Income — Moratorium Act.

1. What income from loans, mortgages, etc., can a man have and not be assessed for income tax?

2. Would owning a small piece of taxable property make any difference one way or the other?

3. Would a man's physical ability to work or not make any difference?

4. How does the moratorium law affect mortgages issued since the passing of that law? O. I. G.

Ans.—1. There is no exemption in respect of interest on mortgages.

2. No.
3. No.
4. It does not apply to such mortgages.

Vendor and Purchaser.

A buys a farm from B for \$8,500.00, paying \$1,500.00 cash down, B holding the mortgage for the remainder. This was 3 years ago, since which time A has paid \$200.00 per year off the principal and has had written receipts for same, signed by B, but A has nothing to show in the way of receipt for the \$1,500.00 paid down on taking the farm. B holds the deeds which he claims is customary in such a case. But supposing these deeds through mishap were destroyed, what would happen? Would it not be the correct and legal thing for A to hold them? At least should we not have a receipt for the \$1,500.00? H. H. G.

Ans.—We assume that you received a deed of conveyance of the farm at the time you paid the \$1,500 and gave the mortgage for \$7,000. Such deed, if in the usual form, contains an acknowledgment by B of the receipt by him of the consideration money, and nothing further in that way is requisite. We assume also that this deed and the other deeds you refer to are registered. If they were destroyed it would entail some expense for a statutory declaration proving the loss and for certified copies from the Registry Office; and if the loss occurred from negligence on the part of the mortgagee he would be the one who ought to bear such expense. It would not be regular for A to hold the title deeds while the mortgage is outstanding. B is legally entitled to the custody of them.

Not a Kernel Will Be Wasted

With Seed Corn so precious this year you will want it planted with brains—yet maybe a "green" hand will have to do it. By all means, use a

COCKSHUTT CORN PLANTER

Anyone who can drive can plant a model field with it. It's as near to being human and yet fool-proof that any machine can be.

It has the famous Cockshutt light draft, with the highest-grade materials, so you can get a lot of planting done in a hurry without wearing out your teams—yet it is rugged, durable and always ready for work.

Its absolute accuracy in planting has stood the severest tests again and again—yet it always delivers exactly the number of kernels desired, without the slightest bruise to the seed.



FERTILIZER ATTACHMENT CAN BE ADDED

Will sow any quantity desired. Fertilizer can be checked into the hills with the corn or drilled into rows with the seed. You can stop or change the flow by a simple movement with a foot lever without stopping the Planter.

You can also alter the distances apart that you wish to do your planting. Give this machine your corn sowing to do—it will certainly get the seed into the ground in the best possible condition for germination.

A special Cockshutt Corn Planter folder will be sent gladly on request to the nearest Cockshutt Agent, or write our nearest branch to-day.

COCKSHUTT PLOW CO., Limited
Brantford, Ont.

Sold in Eastern Ontario,
Quebec and Maritime
Provinces by

The FROST & WOOD CO., Limited
Montreal, SMITH'S FALLS, St. John

THE MENIE DISTRICT AYRSHIRE BREEDERS' CLUB

SECOND ANNUAL SALE
OF

Pure-Bred Ayrshire Cattle

TO BE HELD AT

Campbellford, Ont., Tuesday, April 2nd, 1918

1 P.M. SHARP

Some of the choicest animals of the District and best blood of the breed will go under the hammer and be sold without reserve. Our rules prohibit by-bidding and bidding in.

A number of Record of Performance and prize-winning females freshened at the time of sale; also some richly-bred young bulls, ready for service, and worthy of a place at the head of any herd.

We believe more relatives of Grandview Rose, the champion Ayrshire cow of Canada, whose R.O.P. record is over 21,000 lbs. of milk, will be included in this sale than were ever before offered to the public. Fully half the Ayrshires of this district are descendants of that great bull, "Lessnessock Durward Lely", the grandsire of Grandview Rose. Send for a catalogue and look them up, just the kind for a foundation for your future herd, or to add to your present herd.

TERMS:—CASH, BUT CREDIT WILL BE GIVEN RESPONSIBLE PARTIES UP TO 6 MONTHS, AT 6% INTEREST.

ALEX. HUME, President and Sales Manager
CAMPBELLFORD, ONT.

W. E. TUMMON, Secretary
MADOC, ONT.

**Interprovincial
Pressed Brick**

[Handsome, Durable, Economical]

WRITE FOR FREE SAMPLES TO-DAY

INTERPROVINCIAL BRICK CO. OF CANADA, Limited
Office: 154 SIMCOE ST., TORONTO Plant: CHELTENHAM, ONT.

Whether you are young or old you should make your will. Get a Bax Will Form. Ask for Bax and the rest is simple. Full directions and specimen will. Thousands in use. At stationers, 35c.



Strawberry Plants, etc. We have a full line of first-class Strawberries, Raspberries, Currants, Gooseberries, Grapes, Asparagus Roots, Fruit Trees, Ornamentals, Roses, Seed Potatoes, etc. Write for free catalogue.

H. L. McConnell & Son, Port Burwell, Ont.
FOR SALE—THE IMPORTED
CLYDESDALE STALLION
Grandee's Last (Imp.) (13947) 16976, foaled in 1911, a sure and a good foal-getter, and good quality. Frank J. Petch, R.R. 1, Kerwood, Ont.

When writing advertisers will you be kind enough to mention The Farmer's Advocate



Niagara Soluble Sulphur

100 lbs. Sol. Sulphur

San José Scale, Oyster Shell, Blister Mite, Peach Leaf Curl, Aphid and Pearl Scylla are more easily and effectively controlled with Soluble Sulphur than Lime Sulphur. Thousands of farmers in Canada and the United States have proven by actual use that Soluble Sulphur is an excellent fungicide and combined with Calcium Arsenate it makes the best insecticide.

Costs Less Than Lime Sulphur

Soluble Sulphur saves many dollars per acre on the season's spraying. A 100-pound drum costs less than a barrel of Lime Sulphur; makes more spray, saves freight on 500 lbs. water. No leakage—no loss.

THE NIAGARA SPRAY GUN should be part of every spraying outfit. It is easy to handle, saves time in spraying and does the job more thoroughly.

Everything for Spraying and Dusting



The Niagara Brand Spray Co., Limited
Burlington, Ont. 600 lbs. Lime Sulphur

Fistula and Poll Evil

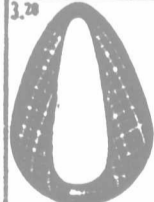
Any person, however inexperienced, can readily cure either disease with FLEMING'S FISTULA AND POLL EVIL CURE—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest Pocket Veterinary Advisor. 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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Church Street, Toronto, Ont.

REMARKABLE STOCK OF PURE-BRED Percheron and Belgian Horses FOR SALE

One (1) Pure-bred Percheron Stallion imported from France; sord color, registered, holding diploma and gold medal, weight 2,100 lbs. Extra fine specimen. Two (2) Pure-bred bay Belgian Stallions age 4 and 5 years old, weight 1,700 lbs. Each registered, holding diploma. One (1) three-year-old pure-bred bay Belgian Stallion, registered. One (1) Pure-bred, imported Belgian bay mare, weight 1,700 lbs; registered, holding diploma. Four (4) pure-bred Belgian bay mares, registered, holding first prizes from the Provincial General Exhibition. Apply immediately to

Estate Alfred Gingras, St. Cesaire, Quebec.
Rouville County, Quebec.



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Lowest prices, every article guaranteed to stand the work test. Write for catalogue. We sell direct.

THE HALLIDAY COMPANY LIMITED
FACTORY DISTRIBUTORS
HAMILTON, CANADA

MESSRS. A. J. HICKMAN & CO., (Late Hickman & Scruby, Court Lodge, Egerton, Kent, England. Exporters of PEDIGREED LIVE STOCK of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

FOR SALE: TWO IMPORTED Clydesdale Stallions

Rising ten years old—Golden Favourite, No. 11456; Milton's Last, No. 12487. Are quiet and sure; inspected and enrolled. Have been six years on same route. For particulars address:

Guy Bell or William Fendley, Brampton P.O.

Questions and Answers. Miscellaneous.

Plum Curculio and Apple Scab.

The plums on my trees always fall before they ripen. They first seem stung, then they wilt and drop off. When cut open they have a jelly matter around the part that is stung. Do they need spraying? If so, with what and when should I spray?

2. My Snow apple trees blossom well but the fruit is very small and scabby. What is the cause?

R. E. B.
Ans.—1. The falling of the plums is undoubtedly due to the work of the plum curculio. This a small, hard-shelled beetle which cuts a crescent-shaped mark in the skin of the plum, and deposits the egg therein. When hatching, the larvæ burrows its way into the fruit and the plum drops. In the control of plum curculio it is necessary to destroy all rubbish in and about the orchard, for the curculio winters in such. If there are only two or three trees, it would be practicable to jar them in the early morning, and catch the beetles which fall in a sheet or blanket and destroy them. In mid-day the beetles will fly away when the tree is jarred. The plums should be sprayed just as soon as the fruit has set, and the calvces have dropped. The mixture should be about 3 pounds of arsenate of lead, added either to 40 gallons of lime-sulphur, (made in the proportion of 1 gallon of commercial lime-sulphur to 35 gallons of water), or to 40 gallons of Bordeaux mixture (4-4-40 formula). A second application of the same mixture should be given in two weeks or a little less. The materials mentioned can be used in smaller quantities but in the same proportions and applied with a small hand-pump.

2. The fruit on this tree might be made to grow larger if the tree were pruned thoroughly and fertilized. The scabiness is due to the apple scab, to which the Snow Apple and McIntosh Red are very subject. This can be prevented by spraying. The Spray Calendar will appear in an early issue of this paper, and in it will be found full instructions in regard to this operation.

Gossip.

At the Annual Meeting of the British Columbia Dairymen's Association held at Chilliwack the following announcement was made, "The two leading cows in each of the following breeds for total number of pounds of butter-fat produced were as follows:

Ayrshire.—1st Lassic 3rd, 2 years, owned by Jos. Thompson of Sardis, 414 lbs. fat; 2nd, Irene of Eden Bank, 6 years, owned by W. B. Walker of Chilliwack, 488 lbs. fat.

Holstein.—1st, Canary Queen DeKol, 8 years, owned by J. M. Stevens of Stevenston, 737 lbs. fat; 2nd, Lenora Mechthilde, 7 years, J. M. Stevens of Stevenston, 644 lbs. fat.

Guernsey.—1st, Western Butter Maid, 2 years, owned by Banford Bros., Chilliwack, 328 lbs. of fat.

Jersey.—1st, Blossom of Avelreagh, 7 years, owned by E. H. Barton of Chilliwack, 774 lbs. fat; 2nd, Lady Pauline, 3 years, owned by W. McIntyre, 580 lbs. fat.

This table shows that a seven-year-old Jersey cow is the champion for the province with 774 lbs. of fat, her nearest rival being an eight-year-old Holstein cow with 737 lbs. fat. Those interested in Jerseys will also be interested in the breeding of Blossom of Avelreagh. She was bred by Mr. Barton. Her sire is Monarch of Avelreagh used in Mr. Barton's herd many years and has several tested daughters. Her dam was Bernice of Sumas 178176, who was by one of the best sons of old Brampton Monarch imported, called "Golden Boy of Brampton." Golden Boy of Brampton was selected by Mr. Hodson, when Live Stock Commissioner for Canada, to go to B. C. for the improvement of the dairy cattle there. Monarch of Avelreagh is also from Bernice of Sumas. This shows this cow to be very successfully line bred. The Jersey work in British Columbia is developing very rapidly. On the first of January, 1918, British Columbia breeders had 87 Jerseys working on the R. O. P. Since then this number has greatly increased and by the records which some of the breeders are making there at present a better record still is looked for from British Columbia for 1918.



BRUCE'S

REGAL SWEET CORNS

Golden Bantam—A very early, hardy, productive variety, and of unequalled quality and flavor; it is a rich orange yellow color.

Livingston Early Sugar—An early white variety of large size, and grand quality; sweet as sugar.

Stowell's Evergreen—The standard main crop, white variety, very large and of splendid quality and flavor. Prices: each of the above, ¼ lb. 20c; ½ lb. 35c; 1 lb. 65c; postpaid. By express at purchaser's expense, 1 lb. 55c; 5 lbs. \$2.40; 10 lbs. \$3.75.

FREE: Our illustrated 112-page catalogue of Seeds, Plants, Bulbs, Garden Implements, Poultry Supplies, Etc., mailed you on application. WORTH ITS WEIGHT IN GOLD.

John A. Bruce & Co. Ltd. HAMILTON ONTARIO
BUSINESS ESTABLISHED SIXTY-EIGHT YEARS

MORE WORK FROM YOUR HORSES

Heavy spring work takes the surplus flesh from the horse. His collar no longer fits. His neck and shoulders chafe and gall. He can't do his full share of work and you lose money. Prevent these evils by using TAPATCO Pads.

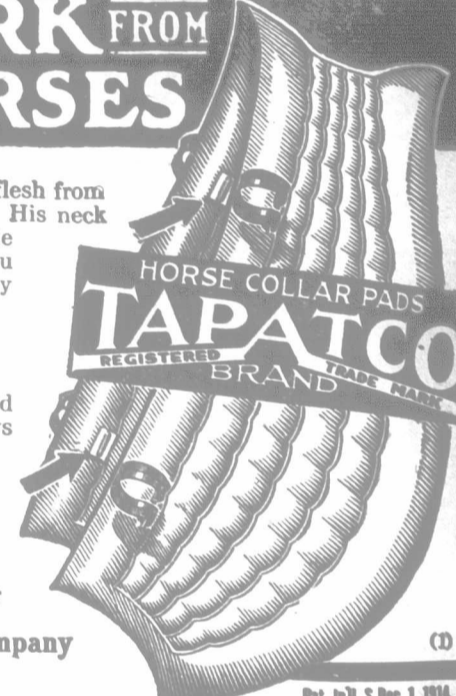
A NEW AND BETTER HOOK ATTACHMENT

Consisting of wire staple, reinforced with felt washer (note where arrows point). This gives the hook a better hold and prevents pulling off. The weakest point is made strong and life of pad greatly lengthened.

Look For The Felt Washer.

SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Company
Chatham, Ontario, Canada



Pat. in U. S. Dec. 1, 1914. Pat. in Can. Apr. 8, 1915.

PERCHERONS AND CLYDESDALES

We Have for Immediate Sale the Following:

Six imported Percheron stallions, ages four to eight years, both blacks and greys; all holding No. 1 certificates and guaranteed sure foal getters.

Two Canadian-bred Percheron stallions, three years old, a pair of real good ones.

Two imported Percheron mares, greys, a lovely pair of high-class mares, both supposed to be in foal.

Four imported Clyde. stallions, all proven horses, and the oldest one eight years old.

Three imported mares, every one a winner at the big fairs, and all supposed to be in foal.

HODGKINSON & TISDALE
BEAVERTON, ONTARIO

Imp. and Canadian Bred Clydesdales

COLUMBUS STABLES

We have on hand at present one of the strongest selections of imported and Canadian bred stallions we have had in the stables in years. A strong combination of size, quality and breeding. We also have 15 in-foal mares, all to the service of horses we are offering.

SMITH & RICHARDSON
Myrtle, C. P. R. Oshawa, C. N. R. Oshawa, G. T. R.

COLUMBUS, ONTARIO

Clydesdales and Shorthorns

I still have some Shorthorn bulls, twelve and thirteen months old. Two grandsons of Old Sort, and four great-grandsons of Royal Blood; these are an exceptionally fine lot; also a number of females. Inspection invited. Apply to

J. B. CALDER, Glanford Station, R.R. 3.

YOURS, FOR THE ASKING!

Our big new Catalogue Free!

For 40 years we have furnished seeds of highest quality. Thousands of customers attest this fact. Generous sized packages. Big-yielding varieties. Send post card now for this reliable Seed Catalogue.

KENNETH McDONALD & SONS, Limited

63 MARKET St., OTTAWA, CAN.

McDonald's
TESTED SEEDS

Compare the **SANITARY KING** with all other Cream Separators

Then you will understand why so many farmers are using the **"Sanitary King"**

Built of the very best material, which insures long life. Stands solid, turns easy, close skimmer, splash oiling system, solid or detachable spindle. Capacities for from one cow to a large herd—operated by hand gasoline or electricity. Sold on easy terms if desired. Write for local agent's address. Try it before you buy.

King Separator Works of Canada
Bridgeburg, Ontario

WE WANT SPRING RATS

Write for our New Price List. We pay express and Postage. Prompt Returns.

E. T. CARTER & CO.
78 Front St. E., Toronto, Ontario

SUNNYSIDE HEREFORDS

We are offering special values in heifers, and bulls with size, quality and breeding; will promise not to disappoint you if you want good cattle.

Arthur F. O'Neill & Sons, R. No. 2, Denfield, Ont.

SUNNY ACRES ABERDEEN-ANGUS

Bulls of serviceable age and females not akin.

WM. CHANNON & SON
P. O. and 'Phone - Oakwood, Ont.
Stations—Lindsay, G.T.R. and C.P.R.

Alloway Lodge Stock Farm

Angus - Southdowns - Collies

SHOW FLOCKS

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

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

Kennelworth Farm ABERDEEN-ANGUS

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

PETER A. THOMPSON, HILLSBURG, ONT.

ABERDEEN-ANGUS

Alonso Matthews, Manager, Forest, Ontario
H. Fraleigh, Proprietor, Meadowsdale Farm, Forest, Ont.

Advocate Ads. Pay

Feeding For Baby Beef.

The following figures give the results of work done at the Iowa Experiment Station by Messrs. Pew, Evard and Caine, relative to the feeding of baby beef. While these results are for Iowa conditions, they show the gains made on certain rations, and the amount of feed and cost of same for 100 pounds gain:

The data following describes the operation:

Calves put on feed	Nov. 12, 1915
Sold as baby beef	Dec. 10, 1916
Number days on feed	386
Average number in lot for entire period	42
Average initial weight	417 lbs.
Average final weight	1,043 lbs.
Average initial value at \$8.25 per cwt.	\$34.40
Average final value at \$12.08 per cwt.	\$125.99
Average daily gain	1.879 lbs.

Average daily feed consumed per baby beef:

Corn	11.37 lbs.
Oats	1.36
Oil meal	.263
Cottonseed meal	.766
Corn silage	6.358
Alfalfa	4.00

Feed required for 100 lb. gain:

Corn	602.71 lbs.
Oats	72.08
Oil meal	13.95
Cottonseed meal	40.59
Corn silage	336.85
Alfalfa hay	211.92

Cost of 100 lbs. gain:

A. Excluding work and manure \$11.29

B. Including work and manure 8.61

Prices of feed as follows: Corn, 64½ cents per bushel; oat, 35 cents per bushel; oil meal, \$44 per ton; cottonseed meal, \$30.75 per ton; corn silage, \$4 per ton; alfalfa hay, \$10 per ton.

Actual selling price per 100 lbs. at home, \$12.08. (All expenses of selling previously deducted).

Profit per baby beef:

A. Including work and manure \$17.01

Points of Interest:

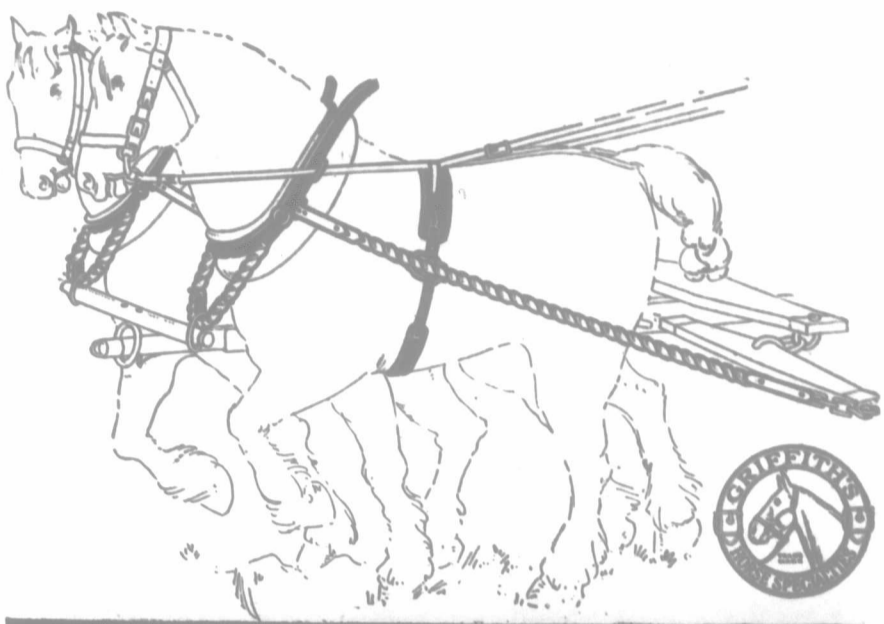
The calves were kept in the dry lot from the time they were put on feed in November until they were marketed. Experience of the year previous in turning to pasture during the summer proved that it is done with a loss after being on full feed during the winter and spring, hence these were dry lot fed. At times other feeds were added, such as chopped sweet corn, chopped ear corn, molasses and gluten feed.

The first requirement in feeding baby beef is to maintain the calf fat by having them on feed before weaning time if possible, then keep them going rapidly so that they will be fat at market time. The baby beef must be fat in order to sell to advantage.

The profit made by these baby beefs is good; it was made after paying market prices for all feeds eaten and also after paying for labor, interest on investment and miscellaneous expenses.

Baby beef production should be better understood, as it can be adapted to intensive farming conditions. More calves may be raised on our farms for feeding purposes. In order that they will finish as baby beefs, they must carry a preponderance of beef blood.

Readers of The Farmer's Advocate will be interested in the new advertisement in this issue, which brings before them the good stock bred at Flintstone Farm, Dalton, Mass. Milking Short-horn cattle, Belgian draft horses, Berkshire swine, and Rhode Island Red poultry are the specialties on this farm. High quality is the rule throughout, and judging from the list of cows in the Short-horn herd which have made records ranging up to well over 11,000 pounds milk and over 400 pounds fat, readers interested in dual-purpose cattle could do no better than get in touch with the Manager of Flintstone Farm. In January, a cow called Maid of Glenside made the highest record for the month. She produced 1920.8 pounds of milk and 64.42 pounds of fat. Readers should drop a line to Flintstone Farm for a copy of the complete official records made by cows and heifers in the herd.



ALLIES NEED MORE GRAIN!
\$15 PUTS A TEAM TO WORK
\$16 WEST OF FT. WILLIAM

THE cry for more and more PRODUCTION is heard everywhere. The Allies are looking to Canada for their grain supply. What are YOU going to do about it? Why not bring in some of that waste land of yours? You know it is harder to make a small profit on a small farm than to make a big profit on a fair-sized farm. And it takes less ability to make a profit out of 4 horses on 100 acres than to make a profit out of 2 horses on 50 acres.

Here's your chance to put another team to work at a trifling expense for equipment. The Griffith Team Outfit will last for years, under the hardest kind of service, because no stitches in traces to rip—no soft leather to stretch. Outfit includes Giant Rope Traces, Giant Yoke Ropes, Hames, Hame Straps, Plow Pads, Belly Bands and Billets, complete for TWO horses. Price, \$15 (or \$16 west of Fort William).

Griffith's Giant Rope Traces only, per set of four, with heel chains, \$6 (or \$6.50 west of Fort William).

Griffith's Giant Yoke Ropes, to replace leather pole straps. Price, complete with snaps and slides, \$1.50 pair (\$1.75 west of Ft. William). If your dealer cannot supply you, order direct. Write for booklet.

G. L. GRIFFITH & SON
68 Waterloo Street, Stratford, Ont.

COME BACK TO ERIN!

260-Acre Farm Bargain. \$1,500 Down. Price \$8,000

Erin Township, County of Wellington, Guelph 14 miles, Toronto 35 miles; 180 acres workable. Two bank barns, two silos. Dandy school half a mile. Erin village 5 miles, Ballinafad 2¼ miles; store, etc. Frame house, 6 rooms; 10 acres good maple bush. Soil—clay loam. Got to be sold. Fall ploughing done; immediate possession.

Write for new Free Catalogue and Bulletin of 750 farms.

WILLOUGHBY FARM AGENCY
Dept. 400. Head Office, Georgetown, Ont.

Aberdeen-Angus

We have a splendid selection of last spring's bull calves to offer, sired by our noted herd bulls and from our choice home-bred and imported cows. Inspection invited. Berkshire Boars and Sows

LARKIN FARMS (MENTION FARMER'S ADVOCATE) QUEENSTON, ONTARIO

KNIGHTON LODGE STOCK FARM

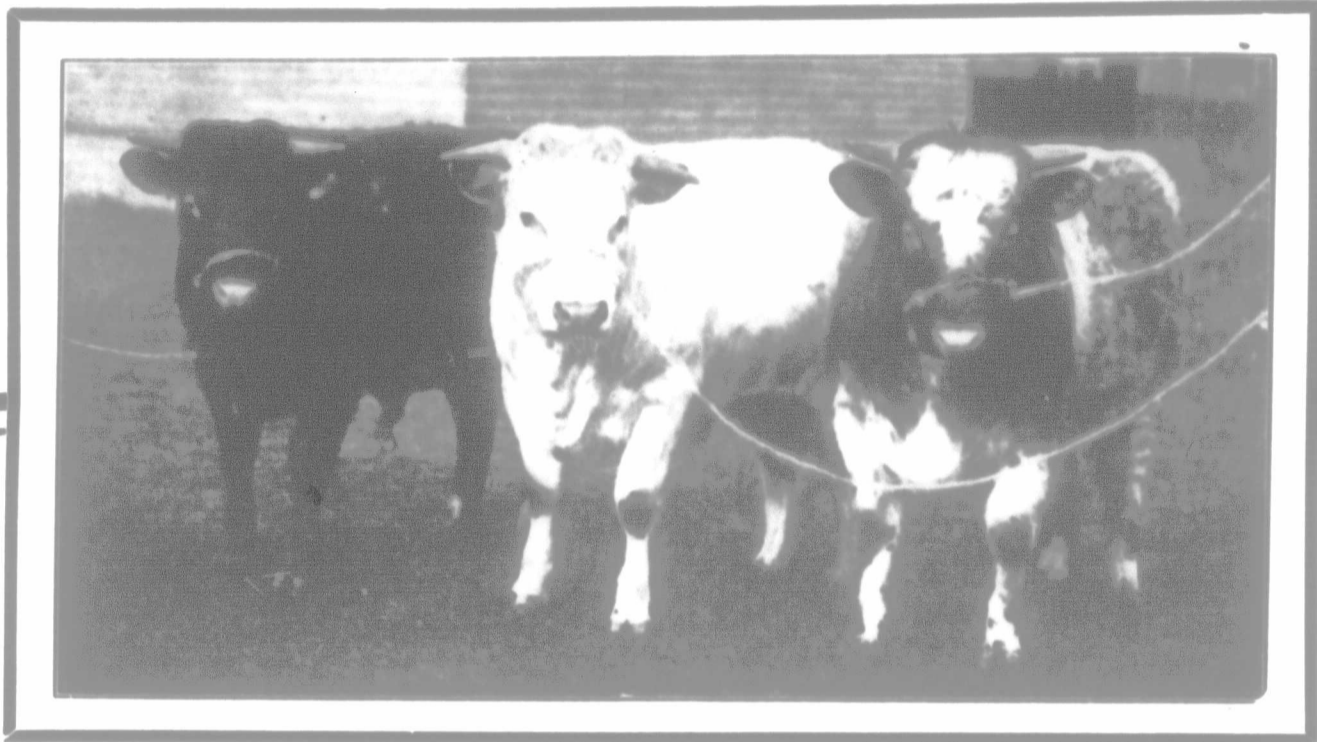
Offers for sale one Aberdeen-Angus bull, 15 months old, in the pink of condition, and a show animal—Cheap, quality considered.

C. C. KETTLE, Wilsonville, Ont.

BROOKDALE FARM HEREFORDS

Herd headed by Bonnie Ingleside 7th, the Canadian-bred champion bull at Toronto, 1914-1915. We are offering several young bulls that were Toronto and Ottawa winners this year, all sired by the herd bull as well as a few females in calf to him. Come and see our herd or write us for anything in Herefords

W. READHEAD Brookdale Farm MILTON, ONT.



150 SHORTHORNS

LONDON'S GREAT TWO-DAY SALE

Fifty Young Bulls—One Hundred Females

The Greatest Number of High-Class Breeding Cattle
Ever Offered in One Sale Ring in Eastern Canada.

SELLING AT

The Fraser House Stables on April 2, and at the Brunswick Hotel Stables April 3
London, Ont., Tuesday and Wednesday, April 2 and 3, 1918

To the Shorthorn Breeders of Canada:

ONCE more we take this opportunity of extending to you a cordial invitation to be with us for our Annual Spring Sale of Breeding Shorthorns, on April 2nd and 3rd. We feel that each one of our numerous sales held in the past has made us many friends among the Shorthorn breeders of the Dominion, and trust that many of these familiar faces, as well as many new ones, may be seen about the ring-side on the above-mentioned dates.

In so far as price-making is concerned, we have never tried to make this a record-breaking sale. The cattle consigned each year have always been carefully selected from the best of Western Ontario's herds, and this year we think you will find our offering of 150 head

just about the straightest lot of choice breeding cattle we have ever had the pleasure of offering. As will be seen by the catalogue just issued, most of the more popular families of the day are well represented in this year's offering, and as individuals, among both the bulls and females, there will be found much that will make the strongest of herd and show material. Ninety-five per cent. of all bulls showing will be ten, twelve and fifteen month calves, just the right age for service, while the females are nearly all of breeding age, being either well along in calf, or having calves by their sides. A superior lot of breeding cattle, selling in our usual way; every animal of breeding age being guaranteed a breeder.

THE WESTERN ONTARIO CONSIGNMENT SALE COMPANY

FOR CATALOGUES, ADDRESS:

AUCTIONEERS, ROBSON AND LAIDLAW
When writing, please mention the ADVOCATE

HARRY SMITH, Hay, Ont., Secretary of Sale

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BEAVER BOARD

FOR BETTER WALLS & CEILINGS



Saw It, Nail It

It's Knotless, Crackless
Manufactured Lumber

You'll never strike a knot, crack or blemish in a plank of Beaver Board—and when you nail this substantial lumber over old cracked walls and ceilings you've finished that kind of job for all time—Beaver Board lasts as long as the building. Like your wood work, it will never need rebuilding.

Trying Beaver Board once means that like nails, you'll always want some on hand. When the most urgent repairing is finished, you'll have the satisfaction of turning the old store-room or other waste spaces about the home into fine, big, usable rooms.

Beaver Board is manufactured lumber that comes in big convenient panels built up from the clean fibre of spruce trees.

Let us send you a copy of "Building More Comfort in the Farm Home."

THE BEAVER COMPANY, LIMITED
209 Wall Street, Beaverdale, Ottawa, Can.

Plants at Ottawa and Thorold, Ont.
Most Lumber and Building Supply Dealers handle Beaver Board. Write us for the name of your nearest dealer.



Made in Canada

These tools do the work of 3 to 6 men

One man can cultivate 3 to 6 times the usual acreage with Planet Jr implements. They are so designed and constructed that with greatest ease they do thorough, rapid cultivation. You save time, labor, money, cut down living expenses, and increase the food supply.

No. 25 Planet Jr Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow sows all garden seeds from smallest up to peas and beans, in hills or in drills, rolls down and marks next row at one passage, and enables you to cultivate up to two acres a day all through the season. A double and single wheel hoe in one. Straddles crops till 20 inches high, then works between them. Steel frame and 14 inch steel wheels. A splendid combination for the family garden, onion grower, or large gardener.

New 72-page Catalog, free!

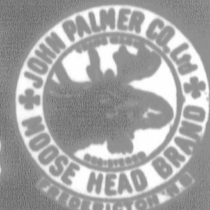
Illustrates Planet Jr in action and describes over 50 tools, including Seeders, Wheel Hoes, Horse Hoes, Harrows, Drills, Beet and Pivot Wheel Killing Cultivators. Write for it today. Also name of nearest agent.



No. 17 Planet Jr is the highest type of single wheel hoe made. It is a hand-made machine whose light durable construction enables a man, woman, or boy to do the cultivation in a garden in the easiest, quickest and best way. We make 24 styles—various prices.

S. L. ALLEN & CO
Box 1108
Philadelphia

Palmer's Summer Packs

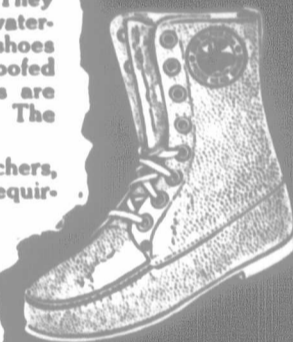


GIVE real foot comfort to tired, aching feet. They are made from oil-tanned Skowhegan waterproof leather. These summer packs or plow shoes are light, strong, durable—made with water-proofed leather sole and heel and solid leather insoles are laced, have large eyelets and bellows tongues. The ideal shoe for working on the land.

They are also specially suitable for ranchers, trackmen, laborers, sportsmen and all others requiring extra strong yet comfortable footwear.

The style shown—No. 109, is nine inches high. Ask your dealer for Palmer's famous "Moose Head Brand" footwear—many styles and sizes to choose from.

JOHN PALMER CO., Limited
Fredericton, N. B., Canada.



Questions and Answers. Miscellaneous.

Smut Sowing Grass Seed.

1. How can I get rid of smut in barley? It was very bad two years ago for the first time. Last year I treated with formaldehyde, without success.

2. Is smut more prevalent when grain is sowed broadcast than when drilled in?

3. When is the best time to harrow and roll fall wheat, before or after sowing grass seed in the spring?

4. Is it advisable to roll wheat just before a rain, or does it make any difference?

5. Should grass seed be sown ahead of the drill or behind it?
J. M. H.

Ans. 1. Formaldehyde does not give the same results with barley as it does with oats or wheat. The loose smut of barley is of a different nature, thus requiring different treatment. The hot-water treatment is the method used, but it is not practicable for a large quantity; consequently, the most feasible plan is to endeavor to secure the seed from a field that was not smutted last year. If this cannot be done, enough seed could be treated to sow a half acre or so to provide clean seed for the following year. The spores of the barley smut are on the inside of the kernel, and consequently surface treatment does not give success. For treating barley the temperature of the water should be 125 degrees Fahrenheit, and the grain allowed to remain in it for fifteen minutes. If the temperature should be 120 degrees Fahrenheit, five minutes would be the limit of time at which it would be safe to leave the seed in the water. A temperature of 124 degrees would be ineffective on the smut organism, and under no circumstances should a temperature of 131 degrees be allowed. Thus it will be seen that there is a very close margin of temperature to work on. Should the grain get too hot,

Springhurst Scotch Shorthorns

Four Bull Calves Fit for Service, a choice lot of thick, well-grown fellows, just the right age for heavy service. One is by our present sire, Volunter, another is by the great sire Blarney Stone, while a third is by the Roan Lady bull, Refiner. If looking for a herd sire, write about these.

Harry Smith, (Exeter Station, Huron Co.,) Hay P.O., Ontario

SALEM SHORTHORNS

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times.
J. A. WATT, ELORA, ONTARIO

PLEASANT VALLEY FARMS

Herd headed by (Imp.) **Newton Grand Champion and Belmont Beau**. We have for sale a goodly number of real good young bulls that will suit the most exacting; also females. Inspection invited.
C. P. R., 11 miles east of Guelph, Moffat, Ontario

Robert Miller, Stouffville, Ont.

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.

Write for anything in Shorthorns One hour from Toronto

Imported SCOTCH SHORTHORNS

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R. is only half mile from farm. **J. A. & H. M. PETTIT, FREEMAN, ONTARIO.**

OAKLAND 60 SHORTHORNS

Present offering is 7 bulls from 10 to 20 months of age; also a few cows with calves at foot, all choicely bred dual-purpose animals, and priced below their value. Crown Jewel 42nd still heads this herd.
JOHN ELDER & SONS, HENSALL, ONTARIO.

Blaigowrie Shorthorns and Shropshires

20 imported cattle, cows and heifers; all have calves at foot or are in calf to British service. Bulls for breeders wanting herd headers. Also home-bred bulls and females. Prices right. Rams and ewes in any numbers. **JOHN MILLER, Myrtle Station, C. P. R., G. T. R. ASHBURN, ONTARIO.**

SPRING VALLEY SHORTHORNS

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96305, and Non-imported Ramsden 83422. We have for sale four as good young bulls as we ever had, and a few females. **KYLE BROS., Drumbo, Ont. Phone and telegraph via Ayr.**

HIGH-CLASS SHORTHORN BULLS

We have a number of these animals on hand, ready for service. Some are straight Scotch and others are bred for milk production. Also offering the four-year-old Duchess-bred bull, Duchess Har for sale or exchange.
GEO. MORDEN & SON, OAKVILLE, ONT.

the germinating power would be destroyed, but if the temperature be not high enough there will be no effect on the smut.

2. We do not know that the method of sowing has any material effect.

3. If the ground is dry, it might be well to harrow and then roll. The stand of wheat would largely offset the evaporation of moisture which takes place from a smooth, bare surface. If the wheat was heaved by the frost, harrowing might have a detrimental effect.

4. Rolling the wheat compacts the soil around the roots. We do not know that there is any particular reason that the work should be done just previous to a rain.

5. Sowing in front of the drill is considered advisable. The small seeds are not covered so deeply as if the seeds were scattered behind the drill and then harrowed.

War Tax.

Should the proprietor of a cheese factory deduct the war-tax stamp on the cheques from the amount, when he is paid a fee of so much per pound for cheese manufactured to cover all expenses?

W. R. E.

Ans.—As we understand it, the man who issues the cheque is supposed to attach the stamp. If the agreement reads that all expenses are covered by the fee charged, we cannot see that the proprietor is entitled to deduct the price of the stamp.

Breeding Mare.

1. Should I breed a two-year old mare or is it better to wait until she is three years old?

2. If birds take poison left for foxes and drop it on the grass would that endanger the lives of live stock?
C. H. T.

Ans. 1. We would prefer to have the mare a little more developed than she would be at two years.
2. There would be some danger.

Pulled! - by One Man!!

Prove It By 30 Days' Free Trial!

That's what you can do—use this great puller for 30 days! Hook it onto any stump, pull it alone, unaided. Then—

—if you don't agree that the giant Kirstin pulls stumps quicker, cheaper, easier than you ever dreamed possible, send it back! Trial costs nothing! Think what an easy way to turn WASTE into PROFITS!

Pulls Stumps for 5c

—pulls 'em in from 4 to 10 minutes! That's what hundreds do with the wonderful 6-Speed, Triple-power Kirstin One-Man Clutch Stump Puller. Double leverage—that's why! A few pounds on handle pulls TONS on stump—gives boy power of giant! With it, you can laugh at labor scarcity!

Has Take-up for slack cable—soft steel catches that won't injure cable. Simple! Durable! A Three-Year Guarantee—law or no law. Used by U. S. Gov't.

4 Liberal Offers

with a No-Money-in-Advance and Easy 6-Month-to-Pay Plan. All described with pullers both in 1-1/2 and 2-1/2 horse power in FULL BOOK—fully illustrated, showing every detail. Write for yours! Get SPECIAL offer before too late.

A. J. KIRSTIN CANADIAN CO.,
811 De Witt St., Box 1 Ste. Marie, Ont.

Kirstin ONE-MAN Stump Pullers

LIFT YOUR CORNS OFF WITH FINGERS

Tells How to Loosen a Tender Corn or Callus so it Lifts Out Without Pain.

A noted Cincinnati chemist discovered a new ether compound and called it Freezone, and it now can be had in tiny bottles as hereshown for a few cents from any drug store.



You simply apply a few drops of Freezone upon a tender corn or painful callus and instantly the soreness disappears, then shortly you will find the corn or callus so loose that you can just lift it off with the fingers.

No pain, not a bit of soreness, either when applying Freezone or afterward, and it doesn't even irritate the skin. Hard corns, soft corns, or corns between the toes, also toughened calluses, just shrivel up and lift off so easy. It is wonderful! Seems magical! It works like a charm! Your druggist has Freezone. Ask him!

BEESWAX WANTED

WE PAY THE HIGHEST MARKET PRICE IN CASH OR TRADE

The Tillson Company, Ltd.
TILLSONBURG, ONT.

Linseed Oil Cake

"Maple Leaf" Brand

The best supplementary feed for live stock, and the "Veterinarian," the best book on the treatment of Diseases in Cattle. This book sent free with a trial ton order of Oil Cake.

Write today for lowest prices.

Canada Linseed Oil Mills, Limited
Toronto and Montreal

Spruce Lodge Shorthorns and Leicesters

Herd headed by the Butterfly-bred bull, Roan Chief Imp. #608655. Young bulls, cows, and heifers of all ages, of good breeding and quality.

W. A. DOUGLAS, CALEDONIA, ONTARIO

The Hawthorne Shorthorns

5 young bulls, and several females bred by the best sire, Royal Crown #79864, a Toronto winner. Both in the red and blue. A few Leicesters, and York shes, Friesians, and a few cows.

The Hawthornes, Allan B. Mann, R. R. 4, Peterboro, Ontario, G.T.R., C.P.R.

Plaster Hill Herd Dual-Purpose Shorthorns

Six young bulls from 8 to 13 months old. Some quality and good breeding strains.

E. MacIndale & Son, R.R. 4, Caledonia, Ont.

Evergreen Hill R. O. P. Shorthorns

Champion sire St. Clair #4598 R.O.P. No. 5, who got the 1917 champion fat steer at Toronto Exhibition. Also offering Berkshires 2 months old.

S. W. Jackson, R.R. No. 4, Woodstock, Ont.

Wonderful Prices for Scots Shorthorns.

On February 12th, 13th and 14th at Perth and Aberdeen, in Scotland, new Shorthorn bull calf records were made and broken, when two March (1917) calved youngsters were sold on successive days at 3,100 guineas and 3,200 guineas, respectively. To tell the tale properly, the occasions were the annual sales held by Macdonald, Fraser & Co., Ltd., Perth, and at Perth on the first two days named, they sold, all told, some 503 head of Shorthorns for £73,492 13s. 0d., or an average of £146 2s. 2d. apiece. The 434 bulls averaged £154 7s. 3d.; eight cows made £114 6s. 4d. each; seven two-year-old heifers £101 2s. 0d. and 54 yearling heifers £90 6s. 0d.

On the third day at Aberdeen they sold 231 bulls at an average of £94 each. Here the average quality of stock offered is supposed not to be as good as that sold at Perth, but as our story will show for once anyway Aberdeen outshone Perth.

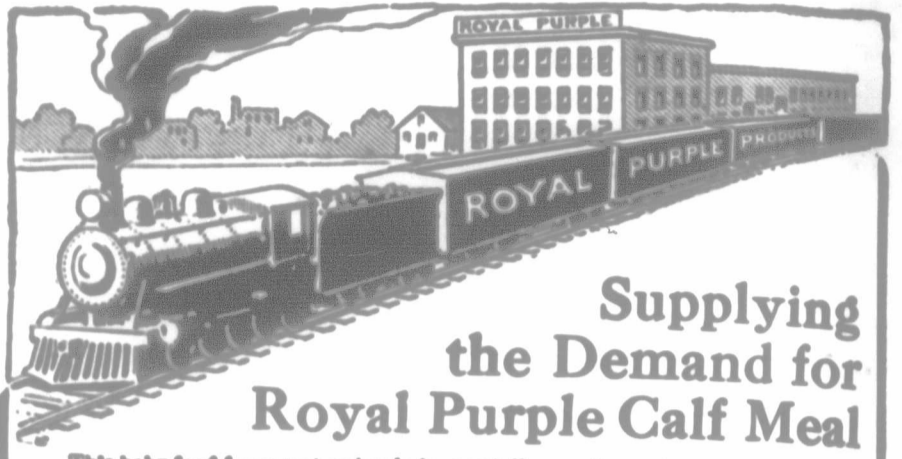
The feature of the Perth sales was the strong foreign demand, for Messrs. Carpenter & Ross and Hartnet (of U. S. A. and Messrs. Casares, Sidey, Shepherd and Hughes (Argentina) and Drummond, Forbes (Rhodesia) were big purchasers.

For U. S. A. Hartnet paid 2,000 guineas for the Representatives of the late A. Campbell, Balnabeen, beautiful roan Goldie yearling bull, Balnabeen Gypsy Lad by Sanquahar Proud Baron. The youngster was only placed fifth in his class in the show but he was quite the best "breeder's bull" in that competition. H. M. the King's agent badly wanted him but Hartnet stayed the longer in the biddings.

Carpenter & Ross gave 250 guineas for D. H. Moore's Drummond Augustus; 120 guineas for George Harrison's Gainford Magnate; 110 guineas for W. & G. R. Rose's Violet's Jubilant; 170 guineas for Fred Wrench's Brave Baron Crocus; and among the females paid 100 guineas for J. D. Robertson's Village Maid; 160 guineas for the same breeder's Lady Dorothy; and 170 guineas for A. Fergusson's Lady Dorothy 40th, a yearling heifer of quality and substance combined. Hartnet paid 140 guineas for J. MacWilliam's Garbity Avene Queen, and 140 guineas for J. Mackenzie's Balnain Jealousy 3rd.

It was on February 13th that sensation crept into the biddings at Perth, for the champion bull—a March (1917) calf—made 3,100 guineas. This was Duncan Stewart's Pride of Millhills, a rich roan Marigold by Marigold Pride, bought by young Raoul Casares for exportation to the Argentine. All the exporters were after him and one of them started the biddings at 500 guineas. All dropped out except T. B. Wilkinson acting for Casares, and Sidey Casares, now the sole representative of the firm of Emilio Casares & Co. of Buenos Aires, now in England, won the contest amid great cheering, at 3,100 guineas. Some critics fault the young bull on his back, but he is possessed of wonderful hind quarters. Prices ruled sensational all day after this. Carpenter & Ross paid 480 guineas for J. E. Kerr's bull calf, Harviestoun Gay Gallant; 770 guineas for J. J. Mowbray's Naemoor Argus; 300 guineas for Lord Moray's Braes of Doune; 220 guineas for J. J. Mowbray's Naemoor Argent; etc. Drummond Forbes paid 1,000 guineas for D. Stewart's Millhills champion, one of the Clipper tribe. H. M. the King's agent gave 1,150 guineas for G. B. Shields's Reddon, the reserve champion bull in the show, a dark roan March calf by Collin's Grand Duke. J. J. Mowbray paid 1,100 guineas for a red Mabel calf by Edgemoor Flatterer, from the herd of James MacWilliam of Garbity. A white Broadbooks twin with a heifer April bull calf, bred by Lord Lovat, was secured by Mr. Cameron Newton, of Strachan, Brechin, for 1,650 guineas, being kindly followed in the biddings by Dr. Ross of Carpenter & Ross.

But the sensational price of 3,100 guineas was achieved next day at Aberdeen. William Duthie, of Collin's name, sold 3,200 guineas for the champion March calved bull calf belonging to William Anderson, Saphock, and a dark roan of the Killbuck Beauty family got by a bull, bred by Lord Merthyr.



Supplying the Demand for Royal Purple Calf Meal

This baby food for young animals is partially pre-digested, and can be fed to the youngest animals with perfect safety. It WILL NOT cause stomach or bowel trouble, which are serious ailments in young animals. Royal Purple is a sure preventive for scouring.

Calves Gain Rapidly Without Milk

When the calves are 3 or 4 days old they can be fed Royal Purple Calf Meal and raised just as well without one drop of milk. What prominent breeders remark: Mr. Geo. W. Collins, Plainfield, Ont., writes:

"Gentlemen,—In regard to your Calf Meal, I think you have the best on the market, as people who have bought it give it great praise. Some have taken their calves off sweet milk, and feed them nothing but your Calf Meal and water, and say they are doing as well on it as they did on the whole milk."

Uxbridge, Aug. 5th
This is to certify that I have secured your "Royal Purple" Calf Meal from our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves.—Stanley W. Croxall.

Note—The above Mr. Croxall keeps a large herd of pure-bred Holstein cattle, and is an excellent authority on Calf Foods.

Royal Purple Calf Meal is equally good for young colts, lambs and young pigs. Put up in 25-lb., 50-lb. and 100-lb. bags. Secure it from our dealer in your town.

W. A. Jenkins Mfg. Co., Ltd., London, Can. 35

FREE BOOK

Send for our 90-page book which describes the common diseases of stock and poultry; also methods of feeding and our many products. Get a copy to-day.

CLEARING-OUT SALE OF SHORTHORNS

Farm Stock and Implements, Seed Potatoes, Barley and Oats
at Lot 4, 7th Line, Erin Township, Wellington County

ON WEDNESDAY, MARCH 27th, 1918

The Shorthorns include 6 cows in calf, most of them good milkers; three in R.O.P., one a 3-year-old, beating 1,100 lbs. of milk a month; 3 yearling heifers, 2 heifer calves. Stock bull just 4 years old, and 4 bull calves—all good thick ones.

No reserve as farm is sold. Seed all bagged, ready to ship. Forenoon trains met at Erin, C.P.R., and Georgetown, G.T.R. Catalogues sent.

Ira B. Vannatter, Prop. (Phone 95-R. 22) R. No. 1, Georgetown, Ontario
R. J. Kerr, Auctioneer, Acton, Ontario

FOR SALE Dual-Purpose SHORTHORN BULL

This bull is a solid red, one year old, and weighs over 800 lbs. His dam holds official world's butter-fat record for the breed, making 892 lbs. butter in one year as a four-year-old. The sire, Weldwood Captain, is bred from R. O. P. stock. Dam is recorded in the American Milking Shorthorn Book, but is not eligible for the Dominion Shorthorn Herd Book. This is an extra good calf, ready for service, and suitable for a heavy-producing grade herd. Write:

Eardly Finch, R. R. 1, Kingsmill, Ontario

FAIRVIEW SHORTHORNS AND CLYDESDALES

In Shorthorns we can offer you a choice, from 60 head, including both bulls and females, of Lavender, Missie, Augusta, Duchess of Gloster, Village Girl, Miss Ramsden and Clara breeding—the best of cattle and the best of pedigrees. In Clydesdales, write for our list of winnings at Toronto, London and Guelph 1917 shows, Canadian-bred classes. We also have a nice offering in Shropshires.

ROBERT DUFF & SONS, Myrtle Station, C.P.R., and G.T.R. MYRTLE, ONTARIO

PURE SCOTCH SHORTHORN BULLS

Our present offering of young bulls, sired by our herd sire Broadbooks Star, a son of the great Newton Ringleader, Imp., are the best lot of bulls we ever had on the farm. Come and see them, or write for particulars. We also have females of the richest breeding and highest individuality.

GORDON SMITH, Woodslee Sta., M.C.R., Essex County, SOUTH WOODSLEE, ONT.

FIFTY IMPORTED SHORTHORNS

I have fifty head of newly imported Shorthorns (42 females, 8 bulls) which are acknowledged to be one of the strongest lots that have hit Britain this season. You should see these if you are wanting something choice.

George Isaac, (All Railroads; Bell Phone) Cobourg, Ontario.

IRVINEDALE STOCK FARM

For sale, 4 grand daughters of (Imp.) Right Sort, two are Scotch and two Scotch and pure, also two bulls, 1 roan 16 months by Gainford Select, and one white, Scotch topped sire by the same sire, 7 months old, priced to sell.

JOHN WATT & SON, G.T.R. & C.P.R. R.R. NO. 3, ELORA, ONTARIO

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding and are fine & mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

NICHOLSON'S SHORTHORNS

March 27th, 1918, at the London Sale, April 2nd and 3rd.

R. and S. Nicholson, Parkhill, Ontario

SEVENTY-THREE HEAD OF SHORTHORNS

For sale, 73 head of Scotch and mixed Scotch and Ramsden #101081 and Royal Red Blood imported from Scotland. They are all of the best of the breed, ranging in age from 8 to 15 months, and are for pleasure or profit. They will bear inspection. Our cows and heifers will produce milk of the highest quality, from heavy milk-producing dams.

James McPherson & Sons, Dundalk, Ontario

Thus the guineas. Duthie is He himself got calf at his last these high figures at Ona bulls sold at sales in Eng Perth and Ab but as calf figures are received. Let it be recalled that Shorthorn bull MacWilliam an average of (Balnabeen) m D. Stewart m Lord Moray £493 for three for six of the got £688 10s. den. The th the group price piece.

Question

Timothy Has timothy considerable a feed? Ans.—We ca value of the tin usual to feed it doubtfully have the flax. In or of the flax finely or else

Pou Are there any crops to which valuable as a f in certain che in large quant land? Ans.—Poult percentage of t sary to prom however, some or the element than some of t would be found where rapid gro is a possibility coat. It shoul

Unusual Per Contro

1.—I have a mane and the ro with sweat in th all night. 2. He appea and when he l with a jerk as himself. Ans.—1. It this. It is not cease in warm clip him as soon mit. Dilute 2 pint of water a the skin of th This tends to cr 2. He has a cord. A recove ing him 2 drams daily.

Oedema

1. Fourteen-tally idle and is Last fall he sw this winter is q leg. 2. What cau bark off wood? Ans.—1. Th is due to an al encouraged by i Purge him with drams ginger, an powdered sulph Give regular ex gain their non grain in propor exercise, even. 2. In some habit, when in of phosphate, liberally on bran and give each 2 pints three tim ceases.

Thus the Perth record went by 100 guineas.

Duthie is associated with sensations. He himself got 2,700 guineas for a bull calf at his last October sale. None of these high figures are "world's record" prices for some of the New York Mills figures at Onside in 1873 still stand, and bulls sold at Dunmore in 1875 and in sales in England have beaten these Perth and Aberdeen figures very early, but as calf prices these latest Scots' figures are records!

Let it never be said that breeding Shorthorn bull calves doesn't pay. James MacWilliam (Garbity) sold three at an average of £763 each; Campbell (Bainabeen) made £753 for his three; D. Stewart averaged £698 for ten head; Lord Moray £499 for five; J. E. Kerr £493 for three; and Lord Cathcart £584 for six of hers. Anderson (Saphock) got £688 10s. for seven he sold at Aberdeen. The three bulls which won him the group prize there averaged £1,642 apiece. ALBION.

Questions and Answers.
Miscellaneous.

Timothy and Flax-seed.

Has timothy seed, in which there is a considerable amount of flax, any value as a feed?
B. W. F.

Ans.—We cannot give the exact feed value of the timothy seed as it is so unusual to feed it. However, it would undoubtedly have some value, as would also the flax. In order to destroy the germination of the flax, it should be ground very finely or else boiled.

Poultry Manure.

Are there any particular garden or field crops to which poultry manure is especially valuable as a fertilizer? Is it too strong in certain chemical elements to be used in large quantities on a small piece of land?
S. B.

Ans.—Poultry manure contains a fair percentage of the various elements necessary to promote crop growth. It is, however, somewhat stronger in nitrogen or the element which forces rapid growth than some of the other manures, thus it would be found valuable for any crop where rapid growth is necessary. There is a possibility of applying too heavy a coat. It should be put on in moderation.

Veterinary.

Unusual Perspiration—Imperfect Control of Hind Limbs.

1.—I have a 3-year-old horse whose mane and the root of his tail are covered with sweat in the mornings after standing all night.

2. He appears nervous when drinking, and when he backs he goes backwards with a jerk as if not able to support himself.
J. M. F.

Ans.—1. It is hard to account for this. It is not serious, and will probably cease in warm weather, especially if you clip him as soon as the weather will permit. Dilute 2 drams of nitric acid in a pint of water and rub a little well into the skin of the affected parts once daily. This tends to check perspiration.

2. He has an affection of the spinal cord. A recovery is doubtful. Try giving him 2 drams of nux vomica three times daily.
V.

Oedema—Horses Eat Bark.

1. Fourteen-year-old horse is practically idle and is well fed on hay and oats. Last fall he swelled in abdomen, and this winter is quite swelled on one fore leg.

2. What causes my horses to eat the bark off wood?
C. J.

Ans.—1. This oedematous condition is due to an alteration in the blood, and encouraged by idleness and high feeding. Purge him with 8 drams aloes and 2 drams ginger, and follow up with 2 drams powdered sulphate of iron twice daily. Give regular exercise after the bowels regain their normal condition, and feed grain in proportion to the amount of exercise given.

2. In some cases that is simply a habit, while in others it indicates a lack of phosphates in the system. Feed liberally on bran, allow free access to salt, and give each 2 drams of calcium phosphate three times daily until the habit ceases.
V.



"Hundreds of Dollars In Actual Profit"

More than one farmer has told us—since he has got a copy of "What the Farmer Can Do With Concrete," that the advice it gave him netted him hundreds of dollars in actual profit.

Get the book—it's free—and by reading it you will see the profit there is in building improvements of CONCRETE according to its plain, simple directions. For instance, there's a page devoted to Watering Troughs—showing how to build the sanitary kind that will not rot, rust or leak. Several pages devoted to Concrete Silos. Others telling how to build concrete foundations for barns. All these are improvements a farm needs—its value will go up considerably if you use concrete in the building of them. And you'll be able to "work" your farm with less effort and on a more profitable basis if your buildings and utilities are of the modern Concrete type. This book gives all the directions you'll need.

Remember—Concrete improvements are fire-proof, rot-proof, vermin-proof and indestructible

The book also contains interesting photographs showing what other Canadian farmers have accomplished; with working plans revealing how they did it. Perhaps you are specially interested in some of the features listed in our coupon. Put a cross opposite the ones about which you want particular information.

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FLOORS	DAIRY HOUSES
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TROUGHs AND TANKS	ROADS
"What the Farmer can do with concrete"	

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Figure the Time Waste involved in avoiding the bad road. Whether driving or motoring, you can travel over a two-mile stretch of concrete quicker than over a one-mile section of old-style road.

Permanent Highways of Concrete will enable us to greatly reduce the cost of hauling farm produce. If our country's business will be speeded up and economized by replacing the old-style, rut-filled roads with roads of concrete. You use Concrete on your farm to reduce the cost of farm up-keep—because Concrete eliminates "repairs." For the same reason, boost for concrete as a road material—it is just as effective in reducing road up-keep costs as in effecting economy on the Farm.

THE MANOR STOCK FARM---SHORTHORNS
Bulls all sold. Have Winiples, Rosemarys, Minas, Roan Ladys, etc., for inspection.
JOHN T. GIBSON DENFIELD, ONTARIO.

BURNFOOT STOCK FARM
Breeders of high record, dual-purpose Shorthorns with splendid conformation for beef. Have a number of bulls calved last fall and early in winter.
S. A. MOORE, PROP. (Farm one mile north of Caledonia) CALEDONIA, ONTARIO

FLETCHER'S SHORTHORNS
Our herd of Scotch Shorthorns represents Orange Blossoms, Kiblean beauties, Matchless, Mysirs, Missies, Clementina's, etc., and is headed by the Watt-Stamford bull, Victor Stamford =95959 = a Toronto winner. Present offering, two young bulls (show animals) also several heifers and cows.
GEO. D. FLETCHER, ERIN, R. R. 1, ONT. Erin Station, C.P.R., L.-D. Phone

GERRIE BROS' SHORTHORNS
Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladys, Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer.
GERRIE BROS. ELORA, ONT

WELLAND DISTRICT SHORTHORN BREEDERS' CLUB
New sales list out: cows, heifers bred, young bulls, also stock bull Morrision Pride =102330 =.
Chas. Galner, Secretary, Box 607, Welland, Ontario. A. E. Howell, President, Fenwick, Ont

SHORTHORN BULLS Will. A. Dryden
Brooklin, Ontario County
of my own breeding, around a year old; best families and good colors, are for sale. Also a few young, imported bulls.
Mrylle, C.P.R. Brooklin, G.T.R. Brooklin, C.N.R.

A. G. Farrow, Oakville—SHORTHORNS
Herd headed by Proud Lamer (Imp.) and Pride of Escana, a great son of the great Right Sort Imp. I have a few bull calves of the better sort. Three imported ones left. Prices right.
Farm one mile from station. Trains every couple of hours each way

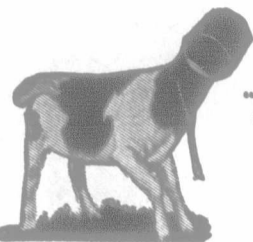
SHORTHORNS—T. L. Mercer, Markdale, Ont.
ROSEWOOD CHAMPION, the N. 100001 Archer, Imp., at the head of the herd. I have almost 100 Shorthorns in my stable, a good many Missies, Campbell-bred Clarets, Nonpareils, Minas, Rosemarys, etc.—the best of breeding and the best of cattle; bulls or females; also have a few Herefords.

BLACK LEG LOSSES SURELY PREVENTED
by CUTTER'S BLACKLEG PILLS
Low-priced, fresh, reliable; preferred by western stockmen, because they protect where other vaccines fail.
Write for booklet and testimonials.
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Herd Headed by Dominator No. 106224 whose grandam on his mother's side has an R. O. P. record of 13,535 lbs. milk, testing 3.99, and whose dam has an R. O. P. record of 10,689 lbs. milk, testing 3.88. Cows heifers and young bulls for sale; some of the latter are out of cows in the herd which have given between 10,000 and 11,000 lbs. of milk each in one lactation period.

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Scottish Clydesdales in 1917.

The closing year has been anything but normal in the fortunes of the Clydesdale breed of heavy draft horses. Its chief feature was the abnormal rise in value for all ages. A price of £200 for a four-year-old gelding beats the best price ever given at public auction for one of his class, and 980 guineas for a three-year-old filly is surely a record. The foreign trade, whilst not altogether at vanishing point, has had no direct effect on values, but the home demand has been unprecedented. The year 1917 has seen all former values eclipsed. Horse hirings for 1917 were more numerous than usual, whilst at the beginning of 1917 two dozen horses were hired for 1918, and five—Ardendale (18993) for North Aberdeenshire, Dunure Ernest (19101) for Vale of Alford, Royal Raeburn (18900), for Central Aberdeenshire; Kismet (18417) for Fyvie and Strathbogie, and Craigie Excelsior (18664) for Central Ayrshire—for 1919. During the year Kismet, for Fyvie and Strathbogie, and Ardendale (18993), for North Aberdeenshire, were hired for 1920. A notable loss falls to be recorded in the death of Messrs. A. & W. Montgomery's famous stallion Everlasting (11331).

The heavy horse breeding scheme of the Board of Agriculture exerted a good influence by encouraging the formation of local stock improvement societies, and the premiums offered with the inspection for soundness insisted on tends to level up the general quality of draft horses. A bill was drafted under Government auspices designed to put the unsound and unworthy sire off the road altogether. This bill was considered by the councils of the Shire Horse Society and of the Clydesdale Horse Society, and by the latter in association with the Board of Agriculture for Scotland, and various amendments and modifications were suggested. Meantime, however, all further progress with the measure has been stilled, in presence of much more pressing national problems. Possibly the object aimed at, with which all agree, the elimination of the unsound stallion, will be accomplished, at least in Scotland, as effectively through the persuasive effect of the Board's Heavy Horse Scheme as through the operation of any drastic legislation.

Export Trade.

The export figures for the year up to November 5th, as recorded with the breed society, showed that 63 horses had been exported of which 51 went to Canada. Australia took six, the United States of America three, South America two, and Russia one. The number exported in 1916 was 71.

The Show Yard.

Only two shows were held, those at Glasgow and Aberdeen in the spring. At the Glasgow stallion show, 7th and 8th of March, there was a grand display of stallions, and both the great trophies—the Cawdor Cup and the Brydon Challenge Shield—went to John P. Sleight's home-bred four-year-old Kismet (18417). The reserve in both cases was Jas. Kilpatrick's three-year-old Craigie Excelsior (18664). The former is a son of Dunure Footprint (15203) and the latter of Bonnie Buchlyvie (14032), themselves both Cawdor Cup and Brydon Shield winners. Kismet's dam, Moira (33747), is also a Cawdor Cup winner. These facts indicate that breeding tells, and the argument might be developed, but space forbids. A lovely colt was Mr. Kilpatrick's Craigie Litigant (19071), which stood first in the two-year-old class. He was got by Baron of Buchlyvie (11263), while the first yearling Doura Gaiety, bred and owned by John Young, West Doura, Kilwinning, was got by Dunure Footprint. Generally the awards at Glasgow went to horses of the Baron Buchlyvie line of breeding, with a few by Auchenflower (12007), Hiawatha (10067), Royal Favourite (10630) and Marcellus (11110) amongst them.

The Aberdeen spring show was held on the 14th of March, and was a successful event. The Surradale stud of G. A. Ferguson was strongly represented in the stallion classes. Philippine (18044) was first aged horse, and Ardendale (18993) was first two-year-old. Both are sons of Bonnie Buchlyvie. The first three-year-old was Lewis Milne's Rannas Print (19239), by Dunure Footprint, and James Fleming's Lord Dundurn (18428) made a good beginning as a sire, a colt

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Write for particulars and watch these columns for further particulars. Address all Correspondence to:

N. S. WASHINGTON, Maple Lane Farm, SOLINA, ONT.
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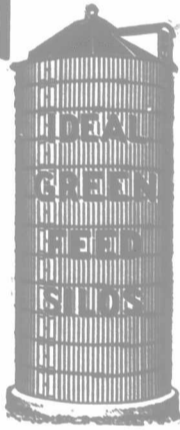
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A 29-pound sire going to head the herd of
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10 months old. Note the splendid develop-
ment. Perhaps I have the one you want.

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Our 30-lb. bulls have all been sold, but we still have several sons of Pontiac Korndyke of Het Loo, that are just nearing serviceable age. Get one of these for your next herd sire, have a brother of Het Loo Pieterje, the world's greatest junior two-year-old, at the head of your herd. We also have a 9-months, 27.78 lb. son of King Segis Alcartra; and one other, same age, by Dutchland Colantha Sir Mona. See them at once or write early.

W. L. SHAW - ROYCROFT FARM - NEWMARKET, ONTARIO.
Take Yonge Street Radial Cars from N. Toronto

by him taking first prize as a yearling, while another was third as a two-year-old. In the two filly classes, J. P. Sleigh, St. John's Wells, Fyvie, had an easy win with full sister of Dunure Footprint, out of his fine breeding and prize mare Lucilla (30460) by Everlasting. Gaya, the two-year-old was champion of the three younger classes—that is, the two yearling classes and the class for two year-old fillies. Philippine was champion stallion with Ardendale reserve, and Rannas Print second reserve.

The basis on which to summarize the success of sires being so narrow, we do not think it expedient to publish the usual list of winning sires.

It may be mentioned, however, that so far as the two shows furnish data, Dunure Footprint is an easy first, with Bonnie Buchlyvie second, then in order Auchen flower, Baron of Buchlyvie, Apukwa, Dunure Stephen. The Dunure, Royal Favourite, Hiawatha, Lord Dundurn, Prince Ossian, Everlasting, Rising Tide, and Marcellus (11110) and Scotland's Victor (18108), the two last named the sires of the Glasgow premium horses for 1918.

Fifty Years in Clydesdale Breeding.

This year there is published in the *Scottish Farmer* Album among the photographs a succession of eight Clydesdale stallions—each of which made history. The photographs are from life, and are of necessity of varying degrees of merit. But each is a photograph from life, and conveys a better idea of the type of each horse than the copy of an idealised painting would. The first is a photograph of Moffat's Conqueror (199) foaled in 1868, the sire of Darnley (222) foaled in 1872, whose photo follows. Then comes Darnley's son, Top Gallant, (1850) foaled in 1877, and next Sir Everard (5353) foaled in 1886. After him we have Baron's Pride (9122) his son, Baron of Buchlyvie (11263) and then the two dominant types and sires of today, Dunure Footprint and Bonnie Buchlyvie, with Philippine. Photos of the last two named will be found near the end of the book. The transitions or developments from Conqueror (199) to the horses last named illustrates better than any amount

CHOICE BULLS READY FOR SERVICE

No. 1—By a son of MAY ECHO SYLVIA. His two nearest dams (both Canadian champions), average 35.62 lbs. butter in seven days. Price \$1,000.
No. 2—By a son of MAY ECHO SYLVIA. His two nearest dams (one a four-year-old), average 34.17 lbs. butter in seven days. Price \$600.
Some extra choice young bull calves from \$200 to \$1,000. We have sold 37 bulls this winter.

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A number of choicely-bred bulls. One a real show bull, beautifully marked, dam a 30.76 junior four-year-old; sire's dam 34.60. The three nearest dams average over 100 lbs. milk a day. Can spare a few good heifers.

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MAPLE SOIL STOCK FARM OF HOLSTEINS

I am offering a few choice heifers, sired by King Segis Pieterje, that have just been bred to FINDERNE King May Fayne; also some heifers and cows due to freshen all the way from February until April. All bred to FINDERNE King May Fayne; a few heifer calves sired by FINDERNE King. Get some good ones.

H. C. HOLTBY R. R. No. 1 GLANWORTH, ONTARIO.

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We are now offering a number of young bulls, sired by our senior herd header, Francy 3rd's Hartog 2nd, the noted son of the famous old Francy 3rd and Canary Mercedes Hartog; also a few females—all choice individuals. P. SMITH, PROPRIETOR, STRATFORD, ONTARIO

SILVER STREAM HOLSTEINS

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J. MOGG & SON, R. R. 1, TAVISTOCK, ONTARIO

DUMFRIES FARM HOLSTEINS

Present Offering—A few bull calves.

S. G. & ERLE KITCHEN ST. GEORGE, ONT

Here's a Top-notch!

Sire, King Segis Walker; dam, 30-lb. daughter of Pontiac Korndyke, who herself has a 30-lb. daughter. He is a youngster, but he'll grow.

A. A. FAREWELL, Oshawa, Ont.

LYNDALE HOLSTEINS—One 13-months-old bull—Sire, May Sylvia Pontiac Cornucopia (34 brother to Champion Echo Sylvia Pontiac) whose two grandams are K.P. Pontiac Lass, 44.18 lbs. butter in 7 days, and May Echo Sylvia, 41 lbs. in 7 days, 152 lbs. milk in one day. Dam of bull offered—Pietje Inka Pieterje, jr. 4-year-old; butter in 7 days, 30.77 lbs.; 30 days, 124.34 lbs.; milk in 1 day, 10 1/4 lbs.; 7 days, 669 lbs.; 30 days, 279 lbs. Other young bulls of choice breeding and of serviceable age for sale. Brown Bros., Lyn, Ont.

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I am offering a choice lot of bull calves, all sired by May Echo Champion, who is a full brother to the world's champion, May Echo Sylvia. All are from R.O.M. dams and good individuals. Also have the usual offering in Tamworth swine.

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of word painting could what the work of these fifty years has been. Conqueror went to Australia, and there are breeders there who still "hanker" after that type of horse—built on a more generous scale. But the greater size, style and wearing quality of the horse of to-day are unmistakable.

A. CH. MACNEILAGE,
Sec. Clydesdale Horse Society of Scotland.

Questions and Answers. Miscellaneous.

Stocking a Pond With Catfish.

I have a small pond of water, supplied from a drilled well, with gas engine, it would be expensive to keep it cold and pure enough for trout. I was thinking of stocking it with cannal, or river catfish, as they grow larger and more rapidly, I understand, than trout, and in inferior water. I am told by those who have eaten them that they are very good eating. I would like information regarding their habits and requirements. Where could I get some cannal catfish to stock my pond?
W. J.

Ans.—The fish to which you refer is undoubtedly the Common Catfish, otherwise known as the Bull-head, Mudpout and Bull-pluck. This is the commonest of our Canadian Catfish and does well in muddy streams, and ponds, and in water which is neither very cool or well aerated. This species attains a maximum length of eighteen inches and a maximum weight of four pounds. The usual length and weight is, however, much less than this. It is not by any means a handsome fish; it is, in fact, decidedly ugly in appearance, and this fact has prejudiced many people against it as a food fish. It is really a very fine food fish, with firm flesh of good texture and flavor and free from small bones. The Common Catfish is an omnivorous feeder. It attains maturity in three years. You should have no difficulty in obtaining a supply of these fish for stocking your pond, as they can be taken from practically every slow-flowing stream in Ontario, as well as from lakes and large ponds.
A. B. K.

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"SAVING" money by continuing to use an inferior machine is like "saving at the spigot and wasting at the bung." For instance, if your machine skims down to .1 per cent. for every thousand pounds of milk skimmed, compare that result with the splendid, proven record of the Renfrew. You find by having the

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that you will save about $\frac{1}{2}$ pound of butter-fat per week for every cow. The Renfrew skims down to .01 per cent. That loss of $\frac{1}{2}$ pound means money! With eight cows, and butter-fat at say 30 cents per pound, you would be losing every year (40 weeks' milking) the tidy sum of \$48.

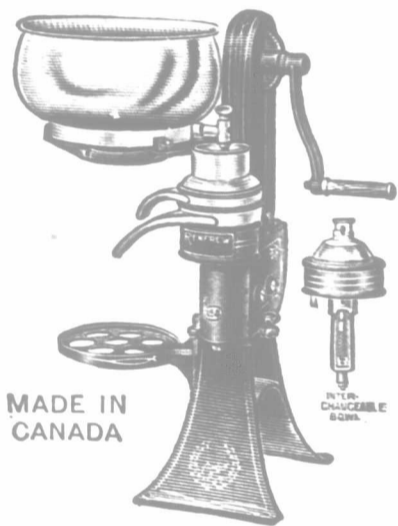
This sum saved is accepted by us as a first payment on a Renfrew. The saving soon pays for the machine—and then the \$48 per year for eight cows becomes extra profit.

Will it not pay you to discard the old machine for the Renfrew? It gets all but the last three ounces of butter-fat in a whole ton of milk skimmed. If you could reckon the losses the old machine made the last few years,

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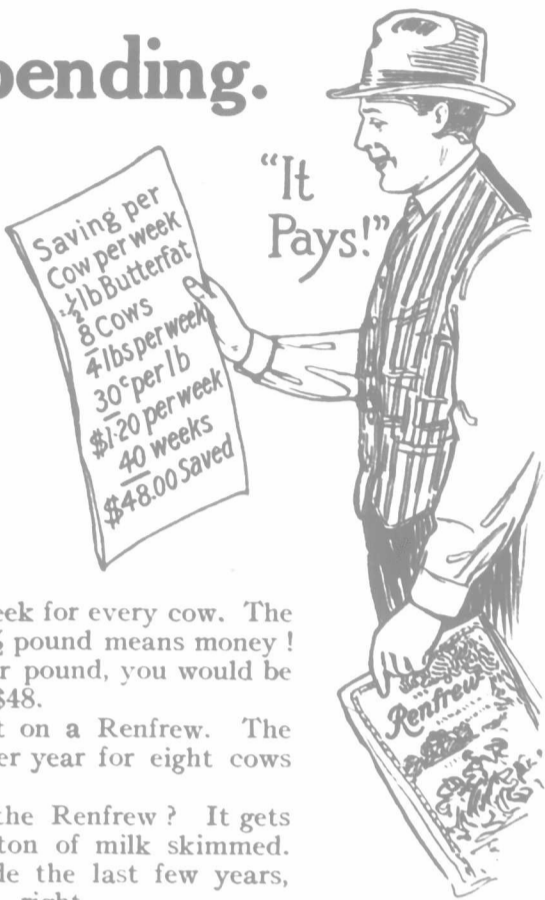
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NOTICE.—The Renfrew Separator illustrated here was formerly sold under the name "Standard," which identified it as a high efficiency cream separator. The name "Renfrew" has been used on the same machine for several years for our United States and foreign trade and under that name has become as popular in those markets as under the name "Standard" in Canada. Now the name "Renfrew" has been adopted for Canada so as to link the name more closely with that of our company and so that we can sell the machine under a uniform name throughout the world.

DAIRY CONFERENCE

To be held in the MASSEY HALL, O. A. C., GUELPH, April 4th and 5th, 1918.

The spring of the year is a good time to consider plans for greater efficiency in dairying for the coming season. Speakers for this conference are: Hon. Mr. Crozier (conditional); Dr. Creelman; Dr. G. L. McKay, of Chicago; Dr. C. J. Hastings, Toronto; Messrs. Stonehouse and Doherty, representing Milk Producers; J. Birmingham, Ottawa; W. H. Forster, Hamilton (Milk Dealers and Ice Cream); G. A. Putnam, R. J. McLean (Produce Dealers); F. Boyes (Cheese Mfr.); F. Hems, G. C. Publow, Mack Robertson, J. A. McFeeters (Creamery Assoc.); D. McMillan, S. B. Trainer. The Presidents of the Eastern and Western Dairywomen's Associations, Messrs. Legget and Donaldson, will preside at two of the sessions, and Mr. S. Young, Pres. of the Guelph Milk Producers' Assoc. at the first session. This meeting will represent every phase of the Dairy Industry of Ontario. Every dairyman and dairywoman is invited. Music at evening session. For programmes, apply to

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29.68 lbs. butter, 563.7 lbs. milk

as a junior three-year-old
This is the official record of

Burkeyje Hengerveld May Echo (12658)

Her dam "Burkeyje Hengerveld", is Canada's first 20,000 lb. 4-year-old. Her sire is a son of "May Echo" and a $\frac{3}{4}$ brother of the great "May Echo Sylvia" (world's champion).

You can buy her son, sired by "Hillcrest Ormsby Count", a son of "RAUWERD COUNT DEKOL LADY PAULINE," 29,000 lbs. milk, 1,113 lbs. in 1 year, 112 lbs. milk in 1 day. Dam of K. P. Rauwerd, 3,413 lbs. butter as senior 3-year-old, 103 lbs. milk in 1 day.

Where Can You Equal This for Production and Re-Production?
He is largely white in color—a beauty. Write us for Price, etc.

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ONLY THREE BULLS LEFT

(1) A splendid fellow, more white than black, born May 1917. He is a grandson of Dutchland Sir Mona, and his dam is a half sister of the famous Totilla of Riverside.

(2) Born September and December, 1917, of A. I. R.O.P. dams.

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Do You Want to Lease a Bull with 30-lb. Breeding?

Then consider LYONS HENGERVELD CHAMPION, whose dam is a 25.83-lb. junior 3-year-old daughter of Baroness Madoline. Reason for leasing—we want to make his dam a 30-lb. cow before selling him. His sire's dam and grandams average 32.19. Write at once, or better, come and see him.

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are combined in the young sons we are now offering from daughters of Lewis Prilly Rouble Hartog, and sired by Baron Colantha Fayne. They will improve most herds. Several are of serviceable age. See these.
T. W. McQUEEN OXFORD COUNTY TILLSONBURG, ONTARIO

Anthrax and Black Leg.

The following information regarding two animal diseases that have caused considerable loss was published by Dr. F. Torrance, Veterinary Director General, in Bulletin No. 13, of the Department of Agriculture, Ottawa. The history of the diseases is given and symptoms of the trouble together with methods of prevention are outlined:

The history of anthrax and black-leg can be traced through past centuries with little difficulty, even though their exact causes were unknown until comparatively recent years. In fact, the former affection is one of the first diseases of which we have a record. Both are almost world-wide in their distribution, usually appearing in isolated outbreaks, although they may be quite common in certain districts.

The determining of the cause of anthrax was a direct result of the improvement and perfection of microscopic lenses; its causative organism, however, was observed as early as 1849, though the objects seen in the blood under high magnification were not directly connected with the disease until 1863. A still further period elapsed before the casual relation of these objects to anthrax was generally accepted.

The discovery of the organism causing black-leg followed the finding of the bacillus of anthrax by some years (1878), and it was not until 1880 that its principal characters were determined and studied.

Anthrax may appear in a severe or mild form among all our domestic animals, being contracted, as a rule, by direct inoculation with material containing the germ, through the skin or the mucous membrane of the mouth, intestinal tract, or the lungs. Human beings are susceptible to this disease, infection, as a rule, resulting from direct inoculation of individuals dealing with diseased carcasses or their products, such as hides, hair, and wool. From the fact that the disease is quite frequently observed among people handling wool, it is called in England "Wool sorter's disease".

Black-leg is seen almost exclusively in cattle, particularly among the younger animals, seldom in those over two, and very rarely in those over four, years of age. Swine and sheep may be affected, but outbreaks are infrequently observed among these animals, and not at all in other animals or in man. Black-leg, like anthrax, is contracted by direct inoculation with material containing its germ, through the skin or the mucous membranes of the mouth, digestive tract, or lungs.

The causative bacilli of anthrax are microscopic in size, and occur in enormous numbers in the blood of affected animals. Their presence in the blood renders it tarry in consistency, very dark in color, and prevents it clotting after the death of the animal. These germs form themselves into long chains during their multiplication and growth, and, when deprived of favorable surroundings, resting bodies (spores) are formed, these having special resistant powers so that ordinary disinfectants fail to destroy their vitality unless applied for a considerable time. These resting forms or spores do not form in the carcass of an animal dead of the disease, provided the skin is left whole on the animal, as a large amount of air (oxygen) is required for their development, although they are found in the bloody discharges which exude from the natural openings of the body, such as the mouth, nose, anus, etc.

The reappearance of anthrax on ground once infected is due to these spores or resistant forms which retain their vitality for years, even though their surroundings are unfavorable. The destruction of anthrax germs within the carcass, as above described, is in part due to the presence of other microbes, which, while otherwise harmless, are their natural enemies.

Black-leg is caused by a germ distinctly different from the one causing anthrax, it being much smaller and growing only in the absence of air (oxygen). It also forms resting bodies or spores. The organism of black-leg is not found in the blood, save immediately before or after the death of an animal dying of this disease; even then it is found in very small numbers only. The blood of an animal dead of this disease is normal in color,

On Milking



Care of Milk

Excerpts from an article in "The News"
"One of the most important factors in the production of milk is the cleanliness of the milking machines. The machines should be cleaned until the casein hardens on the cups."

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Short, transparent place of long rubber or harbor germs is cleaned. This is a sure; another is that are suspended from test-cups cannot fall into the milk.

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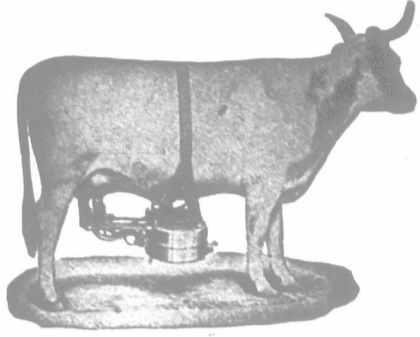
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about our offering to the

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2 extra good bulls old enough for service; 1 choice 10 months heifer by "Selwood Prince Ideal"; 5 young cows due to freshen about time of sale, splendid individuals of hill-edged breeding, just the kind for foundation stock.
Remember our personal guarantee of satisfaction or money refunded goes with every animal we offer.

Write for catalog and look up our consignment,
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are easy feeders—and thrive well.

WRITE W.F. STEPHEN, Secretary
CANADIAN AYRSHIRE BREEDERS' ASS'N
Box 513, Huntingdon, Que.

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A choice selection of young bulls for sale from Record of Performance dams imported and Canadian bred.

SIRE: Auchenbrain Sea Foam (Imp) 35758 many times grand champion.
Fairfield Mains Triumph (Imp.) 51137 a son of the noted Hobland Perfect Piece.
Write for catalogue.

Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. McArthur, Manager, Phillipsburg, Que.

JAS. B. ROSS, MEADOWVALE, ONTARIO
for high-producing, show-yard AYRSHIRES
Herd headed by SNOW KING 47376, first-prize two-year bull at Toronto, 1917. Write me also for anything in Yorkshires.
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SUNNYSIDE AYRSHIRES

We have, at present, the strongest lot of young bulls we ever offered—1 by Hobland Masterpiece, 1 by Sunnyside Matchless—and the others by our present herd sire, Sunnyside Masterpiece.
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and clots quickly when exposed to the air, being entirely different in this respect to the blood from an anthrax carcass, which is tarry and will not clot. The germs, while not numerous in the blood, are present in great numbers in the bloody serum of the swelling which generally appears on one of the quarters or the side of the neck of an affected animal. This swelling is characteristic of black-leg when a crackling sound is noted on passing the hand over the swollen area. The crackling sound is caused by the presence of gas in the tissues, this being formed during the growth of the black-leg germs. On being cut, the affected muscle is found to be very dark in color, while gas, having a peculiar penetrating acid odor is seen coming up from the cut surface in very small bubbles. As in the case of anthrax, the germs are killed and spore formation checked by leaving the hide on the dead animal, thus excluding the air.

Anthrax is much the more serious of the two diseases, as it may affect man as well as horses, cattle, sheep, swine, and other animals of any age or breed, and is quickly fatal. One may be led to suspect anthrax by the short duration of the illness. The animal may have been perfectly healthy the night previous, but is found dead in the morning, and is found to have a bloody discharge from the natural openings of the body (mouth, nostrils, anus, etc.) These features should arouse suspicion, and make one exceedingly careful in handling the carcass, so as to avoid infecting himself and others, or distributing the infection over the ground when removing the carcass to a suitable place for burial. If there is still doubt, a dew drop of blood placed on a clean piece of note paper, allowed to dry in the air, folded and forwarded to a laboratory, enables a microscopic examination to be made, which should settle all doubts. A post-mortem examination may be performed, but this is not advised, as it is a very dangerous procedure. At a post-mortem on a case of anthrax, bloody stains are noted throughout the tissues and organs of the body. The spleen (milt) is greatly enlarged, very dark or black in color; the blood is dark in color, tarry and does not clot after death.

The carcass of such an animal should be destroyed by fire as soon as the diagnosis is made or suspected, care being taken that all discharges and litter about the animal be burned with it, even to the halter. The animal should, under no consideration, be skinned, as this is a most dangerous procedure; nor should it be dragged over the farm with a chain around its neck or leg that a spot may be found where the digging is easy, for by this means the infection is spread, contaminating any enclosure through which the animal may be drawn.

Black-leg is a disease of the ox, and is most often seen in animals from 6 months to 4 years old. The first symptom is usually lameness, and the entire duration of the disease may be slightly longer than anthrax. The quarter in which the animal has shown lameness becomes swollen and the tissue beneath the skin is filled with gas, feeling very much like stiff paper when pressed by the hand. Pressure gives a crackling sound similar to the rustling of paper. The skin covering the affected part is dry and, on post-mortem examination, is found to be very dark in color, while the mucous membrane or internal lining of the intestines may be reddened or slightly blood stained.

The precautions to be taken in handling the carcass should be similar to those mentioned in the case of anthrax, as the danger of spreading the infection is serious, although human beings do not contract the disease. There should be no more difficulty experienced in determining the existence of black-leg than there is in diagnosing anthrax, but if it is desired to be absolutely certain, a few drops of the bloody material from the affected muscles placed on a clean piece of note paper and dried in the air will determine, when microscopically examined, whether the disease is black-leg.

Where the death is thought to be due to either anthrax or black-leg, and it is impossible to determine which affection caused death, the placing of a small amount of blood in an equal amount of glycerine will enable a positive laboratory diagnosis to be made. A drachm (teaspoonful) of this blood glycerine preparation is sufficient.

An opportunity for treatment of animals affected with either disease is seldom afforded, and when such an opportunity

SIXTH CONSIGNMENT SALE OF 50 Head Pure-Bred Ayrshire Cattle

FROM THE HERDS OF THE
SOUTHERN COUNTIES AYRSHIRE BREEDERS' CLUB

to be held at Dr. Rudd's Sale Stable, Woodstock, Ont.

March 27th, 1918

AT 1 P.M.

In this sale will be found representatives of the greatest producing strains of Ayrshires in Canada. JEAN ARMOUR, ex-world's champion; LADY JANE, Canadian R.O.P. champion cow; SCOTCH THISTLE, Canadian R.O.P. champion three-year-old; and LENORE, 2nd ex-champion butter-fat producer in 2-year-old class, were all bred by members of our club. In this sale, we believe, we have the best lot of cattle yet offered at any of our sales. There will be a few choice young bulls.

Write the secretary for a catalogue, with full details of the sale.

F. H. Harris, Mt. Elgin, Ont.
President

John McKee, Norwich, Ont.
Sec.-Treasurer and Sale Manager

MOORE & DEAN, AUCTIONEERS

HILLHOUSE AYRSHIRES—F. H. Harris, Mt. Elgin, Ont.

Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

Gladden Hill Ayrshires Winners wherever shown—Herd headed by Fairview Milkmaid; sire Hobland Stumpies Heir, Imp.; dam, Milkmaid 7th, a 166.90-lb. R. O. P. cow with 729 lbs. of fat; average test 4.36 per cent. We have three 12-month bulls that were winners at Toronto and London. All are by herd sire. Come and see our females. We also have two three-year-old Clydesdale stallions, one by Surname Imp., and one by Cairndale Imp. Good quality and sure breeders. Will sell one. Price reasonable.
LAURIE BROS. C.P.R., G.T.R., C.N.R., Shipping Stations, AGINCOURT, ONTARIO

SPRING BANK R. O. P. AYRSHIRES
Herd Sires; Netherton King Theodore Imp., and Humshaugh Invincible. Grand champion London, 1917. Our herd at present holds the Canadian records for both milk and butter in the two-year three-year and the mature classes. Let us tell you about the daughters of Netherton King Theodore. We have sons of both bulls for sale—all have R. O. P. dams. Visitors met at Hamilton by appointment.
A. S. TURNER & SON (3 miles from Hamilton) RYCKMAN'S CORNERS, ONT.

GREAT DISPERSAL SALE BY AUCTION OF 35 Head of Registered Jerseys

I will sell at my farm, 1 mile west of Dorchester on Hamilton Road,
my entire herd of Jerseys on

WEDNESDAY, MARCH 27, 1918

Sale Starts at 1 p.m.

The herd is headed by Olines Oxford You'll Do. He is closely related on his sire's side to Oxford You'll Do, the greatest Jersey bull living, and on his dam's side to "Champion Flying Fox", who sold at auction for \$7,500.00. Among the matrons of the herd is Pride of Riverside, which gave on an average for a week, 54 lbs of milk a day, and a testing of 5.7%. Five of her daughters are in this sale.

Two Chester White sows (registered) in pig to registered boar.
TERMS: Cash, or 6 months' credit on bankable paper with interest at 6%.
Trains will be met at Dorchester. For full particulars write:—

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JERSEYS
LONDON, ONTARIO
Jno. Pringle, Proprietor

CANADA'S MOST BEAUTIFUL JERSEY HERD
Imported Champion Rower at its head.
This bull, with his get, won first prize on the island of Jersey, 1914, second in 1916, and again first in 1917. Present offering—A few yearling heifers in calf to our great young bull, Woodview Bright Prince (7788), and bred from imported sire and dams. We show our work cows and work our show cows.

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SPECIAL OFFERING of fresh cows, in-calf heifers and Island bred bulls. Nearly all of the Champion R.O.P. cows are directly descended from the Brampton Herd. Buy at the fountain head.
B. H. BULL & SON BRAMPTON, ONT.

THE EDGELEY CHAMPION HERD OF JERSEYS

Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times.
JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) EDGELEY, ONT.

THE DON JERSEY HERD—

OFFERS:—Several young bulls, all of serviceable age, and all from R. O. P. dams. These are priced right. Interested parties should write or see them at once. We also have females of breeding age.
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CHOICE BULLS AND FEMALES. We have six young bulls of serviceable age, all from R.O.P. dams. Three are by our senior sire, Brampton Dairy Farmer, and three are by our junior sire, Brampton Bright Togo. Write for records. We also have females.
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Twenty-Five Years Breeding REGISTERED Jerseys and Berkshires

We have bred over one half the world's Jersey champions for large yearly production at the pail. We bred and have in service the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.

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Kelso Farm R. O. P. Ayrshires. Herd headed by Palmarston Speculation Imp. We never had a stronger line-up of R. O. P. producers than we have at present. Our 1917-1918 young bulls are sure to please. D. A. MacFarlane, Cars Crossing, G. T. R., Athelstan N. Y. C.; Kelso, Que

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30 Yearling Rams—12 Yearling Ewes.
W. H. PUGH, MYRTLE STATION R. 1
Farm 2 miles from Claremont

Cloverdale Shropshires and Berkshires—40 shearing rams, 70 shearing ewes; an exceptionally choice lot, true to type and well grown, nearly all bred by the show ram, Neck 16 Imp. In Berkshires, the usual strong offering, including sows just bred. C. J. LANG, Burketon, Ont.



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Have a special lot of sows ready to breed at reasonable prices. Write for our circular.

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BEAVER MEDICHESTER WHITES. Won over 75% of the prize money at London this year with three herds showing. Write us for bred sows or young boars. We guarantee satisfaction. We also have Percherons.

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are the best of all—the easy-keeping—easy feeding—easy to raise pig. At the Chicago International, 1917, the Berkshires won the Grand Champion Barrow, the Grand Champion pen and the Grand Champion individual, a record never equalled by any other breed of any kind of animal. Breeder's Gazette. We have a splendid stock of them, both sexes, and all ages. English, American and Canadian strains. A large selection of sows, bred to breed. Do not miss this. Our customers are always well pleased. Write, call or phone your wants.

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Like English, improved Yorkshires, from prize-winning stock bred for type, quality and production. Sows of breeding age and younger, hogs two to four months. Write to

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OAK LODGE YORKSHIRE HOGS

J. L. BRETHOUR & NEPHEWS, Berford, Ontario

is presented it is usually fruitless, although recovery may occasionally take place.

The complete separation of the healthy animals from those which are sick, and their removal from the infected ground will frequently check an outbreak before immunity can be produced with the vaccines of either disease. Low-lying, swampy ground, particularly that lying near sluggish streams of water which receive the drainage from woolen factories, tanneries, or from areas where diseased carcasses have been improperly disposed of, are quite liable to be infected. In the event of animals dying of anthrax or black-leg on such ground, all remaining refuse should be removed until they are properly vaccinated. Areas where carcasses have been improperly buried may be considered as "infected areas" and should be fenced.

Preventive inoculation against both diseases is widely practised, particularly in localities where it is known that the infectious agent exists. The vaccine (an attenuated or weakened germ product) for the preventive inoculation is prepared in laboratories, especially equipped for the work, and there are many institutions of the kind on this continent, one of which is connected with the Biological Laboratory of this department.

These vaccines, when prepared with care, and properly tested, may be considered reliable. With anthrax vaccine, two inoculations are required, the first protecting against infection by the second and the second protecting against an infection with the virulent germ. The interval between the two inoculations varies with the manufacturer, whose instructions should be followed very carefully, but it is usually from ten to twelve days. Black-leg vaccine is sold in two forms, the single and the double vaccine. On this continent the single vaccine is used almost exclusively, and from its name indicates that but a single application is required. The method of applying black-leg vaccine is usually characteristic of the maker, each firm or manufacturer desiring to obtain a method which will be simple and effective, so that it may with safety be placed in the hands of farmers and cattlemen as well as veterinarians. The results following vaccination against either disease are quite satisfactory, yet it must be borne in mind that vaccine used on an animal already affected with either of the diseases in question will not protect an animal and may not prevent its death, while, on the other hand, the same vaccine will protect an unaffected animal against a subsequent infection for a limited period.

Vaccination should be performed in the spring before the animals are turned out, but in either case is not considered effective for a period greater than twelve months.

Questions and Answers. Miscellaneous.

Mixed Grain. Are oats and barley that grew mixed (two of oats and one of barley) all right for sowing, or should I mix grain that grew separately? SUBSCRIBER.

Ans.—You would get more uniform results by mixing grain that grew separately. You would likely have too high a percentage of oats if the suggested mixture were sown. Why not try one bushel of oats to one bushel of barley? This gives best results at Guelph.

School Fees.

1. What are the regular fees for a person living outside of the corporation sending his children to a town school?
2. How much property must he have or what value in corporation?
3. Is there any school department in Ontario, if so what is the address? A SUBSCRIBER.

Ans.—1 and 2. We cannot say what such fees are. The whole matter is provided for by section 71 of the Public Schools Act (Revised Statutes of Ontario, 1914).

3. No, the Legislature of each Province has the exclusive right to make laws in relation to education in and for such province—subject to and in accordance with certain restrictions and provisions. The Department of Education for the Province of Ontario is accordingly to be found in Toronto, at the Parliament Buildings.



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7-48-0 HOR... Has 7... the rod, all No. 9 ha... 11. Weight per rod

8-40 GENE... line w... rod, all No. 9 ha... 6. Weight per rod,

8-48 GENE... line w... rod, all No. 9 ha... Weight per rod, 11 1/2

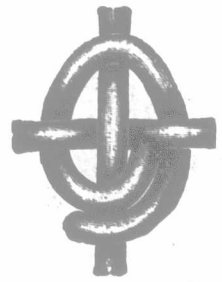
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9-48-0 S SPEC... FENC... high, 9 stays to the Spacing 6, 6, 6, 6, 6. Price, per rod,

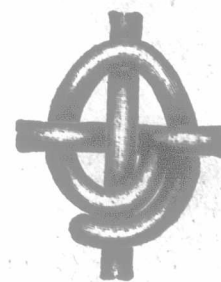
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703 CHRIST

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 DIRECT FROM FACTORY TO FARM. WE PAY THE FREIGHT



—READ OUR MONEY BACK GUARANTEE—
 WE guarantee our fence to be made throughout from the best Galvanized Hard Steel Wire of full Government Gauge, and to be the most perfectly woven fence on the market. We absolutely guarantee every bale of Sarnia fence to stretch with an even tension on all line wires.

We Eliminate All Extra Costs

There are four important things that should be considered by every person when buying fencing this season.
 1st. The reputation of the manufacturer—75,000 satisfied customers tell the story of Sarnia Fence.
 2nd. The quality of his product—absolutely guaranteed—read our money back guarantee.
 3rd. The value—simply compare prices with other makes of anywhere near equal quality.
 4th. The length of service.—Any of the many farmers who have used Sarnia Fence will vouch for it.

But We Will Not Reduce the Quality and Strength of Sarnia Fence to Lower the Price

We never have and never will. But we have continually set the price for Canada—and some of our competitors have skimmed their fence in quality and have devoted all their energies to meeting our prices.
 To-day, as ever, Sarnia Fence is the best "buy" in the Canadian fence market.

No Travelling Expense. No Jobbers' Profit. No Dealers' Profit.
 Only Two Profits on Sarnia Fence—Yours and Ours

A CHAIN is as strong as its weakest link. A fence is as strong as its weakest knot. Every knot in Sarnia Fence is perfectly made from full Government gauge No. 9 wire. This point is most important to you who are about to buy new fencing. There are some freak fencings, not of the ring-lock type, which do not use No. 9 wire for knots and which claim a superiority for their product which is absolutely non-existent. If Sarnia Fence was made with a light No. 12 wire knot like our competitors claim is so superior, Sarnia Fence could be sold for even less than our present prices.

The size of wire which will be allowed to enter Canada free of duty. No. 9 wire shall be over .140 and not exceeding .148 of an inch in diameter, consequently it is impossible for manufacturers buying their wire in the U. S. A. to use under-sized light wire, but must import full Government Gauge Wire.

There are some Canadian Fence Manufacturers making their own wire in Canada. Such wire, of course, is not required to pass the Canadian Customs Regulations as to size, consequently if these manufacturers see fit they can draw their wire under-size and sell you a light weight instead of full gauge fence. If you are placing an order be sure you are getting a full gauge fence such as SARNIA FENCE, and not a light weight.

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The wire used in the manufacture of Sarnia Fence is made in the United States by the largest makers of wire in the world. Their product is recognized as the standard of the world. The Canadian Government stipulates

SIMPLY COMPARE THESE PRICES WITH THE PRICE OF ANY OTHER FENCE MAKERS IN CANADA. YOU TAKE NO RISK IN ORDERING FROM THIS AD.

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After Quality comes the matter of Price. By comparison with other quotations you will find our prices to be the lowest on the market. The reason for this is simple. Our entire output is sold Direct from Factory to Farm for cash. Our modern plant enables us to manufacture cheaply. We are satisfied with a narrow margin of profit on a large tonnage of business. We eliminate all unnecessary cost—no travelling expense for salesmen—no Jobbers' profit—no Dealers' profit. We are the Manufacturers—you the Farmer. We sell direct to you. Only two profits made on Sarnia Fence—Yours and Ours.

WE SET THE PRICE. OTHERS DEVOTE THEIR ENERGY TO TRY TO MEET OUR PRICES.	Price less than carl'd delivered in Old Ontario	Price less than carl'd delivered in New Ont., Quebec and Mar. Prov.	All No. 9 Freight Paid	CASH WITH THE ORDER SAVES EXPENSE AND YOU GET THE BENEFIT OF THE SAVING IN THE PRICE.	Price less than carl'd delivered in Old Ontario	Price less than carl'd delivered in New Ont., Quebec and Mar. Prov.
5-40-0 HORSE AND CATTLE FENCE. Has 5 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire spacing 10, 10, 10. Weight per rod, 6½ lbs. Price, per rod.....	34c.	37c.	7-48-0-47c. IN OLD ONTARIO NOTICE! The prices in the first column are Freight Paid to your nearest station in Old Ontario. The prices in the second column are Freight Paid to your nearest station in New Ontario, Quebec, or the Maritime Provinces in lots of 200 lbs. or over. We do not pay freight on electric or boat lines. Carload Orders The carload rate of freight is considerably lower than the rate for small shipments. We save approximately 1c. per rod by making delivery in carloads. Therefore we will allow you to deduct 1c. per rod from these prices for orders of 24,000 lbs. or over to be shipped to the same station. Get your neighbors to go in with you and order a carload. This is also a great opportunity for Farmers' Clubs to save money by co-operating with us. Remit by P.O. Order, Money Order or Bank Draft Add exchange if remitting by personal check.	10-50 HORSE, CATTLE, SHEEP AND HOG FENCE. Has 10 line wires 50 in. high, 12 stays to the rod, all No. 9 hard steel wire, spacing 3, 3½, 4½, 5½, 6, 8, 8, 8. Weight per rod, 13¼ lbs. Price per rod.....	70c.	73c.
6-40-0 HORSE AND CATTLE FENCE. Has 6 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire spacing 7, 7, 8, 9, 9. Weight per rod, 7¾ lbs. Price, per rod.....	39c.	42c.		POULTRY FENCE 18-50-P STOCK AND POULTRY FENCE. Has 18 line wires, 50 in. high, 24 stays to the rod, top and bottom wire No. 9 filling, No. 13 hard steel wire, spacing 1, ¾, 1¾, 1¾, 1¾, 1¾, 2, 2½, 3, 3½, 4, 4½, 4½, 5, 5, 5. Weight 12¼ lbs.	70c.	73c.
7-40-0 HORSE, CATTLE AND SHEEP FENCE. Has 7 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire, spacing 5, 6, 6, 7, 7½, 8½. Weight per rod, 8¼ lbs. Price, per rod.....	45c.	48c.		Put up in 10, 20, 30 and 40 rod rolls. FENCE ACCESSORIES WALK GATE, 3½ x 48.....	\$ 4.25	\$ 4.50
7-48-0 HORSE AND CATTLE FENCE. Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire, spacing 5, 6, 7, 9, 10, 11. Weight per rod, 9 lbs. Price, per rod.....	47c.	50c.		FARM GATE, 12 x 48.....	6.75	7.00
8-40 GENERAL STOCK FENCE. Has 8 line wires, 40 in. high, 12 stays to the rod, all No. 9 hard steel wire, spacing 5, 5, 6, 6, 6, 6, 6. Weight per rod, 10¾ lbs. Price, per rod.....	55c.	58c.		FARM GATE, 13 x 48.....	7.00	7.25
8-48 GENERAL STOCK FENCE. Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire, spacing 4, 5, 6, 7, 8, 9, 9. Weight per rod, 11 lbs. Price, per rod.....	58c.	61c.		FARM GATE, 14 x 48.....	7.25	7.50
9-48-0 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire, spacing 3, 4, 5, 6, 8, 8, 9. Weight per rod, 11 lbs. Price, per rod.....	58c.	61c.		FARM GATE, 16 x 48.....	7.75	8.00
9-48-0 S SPECIAL HORSE AND CATTLE FENCE. Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire, spacing 6, 6, 6, 6, 6, 6, 6. Weight per rod, 11 lbs. Price, per rod.....	58c.	61c.		STAPLES GALVANIZED, 1½ in., per bag of 25 lbs.....	1.50	1.60
9-48 GENERAL STOCK FENCE. Has 9 line wires 48 in. high, 12 stays to the rod, all No. 9 hard steel wire, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod, 12 lbs. Price, per rod.....	63c.	66c.		BRACE WIRE, No. 9 Soft, per coil 25 lbs.....	1.50	1.60
				STRETCHER. All iron top and bottom, draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price.....	10.00	10.25

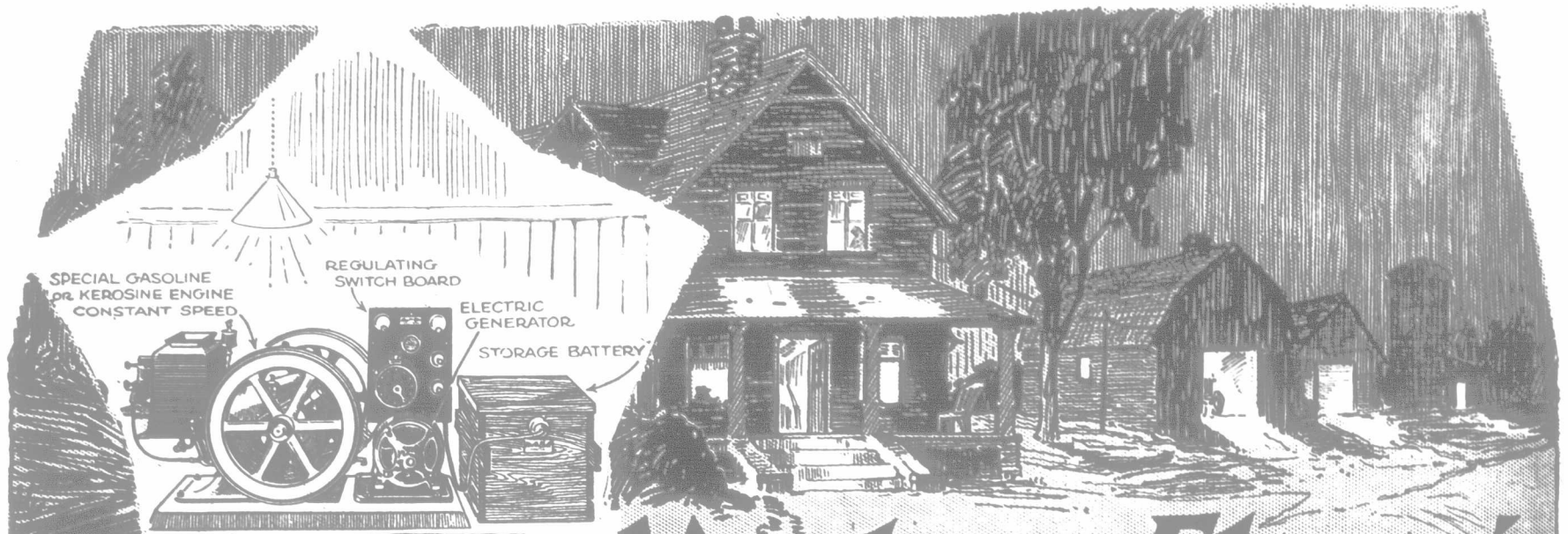
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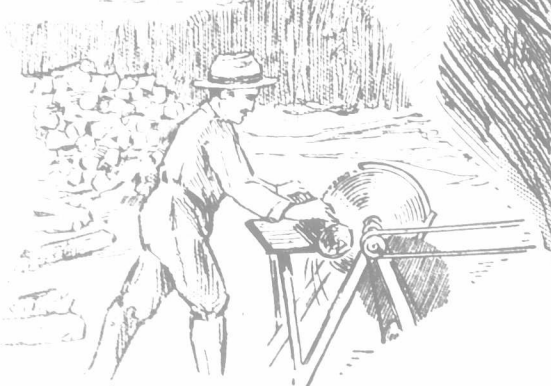
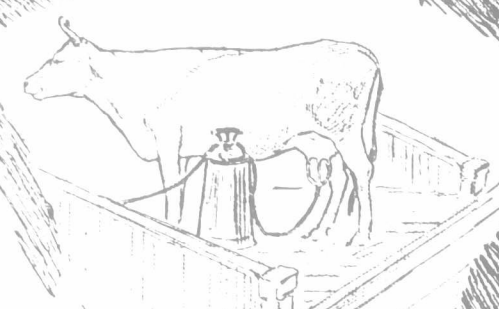
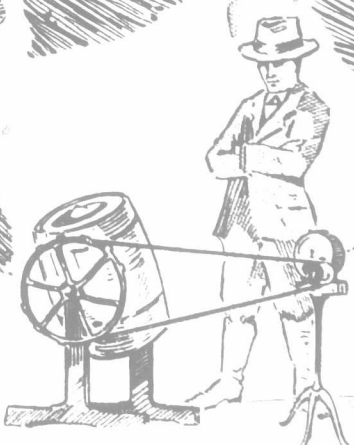
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