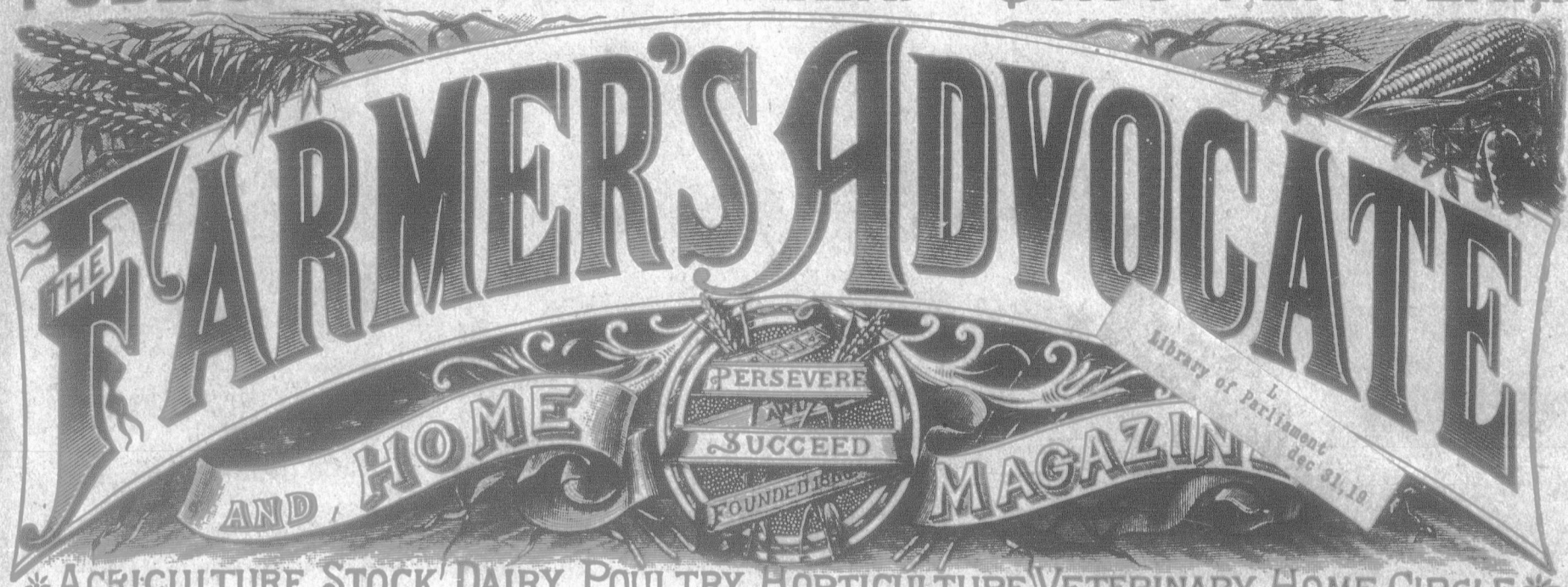


FEBRUARY 20, 1919

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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

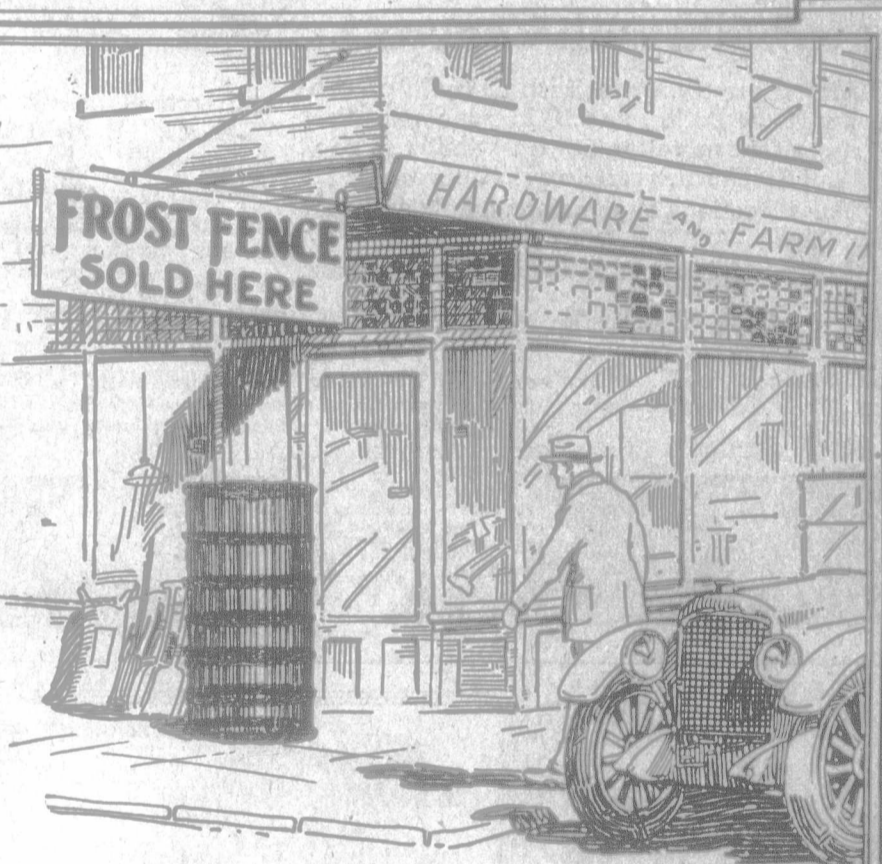
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LIV.

LONDON, ONTARIO, FEBRUARY 27, 1919.

No. 1379

# The most Satisfactory Way to buy fence



OUR long established policy of selling through responsible dealers is getting stronger each year. We look after our customers by having a stock in the different localities where one can see and judge what is wanted, just as you go to your grocer or butcher or dry-goods merchant. Wouldn't it be next to impossible to buy such commodities by mail from a catalogue?

Your interests are best protected when you know what you are buying and when you do not have to pay for it until you know it is right.

The Frost Steel and Wire Company have never changed from this policy.

The needs of the war have made a great scarcity not only of material, but of skilled men in every line of trade. You therefore need to

be more particular in your fence buying than ever before. Cheapness and quality never did go together and much less chance now. Frost Fence has a reputation to preserve and continue with its customers and dealers. You'll always get the best we can make for you and that means the best fence you can get anywhere. If you do not get fence satisfaction from Frost Fence, you'll get it nowhere.

Gates of all kinds; Bale Ties; Fence Supplies; Fancy Fences.

*Frost Fence First*

# Frost Steel and Wire Company

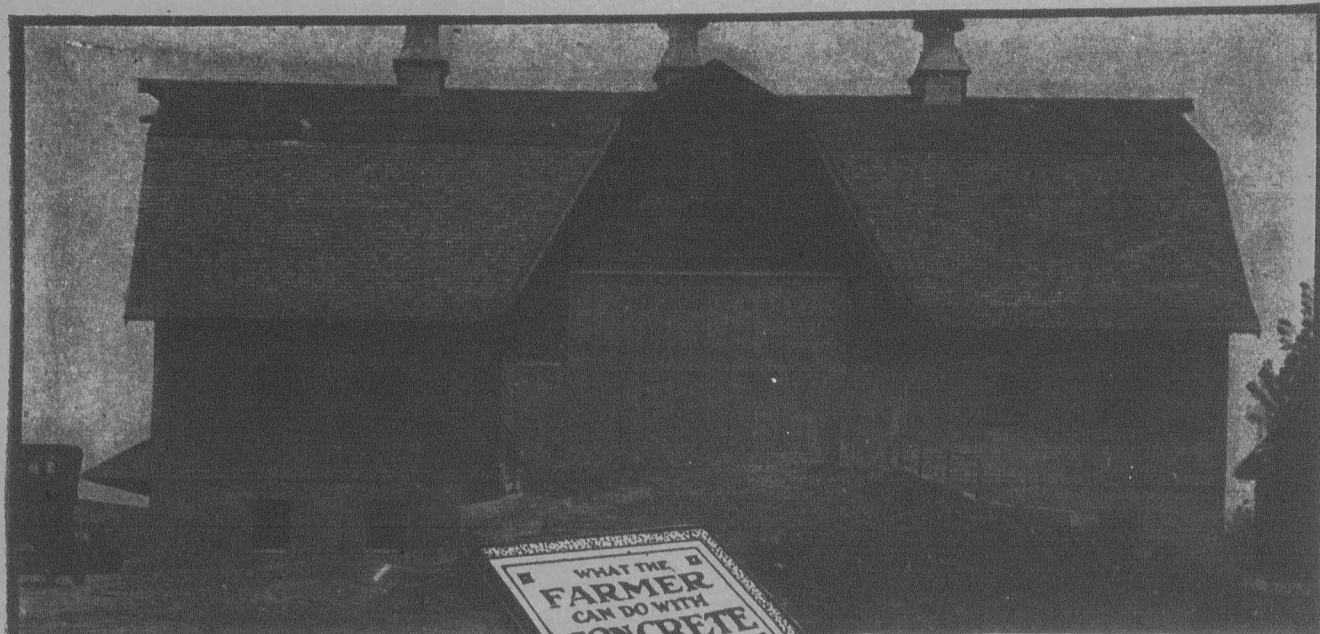
LIMITED

HAMILTON, CANADA



117





The book that shows by plainly-told directions how easy it is to build with Concrete

Concrete construction is not only ideal construction for the farm—it is also easy construction.

Almost anything you wish to build of concrete can be built yourself, in your spare time—if you take as your guide our wonderful book "What the Farmer can do with Concrete."

The directions it gives are simple and easy to follow.

The materials it calls for are handy—sand

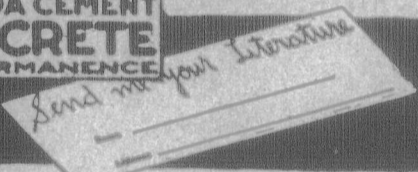
and gravel, which you have at hand, and "Canada" Cement which is sold by dealers everywhere.

Begin now to replace your temporary buildings with Concrete buildings. The first step is to secure our book—and that you may do by simply writing for a copy—the book is free to any farmer.

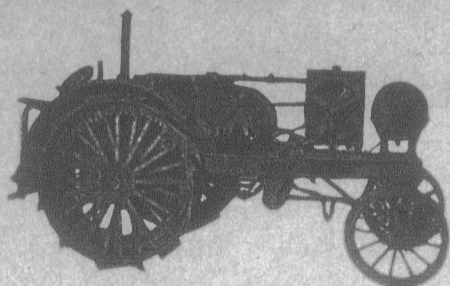
**CANADA CEMENT COMPANY LIMITED**

841 Herald Building Montreal  
 Sales Offices at **Montreal Toronto Winnipeg Calgary**  
 Canada Cement can be secured from over 2,000 dealers in nearly every city, town and village in Canada.  
 If you cannot locate a convenient dealer, write our nearest Sales Office.

**CANADA CEMENT CONCRETE FOR PERMANENCE**

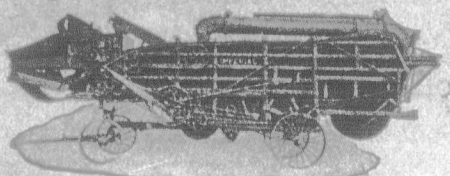


**Tractors and Threshers**



**WATERLOO BOY**

The Simplest, most Accessible, most Powerful 3-Plow Tractor on the market.  
 Suitable for hauling & Plows, Threshing, Silo Filling and General Farm Work.



Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense.  
 Write for free catalogue, prices and any information wanted.

**THE ROBT. BELL ENGINE & THRESHER COMPANY, LIMITED**  
 Seaforth, Ont.  
 Also Steam Tractors, and large size.

**Now is the Time to Order Your Potato Bug Poison**

Acco Spray Powder kills the potato bug and flea beetle. Half the price of Paris Green and equally as effective. A guaranteed product. For sale at all Drug and Hardware Stores. Send for circulars.

**ACCO CHEMICAL CO., Ltd.**  
 25 River St. Toronto  
**HAROLD F. RITCHIE & CO., Ltd.**  
 Toronto Sole Agents



"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., Limited, 259 York St., Guelph, Ontario**

**The Wonderful GILSON The Lightest Running Blower-Cutter Made**

Pours a steady stream of uniformly cut ensilage into the highest silo at the rate of 8 to 30 tons per hour—according to size. Use your own gasoline engine, 4 h.p. or more. Great power saver. The Gilson "Throws as well as Blows." The simple, scientific, carefully worked-out construction of the blower. It has broken all records for high elevation and rapid work with light power. Made in three sizes to suit every need. Built for years of hard service. Has a one-piece, semi-steel frame, gear transmission only. All bearings in perfect alignment at all times. Easily adjusted for shredding or cutting. Easy to set up, operate and take down. Nearly 10,000 in use and giving best of satisfaction. Get our Cutter catalogue—it shows the different sizes of "Gilson" Fillers and how they reduce the cost and time of filling to the lowest possible. Send for your copy TO-DAY.



Made in Canada

WRITE FOR FREE "GILSON" BOOK

**GILSON MFG. CO. LTD., 509 York Street, GUELPH, ONT.**

Please Mention The Advocate



**For Maple Syrup and Sugar**

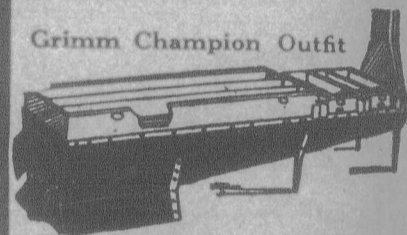
Every maker of Maple Goods in Eastern Canada should be interested in this remarkable contest. It will help all makers of Sugars and Syrup in the Grimm Champion Evaporator to have an expert opinion of their goods, whether they win a prize or not. The

**Grimm Champion Outfit**

is built with one idea—the best Syrup and Sugar at the least cost. Start with good, clean sap and the Grimm Champion does the rest. Put a champion in your grove as early as possible. We can give you the right size at the right price.

**The Grimm Manufacturing Co. LIMITED**  
 40 Wellington Street  
**MONTREAL QUE.**

**Grimm Champion Outfit**



**HYLO SILO**

Sweet Fresh Ensilage down to the last forkful!

THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

Write for prices and catalogue. AGENTS WANTED.  
**Gilson Mfg. Co. Ltd., 49 York St. Guelph**

**FIRST PRIZE**

O.A.C. No. 72 Oats, in field crop competition.

Also winner of two firsts at Ottawa Winter Fair, Prize winning O.A.C. No. 21 Barley at Guelph and Ottawa. Both grown from registered seed under rules of C.S.G.A. Also a small amount of Marquis Wheat, common White Pea Beans (Early Maturing) and Alsike. Samples and price on request.

**OSCAR KLOPP, SEED GROWER**  
 Zurich, Huron Co., Ont.

A quantity of choice O.A.C. 72 oats grown from registered seed \$1.00 a bushel. Bags free.  
**Gordon Harris, Dorchester, Ont.**

**SEEDS**

A quantity of No. 2 Alsike Clover Seed, grown in Haldimand County. An attractive price will be quoted to intending purchasers.  
**Parkinson Bros. R. R. 5, Hagersville, Ont.**

**FOR SALE**

5-10 h. p. Avery Tractor with extras.  
**G. K. WHITE - Downsview, Ont.**  
 R. R. No. 1

**SEED CORN**

Kiln dried improved White Cap Yellow Dent. Government test eight-five per cent in four days. One hundred per cent in ten days. Write for Bondy's Seed Annual dated Feb. 12th, 1919.  
**Darcy E. Bondy - Arner, Ont.**



**\$1000**  
**MAPLE SYRUP**  
**PRIZE CONTEST**

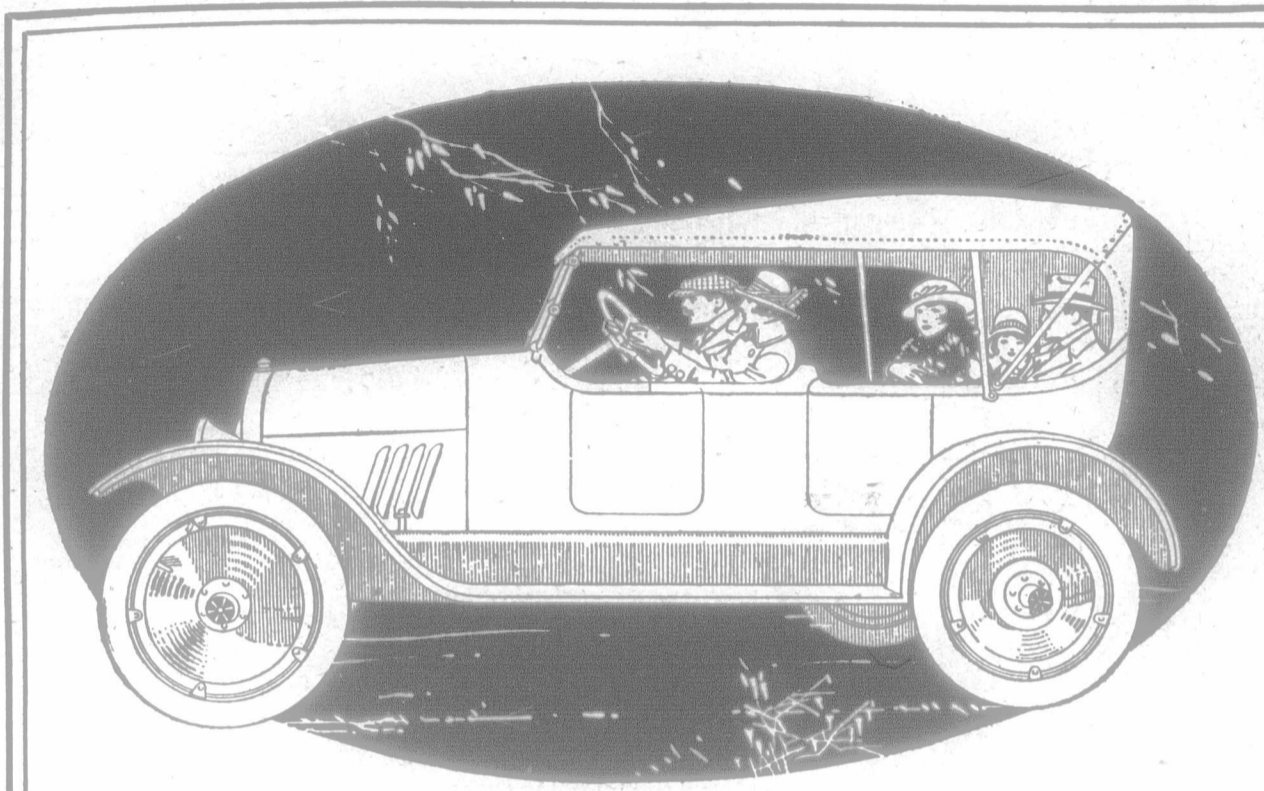
For Maple Syrup  
and Sugar

Every maker of Maple Goods in  
Canada should be interested in  
this contest. It will help all  
of Sugars and Syrup in the Grimm  
on Evaporator to have an expert  
of their goods, whether they win  
or not. The

**Grimm Champion**  
**Outfit**

with one idea—the best syrup  
at the least cost. Start with  
an sap and the Grimm Champion  
rest. Put a champion in your  
early as possible. We can give  
right size at the right price.

**Grimm Manufacturing Co.**  
LIMITED  
40 Wellington Street  
REAL QUE.  
n Champion Outfit

**New Riding Comfort  
in a Moderate Priced Car**

Just see the Briscoe and ride in it—  
learn that you can have low upkeep  
cost and at the same time smart  
appearance and luxurious riding  
qualities.

The first time you drive a Briscoe  
you will instantly get that feel of  
reserve power, which means your car  
is equal to all emergencies. With  
that sweet-running engine ready to  
give you instant acceleration when-  
ever you need it, your Briscoe slips  
through traffic tangles—purrs along  
park drives—speeds you over the  
country roads—in comfort.

It is on severe hill tests that the  
Briscoe proves its reserve power. Try  
it on a hill with a curve half-way up.  
It is here the average car falls down.  
Slowed down for the curve, the aver-  
age car refuses to "pick up" again  
for the final ascent. But note how  
the Briscoe takes it—that wonderful  
engine of the Briscoe is there with  
the spurt; gives you ample res-  
ponse to your call for more power,  
so that you may finish the long  
climb without taking the clutch out  
of "high."



Sedan.....	\$1,950	Standard Touring.....	\$1,225
Special Touring.....	1,350	Roadster.....	1,225

All F.O.B. Brockville. Briscoe pays the tax.

**THE CANADIAN BRISCOE MOTOR COMPANY LIMITED**

FACTORY AT BROCKVILLE HEAD OFFICE, TORONTO

TORONTO AGENTS

**BAILEY and PEER MOTOR CO., 497 YONGE STREET**

HAMILTON AGENTS  
**LIVINGSTONE BROS.**  
97 King Street West

LONDON AGENTS  
**BINDNER and MORRISON**  
174 Fullerton Street

**LO SILO**

at Fresh Ensilage  
to the last forkful

**HYLO SILO** is per-  
fectly air-tight. No frozen  
ensilage around the  
convenient and perfect  
doors, adjustable without  
or wrench. Made of  
red Long Leaf Yellow  
built to last a life-time.  
rigid when empty.  
for prices and catalogue.  
ENTS WANTED.  
Co. Ltd. 49 York St.  
Guelph



**ST PRIZE**

No. 72 Oats, in field crop  
competition.

Two firsts at Ottawa Winter Fair  
O.A.C. No. 21 Barley at Guelph  
Both grown from registered seed  
(C.S.C.A.) Also a small amount of  
heat, common White Pea Beans  
(ing) and Alsike. Samples and price

**KLOPP, SEED GROWER**  
Zurich, Huron Co., Ont.

Quantity of choice O.A.  
ats grown from reg-  
seed \$1.00 a bus-  
gs free.

**Harris, Dorchester, Ont.**

**SEEDS**

No. 2 Alsike Clover Seed, grown  
County. An attractive price will be  
nding purchasers.  
roa. R. R. 5. Hagersville, Ont.

**OR SALE**

Avery Tractor with extras.  
ITE - Downsview, Ont.  
R. R. No. 1

**ED CORN**

proved White Cap Yellow Dent.  
est eight-five per cent in four days.  
per cent in ten days. Write for  
Annual dated Feb. 1919.  
Arner, Ont.  
ndy

**HASTINGS GROWN**  
**SEEDS**

Are acclimatized and Hardy.

We can offer the following while  
our stock lasts.—

	Per Bus.
Red Clover—No. 2.....	\$28.00
Alsike—No. 2.....	18.00
Timothy—No. 2.....	7.50
No. 1 for Purity.	
W.B. Sweet Clover.....	15.00
(re-cleaned)	
Our Special Northern Grown Alfalfa.....	19.00
(Stock Limited)	
	Per cwt.
Our Special Mixed Alsike and Timothy.....	20.00
(Stock Limited)	
New Cotton Bags 55c.	

We pay freight on shipments of 3  
bus. or over. Samples on application.

**CHARLES E. BISHOP & SON**  
BOX 114  
Belleville - Ontario

**SEEDS**

Grown in the County of Haldimand

Our County took First Prize at  
Guelph Winter Fair this season on Red  
Clover, Alsike and Alfalfa.

These prices good till next issue of  
this paper, as long as our stocks last.

Red—No. 1.....	\$28.00
Red—No. 2.....	26.50
Alsike—No. 2.....	18.50
(No. 1 Purity)	
Timothy—No. 2.....	7.25
(No. 1 Purity)	
Timothy—No. 3.....	6.25
Alfalfa—No. 2 and No. 3.....	24.00
(Is home grown, Ontario Variegated)	
Bags are 60c. each.	
Seed Peas—Golden Vine.....	\$ 2.50
Flax Seed.....	4.25

These prices are per bushel, freight paid on  
purchases of three bushels or over. Cash must  
accompany order. If seeds does not satisfy  
on arrival, ship back at our expense. We can  
highly recommend our grade of No. 2 (No. 1  
Purity). Ask for samples.

**The Caledonia Milling Co., Limited**  
Caledonia, Ontario  
(Canada Food Board License No 87)

**SEEDS**

We pay the freight on all orders of \$25.00  
or over, east of Manitoba.

**Government Standard**

	Per bus.
No. 1—Red Clover.....	at \$29.00
No. 2—Red Clover.....	at 25.00
No. 1—Alsike.....	at 21.00
No. 2—Alsike.....	at 18.50
No. 2—Timothy.....	at 6.75
(No. 1 for purity)	
No. 3—Timothy.....	at 6.00
No. 1—Alfalfa.....	at 17.00
(Northern Grown)	
White Blossom Sweet Clover.....	at 13.00
Mixed Timothy and Alsike.....	at 10.50
of 60 lbs.	

Terms—Cash with order. Bags extra,  
at 65 cents each. Ask for samples if  
necessary. We guarantee seeds satis-  
factory or return at our expense.

**TODD & COOK**  
Seed Merchants  
Stouffville, Ontario

**SEED CORN**

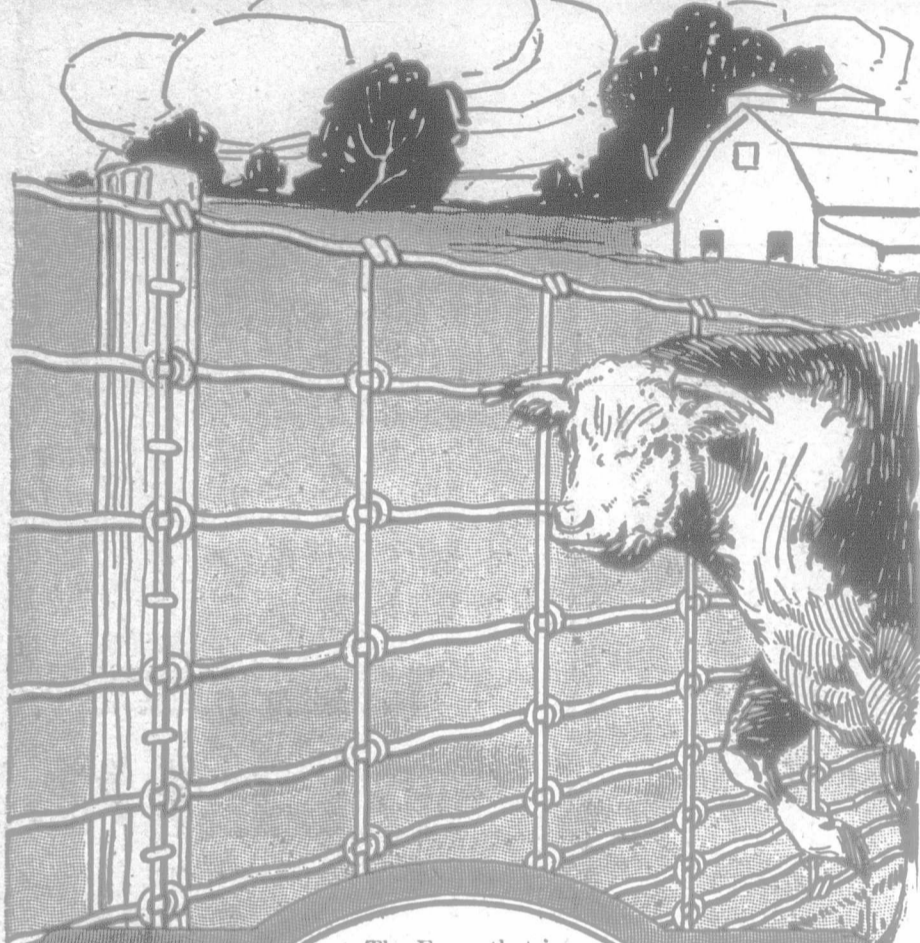
Address  
**IRA L. GRAHAM,**  
Windsor, Ont., Essex County.

**Seeds**—Haldimand Grown—A quantity of  
Medium Red Clover Seed, Govern-  
ment grading, will be given on appli-  
cation. An attractive price will be quoted to  
prospective buyers. Address

**W. D. LINDSAY**  
R. R. 5 Hagersville, Ont.



# PEERLESS PERFECTION



The Fence that is making Canada famous—always in place—always pleases. Our fighting men are homeward bound. They are taking up the business life of Canada again—give them the best.

## Absolute Security

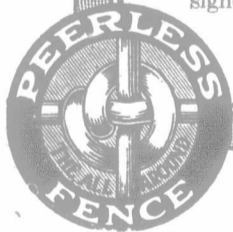
When you go away for a day or turn in for the night, you are certain your stock is locked in—they can't get over, under or through the spaces—a perfect fence for hilly or uneven ground, through streams; protects poultry, ducks, geese, sheep and hogs. Can't sag or break down and will turn an unruly horse, or the strongest bull.

### PEERLESS PERFECTION FENCING

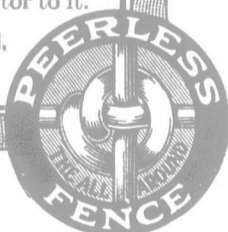
is made of best heavy Open Hearth steel fence wire, the impurities burned out and all the strength and toughness left in. Makes the fence elastic and springy. It will not snap or break under sudden shocks or quick atmospheric changes. Our method of galvanizing prevents rust and the coating will not flake, peel or chip off. Every intersection is securely clamped with the famous Peerless Lock.

Send for catalog. It also describes our farm gates, poultry fencing and ornamental fencing.

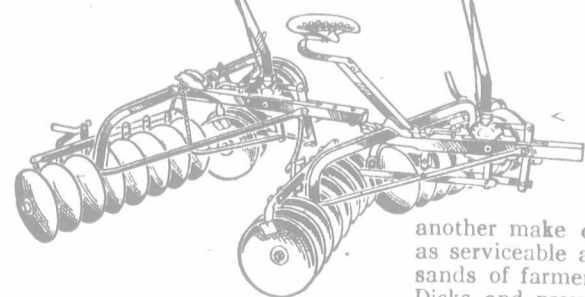
Dealers nearly everywhere. Agents wanted in unassigned territory, write now, beat your competitor to it.



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



### Sizes for Horses or Tractors



Use the Bissell Double Disk Harrows. They have great capacity for cultivating, and have made a record for working the soil better than other Disks—in fact, you won't be able to find

another make of Disk Harrow nearly as serviceable as the Bissell. Thousands of farmers have tested Bissell Disks and proved them to have the

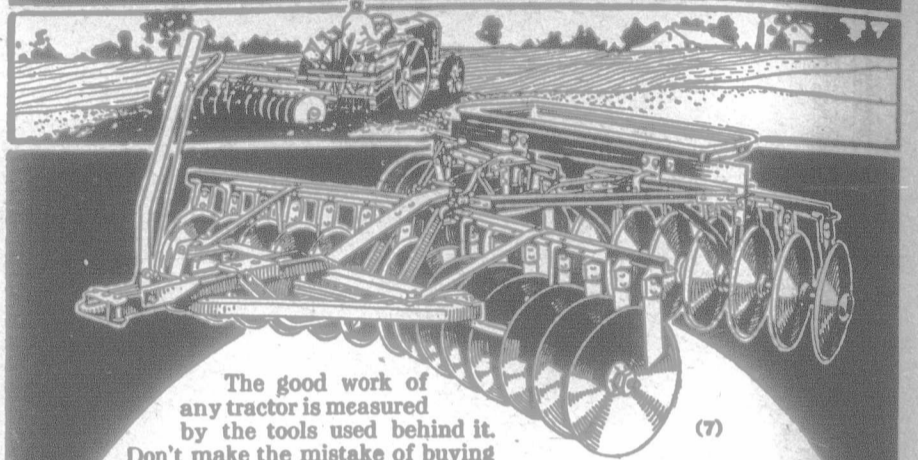
"knack" for doing the best work. They are simple in design, durable and Built for Business. Write Dept. w for Booklet. Man'd exclusively by—

T. E. BISSELL COMPANY, Ltd., Elora, Ontario

See advertisement also on page 394

# Roderick Lean

## Automatic Engine Disc Harrow



The good work of any tractor is measured by the tools used behind it. Don't make the mistake of buying a good tractor and then try to get along with an ordinary harrow or one that is not automatic. The Roderick Lean Automatic Engine Disc Harrow, built specially for the "Fordson" Tractor, is recommended by "Fordson" Dealers everywhere as

### THE RIGHT TOOL FOR YOUR "FORDSON"

Sturdy and substantial in every way. Made to meet power needs without unnecessary weight to make it heavy in draft. Automatically adjusted and operated from the tractor seat like a power plow. The one lever alone allows the draft of the engine to adjust the gangs to suit soil conditions.

This harrow is flexible, with double connecting bars between the front and rear sections like our well known heavier tractor discs for larger tractors. Turns short like a wagon without unnecessary strain and without piling up soil. Thoroughly works all ground passed over—rear section cannot slide on hill-sides or track with front section. Made in 6 and 7 ft. sizes with 16" and 18" inch round or cutaway discs. Furnished complete with weight boxes, front and rear disc, cleaners, etc., etc.

See this disc at your "Fordson" Dealer's or write us or the nearest general distributor for prices and full information.

THE RODERICK LEAN MANUFACTURING CO.  
MANSFIELD, OHIO

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

#### DISTRIBUTORS

##### For Canada

The Ford Garage, Lethbridge, Alberta	Western Motors, Ltd., Brandon, Manitoba
Lines Motors, Ltd., Edmonton, Alberta	Saskatchewan Motor Co., Ltd., Regina, Sask.
Maclin Motors, Ltd., Calgary, Alberta	Universal Car Agency, Windsor, Ontario

## HIP Roof Silos

Toronto Silos, because of the Hip Roof, give you greater capacity than any other silo. You can tramp the ensilage right to the top of the walls. The double tongue-and-groove staves of selected spruce, impregnated with creosote, protect the ensilage and resist rotting.

You need an ensilage cutter of your own. The Toronto Ensilage Cutter is of a new and better design. Runs smoothly and lightly, without clogging or other trouble.

You should know more about these two farm necessities. Write for our booklets giving valuable advice on the feeding of stock and discussing the superior points of the Toronto Silo and Ensilage Cutter.

Ontario Wind Engine & Pump Co., Limited  
Atlantic Ave., Toronto

Montreal Winnipeg Regina Calgary



ONTARIO WIND ENGINE & PUMP CO. LIMITED

# TORONTO

FEBRU

The fruit to Lime and 40 circula

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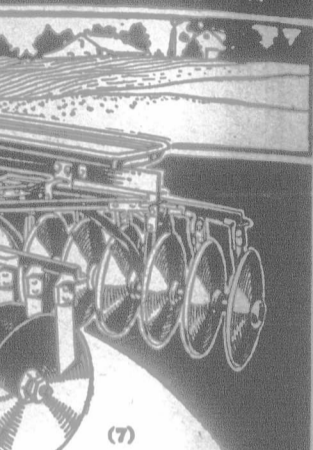
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JH 58 Fro

When w



**Lean**  
Disc Harrow



with an ordinary harrow, built specially by "Fordson" Dealers

**R "FORDSON"**

to meet power needs without automatically adjusted and The one lever alone allows soil conditions. ing bars between the front for discs for larger tractors. n and without piling up soil. ection cannot slide on hill- 7 ft. sizes with 16 and 18 with weight boxes, front

te us or the nearest

**ACTURING CO.**

rows also supplied for ment and special

rs, Ltd., Manitoba Motor ina, Sask. Agency, Ontario

**Massey-Harris**



## A Good Start is Half the Battle

Seed time is approaching—are you ready? Sowing your grain with a MASSEY-HARRIS DRILL is a big factor in securing a "Good Start" of the grain and a bountiful harvest.

The Reliable Force-Feed Runs sow uniformly in any desired quantity and without injury to the seed.

Strong Steel Frame holds all parts in proper relation to ensure free action of all.

Simple and easy control—one motion of a Lever lowers the Furrow Openers, applies pressure and starts the feed—the opposite motion raises the Furrow Openers and stops the feed.

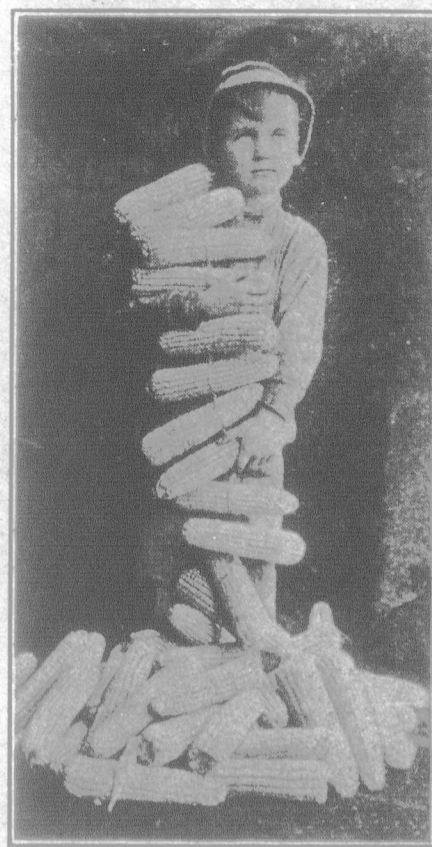
Positive Gear Drive.

*Made in a wide range of Sizes and with Hoes, Discs or Shoes.*

*Grass Seed Boxes, when ordered.*

**MASSEY-HARRIS CO., Limited**  
Head Offices—Toronto, Ont.

—Branches at—  
Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton. Transfer Houses—Vancouver and Kamloops.  
Agencies Everywhere



**SEED CORN** Insure your 1919 corn crop by buying your seed corn from the Potter Farm. All corn grown from our own seed. Hand picked from standing stalk. Thoroughly dried in our dryer. Germination guaranteed. Write for prices and particulars. **THE POTTER FARM, Essex, Ont.**  
R. D. Potter, Mgr. R. R. No. 2

### FERTILIZERS

Lime improves the physical condition of the soil. Use

#### Acco Hydrated Lime

on your land. It has been proven by experiments that an unlimed check plot gave a yield of 690 pounds of crop, while a limed plot gave 1,865 pounds. Why should your land not produce a heavy crop? Make it do so by using Acco Hydrated Lime as a fertilizer. Put up in 5, 10, 25 and 40-lb. bags, ready for use. Write for quotations and circulars.

**Acco Chemical Co., Ltd.**  
23 River St., Toronto.  
**HAROLD F. RITCHIE & CO., LTD.**  
Sole Agents, Toronto

### SEED BEANS

50 Bushels Selected Seed. White Field.

WRITE TO-DAY

**SUMMIT FARM**  
JEFFERSON P.O., ONTARIO

### Order Nursery Stock



direct from our nurseries and save agents' and middlemen's profits.

Write at once for our free descriptive catalogue and price list of fruit trees, small fruits, ornamental etc. Address:

J. H. McCOMBS NURSERIES  
L. B. 828 Fonthill, Ont.

#### Strawberry Plants

The best varieties viz. Williams Improved, Senator Dunlap, Pokom ke, Parson's Beauty, Glen Mary, Three W's, Arnot Stephen's Champion. Sample etc. \$5.00 per thousand or \$1.00 per hundred. Everbearing varieties \$1.50 per hundred.

WM WALKER  
PORT BURWELL - ONTARIO

**Seed Corn**—A quantity of Select Early Leaming, Longfellow, Wisconsin No. 7 and White Cap Yellow Dent. A card will bring full particulars. **GEO. B. LANGFORD, Kent Bridge, Kent Co.**

**Whitewashing**

The very best lime for whitewashing your fruit trees, poultry and out-houses, is Acco Lime. Will not rub off. Put up in 5, 10, 25 and 40 lb. bags ready for use. Write for circulars.

**Acco Chemical Co., Ltd.**  
23 RIVER ST. - TORONTO  
**Harold F. Ritchie & Co., Ltd.**  
TORONTO - Sole Agents

**Steel Rails**

for Reinforcing Bridges and Barn Driveways.  
Cut any length.

**JNO. J. GARTSHORE**  
58 Front Street West Toronto

**"Best-by-Test" FERTILIZERS**

This brand of fertilizer is noted for high plant food value and the analyses are guaranteed by us and by Government regulation to be full strength. We have the right Fertilizer for every soil and every crop. Make your farm a good farm; make your yields big on every acre and for every crop. You can do it by judicious use of Best-by-Test Fertilizers. Get your order in early; don't take a chance on a shortage. Farmers should club together and order in car load lots. Write particulars of your soil and the crop you will plant, and we will give you the best advice we can, as to the kind, quantity and price.

Write For Booklet—FREE  
**CANADIAN FERTILIZER CO. LIMITED**  
12 Market Chambers  
CHATHAM, ONT.



When writing please mention "Advocate."



## Make Your Syrup Cans Advertise YOU!

HERE is a new lithographed syrup can in red, black and gold of handsome design. The attractive appearance of this can will sell your syrup in the best markets at best prices. The design is lithographed right on the tin, doing away with the cost of labels, the trouble of pasting, muss, and rusting of cans, etc.

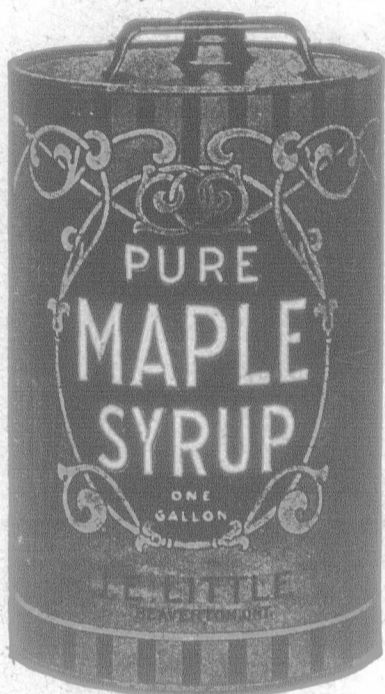
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# The Farmer's Advocate and Home Magazine

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1866

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LONDON, ONTARIO, FEBRUARY 27, 1919.

1379

## EDITORIAL.

Don't trust your seed corn.—Test it!

When March arrives, spring is not far off.

Plan to be more than an average farmer this year.

"Better stock and more of it" should be the stockman's slogan.

It will soon be time to warm up the incubator and be on the watch for broody hens.

The winter months are fast passing; are you ready for the "spring opening" on the land?

Diversification rather than specialization seems now to be the motto of the Ontario fruit grower.

There should be a good garden on every farm. Plan now for this year's garden and secure your seed early.

The significance of the poultry industry in Canada is not appreciated. The hen has not cackled loud enough.

The spring litter should be kept dry and warm. This will go a long way towards insuring health and thriftiness.

The U. F. O. Co-operative has got away to a good start in the handling of live stock. Read in this issue how they are doing it.

There is still need for big crops to feed a hungry Europe. Good seed and good cultivation are the first requisites to a big crop.

The question of "aliens" must be handled in a common-sense way. In normal times they do work which the Canadian will not touch.

The standardization of wearable and breakable parts on farm machinery would be a move in the right direction. Have you any suggestion to help it along?

The colt which is to be worked this spring should be hitched frequently during March so as to accustom it to the bit and harness, and to harden its shoulders in readiness for strenuous spring work.

Secure the seed corn in time to test the germination. The farmer who plants his corn without first ascertaining what percentage of the kernels are likely to send up a vigorous growth is taking a long chance.

Don't try some new variety just because it is "new." "Be not the first by which the new is tried, nor yet the last to throw the old aside." Stick to the tried and well-proven varieties and thus help to standardize the farm crops of your district or province.

Fruit growers in Ontario see a bright future ahead if they grapple manfully with the big problems. They realize, however, that their competitors are winning on account of superior quality, and to meet that competition the quality of Ontario's product must be improved.

It will take time to adjust the labor situation so far as the farm is concerned. There are many men looking for work in the cities, but as yet the supply has not overflowed into the country. Spring, no doubt, will alter things to some extent, but farmers want experienced hands now after their trials of the past two or three years.

## "The Farmers's Advocate" Will Report Parliament.

Owing to the many important questions to come before the House of Commons during this session, "The Farmer's Advocate" has arranged to give its readers an unbiased report of the proceedings. The time is past when agriculturists are interested only in the legislation pertaining to the farm. They are assuming the full role of citizenship and, after all, what affects one class of people affects other classes as well, only, perhaps, in a different way. Our report will not be prepared by a correspondent or reporter. An editor of The Farmer's Advocate and Home Magazine will report the session and give the readers of this paper a summary of what goes on in the House. We have long seen the need of just such a non-political and unprejudiced report of Parliament, and with the importance of this session in view we have decided to meet the need by delegating a "Farmer's Advocate" editor to sit through the session and prepare a report of what is actually said and done. This is an innovation in agricultural journalism. To our knowledge, no other agricultural paper in the world has ever carried a report of Parliament, prepared by one of its own editors.

Farmers are beginning to dispel their "Grit" and "Tory" sentiments and realize that they, amongst all classes, are the last to put first things first. Agriculture and national interests come before party, and this is one reason why we shall endeavor to give the rural population an ungarbled and non-political report of what is going on at Ottawa.

The reconstruction period presents many problems. These must be solved and solved quickly. The future of Canada is in the balance, and if our legislators do not rise to the occasion during this session, not only we but our children will live to regret it. It is no time now to play politics. It should be "Canada First," and if the rank and file of Canadian citizens demand this attitude on the part of their representatives, Parliament and Government will have to measure up to the standard of the people they represent.

We are again taking the lead with the hope that our readers will appreciate the opportunity of getting a report which has not been flavored by party affiliation or doctored for the purpose of protecting capital and big business. Agriculture is the basic and most important industry in this country but there are other industries and, above all, we will be fair.

## Sir Wilfrid Laurier.

The people from Atlantic to Pacific, irrespective of political affiliations and religious creeds, have united to mourn the loss of an illustrious Canadian who has adorned the public life of this Dominion for forty years. The passing of Sir Wilfrid Laurier removes not only one of Canada's foremost statesmen, but a man whose name will go down in history with those of Macdonald, Blake and others of our honored great.

The "Liberal Chieftain" had bitter political opponents, but no personal enemies. At times he differed with his followers in matters of policy, but the bonds of friendship were not severed. He was honored by Conservatives and Liberals alike, because they recognized in him the elements which combine to elevate the real man above the realm of political differences and controversies. His brilliant oratory and personal magnetism made him the leading figure in public and private life, and the House of Commons will not appear the same without the distinguished personality of Sir Wilfrid Laurier. He was a true Canadian and a champion of British traditions, and the history of the country he served so long will be the brighter for the mark this distinguished son of Canada has left upon it. His message to young Canadians, delivered on an occasion, only two years ago, well exemplifies the life of him whom the nation now mourns:

"Banish doubt and hate from your life. Let your souls be ever open to the strong promptings of faith and the gentle influences of brotherly love. Be adamant against the haughty; be gentle and kind to the weak. Let your aim and your purpose, in good report or in ill, in victory or in defeat, be so to live, so to strive, so to serve, as to do your part to raise the standard of life to higher and better spheres."

## The Demand is for Heavy Cattle.

A great many farmers have been making the mistake of rushing light, unfinished cattle on to the market at a time when the demand is an uncertain thing, and at a time when the demand is unquestionably not for light stuff. For the past few weeks United States packers have been buying heavily at Canadian stock yards. They have been taking the well-fitted, heavy kinds, and leaving the light stuff alone. This is what kept the cattle market firm, because Canadian abattoirs were, in some cases, not operating up to fifty per cent. of their average. Whether the United States demand will continue or not cannot be answered now. It may cease for a while and then spring up again, depending on home consumption and their European orders. No doubt the Republic will become a good market for Canadian live stock, but just what will happen during the period of readjustment cannot be foretold. One thing is certain, they will not require any great quantity of light, poor-quality cattle, and the market for such must be found in Canada. One week recently, 200 carloads of Canadian cattle were consigned to Buffalo, and from 2,000 to 3,000 head weekly have been reshipped south from the Toronto yards.

To take advantage of this demand, stockmen should put flesh on their cattle and bring them up to a reasonable weight. There is no excuse for a panicky feeling and the desire to liquidate live-stock holdings. Under any circumstances the tendency to rush light cattle on to the market will only make things worse and defeat the object of those who are trying to avoid loss. The better plan will be to feed and finish well.

## The Standardization of Implement Parts.

There is no doubt that a standardization of implement parts would prevent much annoyance and a great deal of lost time. If Smith could jump over the fence when he breaks a plow-point and borrow one from Brown, it would save him a trip to town, in case he happened to be improvident enough not to keep a few extra ones on hand. Furthermore, it is not infrequent that one finds the stocks depleted of the particular parts that he wants, and an expensive delay is occasioned. This is only an instance, but there are parts of all farm machinery which are inclined to break or wear out quickly, and if these were interchangeable on all makes of machines manufactured in this country, it would be a boon to farmers. Even hardware merchants could then stock such parts in outlying districts, and farmers' organizations, which make a business of handling staples, would be in a position to give a much needed service. The problem which might arise from the use of machinery manufactured in the United States would solve itself, for manufacturers wherever they might be, would hasten to give the Canadian farmer what he wanted. The discussion on this subject opened in the Convention of the Fairs and Exhibitions Association, held recently in Toronto, was opportune, but a further treatment of the question, through these columns, would no doubt bring out many facts and help to throw light on a matter which requires attention. Anyone with an idea in regard to the standardization of implement parts can express them through the columns of "The Farmer's Advocate."



## 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 Magazine,"  
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.
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THE WILLIAM WELD COMPANY (Limited),  
London, Canada.

### Sandy Visits Duncan McGregor.

BY SANDY FRASER.

"Sandy", says Jean to me the ither night, "ye'd better tak' a run over an' see auld Duncan McGregor. He's no' been weel for a week back, ye ken, and ye'd better be findin' oot if there's onything serious the matter wi' him."

So, bein' a married man and knowin' enough to tak' a hint wi' oot waitin' for an' order, that evenin' I took a stroll to see auld Duncan.

"How are ye, Sandy", he says to me as soon as his missus had let me in. "I haven't seen ye for years, mair or less, I'm thinkin'. An' how's the auld wumman?"

"How are you yersel', Duncan?" I replied. "I hear ye've no' been weel. Is it the "Flu" you've been pickin' up at your time o' life?" "Dinna think it for a meenute," returned Duncan, "It's juist a touch o' the cold. I'll mend as I get better, as my auld feyther used to say when he had onything the matter wi' him. The doctor left me a bottle the ither day when he wis in and I'm thinkin' maybe it's no' doin' me ony harm. I asked him gin he didna think a wee 'drap o' the cratur' would dae me mair guid than onything else, but he only laughed an' said that I might be gettin' sae fond of the medicine that I'd refuse tae get better at all. 'Tak this regularly' says he, 'an' ye'll no' stay sick ony langer than ye can help.' And he wisna far oot, for it's the mean stuff to be takin'."

"Weel Duncan," I said, "I guess things hae changed quite a bit since the days when ye were in the auld land and there wis juist about the one kind o' medicine for all the different sicknesses. And even if a chap wasn't sick, a little whiskey always made him feel better anyway. According to its reputation, Scotland wis a country o' hardy fighting men and great drinkers. They must hae been made o' pretty guid stuff alright, to hae come through as much of both as they did. But Scotland is gettin' pretty weel civilized, along wi' the rest o' the world, they tell me," I concluded.

"Oh aye," Duncan replied, "even before I left it there wis a change comin' over the auld place. Ye could even refuse to tak' a third glass without hurtin' yer friend's feelin's beyond recovery. There wis a time when, if ye wanted to show yer guid-will, ye had to drink until one or the ither o' ye went under the table. That wis the usual end-up o' ony social gathering in those times. The best man wis the one that could stick the longest to his chair while the rest o' the party went doon, one by one. I mind once being wi' a crowd o' this kind and as I wasn't minded to mak' a pig o' mysel' like some o' the ither I juist let mysel' slip doon an' oot o' sight under the table. I hadna been lang there when I felt a couple o' wee hands workin' at my collar an' necktie. 'Who's that?' says I. 'I'm the chap as loosens

up the gentleman's collars,' answers somebody, and I found later on that it wis the custom to hae a young lad go under the table, durin' these speers, for the purpose o' loosening up the neck-wear o' those that were 'paralyzed', as ye might say, and so prevent their chockin' to death, or dyin' o' appoplexy or something. It had happened mair than once.

There didna seem to be ony occasion or event where whiskey couldna be made to serve a purpose or add to the enjoyment o' those present. At baptisms or wedding or funerals it wis the thing that kept the company in guid cheer. I havena forgotten one funeral I attended in my young days. It wis that o' an auld maiden lady wha had died in the toon o' Strathspey. She left orders that as much whiskey wis tae be used at her funeral as had been used at her christening and there wis those amang her relatives that weren't slow about obeying her instructions. It wis ten miles to the churchyard and on the way there the funeral party had to pass a public-house where it wis considered the duty o' every one to lay in a supply o' liquid refreshment that wad last them for the rest o' the trip. When, at last, they arrived at the burying-place they found the auld grave-digger in a very bad humor over having to wait sae lang and they couldna mak' ony apology that wad satisfy him. 'Let's get the thing over an' get awa oot o' this,' says he. 'But,' he went on, lookin' around him for a meenute, 'whar is Miss Ketty?' 'In her coffin, to be sure,' said one o' the party, a wee bit mair sober than the rest. But on making a further search it turned out that neither the coffin nor Miss Ketty were amang those present and juist then an idea came tae one o' the pall-bearers. 'I ken whar she is,' says he. 'We pit the coffin doon on the stane dike outside that tavern we went in tae on the way here, an' it's there yet, or I'm a drunkard,' he says. 'Miss Ketty' spent the night on the stane fence but we got her safely under ground the next day.

"However," went on Duncan, "as ye say, things hae changed since those days. The likes o' that could hardly happen in Scotland noo, although the whiskey is still to be had there for the buyin'. Moderation is a word that they are beginnin' to ken the meanin' o'. No muckle like an auld chum o' my ain, Hughie McKenzie by name. His boat upset one day as he wis crossin' the river that ran past oor town, an' as Hughie wis carried doon the stream by the current, yellin' for dear life, auld Jock Tamson wha wis standin' in the door o' the hotel watchin' him, says, 'Weel, I'm surprised at Hughie. It's the first time I ever kened o' him passin' this place wi'out comin' in for a glass.' Hughie wis one o' the auld-timers. He wis like the chap that I heard a minister tellin' about one time. He said he had been advisin' this man, David by name, to try an' gae mair easy on the whiskey, gin he couldna cut it oot a'thegither. 'Davie, my lad,' said the minister, 'follow my advice an' never tak' mair than one glass at a time.' 'Neither I do sir,' says David, 'neither I do. But I care unco' little how short a time be atween the twa.'"

"Weel, I guess it's time I wis thinkin' o' gettin' bac hame," says I at last, when Duncan stopped for a minute. "Yer cauld, or whatever it is hasn't affected yer memory ony, Duncan," I says. "I suppose, noo that this country has got sae dry like, that it maks ye a wee bit lonesome, recallin' the auld days?"

"Oh, I dinna ken," replied Duncan. "I gave whisky a fair trial in my time an' I canna say that it ever did me muckle guid. I cam' vera near swearin' off entirely one time. It wis after a drinkin' party I had been at in the country, at the hame o' one o' the Lairds. It wis gettin' on towards mornin' an' a guid part o' the company were laid oot in different shapes an' places, when I heard one man say to another, 'What maks the Laird o' Garskadden look sae white like?' 'Oh, Garskadden's been in heaven these twa hours,' replies his neighbor, 'I saw him step awa', but I didna like to disturb guid company.'"

"Weel Duncan," I said, pittin' on my cap an' mitts, "I dinna ken that I would hae found muckle fault wi' ye gin he had signed the pledge on that occasion. I've seen mony a man sobered up by less than the likes o' hat." "Oh sure," says Duncan, comin' wi' me as far as the door. "I'm on the water-wagon noo, Sandy, as ye ken weel enough, but, gosh man, I hae a terrible feelin' sometimes that the axles are in bad need o' a wee bit o' grease. Guid-night, Sandy. Remember me tae the auld wumman."

### Nature's Diary.

A. B. KLUGH, M. A.

Nature in Poetry.

No 3.

In our consideration of poetry from the standpoint of the naturalist we now turn to what might be termed "glimpses of nature"—little gems of description of particular scenes, or particular aspects of nature. There are hosts of such descriptions in the works of the various poets, but many of them do not "ring true" to the nature lover.

One of the very finest of these is Longfellow's description of the forest along the Atlantic coast in "Evangeline":

"This is the forest primaeval. The murmuring pines and the hemlocks,  
Bearded in moss, and in garments green, indistinct in the twilight."

A Canadian poet, Arthur W. H. Eaton, in "Phantom Light of Baie des Chaleurs" gives us a delightful glimpse of this same region:

"Tis the laughter of pines that swing and sway

Where the breeze from the land meets the breeze from the bay  
In ripples that reach to the forest side."

In his poem, "In Peace," Whittier gives a very vivid description of moonlight on a lake:

"A track of moonlight on a quiet lake,  
Where small waves on a silver-stranded shore  
Whisper of peace."

And another passage from the same poem is an exquisite description of sunset:

"A slumberous stretch of mountain-land, far seen,  
Where the low westering day, with gold and green,  
Purple and amber, softly blended, fills,  
The wooded vales, and melts among the hills."

Lowell's description in "Under the Willows" of the effect of light clouds floating, on a bright day, over orchard and meadow is beautiful:

"From blossom-clouded orchards, far away,  
The Bobolink tinkled; the deep meadows flowed  
With multitudinous pulse of light and shade"

Bryant, in "Gladness of Nature" gives us a fine picture of a sunny summer day:

"There are notes of joy from the hang-bird and wren,  
And the gossip of swallows through all the sky;  
The ground-squirrel gayly chirps from his den  
And the wilding bee hums merrily by.  
The clouds are at play in the azure space  
And their shadows at play on the bright green vale,  
And here they stretch to the frolic chase  
And there they roll on the easy gale."

To one who has watched the dawn in the mountains Shelley's description in "Prometheus Unbound" appeals very strongly:

"The point of one white star is quivering still  
Deep in the orange light of widening morn  
Beyond the purple mountains."

The coming on of night in the forest is thus very truly described by Aldrich in "Invocation to Sleep":

"On still nights  
There is a folding of a world of wings—  
The bees in unknown woods,  
The painted dragon-flies, and downy broods  
In dizzy poplar heights—  
Rest for innumerable nameless things."

The picture which Longfellow gives us in "Hiawatha" of the forest towards sunset is a perfect gem of beauty and accuracy:

"Fell the evening's dusk and coolness  
And the long and level sunbeams  
Shot their spears into the forest,  
Breaking through its shields of shadow."

Here Longfellow has caught and fixed for all time an effect which only close observers would notice—the long rays of the setting sun penetrating the forest and lighting up the portions of the forest floor which are usually shaded by the crowns of the trees.

In "A Water Song" A. F. Bruce Clark, a Canadian poet, gives a beautiful description of a water scene:

"Where the wavelets gurgle and ripple and cream,  
And the fish curves forth in a watery gleam  
And the kingfisher dives and the white gulls scream  
And the clouds drift all day long."

Albert D. Watson, another Canadian, in "Dream Valley" presents a delightful little picture:

"I know a vale where the Oriole swings  
Her nest to the breeze and the sky  
The Iris opens her petal wings  
And a brooklet ripples by."

Our Canadian poets have drawn very largely upon nature for their themes, more so, I believe than the poets of any other land, and in the main their verse "rings true." There are many descriptions of storms in poetry, but the best of them all, as far as I know them, for absolute fidelity to nature is that of a Canadian poet, W. Kirby, in his "Thunderstorm in August":

"But when the fierce August suns, careering high  
Gaze hot and silent from the brazen sky,  
When bird and beast forsake the open glade  
And plant all mute within the sultry shade."

"Eclipsed the sun, his fires at once allayed  
Falls o'er the quaking earth a dreadful shade,  
A thousand birds aloft in terror rise  
And seek sager haunts, with piercing cries,  
The leaves they tremble in the breathless woods."

"The rocking forests groan from side to side  
While cataracts of rain in deluge pour  
And sweep the smoking land with ceaseless roar."

"The wild tornado passes, and the sun  
With golden rays peeps through the clouds of dun,  
While down the streaming gullies, furrowed wide  
The rushing waters pour on every side,  
And earth refreshed emerges from the storm  
With smiling face and renovated form."



# THE HORSE.

## Unthrifty Horses.

There are many horses that are "off color" unthrifty, out of condition generally, and the owners naturally are anxious to get them in condition for spring's work. Of course, the first necessity is to determine the cause, and remove it. If the horse's condition is the result of want of sufficient feed of the proper kind, no medicines are needed. We have on different cases stated that "a healthy horse requires no drugs." It is a great mistake to periodically give drugs to horses in order to "keep their water right," etc. A horse that is in low condition from lack of feed is still healthy, unless the want of nourishment has been carried to the extreme. In most cases all that is needed is to commence to feed good hay, oats, bran and a few raw roots and give regular exercise. All changes in regard to feed and exercise should be made gradually, increasing the exercise in proportion to the increase in quantity of grain fed. Of course, good and regular grooming is also essential.

The cause of the unthriftiness may be chronic indigestion. Then we must discover what causes this. It may be from imperfectly masticated food. This is a very fertile cause. This is due, in most cases, to a faulty condition of the teeth. In colts approaching 3 or 4 years of age, an unthriftiness is often noticed, and it is due to the fact that the crowns of the temporary molars have not been shed. Between 2½ and 3 years of age the first two molars in each row should be shed and replaced by permanent ones, and between 3½ and 4 years of age the third molar in each row should be replaced by a permanent one. Materials that form the permanent teeth are deposited in the tooth socket at the deepest part of the socket. As these materials are deposited the fangs or roots of the temporary tooth becomes absorbed, and when this process has reached that degree where the new tooth is appearing at the margin of the gum, there is nothing but a portion of the crown of the temporary tooth left, and, of course, it

gases in the stomach, it is good practice to add to the drinking water about ¼ of its bulk of lime water for a couple of weeks. This, with the bicarbonate of soda will prevent any tendency to fermentation in the stomach. The amount of grain given should, as in other cases, be small at first and gradually increased as digestion improves, and, of course, regular exercise should be given, the amount of exercise or light work should be little at first, and gradually increased in proportion to the increase of the grain ration. Of course, the grain given is generally oats. Personally, we prefer rolled to whole oats, for any horse performing ordinary work on either a farm or the roads, but where there is nothing which interferes with mastication whole oats give good results.

In "conditioning horses" for work, that is, horses that have spent a few months in partial or complete idleness, it must be remembered that something more than flesh is necessary. In idle horses, by reason of want of function, the respiratory and muscular systems, and, to some degree, the nervous system also, lose tone. The tone necessary to enable a horse to perform the functions of a horse with reasonable satisfaction to the driver and comfort to himself can be gained only by regular exercise or light work, and as in change of feed, the amount given daily at first should be little and it should be gradually increased until he is in a fit condition to perform regular work. Of course, unthriftiness may be due to some specific chronic disease, the nature of which can be determined only by a careful examination by a veterinarian, and requires specific treatment.

## Horse Breeders' Clubs and Federal Assistance.

The season is approaching when horsemen will be looking around for a suitable stallion with which to mate their mares this spring. Since the Federal scheme of assisting horse breeding went into effect many clubs have been formed and stallions have been hired on this co-operative plan. Similar action may be taken in other districts this spring and it is well to become



A Bunch of Young Clydesdales.

should cast off or shed. In some cases a portion of the root has not been absorbed, and this prevents shedding. The growth of the new tooth forces this crown above or below the level of its fellows, according to whether it be in the lower or upper jaw. This, of course, prevents proper contact of the molars, hence makes perfect mastication impossible. When a colt of the ages mentioned is noticed to "not be doing well" the teeth should be carefully examined and the unshed crowns removed by the use of a pair of forceps or ordinary pinchers. In other cases the trouble is irregularities of the teeth. These can be corrected by the proper use of dental rasps. It is generally profitable to employ a veterinarian to dress a horse's teeth, as the bearing surface of the teeth should not be interfered with, except in cases when a portion of the tooth has to be shorn off. A great number of horses are unthrifty solely from the condition of the teeth, which, in most cases, can be corrected, but bungling operations on the teeth are very liable to make matters worse.

In other cases unthriftiness is due to partial inactivity of some of the glands of the digestive tract. In such cases it is wise to allow the patient bran only for about 24 hours and then administer a purgative. For an ordinary-sized horse about 8 drams of aloes and 2 drams ginger should be given. Small or quite large animals should be given less or more according to size. The patient should be allowed bran only until purgation commences, and then fed lightly on good hay and oats until the bowels become normal. This should be followed by a course of tonics to give tone and increased activity to the glands and also increase the appetite. For this purpose most practitioners prefer a mixture of powdered sulphate of iron, gentian, ginger, nuxvomica and bicarbonate of soda. A tablespoonful of this 3 times daily mixed with damp food, or mixed with a pint of water and given as a drench 3 times daily is the dose for the ordinary-sized horse. As there is, in some cases, a tendency to the formation of

thoroughly acquainted with the provisions governing the operation of the clubs and the hiring of stallions. Following is an outline of the Federal Scheme, and elsewhere in this issue will be found a copy of the constitution and by-laws governing the clubs:

### Outline of Federal Scheme.

The farmers of any district, wishing to work for the betterment of horse breeding by encouraging the use of sound, individually excellent, pure-bred sires, may form a Breeders' Club for the purpose of hiring a pure-bred stallion to travel their district for the benefit of the members. This Club, by organizing under and adopting the constitution and by-laws, and conforming to the various rules and regulations governing this grant, may participate in the Federal Assistance given to such Clubs as hereinafter set forth:—

1. The Club shall guarantee the stallion owner a definite number of mares at a certain service fee per mare, said mares to be in good breeding condition, and not affected with any contagious or infectious disease.
2. All stallions named by Clubs for the purpose of securing Government assistance must be submitted to an examination by an authorized veterinary surgeon.
3. The Secretary of the Club shall forward to the Live Stock Branch, with the regular application, a list of its members, also a copy of the memorandum of agreement signed by both parties interested. This agreement shall not become binding until approved by the Live Stock Commissioner.
4. The minimum service fee shall be not less than Twelve Dollars, and the maximum shall not exceed Twenty-five Dollars.
5. All service fees shall be collected by the Club.
6. Payment of service fees shall be made as follows: one-third of the service fee for each guaranteed mare shall be paid by the Club to the stallion owner at the end of the service season.
7. The remaining two-thirds of each service fee

shall be paid when the mare proves to be in foal. That is to say, the remaining two-thirds shall be paid for only such mares as prove to be in foal.

8. At the end of the service season the stallion owner shall furnish the Live Stock Branch with a sworn statement setting forth the number of mares bred to his horse and the name of the owner of each.

9. The Live Stock Branch shall pay the Club an amount equal to 33½ per cent. of the total amount paid to the stallion owner at the close of the service season on the actual number of mares bred but not exceeding the guaranteed number, on receipt of the stallion owner's statement and of a properly audited and sworn statement signed and declared by the President and Secretary.

10. The Live Stock Branch shall pay the Club a second grant equal to 33½ per cent. of the amount paid to the stallion owner on the total number of mares that prove to be in foal, that is, 33½ per cent. of two-thirds the service fee paid for each mare that proves to be in foal, on receipt of a properly audited and sworn statement signed and declared by the President and Secretary of the Club.

## LIVE STOCK.

More cattle and better cattle are needed in Canada.

As it nears lambing time slaken off a little on the roots and give the ewes more grain as oats and bran.

The sow should be in the farrowing pen a few days before farrowing so as to become accustomed to her new quarters.

The scrub sire is doomed. There is no place for him in a country like Canada where there is an endeavor being made to improve the quality of live stock.

If one of the animals is a little "off" its feed ascertain the cause immediately and apply treatment so as to prevent complications appearing. Delaying treatment for a day may result in the death of the animal. The good feeder closely watches both ends of every individual in the herd, and feeds so as to keep the appetite keen and the digestion good.

It is advisable to produce what the market demands rather than endeavor to educate the consumer to use what can be produced easiest. For instance, England is our market for hogs. A product of exclusive quality is wanted. If Canada cannot supply the quality of bacon desired other countries will. The British desire for prime bacon will not change.

Do you ever make a special effort to give the timid animals a chance to get a good drink at the trough? There is usually one or two bosses in every herd and they appear to glory in keeping the rest in the rear. It too often happens that the weaker ones do not get sufficient drink to satisfy their thirst. It is well to leave the timid cattle out a few minutes longer so that they may slake their thirst unmolested.

Feeding live stock is an art which some fail to acquire. To be a successful feeder, the appetite of the animals must be catered to. Each animal must be studied and fed so that it will have plenty but yet be ready for the next meal. If close attention is paid it is possible to satisfy the animals and yet have them practically clean their mangers. It is a sign of poor feeding to have a lot of silage mixed with roots and chop left in the manger.

## The Gestation Table is Valuable to Every Breeder.

In this issue we again publish the "gestation table." Every spring a number of subscribers write asking for the table claiming that they find it of service to them, consequently the table is published annually for the benefit of our new subscribers and those who have mislaid or destroyed previous copies. Every stockman should mark down the date on which each animal is bred and also record the date on which it is expected to give birth to its young so that preparation may be made for the increase in the flock or herd. Where no record is kept it frequently happens that the animal is not in proper condition or is not in a proper stall when the time of parturition arrives. When selling breeding females it is essential that the breeding date be given. The accompanying table makes figuring out the time a cow will freshen or a sow farrow very simple and quickly done. In the first column mark the date on which the animal is bred and on the same horizontal line will be the expected date of birth with the four different classes of animals. Many paste the gestation table on a pasteboard card and hang it in the stable where it is handy for reference. When an animal is bred the date of service can be underlined and the animal's name or number written opposite it. A glance along the line will show when that particular animal should give birth to her young. The average gestation for a mare is 337 days; a cow, 282 days; sow, 113 days; ewe, 148 days. Cows have been known to freshen in 240 days and to go so long as 330 days and yet give birth to living young. Tack up the gestation table in a convenient place for ready reference.



GESTATION TABLE.

DIRECTIONS FOR USE OF TABLES.—Find the date of service in the first column; then, on the same horizontal line, and under the heading of "mare," "cow," "sow," or "ewe," whichever it may be, will be found the date of the expected birth.

Table for JAN. MARE Dec. COW Oct. SOW April EWE May. Rows 1-31 with corresponding dates and expected birth dates.

Table for MAY MARE April COW Feb. SOW Aug. EWE Sept. Rows 1-31 with corresponding dates and expected birth dates.

Table for SEPT. MARE Aug. COW June SOW Dec. EWE Jan. Rows 1-31 with corresponding dates and expected birth dates.

Table for FEB. MARE Jan. COW Nov. SOW May EWE June. Rows 1-31 with corresponding dates and expected birth dates.

Table for JUNE MARE May COW March SOW Sept. EWE Oct. Rows 1-31 with corresponding dates and expected birth dates.

Table for OCT. MARE Sept. COW July SOW Jan. EWE Feb. Rows 1-31 with corresponding dates and expected birth dates.

Table for MAR. MARE Jan. COW Dec. SOW June EWE July. Rows 1-31 with corresponding dates and expected birth dates.

Table for JULY MARE June COW April SOW Oct. EWE Nov. Rows 1-31 with corresponding dates and expected birth dates.

Table for NOV. MARE Oct. COW Aug. SOW Feb. EWE March. Rows 1-31 with corresponding dates and expected birth dates.

Table for APRIL MARE March COW Jan. SOW July EWE Aug. Rows 1-31 with corresponding dates and expected birth dates.

Table for AUG. MARE July COW May SOW Nov. EWE Dec. Rows 1-31 with corresponding dates and expected birth dates.

Table for DEC. MARE Nov. COW Sept. SOW March EWE April. Rows 1-31 with corresponding dates and expected birth dates.

W count will g fat, b proge not c vided carcass a mid reason that w When her da dispos not th that in his of cat satisf the ea produ come to me mand. horn pose, the fa are str breed, not g milk. is put form of being Then which flow o clined flesh. of the with o and s develo suited Thus ter m Shorth thick-b heavily This w on the withou a large the le framed when o frames, two str goes to it to m the Sh beef br develop possibl Herefo of the have i the fe The but w purpos and ea Alread and it is term as a st



# Dual-purpose Cattle a Reality.

We have in this country, as no doubt in every other country, the professional dairyman who desires a cow that will give a particularly large flow of milk, rich in butter-fat, but who pays comparatively little attention to the progeny. There is also the professional feeder who does not care so much about the milking propensities, provided he gets animals which will fatten into an ideal carcass of beef. Then there is the stockman who strikes a middle course; he wants a cow that will give him a reasonable flow of milk during the lactation, and a calf that will grow and fatten into a profitable carcass of beef. When she is dry he wants her to fatten up so that when her days of usefulness as a breeder are past, she may be disposed of for a reasonable figure on the market. It is not the easiest thing in the world to get a breed of cattle that will meet this dual-purpose demand. Sanders, in his "History of Shorthorn Cattle" says: "No breed of cattle has ever been evolved which has given perfect satisfaction to the diversified agriculturists who inhabit the earth, but in the two-fold capacity of beef and milk

admirable milkers. Some of the Shorthorn bulls of merit, both in Canada and the United States, carry the blood of both the Bates and Cruickshank strains. There are breeders who contend that the dual-purpose animal is an impossibility, in spite of all the evidence to the contrary which is available in England and America. That we have not more of what is termed the dual-purpose Shorthorn is due largely to the fact that the great majority of the breeders on this side of the Atlantic were more concerned about beef conformation than they were about milk production; consequently in the perfecting of the former, the latter quality deteriorated. On many farms throughout Canada are to be found Shorthorns that give a profitable flow of milk, although such herds are not so numerous as they were a half-century ago. One difficulty has been to secure sires that would transmit the milking qualities. Bulls of the straight beef strain have been used, which has tended to lower the milk yield. Now there is a desire on the part of many to get a little more milk out of the Shorthorn cow

which the Shorthorn breed possesses to a greater extent than any other breed. But to attend some of our large fairs one would naturally be led to believe, from the array of Shorthorn celebrities lined up, that beef predominated—and it does in many herds.

That Shorthorns bred along dual-purpose lines will produce offspring of admirable fleshing qualities is clearly shown by the steer "Clear the Way," which was champion at the Canadian National Exhibition, and second-prize yearling steer at the Chicago International, in 1917. It is said that he dressed a higher percentage than the grand champion steer, or the grand champion carload at Chicago, and yet he has four half-sisters that have qualified in the Record of Performance, one of which gave 8,727 pounds of milk as a two-year-old.

Some excellent records have been developed. Up to a year ago, over sixty cows in the Canadian R. O. P. had made over 8,000 pounds of milk in a year, and nearly half of this number went over 10,000 pounds. A record of 17,723 pounds of milk and 636 pounds of butter-fat has been made by a Canadian cow in one year. Iford Waterloo Baroness, a cow of great depth and substance, in five years, including her first period of lactation, produced over 55,000 pounds of milk. Records up to 18,000 pounds have been made in Shorthorn herds in the United States. Thus it will be seen that the Shorthorn is capable of competing with some of the dairy breeds. However, breeders of dual-purpose Shorthorns should be careful to emphasize the dual; it is a mistake to try to make a dairy breed of a Shorthorn, or any of the other beef breeds. We already have four excellent breeds of dairy cattle. It is quite possible to intensify milk production at the expense of beef conformation; in fact, there are instances



A Group of Skim-milk Fed Calves on Weldwood Farm.

These dams gave from 7,000 to 9,000 pounds of milk in their last lactation, and their sires' two neigest dams average over 12,000 pounds of milk in a lactation.

production Shorthorns come nearer than any breed to meeting this varied demand." Because the Shorthorn fills this double purpose, it has been termed the farmer's cow. There are strains of the Shorthorn breed, however, which do not give a large flow of milk. The feed consumed is put on the back, in the form of flesh, rather than being converted into milk. Then there is the type which produces a large flow of milk but is not inclined to carry as much flesh. Early in the history of the Shorthorn breed men with different ideals bred and selected in order to develop a strain which best suited their conditions. Thus we have what is termed the Scotch-bred Shorthorns, which are deep, thick-bodied, low-set and heavily-fleshed individuals. This was the ideal which Cruickshank had in mind. Bates, on the other hand, bred to develop the milking propensities without eliminating the beefing qualities. He met with a large degree of success, and the Shorthorn to-day is the leading dairy cow of England. They are big-framed and give a fair flow of milk and fatten up readily when dry. Steers from this strain possess smooth, level frames, and are in demand for feeding purposes. The two strains above mentioned had similar origin, which goes to show that a man can take a breed and develop it to meet his ideal. There are more heavy milkers in the Shorthorn breed than there are in any of the other beef breeds, for the simple reason that they have been developed along milking lines to a greater extent. It is possible that heavy milkers could be developed in the Hereford and Angus breeds, but it is seldom that either of these breeds are spoken of as dual-purpose. They have been developed largely for beef, although the females give sufficient milk to raise their calves well.

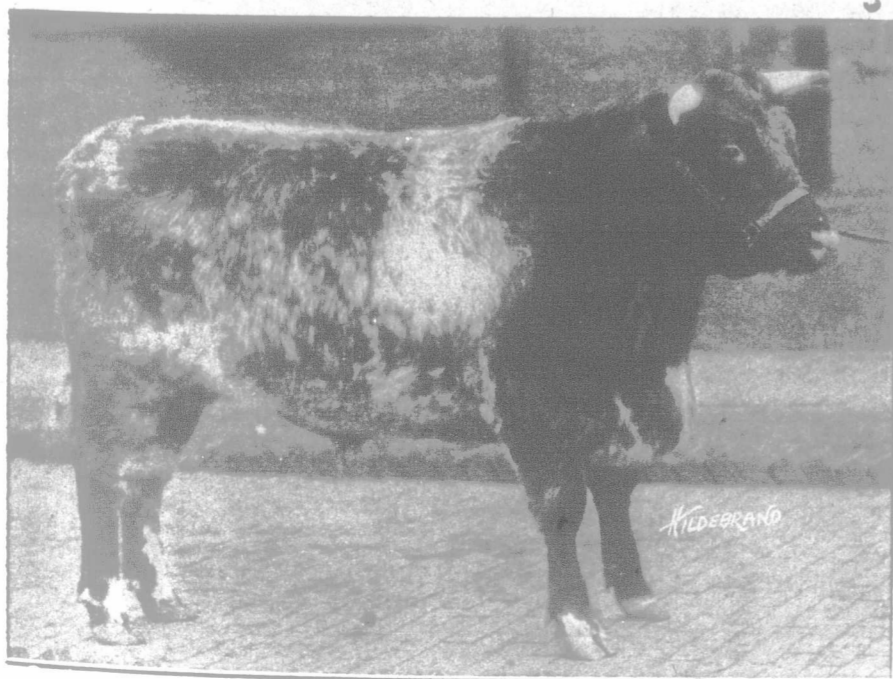
There is a place for each of our dairy and beef breeds, but we believe that there is also a place for a dual-purpose animal, and the Shorthorn, owing to its origin and early development is best suited to fill this place. Already we have the strain highly developed in England, and it is being revived in America. Even among what is termed the Scotch Shorthorns, which are looked upon as a straight beef strain, there are to be found some

and yet not sacrifice the beefing qualities. To do this one must be careful in the selection of females, and in the sires to mate with them. It must not be expected that the recognized beef conformation will be maintained in the animal developed to give twelve, fifteen, or twenty thousand pounds of milk. There may be instances of such, but to have them on a wholesale scale is an utter impossibility. Sanders writes, "It is not reasonable to presume that any Shorthorn advocate would allow his enthusiasm to carry him to the belief or statement that the most perfect beef form and the greatest milk production could exist in the same animal, but it is a safe and reasonable belief, and one fully justified by the records of Shorthorn history, that these dual qualities can and do exist in one breed—that of beef form and quality unsurpassed by, and milk and butter production unequalled by any beef breed. The dual-purpose idea is not that a cow should be fat all the time, and a great milker all the time also, but that she should have the power to convert her feed into milk while she is milking, and to make it into flesh when she is dry." Recognizing the advisability of maintaining this dual-purpose quality, rather than going altogether for beef, the American Shorthorn Breeders' Association have set aside a considerable sum to be used at various fairs as prizes for the different classes of dual-purpose Shorthorns. This dual-purpose quality is a valued asset

where breeders are on a fair way to accomplish this. Some of the entries in the milking Shorthorn classes at the Chicago International appeared to have already lost their fleshing qualities. Their conformation was that of a dairy cow. Breeders should be careful on this point.

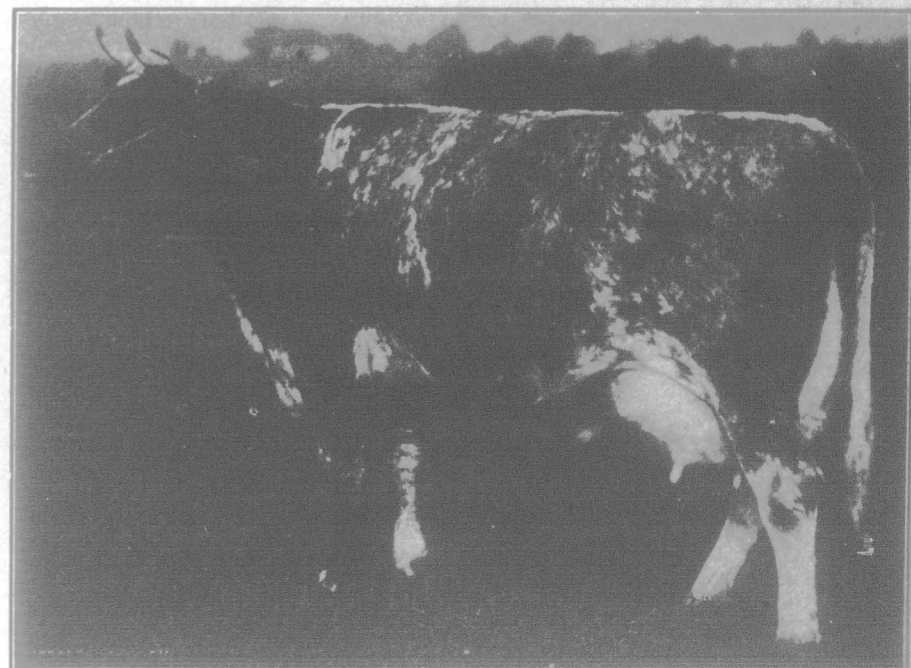
The Bates' or English strain of Shorthorns are generally looked upon as coming nearest to the dual-purpose ideal. However, from the Scotch and Scotch-topped Shorthorns have been developed some heavy milkers. In England the Bates' cattle are looked upon as the best milkers but good milkers are found in both strains and in all families of Shorthorns. In order to improve the milking qualities of the herd it is essential that the sire used be from a cow that is a liberal milker. In many herds daily records are kept so that it is known what a cow does from month to month during the lactation. Care should be taken that the bull has the desired Shorthorn conformation and type as well as the backing for milk. It is much harder to breed for both beef and milk than it is to breed for either one or the other alone. Some have set out to develop a herd averaging over 10,000 pounds of milk in a year. This would be creditable for a dairy breed. If it can be done with Shorthorns without detracting from the excellent beef form—all well and good.

R. W. Hobbs, one of the largest breeders of milking Shorthorns in England, voices the importance of main-



Clear the Way.

Champion steer at Toronto, 1917, and has four half-sisters in R. O. P.



A Dual-purpose Shorthorn.

Note substance, depth and thickness of body, and also the large, well-balanced udder.

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taining the dual-purpose characteristics in these words: We all wish to keep the true Shorthorn character in our herd, and although the object is to breed cows that will give a good yield of milk, we must also have them capable of grazing quickly into good bodies of beef when their milking days are over, and also of breeding steers that will repay well for weaning and fattening. For this dual purpose no cow on earth will compare with the dairy Shorthorn."

### United Farmers' Co - Operative Company Make New Venture on Toronto Market.

"Are these Charlie's?"

"Yes, we'll be getting out of the business now."

"Oh, we'll get some."

"Yes, I suppose we'll all get some."

Half jestingly and half seriously two men were discussing the new departure of the United Farmers' Co-operative Company in establishing themselves as members of the Toronto Live Stock Exchange and opening offices at the Union Stock Yards for the purposes of buying and selling live stock for the hundreds of farmers' clubs throughout the province. "Charlie" is Charlie McCurdy, recently employed by the Company as chief salesman for the Live Stock Department. For thirty years he has been buying cattle on Toronto market, and it is no mean augury of the future success of the company's new attempt to widen their scope in the field of co-operative selling that they have seen the wisdom of engaging the services of so experienced a man. And there is this further fact, too, that he is apparently well and highly regarded by the men in the yards with whom he has been in contact for years, and whom he must now approach as the farmer's agent.

Monday morning, February 17, was the first day that the United Farmers' Co-operative did any business in their new offices at the stock yards. A representative of "The Farmer's Advocate" was present at the stock yards on that day and spent his time "nosing" around, noting not only what cattle were sold and the price, but also what buyers offered themselves and the general attitude of the "trade" toward the farmers' company. We had particular reason to expect vigorous opposition, because it is obviously to the advantage of the larger buyers to deal directly with groups of farmers, but we were agreeably surprised to note at least an apparent friendliness which speaks well for the future success of the new department. Of course, there were some, particularly among the drovers and commission men, who said, "Well, it won't last very long," but we venture to say that when it is seen that the new members of the exchange expect to do business just the same as anyone else and are willing to compete fairly in the market for what business they get, what opposition does develop—and it surely will—will tend to disappear. Apparently the packing houses are disposed to encourage co-operative shipping, and one buyer for a large abattoir said in conversation: "We have always tried to encourage farmers to ship together, and I believe this new venture is good business on their part. In our cattle dealings with clubs we have always had good satisfaction, much more than with sheep and lambs. Farmers have not been at club shipping long enough to know how to finish lambs for the market, and we expect that the Co-operative Company can do a great deal to bring better-fitted stuff on the market. Most of the farmers' clubs ship their stuff on Monday so that it gets here for Tuesday's and Wednesday's market, and I believe this is a good practice. If we had a three or four-day market, instead of a great big market on Monday, prices would be steadier than they are now."

The business done this first day was very satisfactory indeed. It was a much more auspicious opening than that experienced by the Western Canada farmers when they organized their Live-Stock Department about three years ago and waited 10 days for their first consignment. But business grew in the West to 202 cars per month toward the close of the first season, and in 1918 the best month saw the sale of 457 carloads of stock. The Ontario company sold 71 head of cattle and 47 lambs on their first day, all of which sold for prices that were well up with the market and satisfactory to the consignors. Moreover, although the market was falling from the previous week and few steers were sold in the morning, to say nothing of the market for sheep which was dragging, all the offerings of the United Farmers' Co-operative Company were disposed of before eleven o'clock.

Business is done quickly in the yards, once buyer and seller can get together. The Company sold one carload of 22 "warmed-up" feeders, that is, feeders that were by no means fat but were in splendid shape to stand another couple of months' feeding. They would average about medium grade, but some few were worth fourteen dollars, while others were worth no more than eleven. Because they all belonged to one man and were too few to grade out, they sold at a disadvantage. Apparently nearly every buyer looked them over. Finally "the" buyer came along at ten o'clock and a sale was made in much less than five minutes. A quick walk through the pen, a brief handling and in another half minute the sale was made.

"What are you asking for them Charlie?"

"Thirteen cents."

"All right."

"They're sold,"—and they were.

"Business is done very quickly here," said Mr. McCurdy afterwards, "and although some of us have been here for years and are very close friends and would do whatever we could to help the other fellow, once a

man passes under the bars leading to the yards, he should forget everything else but business. He can be sure that everyone else will, whether he does or not."

The system by which the business of the Live Stock Department will be conducted appears to be a very complete one; and one, moreover, which is designed to give the most "service" and satisfaction to the shipper. It is, in fact, the system in use by the Live Stock Department of the United Grain Growers, Limited at Winnipeg. It is composed of the best features to be found in co-operative shipping to various live-stock markets of the United States, and is further to be recommended for the reason that it has undergone three years' successful trial in Winnipeg. Originated and executed there by A. Duncan, Superintendent of the Live-Stock Department of the Western Company, it was only natural that this gentleman should be asked to initiate it at Toronto, and to his well-rendered services considerable credit for the new venture in Ontario must be due.

Perhaps the easiest way to outline the plan to be adopted by the United Farmers' Co-operative Co. is to follow a co-operative shipment from shipping point to market. The agent, or manager of a local club, supplies each member with a number of printed post-cards with which he can notify the manager as to the number of stock he will have at an approximate date. The manager tabulates these as they are received on another special form, and orders shipping cars accordingly. When the stock is delivered at the shipping station it is weighed and the owner given a weigh ticket which he retains. The agent makes out duplicate copies of a shipping manifest, giving the name and address of the various men contributing to the carload, the number of stock each contributes, the special markings denoting each man's stock, and the weights of each contribution. One copy is retained in the local office while the other is forwarded, with the weigh tickets, to the central office at the stock yards, or, if a man goes along with the shipment (a practice that will be encouraged), he takes them with him.

When the shipment arrives at the yards it is unloaded by the Stock Yards Company and placed in the pens allocated to the Live-Stock Department of the United Farmers' Co-operative Company. There the animals are fed, watered and graded, before being offered for sale. A point of the very greatest importance is that a carload is never split up, or, if so, it is considered as a unit, and each animal belonging to a particular load can always be located. Moreover, each man's contribution to the load can always be located, and when they are finally weighed after being sold, each man's animals are weighed separately. These final weights are then compared at the scales by the yard man with a copy of the shipping manifest found on the back of his alley card. If satisfactory, the weights are taken to the office and after the transaction has been put through the books, a cheque is issued immediately and mailed the same day.

The Company gets its money within 48 hours from the purchaser: this is a fixed rule of the yards. They must place a deposit of a sufficient sum with their bank to cover the cheques issued, but it has been the experience of the Western farmers that before the cheques issued can return from the local clubs for collection, the payments will all have been made by the purchasers, and no call on the deposit will have been necessary.

It is obvious that where several men contribute varying amounts to the contents of a car, there will be a certain amount of pro-rating necessary, of commission, yardage, feed, freight, etc. Ordinarily the stock yards office of the company will return to the shipping agent a statement showing the gross charges against the car, but if it is desirable—and in the West, 80 per cent. of the co-operative shipments are pro-rated in this way—the central office offers a special "co-operative service," for which an extra charge of 3 cents per 100 lbs. is made. A part of this service consists of pro-rating these charges at the central office and mailing each man's cheque to him individually with the proper deductions made from each. Each agent and every shipper is furnished with literature explaining in minute the best procedure to take in shipping and, in addition, special "field men" will probably be employed to deal with misunderstandings and offer more explicit advice.

In conclusion let us say once more that the new venture has been launched under favorable conditions and promises to be successful. Ontario farmers appear at last to have representation of their own on this market, and if marketing through this channel is not a future success and made a very profitable business proposition, it must be because of some fatal mistake in management. Failure does not seem probable now.

### Market Receipts.

During the month of January there was a total of 26,991 cattle marketed at the Union Stock Yards, Toronto; Winnipeg was the next highest with 14,687. At Toronto the largest number were good steers weighing from 700 to 1,000 lbs. Good heifers were the next highest, and brought an average price of \$12.54. There were 4,173 common cows, and 3,427 canners and cutters on the Union Stock Yards in the month. Winnipeg market had the largest receipts of hogs, there being 45,906, as compared with 32,728 at Toronto. There were almost as many sheep marketed at Toronto as at the other five Canadian markets combined; the receipts were almost three times as high as in January, 1918. There were a third more calves marketed at Toronto in January of this year as in the same month last year, at a price of \$2 per cwt. in advance of last year. The bulk of the hogs at all the Canadian markets graded selects. On the Winnipeg market there was a considerable number which graded light.

## THE FARM.

### Bolshevism.

EDITOR "THE FARMER'S ADVOCATE":

I am a Bolshevik—three times removed.—A Bolshevik is an extreme Radical. A Radical is an extreme Socialist. A Socialist is an extreme Democrat. A Democrat is one who wants to be fairly, justly and honestly represented in the body which makes the laws of his country by a statesman, not a politician, who has at heart the interests of the men who elected him and who will strive to have laws made which will spell the best welfare of his nation. Outside of a few who by one means or another have purchased titles, or hope to get them, or are afraid that extreme democracy may lessen their hope of gain, the greater part of our Canadian population are democrats.

It will not injure my feelings very much if people do not agree with all the above statements as long as I am confident that they approximate the truth. Now, every normal minded, thinking man who earns his living is a democrat, he believes that those who build and develop the country should have the most to say in its government. When he finds that this government by the people is very theoretical or nominal, that abuses, due to graft or greed on the part of the men who are supposed to represent him, are leading to the granting of special privileges whereby some of the influential are becoming rich at the expense of the ones who are bearing the burdens, then he is likely to become a socialist—democrat. He does not enjoy seeing men who have accomplished little for the development of his country gazing arrogantly at him from the peaks of prosperity, when he knows that they gained those peaks not by any merit of their own, but through the ability of their political friends to feed them pap from a Government spoon.

I can remember when, some twenty-five years ago, a socialist was considered a horrible misfit; something in the nature of a partly tamed beast that should be tolerated as long as he was so far circumscribed as to be incapable of doing harm. We are kinder toward the living expression of the term to-day, for he is not as lonely now. I am looking forward to the day when he will be in the majority. Not the violent type who longs for revolution, anarchy and bloodshed, and who would take wealth from the rich and give it to the worthy and unworthy poor alike. No, my Socialism only asks for a square deal, a fighting chance, an industrial, economical and national golden rule.

Wisely or unwisely no two men, or rather human beings, are alike in tastes, mentality, business ability or energy; wisely, probably, since occupations differ so widely. In connection with the world's work there will always be hand performed labor of the meanest sort. There will always be drudgery requiring only muscle and a type of mind which is not necessarily of a higher order than will understand directions, commands and appreciation. There will always be minds fitted to command and direct this labor. There will always be those who are eminently dowered by nature to influence men from the pulpit, platform and the press, and men whose foresight, shrewdness and grasp of details enable them to conduct and manage business enterprises of greater or less importance, or finally men who are, or should be, capable of being educated by experience or otherwise to make the laws of and carry on the business of a nation.

Now, I am willing to concede that all this is right, and that the State should grade every man into his place, if the push of competition and circumstance does not, and I believe that every man should recognize his place and fill it to the best of his ability as long as he is given his fighting chance by the necessary authority above him, but when he sees this authority taking advantage of his subordinate position to father off his labor to an unreasonable extent, when the man who is only capable of digging ditches or sawing wood, is, through the political machine or other influence able to purchase honor and position in the State, or when any class or community of interests is unduly privileged, then I consider that extreme measures are justifiable. Do you know what breeds radicals, revolutionists and Bolsheviks? Not only the question of food; it's the question of a square deal. If you take any boy and bring him up apart from any influence but your own, you can make more or less of an obedient animal of him, and you can treat him with a great degree of harshness and neglect before he attempts to defend his position. The same way with peoples. The more isolated they are, the more ignorant they are kept of any state more comfortable or more attractive than their own, the more easily they are controlled by a master mind, or a set of laws, however oppressive. The brute creation recognizes ill treatment; the human being recognizes it more quickly. When the injustice becomes too apparent he takes the most natural course toward what he thinks will bring relief, and because he is ignorant, cannot well express his feelings, lacks extensive ability and influence, he bands himself with others of his class and resorts to force. His government has ignored him individually so he feels that this government must be changed and his class become radicals. If force is used and pillage, outrage and massacre are resorted to, a fashionable term to describe him is Bolshevik.

The world was never in a greater state of unrest than it is to-day. Sores and cancers in national, international and industrial life have been developing in some cases for years, and are breaking out and spreading over the face of the earth to an extent hitherto unknown, until discontent is rampant. And it is all the result of the feeling, whether right or wrong, that a "square deal" is not being given. In Russia, Germany



## FARM.

## Bolshevism.

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and in many other countries to a lesser extent it has manifested itself in Bolshevism. In Ireland a mixture of Radicalism and Sinn Fenn. In industrial life it is resulting in strikes and walkouts. In military life it is taking the form, especially around our returned soldiers, of a demand for the positions held by non-combatants and foreigners.

Now, I believe the years 1919 and 1920 will see the height of this unrest, but the problem will not be solved by the submersion of control of labor as in the past. This young lion is just finding his strength. Already he has recognized that the world cannot progress without him. Already he has taken some nibbles out of the profits of capital, and is so pleased with the taste that he is planning for larger bites. Experience will train him and control his appetite, but he will never be satisfied again with what he looks upon now as the meagre allowance of the past.

I have said experience will train labor and control its demands, but laws enacted by Governments will not alone furnish this experience; that will come when labor recognizes that it has used its power to excess and has created conditions of industrial depression which can be easily attributable to its greed and unfairness, i. e., Labor may find that in seeking a "square deal" it has exceeded its goal and thrown itself out of employment through the suspension of industrial life.

All human beings are becoming better educated; as they become better educated they long for, and demand, better conditions of living, more comforts, more luxuries. When that education goes far enough it makes better citizens, more healthful citizenship. But here is a case where a little knowledge is a dangerous thing, for the working man-to-day is like an engine running without governors, and as his demands are of necessity granted he wants more. Shorter hours, more holidays, more wages are or seem to be more of a consideration to him than efficient accomplishment and broad citizenship.

Ten years ago the Governments of civilization could have passed laws prohibiting, or at least, controlling labor organizations, but the power recognized during the war by both parties to the contrast has given it, labor, such an impetus that Governments are afraid of it. Indeed, it is possible that the next decade will see labor in the majority in our Parliaments, for it is fearfully organized. Since this is possible the only thing to do is to compel a broader and more liberal education to all men. If power is in the hands of any class, the more educated that class becomes the safer is power in their hands, and the more likely that everyone in the nation shall receive a "square deal." A most important consideration in connection with the control of labor is the effect that its power, as evidenced in shorter hours and higher wages, will have on the production of food. The consumer is clamoring for cheaper food, and at the same time as a laborer will not take lower wages. It takes labor to produce food. If food is depressed in price and all labor outside farms maintains and even increases its price, then the natural result will be that not only farm labor but farmers themselves will leave farms for more lucrative positions. As a result scarcity of food will become acute. Then what will happen? Will food prices soar, and if so will wages, transportation, etc., soar with them? If so, where will it end? It is generally conceded that farmers are not able to control prices, that if prices of food vary it is due to scarcity or plenty. Then if the powers depress prices and labor forsake them, will want and poverty drive the farmer to Bolshevism? Or if all things increase in price, including food, through scarcity, will it make any difference except a few more figures in bookkeeping? These are questions that only time can answer satisfactorily.

Annapolis Co., N.S.

R. J. MESSENGER.

## Thamesford's U. F. O.

EDITOR "THE FARMER'S ADVOCATE":

The fourth annual "At Home" of the Thamesford Farmers' Club was held in the Town Hall on Friday evening, February 7. There was a very large crowd. Oysters constituted the chief item on the menu. But the ladies brought along all kinds of cakes and pies. The supper was just typical of what you would see in the average country home, namely the best of everything and plenty of it. After the supper a good program was given consisting of singing, speeches and recitations. The Kintore orchestra gave several numbers. The young daughters and sons of the farmers amused the audience by singing the popular songs of the day. John Calder, our new member for the Provincial Legislature, gave an address dwelling on the problems of the reconstruction period. D. M. Ross, who is our new U. F. O. Director for the County of Oxford, reminded the farmers of their duty to the U. F. O. not only in regard to the co-operative side but for organization purposes, and the social side as well. Jas Calder told us about the farmer's daily paper which is about to start and said he thought that when we get a good daily paper of our own started that it will be "The dawn of a new day for the farmer."

After the program the hall was cleared of its chairs. Some one started to play and pretty soon the youths were having a dance. The old people sat along the side of the hall; generally their feet were moving to the music. And the smile on their faces might easily be an index to such a thought as "I wish I were sixteen again." Upstairs the little girls were playing tag around the chairs of the older men who were enjoying a game or having a smoke. Surely thought the writer, "Man does not live by bread alone." And some one said The Farmers couldn't hold together in organization. But any one who attended the "At Home" would have to change their minds in that regard.

Oxford Co., Ont.

J. D. L.

## CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

## The Results of Profit Competitions in 1918.

As a result of participating in the profit competitions conducted by the Ontario Department of Agriculture through the Agricultural Representatives 39 junior farmers in all have been taking the short courses at the Ontario Agricultural College this winter. The winners received, as prizes, their choice of the various short courses, having their railway fare paid as well as board and lodging while at Guelph. Owing to the war many contestants in the various counties were obliged to drop out before the competitions were completed and thus the number sharing the prizes were fewer than otherwise would have been the case. There were 18 contests during last season in the Acre Profit Competition. The prizes were awarded to the young man showing the largest net profit per acre. In estimating the cost of production, \$5 per acre was allowed for rent of land, \$2, per acre for plowing, 15 cents per hour for man labor and 10 cents per hour for horse labor. A uniform price was placed on all seed used in the spring. Oats were chosen in 4 different counties and of the 4 winners Russell Clark of Lambton County stood highest with a yield of 79 bushels per acre; value \$63.20; cost of production, \$14.61 and a net profit of \$48.59. Sugar beets were tested in Lambton County and there Cecil Campbell had a yield of 18½ tons per acre; the value of the crop was \$185; the cost of production was \$21.88 and the net profit was \$163.12. Howard Sellars was the winner in Essex County where corn for seed was grown. His yield of seed corn was 27 bushels, its value was \$94.50, the cost of production was \$14.10 and the net profit was \$80.40. In four counties potatoes were chosen and Jas. Taylor of Thunder Bay was the highest of the 4 winners with a yield of 283 bushels valued at \$339.60. They cost \$49.80 to produce leaving a net profit of \$289.80. Grenville County contestants grew beans and Earl Throop won with a yield of 31½ bushels valued at \$236.25. It cost \$33.45 to produce them leaving a net profit of \$202.80. Durham County was alone with

## AUTOMOBILES, FARM MOTORS AND FARM MACHINERY.

## Keeping the Cylinder Cool.

Owing to the intense heat generated in the cylinders by the combustion of the charges, the cylinder walls must be kept cool in order that the oil used for lubricating the cylinders will not vaporize and pass off with the exhaust, and also to prevent preignition of the fresh charges entering the cylinder.

If it were not for the cooling system the cylinders would speedily become red-hot.

Cooling by means of a thin sheet of water circulating around the heated portions of the cylinder in the most common and satisfactory method. Small, high speed engines, however, are often cooled by increasing the radiating surface of the cylinder walls with ribs or spines, the air currents carrying away the radiated heat, the cooling effect of the increased surface is often helped by the addition of a small fan. Generally the water jacket is cast in one piece with the cylinder, although in some types of light automobile and aeronautic motor the jacket is made of sheet copper. The cylinder head is also water cooled, the water passing into the head from the cylinder through small holes in the respective castings at the point where they join. The water jackets of almost all engines are provided with hand holes for the removal of scale and sediment that is deposited by the cooling water. If the scale is allowed to accumulate on the cylinder walls to any depth the cylinder will become overheated as the deposit is a non-conductor of heat and will insulate the metal from the cooling water. Overheated cylinders will cause preignition and will also occasion excessive wear and cutting of the piston and the cylinder bore. The water enters and leaves the cylinder through two holes on top of the cylinder.

The auxiliary exhaust is employed on the Dubs engines, which feature materially increases the life of the exhaust valves as described. The instant that the auxiliary ports are uncovered by the piston the greater part of the burnt gas escapes together with more or less flame from the explosion, and consequently the



The Young Men's Judging Competition Under Way at the Canadian National, 1918.

mangels and here Harry Jose won with a yield of 785 bushels. These were valued at \$117.75, the cost of production was \$49.70 leaving a net profit of \$68.05. Six counties tried wheat. Manitoulin led where Allan Fraser had a yield of 47 bushels per acre worth \$101.05. The cost of production was \$19.70 and the net profit, \$81.35.

In all the foregoing cases the value of the crops were arrived at by giving the products an arbitrary value. Wheat was placed at \$2.15, potatoes at \$1.20, beans at \$7.50, mangels at 15 cents, oats at 80 cents, seed corn at \$3.50 per bushel and sugar beets at \$10 per ton.

The feeding hogs for profit competition was conducted in 11 different counties, and while each county had its winner, as in all the other competitions, J. A. Jackson of Durham County secured the highest net profit. His average net profit per hog was \$30.93 and his average net profit per cwt. of gain was \$15.08. The lowest winner in the province showed an average net profit per hog of \$13.27 and an average net profit per cwt. of gain of \$7.98.

Four contests were conducted last season in the province in connection with the Dairy Profit Competition. Lloyd Poast of Dundas was the highest scoring winner with a net profit of \$104.29. Only heifers in their first lactation period were used and the feeding period extended over 7 months.

In the Baby Beef Competition the prize was awarded to the boys or young men producing the best steer regardless of cost of production. However, to secure data accounts had to be kept and records of the feed consumed.

Apparently there are more than sufficient men available for town and city jobs, but few are inclined to assist the farmer. A cottage and garden would, no doubt, be an inducement to many men, capable of doing farm work, to move to the country. Many Ontario farmers might advisedly build a neat, substantial cottage for their hired help.

exhaust valve is not subjected to the flame and heat, as only a small part of the gas passes over its surfaces. As the gases are in contact with the cylinder walls for shorter time when the auxiliary exhaust is used, less heat is transmitted to the walls and consequently the demand on the cooling system is less.

The exhaust gases from both the auxiliary exhaust ports and the exhaust valve are conducted to the atmosphere through a single exhaust pipe.

Practically all engines above two horse-power, have the cylinder, cylinder heads, and frame cast in separate pieces; thus reducing the cost of renewals in case of breakage or wear.

Several engines have the exhaust valve chamber cast separate from the cylinder, making replacement inexpensive in case the exhaust valve seat should be destroyed because of wear or excessive pitting due to the heat of the exhaust gases.

A spray of water is generally introduced into the cylinders with the mixture on engines of 20 horse-power and over, the water spray moderates the violence of the explosion and materially reduces the temperature of the cylinder walls without reducing the efficiency of the combustion. If the water spray is correctly applied, and in correct proportions the efficiency and output of the engine are actually increased. Preignition cannot occur when the water spray is correctly applied to the cylinder.

When liquid fuels are used, the fuel is sometimes sprayed directly into the cylinder instead of being drawn into the cylinder mixed with the air in the form of a vapor.

In such an engine the cylinder is filled with fresh air during the suction stroke, the air entering the cylinder through the inlet valve. The pure air is then compressed to the required pressure and the fuel injected at the latter part of the compression stroke by means of a high pressure fuel pump.

The principal advantage gained by fuel injection is the increase of efficiency due to the high compression permissible with this system. Rich fuels that ordinarily would be limited to low compression are injected near



the point of ignition and hence cannot preignite. The Diesel engine, which is a well-known type of engine using fuel injection, is famous for its high efficiency which is due principally to the high compression used. Fresh air is compressed to a pressure of about 500 pounds per square inch; the heat developed by compressing the air to this pressure causes an almost instantaneous combustion of the fuel as it is sprayed into the cylinder, this rapid combustion resulting in a high fuel efficiency.

This principle has been applied with success to several makes of high speed motor boat and aeronautic engines.

The fuel supply is regulated for different loads and demands on the engine by varying the stroke of the fuel pump, the length of the stroke being regulated by the governor on the constant speed stationary engine, and is manually controlled on variable speed engines such as are used on boats and aeroplanes.

The saving resulting from the fuel efficiency is usually more than offset by the cost of the repairs to the sensitive and delicate mechanism used for controlling and injecting the fuel.

The object of the cooling system is not to keep the cylinder cold, but to prevent the heat of the successive explosions from heating the cylinder walls to a degree that would vaporize the lubricating oil and prevent satisfactory lubrication of the cylinder and piston. The hotter the cylinder can be kept without interfering with the lubricating oil, the higher will be the efficiency of the engine and the greater the output of power.

To obtain the greatest power from an engine, the heat developed by the combustion should be confined to the gas in order that the pressure and expansion be at a maximum, it is evident that the pressure and power will be reduced by overcooling as the heat of the expanding gas will be taken from the cylinder and transferred to the cooling medium. The temperature of the cylinder and therefore the efficiency of the engine is determined principally by the vaporizing point of the lubricating oil, and consequently the higher the grade of the oil, the higher the allowable temperature of the cylinder.

As graphite will stand up under any temperature under 3,000 degrees it would be an ideal cylinder lubricant were it not for its property of clogging up the valves and causing short circuits in the ignition system—when used "straight" without oil.

If cold water from a hydrant or well be forced rapidly around the water jacket the power will be greatly reduced owing to the chilling of the expanding gas; an engine which developed 10 actual horse-power to the writer's knowledge, with the jacket water at 160 degrees F., only developed 4.8 h.-p. with jacket water at 68 degrees F.

Good gas engine cylinder oil will lubricate successfully at a temperature of 420 degrees F. with the jacket water at 160 degrees F.—the usual temperature. There is not much danger in keeping the cylinder of an air cooled engine too cold; in fact, the great difficulty lies in keeping the cylinder cool enough to prevent an excessive waste of cylinder oil. An over-heated cylinder is likely to give trouble from preignition, as the intense heat causes the oil to carbonize rapidly and form deposits on the end of the piston and inside of the cylinder head.

With engines using gasoline as a fuel the temperature of the water leaving the jacket should not exceed 160 degrees F., and as a general rule should not exceed 185 degrees F. on any engine as temperatures in excess of this produce deposits of lime on the cooling surfaces. Deposits of mud or scale on the cooling surfaces insulate the metal of the cylinder from the cooling water and result in overheated cylinders and preignition.

Some fuels cause a greater loss of heat to the jacket water than others, alcohol transmits less heat to the cylinder walls than any other fuel.

The valves, particularly the exhaust valves, should be surrounded with sufficient water to insure proper cooling, as they are subjected to more heat than any other part of the cylinder, and should be well cooled in

order that pitting and warping of the seats and valves be reduced to a minimum. Running with a retarded spark heats the exhaust valves to such a degree that they will become red hot and destroy the seat quickly if the cooling water does not properly surround the valves. Water-cooled exhaust valves have already been described and illustrated. A portion of the cooling water should be run into the exhaust pipe immediately after it has completed its flow around the valves and cylinders, as the water cools the gas so suddenly that the exhaust to atmosphere is rendered almost noiseless, and the exhaust pipe is kept much cooler and less liable to cause fire by coming into contact with combustible objects.

On some engines the exhaust pipe is water jacketed for some distance to prevent dirty, rusty pipes in the vicinity of the engine mechanism and also to prevent injury to the operator should he come into contact with the pipe.—From Gas Engine Troubles, by J. B. Rathburn.

## THE DAIRY.

A greater number of factories than in 1917 used rennet during the past season in Western Ontario. This was only due to a more liberal supply but to the fact that substitutes have never been as popular as genuine rennet. Seventy-nine factories used nothing but rennet, while the balance used a mixture of rennet and rennet substitutes.

It cannot be too strongly urged that proper pasteurization of cream is, along with cream and butter grading, the solution of many of the problems which have arisen in regard to improved quality. The pasteurizing temperature recommended at the Ottawa Dairy Conference was 170 degrees Fah., holding for at least ten minutes. If this temperature can be unanimously adopted by the creamery men the Storch test may also be applied, which test has been universally adopted by the creamery men of the Western Provinces.—F. Hens, Secretary Dairyman's Association of Western Ontario.

There has been very little interruption or disturbance of the industry during the war, and it will flourish in the future just as it has in the past. The dairy industry has nothing to fear in the days which we are facing, and there is no need for misgivings and doubt as there may be in some other lines of industry. It is the opinion of everyone who has pretended to study the situation that the dairy farmer has better prospects of receiving good prices for his products for a longer time ahead than the producer of almost any other farm crop.—J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa.

## Ayrshire Breeders Meet in Montreal

The annual meeting of the Canadian Ayrshire Breeder's Association was held in Montreal, February 12. It was a large and enthusiastic meeting marked by unanimity and progressiveness. This feature was, no doubt, due to the number of young and new men present. Steps were taken to increase the membership fee in order that the Association might be in a better position to carry on. A delegation was present from the American Ayrshire Association, including J. G. Watson, the Secretary, Dr. Dubler, L. E. Ortiz, and A. H. Tryon. These men brought fraternal greetings from the American Association, and asked for a closer co-operation between the Ayrshire breeders of the United States and Canada. Following the annual meeting a number of the breeders, together with their American friends, visited a number of the splendid herds in the vicinity of Huntingdon, Ormstown and Howick. The President, L. J. Tarte, Montreal, welcomed the breeders to the Metropolis of Canada for their forty-eighth annual meeting, and referred to the splendid feeling which exists between the breeders in the different provinces in Canada.

Mr. Tarte referred to the great difficulty in securing competent herdsmen, and recommended that the Association induce the Canadian Government to encourage the immigration of expert herdsmen from the British Isles. The President expressed his great confidence in the Ayrshire breed, and said they should all get together to proclaim the Ayrshire's qualities to the people at large.

W. F. Stephen, Secretary of the Association, gave a very complete report of the year's business, and said there was a very appreciable increase in all phases of the work until October, when the Influenza epidemic swept over the country, which caused a falling off in the number of registrations and also entries in the R. O. P. One hundred and seventy-five names of those owing members' fees for three years or more have been struck off. There were also twenty-five resignations and deaths. To make up for this there were 206 new members and the membership stood at 1,537, six more than last year. By provinces the membership is as follows: Quebec, 793; Ontario, 436; Alberta, 60; Nova Scotia, 56; New Brunswick, 48; Saskatchewan, 40; British Columbia, 36; Prince Edward Island, 32; Manitoba, 23; United States, 10, and Newfoundland, 3. In the year there were 4,475 registrations; 3,847 transfers, and 67 duplicates, an increase of 107 registrations, with 642 transfers. Quebec leads in registrations, with Ontario second. All provinces showed an increase, except Manitoba.

The Secretary reported a successful Ayrshire year at all the leading exhibitions. The splendid type and productive proclivities of the animals exhibited were particularly noticeable. The Secretary recommended that new men should commence at the local fairs and work up to the bigger exhibitions. The Record of Performance work showed a slight falling off, which was accounted for by the shortage of labor and high price of concentrates. There were 550 cows and heifers entered in the test, a decrease of 109 over the previous year. Hobsland Masterpiece, the noted show-ring bull, has sufficient daughters registered in the milk records of Scotland, the Advanced Registry of the United States, and the R. O. P. of Canada, to qualify him in each country. He is the only bull in the world which can claim such a record.

The Ontario breeders again scored in the Silver Cup Competition, although several Quebec and British Columbia breeders gave them a chase. In the mature class Lady Jane, owned by A. S. Turner & Son, won the cup with 19,135 lbs. of milk, 704 lbs. fat in 353 days, and scored 21,235 points. In the four-year-old class, Middy—44820—, owned by Wilson McPherson & Sons, won the cup with 13,288 lbs. milk, 533 lbs. fat in 365 days, scoring 11,885 points. In the three-year-old class Anna of Darrock—44850—, owned by Angus Armour, was the winner with 10,530 lbs. milk, 427 lbs. fat in 364 days, scoring 7,885 points. In the two-year-old class, Snowdrop of Hickory Hill 2nd—52518—, owned by N. Dymont & Sons, was the winner with 10,933 lbs. milk, 449 lbs. of fat in 363 days, scoring 10,146 points.

During the year 41 herd names were recorded, making a total of 352.

Receipts for the year totaled \$12,618.55, and expenditures were \$13,554.93, exclusive of the amount invested in Victory Bonds.

The Secretary urged that photographs be sent in by the breeders to assist in advertising the breed. Reference was made to the former Live Stock Council and the National Dairy Council, both of which were considered necessary at this time. Mr. Stephen concluded thus:

"In this period of reconstruction the door of opportunity is open to us. Are we going to enter it? We may not be able to place many Ayrshires in the European countries that have been devastated by the war, but many will be needed in the homeland. The great West is fast turning to dairying, and no breed is better adapted to our prairie farms than the Ayrshire. Ayrshire men must be more aggressive if they want a portion of the trade that is naturally theirs. Therefore, let us adopt



Delegates at the Fairs and Exhibitions Convention Which Met Recently in Toronto.



as our after-the-war policy: BETTER STOCK, MORE STOCK, LARGER SALES AND INCREASED PRICES, BE ENTHUSIASTIC AND BOOST THE AYRSHIRE."

The spirit of the resolutions adopted explains in brief the feeling of the meeting on certain subjects, and the action they took in regard thereto. One resolution was carried asking the Government to provide for the slaughter or isolation of tuberculous cattle, and that the owners be indemnified to the extent of 50 per cent. of value. Payment for milk on the test basis was endorsed. The membership fee was raised from \$2.00 to \$3.00. Proportionate representation by province was left to the Board of Directors to work out. The principle of the Live Stock Council was approved. Daylight Saving was opposed. A resolution was carried, asking the Federal Government to rescind the Order-in-Council regarding the importation and sale of oleomargarine.

The officers elected were: Hon. President, H. S. Arkell, Ottawa; President, A. S. Turner, Ryckman's Corner, Ont.; Vice-President, Gilbert McMillan; Huntingdon, Que.; Secretary-Treasurer, W. F. Stephen, Huntingdon, Que. Directors: Alex. Hume, Campbellford, Ont.; John McKee, Norwich, Ont.; W. W. Ballantyne, Stratford, Ont.; A. S. Turner, Ryckman's Corner, Ont.; A. H. Trimble, Red Deer, Alta.; Frank H. Harris, Mount Elgin, Ont.; William Hunter, Grimsby, Ont.; Robert R. Ness, Howick, Que.; M. Ste. Marie, Compton, Que.; Frank Bourne, Charlesbourg, Que.; J. H. Black, Lachute, Que.; Hector Gordon, Howick, Que.; B. J. Brown, Charlottetown, P.E.I., and Gilbert McMillan, Huntingdon, Que.

**The Value of Skim-Milk.**

The scientist and the experimentalist have brought before the public the knowledge that certain foods are the most economical to use and among these skim-milk—formerly known as a by-product and too often finding its way to the factory sewer—has been placed high in the list of essential, healthful and economical foods that should be more widely used both as foods for humans and as feed for our domestic animals. Skim-milk has an important role to play on every farm where young pigs and calves are being raised, and the farmer who recognizes this fact is making it pay if any one is.

When we consider its composition, its value cannot be over-estimated. No one doubts the fact that whole milk is a perfect wholesome and healthful food that cannot be replaced in the diet of the young—a fact which has been unquestionably substantiated by Dr. McCollum, of Johns Hopkins University. There is no substitute for it. Skim-milk occupies a place only second to whole milk, and indeed, first when we reckon on economy as figured from present day prices. It is whole milk from which most of the fat has been skimmed—the ingredient which has little importance in the diet of the young growing animal. Indeed, according to the contention of Prof. R. M. Washburn in a recent article, milk that is partially skimmed—of 2 per cent. fat content rather than 4 per cent.—gives signs of greater vigor and health in growing pigs that have been fed for some time on a milk diet. Skim-milk contains all the protein—the muscle and tissue builder—that whole milk has. Its ash content, too, is the same and this is so important in the production of bone and blood and other body secretions in the growing animal. It is not so palatable as whole milk, but when mixed with grain as it should be, it is indeed a very tasty feed for pigs, as can be evidenced at any trough where there is the slightest trace of skim-milk. The pig does not question whether the milk is skimmed or not, and so takes the cheap food that is at the same time the best food.

This brings up the question of amounts to feed and what to feed with it. Skim-milk alone would give a ration that is too bulky, and in order to give best results must be supplemented by grains. Two to three pounds of skim-milk per pound of grain in probably the best mixture, but in the case of a surplus of milk-economical results could be had by feeding it in larger proportions.

Talking about its value in terms of muscle and bone builder, however, does not come very close home to the farmer—the man who has to buy the feed and do the feeding. He wants to know its value in dollars and cents, and so the following might be given as the money value of skim-milk. This could be obtained only by actual feeding experiment and the Michigan Agricultural College has some results that are interesting indeed. It proved to be better than for the sewer and even yet of more value than the fifteen cents per hundred that used to be put upon it. In actual experiment hundreds of pigs—the large numbers being fed so as to give conclusive results—were fed on grain alone, including corn, wheat, barley and rye, and the amount of feed per 100 pounds of gain was computed. To compare with these results other pens were fed on the same grains but in smaller amounts and supplemented by skim-milk, and the amount of feed computed again. Quoting actual results obtained by the above Experiment Station, we find that by feeding 785.1 pounds of grain with the grain a saving of 219.6 pounds of grain on every 100 pounds of gain was experienced. This is the same as saying that 100 pounds of skim-milk saved, and, therefore, is equal in value to 28 pounds of grain and makes it quite easy to put a cash value on skim-milk as a feed for pigs. Of course this value varies. The young growing pig can make better use of the skim-milk than the more mature animal. Its value is at a maximum when, as mentioned above, the ration of grain and milk is about 1 to 3.

The following tables gives the value of skim-milk when used with grains as a feed for pigs, such figures having been compiled from the fact that 100 lbs. of skim-

milk has a feeding value of 28 lbs. of grain as is proven above:—

When the Price of Grain per cwt. is	100 lbs. Skim-milk as a Supplement is worth
\$1.00	\$0.28
1.50	.42
2.00	.56
2.50	.70
3.00	.84
3.50	.98
4.00	1.12

Present day prices of grain at the low figure of \$2.00 per hundred would warrant a charge of 56 cents for every 100 pounds of skim-milk fed to pigs, and this, as feeders well know, is a very modest valuation for the grain.

In the ration of the growing calf the value of skim-milk, supplemented by grains—oats, bran, and oil meals—and good alfalfa or clover hay is equally as great as for pig raising. It is estimated that its value compared to whole milk is about one-half. Here again, care must be exercised in the feeding. The calf at about four weeks of age should have its whole milk supply gradually replaced by the skim-milk. About a week is necessary to complete the substitution. This gives the digestive organs of the calf a chance to adjust themselves to the changed feed. Skim-milk as a part of the calf's ration can be profitably fed until the calf has attained the age of about six months.

The value of skim-milk on the farm as a feed for young stock then cannot be overlooked. On many farms better use of it could be made and with profit to the farmer.

This is, however, but one side of the question. The housewife can equally well make use of good skim-milk in her regular dietary. As a single food, it lacks in palatability, or at least our tastes have not been trained to like it; but when used in combination with other foods it makes a very nutritious addition to the diet. In actual food value two and one-half quarts of skim-milk equals a pound of round steak; or two quarts of skim-milk is more nourishing than a quart of oysters, and yet is worth on the market about four cents as compared to sixty to ninety cents for the quart of oysters. To the concentrated and less perishable skim-milk product—cottage cheese—is a very cheap and nourishing food. The method of manufacture is very simple. The finished product is quite tasty if properly made, and can be used either in salads or as a basic food in various prepared dishes. The skim-milk is available on most farms and if wisely made use of will greatly help the individual housewife to decrease the high cost of living in so far as her particular problem is concerned.

Skim-milk on the farm, if properly cared for, and then properly made use of, has a value hitherto unthought of by most people. It would be good economy for the farmer to place more importance on its worth.

**Defects in Ontario Butter.**

The following paragraphs dealing with defects in Ontario creamery butter are taken from an recent address by Jno. H. Scott, Official Butter Grader for the Ontario Department of Agriculture. They are worth a careful reading:

The creamery industry of Ontario needs more uniformity of method of manufacture, particularly in the matter of texture and salting. Better judgment in working butter will well repay the manufacturer who is making the "loose moisture" type of butter. Loose, sloppy textured butter is rarely found to contain more than 13 or 14% moisture while if properly manufactured might contain all the law will allow and make a butter that will suit the consumer better because it will look better on the table and will spread more easily. It will suit the dealer better, because there is less shrinkage in storage and cutting, suiting the manufacturer and producer better by having more of it. Manufacturers should aim at reducing the quantity of salt to conform more with Western type of mild salted butter, in order to be prepared to export our surplus across the seas with that from the other provinces as Canadian butter.

There are three outstanding defects in Ontario butter. The first, of course, is flavor and I think I am safe in saying that 95% of the defects in flavor are due to cream being held too long at too high temperature, developing too much acidity and allowing yeasty fermentations to take place. Inquiries from creameries as to conditions of cream, from which samples of clean, mild flavor butter was made reveals the fact almost invariably that the cream used was comparatively sweet. This is no new doctrine, it has been endorsed by good dairymen for many years. Why discuss it?

The second outstanding defect I would mention is the prevalence of the coarse, loose, free moisture type of butter. We cannot overestimate the importance of this defect. The loss in weight and the soft appearance of this type of butter cannot be ignored. The moisture should at least be incorporated until there is no possibility of leakage after being packed. Anything short of this will not be satisfactory to the distributing end of the trade. Better incorporation of moisture will also assist in clearing or evening the color of butter.

Then there is the salting. On the whole I think there was an improvement in salting during the past season, but there is still a very wide variation in the quantity of salt used. At the Dairy Conference held in Ottawa recently 3% was agreed upon as the maximum amount of salt butter should contain. The very best trade requires not more than 2%.

Regarding the success or failure of the butter grading service in Ontario, I leave others to judge. The support it has received from those who should have been and it was thought were not interested in the proposition, has to say the least, been disappointing. Some of the best creameries that would have added strength to the work, had they come in, did not enter for the grading service. Possibly it would not have been of much commercial value to them but the moral effect would have been very helpful to the grading service. Then the attitude of the dealer to grading has been disappointing. In my judgment the initiative must come from the dealer. We may keep on grading butter just as long as we like, but until the butter dealer loses fear of his competitor, grading will not bring the results it otherwise would. We must have co-operation between all concerned, but I believe the beginning must come from the marketing end.

There is now no doubt in the mind of anyone of the value of pasteurization for keeping butter. Yet creamery salesmen tell me that they are rarely asked by the dealers whether butter is pasteurized or not. It costs money to pasteurize, estimated at one half cent per pound of butter at the least calculation, therefore pasteurized butter must bring a premium at least equal to cost of the operation. It is worth more.

Not more than 20% of the creameries in Ontario pasteurize, therefore, I think the trade generally needs to lay greater stress upon this point of proper pasteurization.

While we are not able to report any great accomplishment for the butter grading service, there is this to say, however, with the experience of the past two years, we have worked out many little details and have been able to demonstrate the fact that grading from sample boxes is practicable. We have also been able to work out systems by which the work of grading can be carried on, we think successfully.

We will be glad to have the assistance of all interested by their suggestions for any improvements that it is thought would be helpful.

**Cheese, Butter and Eggs Discussed by Produce Association.**

The program for the seventh annual convention of the Canadian Produce Association was an unusually interesting one from the standpoint of the dairymen and poultrymen. The sessions were held on Tuesday and Wednesday, February 11 and 12, at the King Edward Hotel, Toronto, and were marked by splendid attendance at each.

Discussing the Canada Food Board regulations, R. A. Ballantyne read a telegram from the Chairman of the Food Board, which was as follows: "Orders of the Canada Food Board will be issued as follows within a few days cancelling Orders Number 26 and 45, and instructions are being issued to collectors of customs raising the restrictions on the export shipment of milk and cream. Applications for the export of butter, cheese and condensed milk will be favorably considered." Order Number 26 limited the holdings of dealers and order Number 45 limited their profits. Mr. Ballantyne thought that the restrictions providing for the purchase of eggs on the "loss-off" basis were good, and should be continued by the Live Stock Branch of the Dominion Department of Agriculture. The order limiting holdings should also continue in the opinion of the speaker, since it would prevent undue hoarding of supplies purchased cheaply during the summer months in order to secure the higher winter prices.

"Probable Conditions of Export of Canadian Eggs, Butter, Cheese and Poultry for 1919," was discussed in a brief but comprehensive manner by F. M. Moffatt. The following figures were used to review the export conditions since 1916:

Commodity	1918	Decrease since 1917	Decrease since 1916
Eggs (cases).....	69,253	126,541	304,000
Butter (pack.)....	143,543	95,217 (increase)	33,616
Cheese.....	1,619,321	41,354	523,378

These exports in 1918 via Montreal, amounted to about \$36,000,000, of which cheese made up \$31,078,000 and butter \$3,778,000. The speaker believed that with the present condition of depleted supply there will be a reasonably certain market for all we can produce in 1919, and that the cheese and butter shortage in Europe cannot be made up this year. He believed it to be a perfectly sound principle, however, that Canadian products should have first claim for space on Canadian boats leaving Canadian ports. One point worthy of note by every dairyman was the opinion of Mr. Moffatt that "Oleo" will be manufactured more cheaply from now on for the reason that very large stocks of the finer oils, such as peanut oil and cottonseed oil from Oriental countries, have accumulated and with the easing up of the demands on transportation these can be easily procured. The speaker also thought, from the fact that Great Britain had already agreed to take the output of cheese and butter from certain countries until 1920, that the control of cheese and butter export in Canada during 1919 is likely. Production of eggs and poultry throughout the country will be easier because of more and better feed, and more efficient if not less expensive labor. The stimulation of prices for farm products, due to war values, will be lacking and thrift will be more general, and a lower cost of shipping and transportation may also be expected. The export produce





business is largely speculative, and now that declining values are a probable factor, Great Britain, who is and was our principal customer, will be open to trade from other countries from which she was cut off during the war. Our war-time advantage of nearness to our market will thus be cut down, and buyers in Great Britain will be able to discriminate again as to value and price. Great Britain also may be expected to encourage production and restrict imports for financial reasons, while, in addition, the buying power of the people will be lessened. Mr. Moffat quoted the following prices in answer to the question, "How much have prices soared since 1918?"

Price Increases Since 1914.

Commodity	Month	Year	Price
Eggs.....	April and May..	1914	\$0.21-\$0.21
Creamery butter.....	May and June..	1914	.22-.23
Cheese.....	May and June..	1914	.13
Live hogs.....	July.....	1914	\$ 8.38
Live hogs.....	December.....	1918	17.00
Dressed hogs.....	July.....	1914	11.33
Dressed hogs.....	December.....	1918	25.50
Live cattle.....	July.....	1914	7.45
Live cattle.....	July.....	1918	10.75

J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa, discussed the subject of a "Central Board for Selling Cheese," making it quite clear that what he had in mind as desirable referred only to cheese intended for export and only to those districts including Eastern Ontario and Quebec. Mr. Ruddick's suggestion involves the selling of export cheese by auction at some terminal warehouse in Montreal, but auction selling involves selling on grade, and grading should, therefore, come first. A splendid system of butter grading is now established in New Zealand which is not optional, but compulsory; and by which, once a grader puts his mark on a package, the owner cannot touch it again except to furnish shipping directions. In the Western Provinces of Alberta, Saskatchewan and Manitoba, development began with the grading of cream. These provinces have since worked up until they have made notable progress.

The present method of operating the cheese boards are, in many cases, nothing but a farce, said the Commissioner, and butter and cheese are not being sold in the primary Canadian markets as they should be sold. Auction selling of graded dairy products has been successfully demonstrated by the Quebec Co-operative Association, and the product of 600 factories is now handled in this manner. The factories are paid a nominal price at first, after which the grading and auction selling follow in order, and the auction price is not subject to any "dickering." This is in contrast to many examples of our present system of Cheese Boards. It was pointed out by Mr. Ruddick that it would be practically impossible to glut an export market like Montreal, but the same advantage would not exist

with an inland market such as Toronto, the capacity of which is limited. Central selling would cut down the cost of marketing, and would entail no expense that does not now have to be met. Its main advantage would be in the fact that the factory would be paid according to the quality of the goods produced; this is not now the case.

"As competition becomes more keen, the dealers may be expected to become more particular as to quality," said J. H. Scott, in discussing the question of butter grading and the grading service carried on during the last two years by the Ontario Department of Agriculture. Mr. Scott reviewed the work of the grading station in Toronto since its establishment in 1917 following an investigation made in 1916 into marketing conditions on Toronto market. The fourteen-pound sample boxes that are sent in for grading are scored at once, purchased by the Department at current prices and retained in cold storage for four weeks in case of complaint being made. In 1918, 3,154 samples were graded, but the work has not progressed as it should and, in the opinion of the speaker, the initiative for more extended selling on grade should be taken by the dealers. Mr. Scott emphasized pasteurization also, and stated that under the usual system of marketing it is 3 or 4 weeks before the average shipment of butter finally reaches the consumer. This clearly shows the necessity for preserving the keeping quality of the butter.

H. J. Crowe, Official Grader for the Saskatchewan Government at Regina, argued that at present it is almost impossible for a factory to get the current market price in Saskatchewan for an ungraded product. Each year the butter trade is becoming more critical and the speaker expressed an opinion, with reference to pasteurization, that grading certificates ought not to be issued either to manufacturer or dealer unless the butter had been pasteurized. He also reviewed at length the methods of grading and successful manufacture as followed in the West.

Referring to a growth in the production of creamery butter in Western Ontario during the last 10 years of from 6,000,000 pounds to 26,000,000 pounds. Frank Hens, Chief Dairy Instructor for Western Ontario thought that we had come forward on the basis of quantity, because the market demanded it, but that quality had been neglected. Producers have supported improvement in quality during the last three years as they had never done before, and Mr. Hens stated very plainly that the Government were willing to do anything to make the butter-grading service a success that would be suggested, but thought that the creamerymen and dealers should come together and thresh the whole matter out. This was agreed upon.

F. F. White discussed the cost of preparing eggs for market, and said that it cost \$1.49 per case or 4.97 cents per dozen to take eggs into storage and 76 cents per case or 2.53 cents per dozen to bring them out. The total cost was \$2.25 per case or 7½ cents per dozen. It was pointed out also that defective eggs make up a

cost of 42 cents per case or 1.4 cents per dozen when going into storage, and 43 cents per case or 1.44 cents per dozen when brought out. Overhead expenses amount to 1½ cents per dozen. Of 100 per cent. of storage eggs only 95.04 per cent. are number ones; the balance, 4.96 per cent., defective, being made up as follows: cracks or splits, 1.40 per cent.; seconds, 1.46 per cent.; leakers, .75 per cent., and rots, 1.35 per cent. These figures are, of course, the dealer's figures compiled for distribution, and may be taken as high enough.

The egg shipping and grading regulations made in 1918 by the Dominion Government were subjected to criticism, much of which, however, was somewhat prejudiced. Recommendations were nevertheless made asking for certain amendments, particularly with respect to inter-provincial trade.

A splendid banquet was a feature of the convention. Dr. G. C. Creelman, Commissioner of Agriculture for Ontario, spoke very interestingly regarding his impressions of England's war effort gathered during his recent visit to Europe. Brig-Gen. Jno. A. Gunn, a former president of the Association, urged the best efforts and co-operation of members in the work of repatriating the soldiers. W. S. Moore, Chicago, was a delegate from the sister association in the United States, and referred in his remarks to the importance of good roads in the marketing of farm produce. Illinois alone, he said, is spending \$60,000,000 on good roads. It should be made profitable for the farmer to produce eggs and get them to the market in the quickest way. In some places, said the speaker, it costs as much to haul goods 20 miles over country roads as to haul them 1,000 miles by rail. He also referred to the increasing sale of oleomargarine, in England especially, where 2 pounds of "oleo" are sold for every pound of butter. "Oleo" has become a public menace in England, as shown by the work of Dr. E. V. McCallum, who has proven by accumulated data from many experiments that children fed on oleomargarine are stunted in growth.

The following Executive was elected in addition to 20 directors: President, E. J. Smith, Brockville; First Vice-Pres., H. R. Gory, Montreal; Second Vice-Pres., F. F. White, Toronto; Sec.-Treas., L. P. Marshall, Toronto. The next convention will be held in Hamilton.

## HORTICULTURE.

The British market for our apples is worth striving after and those few who shipped over culls sinned not only against themselves but against the whole industry in Canada.

There are plenty of apple orchards in Ontario that should be rented by some industrious growers and transformed into profitable holdings. As they are now they are occupying good land yet producing nothing marketable.

## Ontario Fruit Growers' Discuss all Phases of the Industry.

The Ontario Fruit Growers' Association met in annual convention at the Carla-Rite Hotel, Toronto, on Tuesday and Wednesday, February 18 and 19, and there discussed all phases of the fruit industry, but chiefly from such angles as cultural methods, markets, and the relation of the orchard to the farm. Fruit growing has been passing through a critical period when the grower felt that perhaps what grew on the land itself, rather than on the tree or bush, was of more value to the Cause. Consequently plantations have been more or less neglected and the great need now is to get the industry back into its proper swing, ready for the new era which is dawning. The delegates themselves were optimistic, but they brought reports from their districts which indicated a lack of enthusiasm amongst the rank and file, but more particularly in sections where the growing of fruit had in pre-war days been a department rather than the chief department of the farm. There seemed to be a deep-rooted sentiment that apple orcharding should not be divorced from general farm practice, or, in other words, that apple growing should constitute a well-defined and established part of the farming program; not that all farmers should be quasi fruit growers, but rather that all fruit growers should be good farmers.

### President's Address and Treasurer's Report.

The President, R. W. Grierson, Oshawa, reviewed the situation in his presidential address, and pointed out that last season was not a particularly successful one for fruit growers. The high cost of producing a small crop had seriously reduced the profits. More than that, the severe winter of 1917-18 killed many peach and apple trees, and in Eastern Ontario the loss of apple trees was extremely severe. He recalled the reasons why orchards had been neglected, but said that prospects for the future are good where the orchards have had reasonable care. Now that the embargoes have been removed and we have our market back, growers should take steps to re-establish themselves and return their orchards to normal condition. However, he opined that freight rates will have to come back to normal, and express rates must remain where they are, if fruit growing is to be a profitable industry in Ontario. In conclusion Mr. Grierson reported that altogether likely the Fruit, Flower and Honey Show would be held next fall.

The Treasurer, P. W. Hodgetts, reported that owing to demands on the treasury the Fruit Growers' Association had been requested last year not to press for their

grant, which under normal conditions amounts to \$1,800 per year. More than that, the total membership had dropped to 376, whereas before the war the Ontario Fruit Growers' Association had a membership of over 1,200. This report elicited considerable discussion. W. F. W. Fisher regretted that the room being occupied by the convention was large enough to hold the audience which represented the fruit-growing industry in Ontario. Elmer Lick said that steps should be taken, by issuing an attractive program and in other ways, to draw in a more representative and larger convention. Jas. E. Johnson, of Simcoe, however, thought that fruit growers were indifferent and that they should take a greater interest in matters pertaining to the industry. Hamilton Fleming, Grimsby, expressed the belief that the Association should have its Government grant now in order to conduct the business of the Association, such as to oppose the increase in express rates, the Daylight Saving Act, and other obstacles which the growers must meet. Mr. Hodgetts informed the convention that the grant is now available and could be obtained by asking for it.

### An Instructive Address on Pruning.

Professor W. H. Chandler, of Cornell University, Ithaca, N.Y., introduced some ideas regarding pruning which are, to a certain extent, contrary to the general accepted teachings in Ontario; but he proved himself a very acceptable lecturer, and his statements seemed to meet with approval. Prof. Chandler's arguments could be summed up thus: Pruning invigorates a tree but the invigoration comes near where the cut is made; it is not distributed. Pruning in the end dwarfs the tree, and it dwarfs it more than the amount of pruning. Plant food is elaborated and prepared in the leaves, and if one cuts away the leaves the food supply is destroyed; that is, the ability of the tree to grow, or more correctly, to make maximum growth, is removed. An unpruned tree will usually have smaller leaves than those found on pruned trees; nevertheless, the leaf area is greater on the unpruned trees because there are more leaves. In one experiment to which he referred, in which pruned and unpruned trees were being compared, the top of the pruned tree was forty per cent. lighter than the top of the unpruned tree. The roots were thirty-seven per cent. lighter on the pruned trees than on those which had not been pruned. More than that, and very important too, pruning delays fruiting, and this is even more marked than the retardation of growth.

These arguments apply chiefly to young trees. The reverse of this may be true, and no doubt is true, with regard to old trees. If pruning is distributed through the top of the old tree the fruit set is increased on account of the invigorating influence of the pruning. Pruning, however, renews and prolongs the age of a tree and particularly is this true in the case of peaches.

It has generally been considered in this country that summer pruning has a tendency to cause a tree to fruit more heavily. Prof. Chandler said there was no evidence to substantiate this, and was himself of the opinion that summer pruning would not result in more fruit. It had been demonstrated in Oregon that unpruned trees bore earlier than either winter or summer-pruned trees. There was one reason, however, which might make it appear that summer pruning increased the set, and it was that more buds were left on the branches, or, in other words, they were not cut back so far. Neither did Prof. Chandler believe that summer pruning stimulates early bearing.

In New York State, the speaker said, they were getting away from the high-headed tree. It is unnatural, and anything which is contrary to nature in the tree delays fruiting. When one tries to get a tree away from its natural growing habits it is done at the expense of early-bearing and crops.

In regard to young trees, Prof. Chandler's recommendation was to let them just about shape themselves. Start the tree without too many branches and then let them go. Cross branches and such, of course, should be removed. In regard to peaches the speaker recommended letting the trees get a reasonable growth first and then shorten back all the branches.

In the course of Prof. Chandler's address the question was asked if injury was liable to result from winter pruning. Prof. Macoun said he had never seen injury result from winter pruning, but Prof. Crow cited instances where very serious injury resulted from cutting off two-inch limbs in late November and early December. He would not recommend cutting limbs in early winter that were above 1½ inches in diameter. J. C. Harris, Ingersoll, stated that he killed over a hundred trees by pruning in the winter of 1903-4.

### Winter Injury Among Fruit Trees.

J. A. Neilson, of the Horticultural Department, O. A. C., Guelph, discussed the serious injury to fruit trees resulting from the severe weather experienced in the winter of 1917-18. Thousands of trees were killed,

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## ing Fruit Trees.

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or will die, he said, and hundreds of thousands were  
injured more or less. Mr. Neilson said that between  
Toronto and Belleville 20 to 25 per cent. of the apple  
trees, if not dead already, will die as a result of the  
severe winter. The reason for the great damage  
done was said to be the sudden drop in temperature  
about the middle of December, and then the long-  
continued cold spell which followed. The trees had  
not become hardened to winter conditions when they  
were overtaken by the extremely sudden and exceedingly  
severe weather.

The speaker enumerated nine different kinds of  
winter injury which he had observed during a survey  
made by himself in the summer of 1918. These may  
be enumerated as root killing, collar or crown rot, bark  
splitting, crotch injury, killing of bark on trunk, black  
heart, killing of bark on branches, killing of fruit spurs,  
killing of fruit buds, and killing back. In the case of  
root killing, the roots of young fruit trees are sometimes  
killed in winter while the trunk and branches are unin-  
jured. Trees thus affected usually come out in leaf in  
the spring, but in a short time the leaves wither and  
die. Collar or crown rot is so-called because the bark  
on the trunk, just at the surface, and a little above, the  
ground, appears to be dead and brown. King, Ontario,  
Pewaukee, Duchess, Gravensteins are the most sus-  
ceptible varieties to this form of injury. Bark splitting  
may be noticed on sweet cherry trees and on some  
varieties of apples. The bark often splits vertically  
from the ground up for several inches, and, in some  
cases, almost up to the limbs. The trees affected with  
crotch injury show an area of dead bark in the crotch.  
This may be confined to the crotch, or it may extend  
clear around the base of the limbs. The remaining  
forms of injury are pretty well described by the words  
used to indicate them.

Some of the factors which predispose trees to winter  
injury are as follows: Varieties lacking in cold re-  
sistance. The hardest varieties in this regard are mostly  
those which originated in either Russia, Canada or the  
Northern States. Unfortunately, they are not the best  
kinds. Where orchards are exposed to strong, cold  
winds there is a tendency to winter-killing. Late  
cultivation is also another factor which predisposes trees  
to winter injury. The speaker recommended early  
cultivation, but was strong in the opinion that cultiva-  
tion should not be continued so late in the season as is  
generally practiced. Poor soil drainage weakens a  
tree, and thus predisposes it to the effects of cold weather.  
Lack of soil fertility is another factor, while there is  
sufficient evidence that the heavy production of fruit  
during the preceding season makes a tree susceptible  
to winter injury. Prof. Macoun substantiated this  
statement from his records at the Central Experimental  
Farm, Ottawa. The seventh and last factor to be  
mentioned was insect pests and plant diseases.

Mr. Neilson recommended the following factors  
which might be combined to prevent a recurrence of  
these losses. They are: 1, plant breeding; 2, good cul-  
tural practices; 3, use of cover crops; 4, judicious use  
of manures and fertilizers; 5, soil drainage; 6, thinning  
of fruit; 7, thorough spraying to control insects and  
diseases; 8, provision of shelter against strong, cold  
winds; 9, proper choice of site; 10, hardiness of varieties.

The varieties least affected were enumerated by  
Mr. Neilson as follows: 1, Hybernal; 2, Duchess; 2,  
Patten's Greening; 2, Dudley; 3, McIntosh; 3, Yellow  
Transparent; 3, Wolf River; 3, Wealthy; 3, Haas; 3,  
McMahon White; 4, Snow; 4, Alexander; 4, Baxter;  
4, Golden Russet; 5, Scarlet Pippin; 5, Spy. These  
have been set down in the order of their hardiness, and  
divided into groups indicated by the figures. The  
varieties most affected were indicated in the following  
order: 1, Baldwin; 2, Ontario; 3, King; 4, Cranberry  
Pippin; 5, Wagener; 6, Spitzenburg; 7, Gravenstein; 8,  
Hubbardston; 9, Stark; 10, Pewaukee; 11, Ben Davis;  
12, Bottle Greening; 13, Rhode Island Greening.

### What the U. S. Experiment Stations Are Doing.

The convention was informed by E. F. Palmer,  
Director of the Horticultural Experiment Station,  
Vineland, what the United States experiment stations  
are doing for the fruit grower. In California, he said,  
50 definite projects are under way, and an appropriation  
of \$500,000 has been made for the execution of one  
experiment alone. The object all the stations have is  
first to establish a fact, which is done by experimentation;  
then they proceed to find out the cause, and this is  
known as "research work;" then there is plant improve-  
ment, which describes itself. In Massachusetts, the  
speaker had seen an experiment including 1,400 trees  
which was being carried on to determine the inter-  
relation of root and scion in apples. So far as this  
experiment has gone it had shown that the Spy and  
Duchess root have a marked dwarfing effect on scions.  
In Pennsylvania the speaker had seen a very interesting  
experiment on fertilizers, and much the same kind of  
work was being conducted in Oregon. Mr. Palmer  
had seen evidence enough to show that we have been  
pruning young orchards too heavily. The speaker  
furthermore said there was a lack of co-operation be-  
tween the stations. Mr. Palmer concluded his address  
by stating that experiment stations in Canada should  
employ and hold trained men. So far Ontario had been  
a training ground, and from here the men go to other  
countries where they are better paid.

### Diversification in Fruit Farming.

Prof. J. W. Crow, of the Ontario Agricultural Col-  
lege, championed diversification in fruit farming, and  
said: "The most important aspect of the fruit situation,  
so far as the future of the industry is concerned, is that  
relating to the cost of production. We shall have to  
lower production costs if we are to stay in the business  
permanently." He cited the following six factors

which determine the cost of production in any given  
case: 1, the variety grown; 2, the distribution of labor;  
3, the size of the producing unit; 4, cultural methods,  
particularly the use of fertilizers; 5, marketing facilities;  
6, the suitability of the soil, site and climate.

Aside from the variety, Prof. Crow considered labor  
the most important single item entering into cost, and  
the most effective means of lowering the cost per box  
or barrel was to arrange the farm schemes so as to  
make the best use of labor. The real problem, he said,  
was to distribute the labor as uniformly as possible  
over the season, or, better still, over the full year.  
Prof. Crow referred to the survey made in Oxford  
County, by A. Leitch, of the O. A. C., and drew attention  
to the findings which showed, he said, that a dairyman  
who specializes in milk alone, or largely, is not able to  
use to the best advantage the labor employed, and that  
in dairying the largest actual profits came from partially  
diversified farming, rather than from too intensive  
specialization. Prof. Crow was of the opinion that this  
principle would hold good in fruit growing. He recom-  
mended the selection of varieties which ripen in succession  
from early to late, and the grading and packing of  
winter varieties of apples in the fruit house in the winter  
time. Some of the most successful fruit growers, said  
the speaker, produce a general line of fruits, including  
apples, pears, plums, cherries, strawberries, raspberries,  
currants, gooseberries, and, where climate permits,  
peaches and grapes as well. In regard to combinations,  
Prof. Crow made the following statement: "Hogs seem  
to go along with dairy cattle, and seldom work in satisfac-  
torily in any number on a fruit farm. Beef cattle  
go well with large apple orchards, or with general fruit  
growing, and provide winter employment besides valu-  
able supplies of stable manure. Where a good market  
for hay exists, this will be found to combine well with  
apples and with other tree fruits, excepting cherries.  
Asparagus and peaches make an excellent combination  
for high-priced land in suitable districts. Poultry on a  
large scale does not seem to work out well with fruit  
growing, the reason being that poultry keeping is, in  
itself, a well-balanced scheme with continuous, steady  
employment the year around."

### Varieties of Apples to Plant.

At the evening session an animated discussion  
occurred regarding the respective merits of several  
varieties of apples. The Baldwin came in for consid-  
erable criticism on account of the large percentage of  
casualties among Baldwin trees during the winter of  
1917-18. Other growers, however, reported that they  
lost none, and would still approve of the Baldwin as a  
profitable variety. Delegates from many districts  
expressed their opinions, and the remarks were sum-  
marized by Prof. Crow, who led the discussion, as fol-  
lows: Snow and Wealthy were mentioned seven times  
each; Duchess and McIntosh were mentioned six times  
each; Greenings, Spy and Baldwin were mentioned five  
times each; Alexander was mentioned four times.  
Judging from the expression of opinion, it would appear  
that the following varieties stood in popularity according  
to the order in which they are mentioned: Snow,  
Wealthy, Duchess, McIntosh, Greening, Spy, Baldwin.

### Control of Aphids.

W. A. Ross, representing the Dominion Entomo-  
logical Branch and in charge of the station at Vineland,  
discussed the different species of aphids and the manner  
in which they attack and injure fruit. The green apple  
aphid and the rosy aphid were pronounced the worst  
from the apple grower's point of view. These suck the  
juice from the foliage of the trees and thus reduce the  
vitality. By living on the foliage of the lower branches,  
the rosy aphid causes the clusters of fruit on the apple  
to become dwarfed and deformed. These clusters or  
little groups of apples are common in years when aphids  
are prevalent. Outside the presence of the aphids them-  
selves another indication is the honey dew, or sticky  
substance, seen on the foliage. This, too, is frequently  
covered with a black, sooty fungus. As a means of  
control, Mr. Ross recommended that the dormant  
spray be delayed in the spring until the buds begin to  
burst but are still quite compact. Then add three-  
quarters of a pint of Black Leaf 40 to eighty gallons of  
the lime-sulphur material and drench the trees. This  
will destroy the aphids present, but if another outbreak  
occurs it will be necessary to spray again with Black  
Leaf 40. If no outbreak occurs till the middle of July,  
the speaker recommended not to spray as nature would  
probably look after the attack. The first spray  
mentioned was described as very important, because  
the insects curl the leaves up around them, after the  
buds are opened, and it is impossible to hit them with  
the spray. There is a species known as the black  
cherry aphid, which also curls the leaves about it and  
consequently must be sprayed early with the insecticide  
mentioned. On plum and peach trees the aphid does  
not curl the leaves to the same extent, and it is, there-  
fore, not absolutely necessary to spray until they become  
present in alarming numbers. In summarizing, Mr.  
Ross said: "Spray for the rosy aphid on the apple, and  
for the cherry aphid while they are on the bud. In the  
case of plums and peaches, wait until they are danger-  
ously numerous."

### The Small Fruit Farm.

The small mixed farm for the fruit grower was dis-  
cussed by A. G. Harkness, Vineland. The speaker  
operates a farm of nine acres, six acres of which is light  
land and the remainder heavy. In his treatment of the  
subject, he said that the small grower near a shipping  
point or market will do all right, but if he lives too far  
away express rates will eat up the profits. This could  
be overcome by co-operating with neighbors and securing  
the 100-lb. rate. On a small farm the owner does a

large part of the work, and is not troubled by the labor  
shortage. Mr. Harkness prophesied that wages will  
not come down where they were in the past, and said  
the small grower, was at an advantage in that he did  
not have to draw on his receipts to pay for help. Further-  
more, a small farm does not require very expensive  
machinery, and there is less land going to waste. On a  
small lot one can keep bees and poultry, and Mr. Hark-  
ness considered bees a very necessary adjunct to fruit  
growing. In 1916 the speaker took 800 pounds of  
honey from nine colonies; in 1917 he took 900 pounds  
from eighteen colonies, and in 1918 he took 2,400 pounds  
from twenty-two colonies. By inter-cropping the  
speaker had got good returns from land planted to cane  
berries. He did not consider peaches the most profit-  
able tree on a small farm, and expressed the opinion  
that it would be very easy to plant too many of them.  
From his nine-acre farm, Mr. Harkness sold produce  
last year to the value of \$2,410. The expenses to be  
charged against this amounted to \$390.

### Profits From the Small Apple Orchard.

Frank Shearer, Vittoria, told the convention what  
he had accomplished with a small orchard of sixty-five  
trees covering an acre and a half of land. The trees  
were planted too close together he said, but they were  
on fairly good sandy soil, with good soil and air drain-  
age. The orchard is about forty years old. It began  
to receive attention sixteen years ago, but prior to that  
it was in sod, sometimes bearing a crop and sometimes  
not. Mr. Shearer outlined his care of the orchard  
somewhat as follows: The orchard receives a light coat  
of manure annually amounting to about three to five  
loads to the acre. This is applied any time during the  
winter. Scraping is another winter operation. With  
a dull hoe, the rough bark is scraped from the trunk and  
large limbs, care being taken not to go deep enough to  
show the green wood. Trimming consists in cutting  
out surplus wood to let in the sunshine, also to keep the  
tree in shape and within bounds. The rubbish and  
brush is cleaned up and burned. As soon as spring  
opens up the orchard is plowed and worked down;  
this is done early so that frequent cultivation may be  
given in May. Mr. Shearer spoke approvingly of the  
spring-tooth harrow as an instrument for orchard  
cultivation. Cultivation ends somewhere between the  
middle and the last of June, according to the season,  
when a cover crop of buckwheat is sown. Hand thin-  
ning has been practiced to a limited extent with beneficial  
results. The speaker said it had tended to give regular  
crops and much better apples. The financial state-  
ment of the operations included the following cost  
items: Five tons of manure, spread, \$7; scraping, two  
days, \$5; trimming sixty-five trees, four trees per day,  
\$40; removing brush and burning, \$10; plowing, \$5;  
cultivating six times, \$8; spraying (material \$18, time  
\$15), \$33; interest and taxes, \$40; interest and de-  
preciation on power outfit, \$40; total cost, \$188. This  
is an average of nearly \$3 per tree per year. Following  
up these cost items, Mr. Shearer explained what the  
orchard had done every year since 1907. The smallest  
yield was fifty-two barrels, in 1915, when the orchard  
was hit by hail, and the heaviest yield was in 1909,  
when two hundred and twenty barrels were secured.  
In only four years, however, was the yield less than a  
hundred barrels. In the twelve years mentioned the  
total yield was 1,714 barrels. The smallest cash returns  
were received in 1908, and then amounted to \$140.  
However, these rose to \$730 last year, from 203 barrels.  
The total receipts for the twelve years amounted to  
\$4,127. The yearly average of production was 143  
barrels, or 2.2 barrels per tree per year. The speaker  
concluded thus: "The cost of barrels, spray material and  
commission for selling have been taken out of the  
amounts, but not the cost of picking and packing.  
This item has grown from 50 cents per barrel in 1907  
to practically 80 cents in 1918. The cost items are  
figured on the basis of \$2.50 per day for men, and \$5  
per day for man and team; the cost of caring for the  
small orchard is necessarily greater than in the large  
one, and while I do not advocate the setting out of a  
small orchard, the returns from it have been such that I  
have set twenty-five more acres beside it."

### The Fruit Grader.

The machine for grading fruit, or, more properly  
speaking, sizing fruit, came in for considerable dis-  
cussion. J. B. Fairbairn, Beamsville, said he had used  
it four years in grading peaches, and found it one of  
the best measures of economizing in labor. Several  
graders were in use in the Niagara District, and Mr.  
Fairbairn was of the opinion that when the market  
recognizes different grades and sizes of peaches they  
will be used more commonly. When the fruit is not over-  
ripe the grader does not injure it. Some growers in  
the district had used the grader for pears, apples, etc.,  
and had found it satisfactory. W. F. Kidd, of the  
Fruit Branch, Toronto, was of the opinion that growers  
of apples will have to do more grading and sizing if they  
are to compete with the apples which are imported.  
It would furthermore be expedient in meeting this com-  
petition to box the apples rather than barrel them.  
Some growers, he said, raised the objection that box  
packing was more expensive, but Mr. Kidd met this  
with the argument that girls can be employed who will  
pack around ninety boxes a day, and that, in the end,  
box packing is practically as cheap as barrel packing,  
because it can be done with cheaper labor. The sizing  
of apples has an advantage in that the small apple does  
not look well beside a large one, and when uniform  
grades are made they sell more readily. James E.  
Johnson, of Simcoe, said he packed about 9,000 boxes  
last year and used a grader to size the fruit. He had  
found the grader fairly satisfactory, but the one he  
used was, in his opinion, much inferior to the graders



used in the Western States, which, however, are more costly. W. H. Gibson, of Newcastle, gave his experience with the grader and said that in some varieties it was a great labor saver. He had kept an account of what it had cost to pack when doing all the grading by hand, and it amounted to 30 cents per barrel. This, he said, could be reduced to 23 cents with a grader.

#### Grape Growing for Factory Purposes.

A lengthy address on grape growing for factory purposes was delivered by D. E. Skinner, Westfield, N.Y. Mr. Skinner described his methods and the practices in his district. These, in a general way, resemble the operations as carried on by grape growers in the Niagara district. Their land, Mr. Skinner said, was perhaps not quite so fertile as that of the Niagara District, or along the lake shore of North Ontario, and they found it advisable to use commercial fertilizer in addition to all the barnyard manure they could obtain. One practice was to sow 300 pounds of acid phosphate during the winter or spring and then divide 200 pounds of nitrate of soda into two applications, after the buds start. The Chautauqua system of training the vines was the most common, and wire instead of string was being used to tie the vines to the wires. Mr. Skinner handled his subject in a very practical way and answered many questions asked by those present.

#### The Large Specialty Farm.

W. H. Gibson, Newcastle, discussed fruit growing from the viewpoint of the large specialty farm for apple growing. He described the Bowmanville-Newcastle District in regard to soil, etc., and said that many growers there were anxious to get out of the business. Many consider that they have too much orchard; some are trying to sell, and some are even converting their orchards into firewood. Mr. Gibson stated that these growers should be shown the right road and given some idea of what the future had in store for them if they gave their orchards reasonable care. However, he said unless the orchard is cared for it would be far better to make it into firewood and use the land for farm crops. In the opinion of the speaker, growers who have large orchards should give them intensive care and provide employment for the men who have done so nobly and who are now returning home. He thought it would be good business practice and a patriotic act. Mr. Gibson's practice is to leave five feet of grass on each side of the tree rows. This, however, is mowed and allowed to remain on the ground. He recommended that not more than one-third to one-half the farm be planted to trees, and that live stock be kept and mixed farming conducted.

#### Annual Crops of Apples.

Among some of the recommendations made by J. C. Harris, Ingersoll, to secure annual crops, the following statements may be cited: Mulch Baldwin trees and don't prune very much. Land under the trees must be kept moist not only to get fruit but to develop buds. Take two years to prune or make over neglected tree. Study the tree and don't take out a limb unless you know the reason why you are taking it out. Too much pruning is detrimental. Go over the orchard annually and take out cross branches and such, but to get annual crops excessive pruning is out of the question. Mr. Harris was of the opinion that a young orchard left unpruned will bear at a younger age than a pruned orchard. However, he had no evidence or experience to show him that it would be more profitable in the end. In his opinion, Bordeaux will stay on the tree longer than lime-sulphur. He never used more than three pounds bluestone to 40 gallons of water after the blossoms fall. This is incorporated with ten pounds of lime. Mr. Harris thought that failures to get good crops were due to the absence of barnyard manure, too much pruning, poor cultivation and soil drainage, or poor spraying.

#### Making the Land Pay While the Orchard is Growing.

William Everett, Simcoe, outlined his experience and success in making the land pay while the young orchard was coming on. In 1910 he purchased fifty acres, and of this planted twenty-four acres with trees. The land was built up with cover crops and such, until last year from the twenty-four acres Mr. Everett took the following crops from the area left after deducting four feet on each side of the tree row. Two and one-half acres were devoted to wheat, yielding 90 bushels, which was

sold for \$2 per bushel, making \$225; 12 tons of hay were valued at \$144; 10 bushels of clover seed valued at \$220; 425 bushels of potatoes worth \$425; 30 tons silage valued at \$150; 300 bushels sugar beets valued at \$90; 500 bushels of turnips valued at \$125. This produce which was practically sold off the farm returned a gross revenue of \$1,379, and was all taken from the twenty-four acres of orchard planted in 1910.

#### Co-operative Buying and Selling.

One item on the program called for a discussion of co-operative methods. Under this heading, Elmer Lick, Oshawa, outlined the history of the Central Selling Agency organized several years ago, and which went into disuse owing to war conditions. Mr. Lick said an effort was now being made to re-establish it on a firm and successful working basis, and he called for the support of all the associations in order to make the Central a means of handling the Ontario crop. Furthermore, he thought some such organization was necessary in order to meet the competition emanating from the other side. Prof. Crow told the convention that a Michigan man was already in England trying to sell Spys and establish market connections in that country. W. H. Gibson told about their organization at Newcastle, which started with seven members and now has only eleven. A central packing house is used and a reliable pack is put up year after year. Mr. Chapin, Toronto, took occasion here to discountenance the sending of inferior fruit to England just now when we want to establish our trade connections and make a good impression. He said it is certain that the masses in England will henceforth be better paid, and there will be a good demand for Canadian fruit if we do not injure our chances by sending over inferior quality. P. W. Hodgetts said they were very anxious that new associations, and those which had experienced difficulties, should be encouraged and that those about to start should be started right. He suggested missionary work among the local associations.

#### Changes in the Inspection and Sale Act.

C. W. Baxter, the Dominion Fruit Commissioner, made his first appearance before an Ontario Fruit Growers' Convention in his present capacity at the Wednesday session. Preliminary to his address, Mr. Baxter thanked the growers for their confidence in him, and he outlined very briefly the policy of the Fruit Branch. The substance of the speaker's address pertained chiefly to the amendments made to the Inspection and Sale Act, and since these were fully described in an issue of "The Farmer's Advocate" after the Act was assented to, in May, 1918, it does not seem necessary to go into details here. However, Mr. Baxter dwelt on several features of the Act to which growers should pay particular attention. In regard to immature fruit which is now described in the Act, the speaker said a great tonnage of this went on the market just about the time that two varieties of California grapes were being sold. Consumers naturally turned to the California product, much to the detriment of the Canadian grape industry. In regard to the marking of fruit, a clause has been added making it necessary to brand open packages with the name and address of the seller. This has resulted in a great decrease in over-facing, which, prior to the amendments, was on the increase. The growers pointed out that in some cases it worked hardships, but no very strenuous objections were raised. The Act has not yet been satisfactorily concluded concerning the dimensions of eleven-quart baskets. The Department in view of this is allowing growers to use the old types of baskets until December 31, 1919. Both growers and basket manufacturers have quite considerable stocks on hand, but the Fruit Commissioner asked that they take every reasonable precaution in order to get rid of their old stock before 1920. Now that packages have been standardized and the Canadian and U.S. barrels are alike, the Fruit Commissioner strongly advised that we keep our apples prominently before the British consumer by having the word "Canadian" on every barrel. There were marks, however, such as "fancy," etc., which now mean nothing and should be omitted. It was furthermore necessary not to jeopardize our chances with the British trade by sending over culls such as had been done since the embargo was taken off.

#### Growing Berries for the Factory.

The Ontario Fruit Growers' Convention was glad to welcome James E. Johnson, who, on account of

interests in Florida, usually finds it necessary to spend his winters in that State. He delivered a very interesting and instructive address on growing strawberries, and gave a statement of costs and yields. All the different operations in connection with the production of berries were discussed in detail in this paper, and one could not condense it without doing it a great injustice. Consequently, we shall ask our readers to watch for a reproduction in full of Mr. Johnson's paper in an early issue of "The Farmer's Advocate."

#### The Labor Situation.

Miss Hart, of the Ontario Labor Bureau, was negotiating with the fruit growers on Tuesday and Wednesday in order to effect an agreement between them and the National Service Girls. On Wednesday afternoon Miss Hart told the delegates what the National Service Girls had accomplished last year, and what they were asking in the way of remuneration for services in 1919. Only forty-two per cent. of the girls made over nine dollars per week last year, and fifty-eight per cent. made less than nine dollars. This statement was arrived at by only taking into consideration those girls who had worked a reasonable length of time. For the coming season the girls are asking for a sliding scale piece rate, a nine-hour day and an increased hour rate. The majority of the growers expressed satisfaction with the girls employed last year, but they were not anxious to increase the rate of wages. A committee of the growers will confer with Miss Hart and her committee in order to bring about a settlement. The Y. W. C. A., she said, will establish camps again this year, if growers will contract for them early, but the Organization will not accept rush orders in 1919.

#### Resolutions Adopted.

The long list of resolutions presented and adopted included tributes to the memory of the late Donald Johnson, and the late R. B. White, a former member of the Association. Another resolution suggested that a memorial be put up in the Parliament Buildings to the memory of the soldier sons of Ontario fruit growers. One resolution asked for a detailed survey of the fruit industry in Ontario, and still another that Ontario have a representative at the London, England, office of Immigration to give facts and figures regarding our possibilities as a fruit-growing province. A re-enactment of the Daylight Saving Act was strongly condemned in a resolution, and so was the proposed increase in express rates. A committee was elected to take action in regard to the latter. Miscible oils are necessary in the industry, and the fruit growers will ask that the duty be removed. It was also resolved that a man be employed to do missionary work amongst the local fruit growers' associations.

#### Officers.

The following Directors were elected from the thirteen districts in the Province of Ontario. The number in brackets preceding the name of the director indicates the district: (1) W. T. Macoun, Ottawa; (2) F. C. Keeler, Brockville; (3) H. Leavens, Bloomfield; (4) H. Sirett, Brighton; (5) R. W. Grierson, Oshawa; (6) C. E. Terry, Clarkson; (7) J. P. Bridgeman, Winona; (8) A. Craise, St. Catharines; (9) Jas. E. Johnson, Simcoe; (10) P. E. Hind, Forest; (11) H. K. Revell, Goderich; (12) J. C. Harris, Ingersoll; (13) W. Mitchell, Clarksburg. Representing O. A. C., Guelph: Prof. Crow; Representing Horticultural Experiment Station, Vineland, E. F. Palmer. James E. Johnson was elected President; C. E. Terry, Vice-President, and P. W. Hodgetts, Parliament Buildings, Toronto, Secretary-Treasurer.

## POULTRY.

Mate up a breeding pen of birds and hatch chickens from the best of the flock only.

The natural season for egg production is approaching but the well-cared-for flock seems to realize it first.

If you are going into chickens heavier next winter, now is the time to prepare for it. Get settings of eggs from good, virile stock or arrange for a batch of day-old chicks. It is well to know the stock from which you are obtaining your foundation. Don't go at it blindfolded.

## Enthusiastic Dominion Poultry Conference Held at Ottawa.

It is perhaps quite fitting that at this time, when the future lies vaguely before us and even the keenest in the country are unable to forecast with any assurance what will befall during the next decade, that a Dominion Poultry Conference should have been called to consider the status of the industry, its importance as a national asset at a time when national assets are so welcome, and the steps that may be taken advisedly for its development. So at least thought Dr. J. H. Grisdale, Acting-Deputy Minister of Agriculture for Canada at the opening session of the conference, of which he was chairman, on Tuesday morning, February 18. Granted a unanimity of purpose on the part of poultry raisers and a well-planned campaign of progress, Dr. Grisdale forecast a tremendous development of the industry. The speaker thought that greatest improvement could be brought about through a careful development of the farm flock, keeping to the slogan of the conference, "One hundred hens on every farm" and not unduly encouraging intensive poultry raising. In fact, he thought that our

### Produce.

- Pure breeds of laying strains.
- Remove non-producers.
- Only early hatches.
- Diseases cause heavy loss.
- Uniform methods.
- Canada good for poultry.
- Every farm 100 hens by 1921.

exports could very well be so greatly enlarged as to reach and even surpass the apparently impossible figure of 250,000,000 dozen eggs yearly.

The speaker further said that the Department of

Agriculture is fully conscious of the necessities of the industry, in the way of marketing and cold storage facilities. He referred to the proposal to erect on the Montreal Harbor front a large cold storage and warehouse including an abundant accommodation for eggs and poultry, intended for either export to Europe or the United States. Dr. Grisdale said he felt that upon the deliberations of the conference depended the immediate future at least of the poultry industry in Canada.

F. C. Elford, Dominion Poultry Husbandman, discussed "Canada's Potential Possibilities in Egg and Poultry Production." He felt that production was one of the high spots to be touched by the conference. Mr. Elford spoke to the slogan "One hundred hens for every farm and a consumption of one dozen eggs per head per week by 1921." In 1916 Canada had 41,000,000 hens, whereas if there were 100 hens per farm we would have 75,000,000 hens. The average hen lays probably 6 dozen eggs per year and at this rate 75,000,000 hens would produce 450,000,000 dozen eggs in 1921. If



It is necessary to spend money in a very interesting way. Growing strawberries, and other crops. All the different methods of production of berries, and one could not get a great injustice. Consequently, we must watch for a reproduction in an early issue.

**Education.**

Labor Bureau, was negotiated on Tuesday and Wednesday between them and on Wednesday afternoon at the National Service Bureau, and what they were doing for services in 1919. The girls made over nine and fifty-eight per cent. This statement was made in consideration of those girls' length of time. For the purpose of a sliding scale, an increased hour rate, expressed satisfaction with it they were not anxious. A committee of the Department and her committee. The Y. W. C. A., gain this year, if growers and the Organization will

**Adopted.**

presented and adopted by the late Donald White, a former member of the Parliament Buildings to the Ontario fruit growers. A survey of the fruit industry in Ontario, England, office of the figures regarding our province. A re-enactment was strongly condemned. The proposed increase in the price of eggs is elected to take action. The oils are necessary in the power will ask that the Government resolved that a man work amongst the local

ere elected from the Province of Ontario. The name of the director is T. Macoun, Ottawa; (3) H. Leavens, Bloomington; (5) R. W. Grierson, Ontario; (7) J. P. Bridgeman, Ontario; (9) Jas. E. and Forest; (11) H. K. Harris, Ingersoll; (13) representing O. A. C., Palmer. James E. C. E. Terry, Vice-Parliament Buildings,

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the necessities of the ing and cold storage oposal to erect on the storage and warehouse odation for eggs and o Europe or the United t that upon the de- pended the immediate try in Canada. Husbandman, possibilities in Egg and at production was one d by the conference. n "One hundred hens of one dozen eggs per Canada had 41,000,000 ns per farm we would ge hen lays probably s rate 75,000,000 hens n eggs in 1921. If

Canadians consumed 50 dozen eggs yearly in all ways there would remain 50,000,000 dozen for export. But we will hardly do this, said the speaker, so that if we say 25 dozen eggs yearly per head of population there would be a surplus production for export of 250,000,000 dozen.

What must the province do to realize the slogan? The accompanying table gives the speaker's estimate.

These estimates do not consider the increase in number of farms which may be brought about or the backyard poultry flock.

an accident with our early chicks, our main source of revenue for the winter months is gone. Fortunately we now know that flocks of selected yearling high layers may equal, and in some cases exceed, the annual number of eggs laid by an uncultured flock of pullets. The old hen has been considered as doing fairly well if she paid her way from November to March, but I think we are safe in saying that a way, at small expense, is now known to have her do better.

"Given a person who is not lazy and is fond of poultry there is every reason for a bright prospect for the future.

**Poultry Progress From 1901 to 1921.**

Province	1901		1911		1916	1921
	Total hens	Hens per farm	Total hens	Hens per farm	Total hens	Total (100 hens per farm)
British Columbia.....	330,000	53.9	1,000,000	54.8	1,500,000	2,000,000
Alberta.....	250,000	26.5	2,500,000	39.9	3,250,000	6,800,000
Saskatchewan.....	250,000	21.8	3,500,000	35.2	3,750,000	10,500,000
Manitoba.....	1,116,000	35.9	2,500,000	56.7	2,500,000	4,100,000
Ontario.....	10,500,000	46.7	14,500,000	63.9	19,000,000	24,000,000
Quebec.....	3,250,000	21.8	5,000,000	32.3	7,000,000	16,500,000
New Brunswick.....	750,000	19.0	1,000,000	25.7	1,500,000	4,000,000
Nova Scotia.....	750,000					
P. E. Island.....	500,000					

Our slogan must be "production" and the lettered slogan boxed in connection herewith was taken up by the speaker in brief, correlating each with the other, so as to show the factors important to the successful culmination of the increase which is necessary. "Early Hatches" were emphasized very strongly as probably the most important single cause of lessened profits in poultry raising. Poultry diseases also have been estimated to cause from 10 to 25 per cent. of financial loss in the industry. The provinces must have uniformity of purpose and, said Mr. Elford, "We must quit preaching what the other fellow preaches against."

Professor W. R. Graham, O. A. C., Guelph, discussed in his usual inimitable style "The National Importance of the Poultry Industry" and spoke in part as follows:

"Dr. E. V. McCollum in his book 'The Newer Knowledge of Nutrition' has proven, I think, beyond any possible doubt that eggs are an important food, much more so than the most optimistic of us had hoped. Dr. McCollum states that eggs contain nature's protective foods. That is they are essential to growth and to health. It is quite true we have not as good a food as milk but it is the next best. To-day I feel that any poultryman should be as proud of his walk in life as he is of being a Canadian. True, all who attempt will not succeed, nor do all attempts in other walks of life succeed, but nevertheless, the poultryman has a business that is sound in every sense of the word.

"Your business is a national necessity. Why? Eggs are one of the very few human foods that contain the essentials of growth; the material in foods that gives and maintains our normal power of resistance against disease. Canada is a young nation. It is our individual duty, as well as the duty of our Governments, to see to it that these protective foods of nature are produced in abundance; that they are produced economically; and gathered, stored and distributed with the least possible waste and in the best possible manner to the consumer, whether he be rich or poor. Every human being in Canada required eggs. They are a national asset. It is your duty as individual poultrymen to produce them; our duty, with the co-operation of the trade of our Government, to see to it that they are not spoiled in transit or unduly increased in price to the consumer.

"The history of poultry farms would suggest that the poultry business is one of doubtful value as an investment. There can be no doubt but that many poultry farms have failed but the proportion of successful farms is on the increase and to-day most failures are due to lack of knowledge of the essentials. It has been a pleasure to me and to those associated with me to study, daily, weekly, monthly and yearly, the question of producing a large number of eggs at low cost. There has never been much trouble to get hens to lay from March to September but from September to March has been a difficult period of production. There have been many obstacles in the way but practically all of these can now be fairly well controlled. As illustration of this, the following figures are given for the production of 540 pullets during the months of November, December and January. These birds were hatched in March, April and May and may, therefore, be considered a fairly representative type. The flock consists of 340 Banded Rocks and 200 White Leghorns. These birds laid 8,441 eggs in November, 8,378 eggs in December and 6,396 eggs in January, or a total of 23,215 eggs, or nearly 43 eggs per bird during what is generally considered to be the worst producing months of the year. These eggs would represent at least at cash value, over \$2.00 per hen. There are commercial poultry farms doing as well or better. There is no place in this country for the slacker. There is now no excuse for one having a flock of non-productive hens if the owner does his or her part. A good hen will give a favorable account of herself if you will give her the materials and the surroundings to make her comfortable and happy.

"It has long been known that pullets were the best egg producers, and most successful poultrymen have known that there was a time in the year to hatch these birds in order to have them lay during the common periods of short production. The great bulk of the chickens in this country are hatched during May, but most May pullets do not lay as many eggs during the year as their sisters hatched in March or early April. The difficulty has always been that should we meet with

Whether you keep a dozen hens in your back-yard, or one hundred on a farm, or a thousand hens on a one-man poultry farm, the business is sound economically if one uses the information available. We might look upon the business in this way, that now we do not have to put all our eggs in one basket, there is more than one way of getting results.

"The situation at present may be looked upon in the following manner:

The good laying hens can be told from the poor layers; there is a vast difference in the rate of growth and time of maturity of different strains of chickens; there is a best time to hatch; there are many good feeds; eggs can be produced in fairly large numbers in any week or month of the year; the amount and kind of feeds commonly consumed by hens are known; the various grades of eggs are standardized; the co-operative gathering and selling of eggs has been a success; the knowledge of how to conserve our supplies during the periods of high production, so far as to give the consumer an egg that will poach six months hence, is available.

"My feeling is that we have now got our foundations laid. We can see over the top but the building is not complete by any means. A start has been made. We have no fears of the future so long as the poultryman is given a chance. The making of the industry is up

**Essentials for Export Trade.**

1. A standardized product.
2. Quality Payment.
3. Co-operative Marketing—Despatch.
4. Service in Transportation.
5. Perfection in Storage.
6. Government Inspection.
7. Advertising and Salesmanship at Home and Abroad.
8. Market Intelligence.

to Canadian poultrymen. To-day the poultrymen can go to any Government, or to any body of business men, feeling that they are an economical, essential industry that deserves every encouragement. The business needs much scientific research, careful experiments, wide publicity, an organized effort to carry the information to the public, and a careful study of all economic factors in connection with the marketing of the product.

W. A. Brown, Chief of the Poultry Division of the Live Stock Branch, Department of Agriculture, Ottawa, took up the question of "Canada's Export Opportunity," and quoted a prominent English authority as follows:

"No branch of food production has suffered during the war to a greater extent than that of poultry and eggs. In many countries of Europe it has almost disappeared, whilst in others scarcity of feed and high prices and closing of markets have compelled serious reductions of poultry flocks. Probably a conservative estimate is that European production is now not more than 40 per cent. of what was the case in 1913. Further, in several countries there has necessarily been a complete cessation of instruction and investigation in this subject and of organized efforts for its maintenance, development and improvement. As a consequence the shortage of supplies of eggs and poultry is very great, and prices have advanced enormously. Imports into the United Kingdom have fallen by about 60 per cent., and of eggs alone the decline is about 130,000 tons. The same is seen elsewhere to a greater extent. Such conditions will continue for years unless a determined effort is made to rebuild the poultry industry. Moreover, the opportunity of increased production presented in lands where feed is abundant is greater than ever. A great responsibility rests upon the nations which have not been devastated by the war, not only to extend their operations but to assist in the work of reconstruction of the stricken lands."

"That need," said Mr. Brown, "is Canada's opportunity to supply the need of the Mother Country, and

incidentally pave the way for a permanent place in the export trade to Great Britain. Three things are essential to the making and holding of this place—quality, volume and price. England imported eggs from fifty-five countries before the war, of which Canada was not one. It is not in Canada's interest to have to compete with the low-grade eggs of Russia, Roumania, Morocco, etc. I believe that Canada can compete with the best on the British market. Canadians know how to grade—Canada should be a nation of egg candlers, and candling instruction should be given in which we must standardize grades. Let us sell our goods on grade and carry our product to every British consumer."

"How Provincial Departments Can Assist in Increasing Production," was discussed by H. B. Donovan, Toronto, who urged more definite encouragement to the industry, and greater interest on the part of Provincial Governments. The way in which agricultural colleges can assist in production was taken up by M. A. Jull, Macdonald Agricultural College, Quebec, following Mr. Donovan. The speaker referred to increasing relative importance of poultry as an economic and efficient producer of human food. The work of a college is threefold, namely, teaching, investigation and experiment, and extension. The colleges thus have a duty in training instructors and future poultry raisers, in looking into the problems found in the more or less circumscribed territory of an agricultural college, and in carrying out educational and extension work in this territory. Following Mr. Jull, the way in which poultry organizations may assist in production was taken up by Dr. R. K. Barnes, President of the Eastern Ontario Poultry Association. The speaker thought that officers should be looked to for leadership. These officers should be more than mere breeders of show birds and experts in the fine distinctions of breed type. The Executive should be able to discern more in poultry progress than the development of finer plumage or a more perfect barring of the feathers. Organizations must work for the larger consideration of the industry, and the flock must be considered from the standpoint of what it can do, not merely what it looks like. Provincial governments were scored severely for their lack of assistance to local associations, from whence increased production must come. The boys and girls, as well as the women, must be encouraged if the desired end is to be obtained. Both the producer and exhibitor must be catered to in a local association, and this is done in the Ottawa Poultry Association. The press is also in this local association used both for news and advertising service. N. W. Kerr, President of the Manitoba Poultry Association, agreed with the previous speaker. Associations stand to organize a district and to assist members. During 29 years of association work in Manitoba, production has hardly doubled because of dissension among local interests. The speaker hoped for the formation of a National Poultry Association at the conference. A plea was entered for bantam chickens as being most likely to interest the children in poultry raising. The speaker believed that an attempt to place pure-bred flocks of standard breeds on every farm would be futile, but that grading up could be encouraged with every prospect of success. Wm. Kerr, Maritime Representative of the Poultry Division at Ottawa, reviewed the organization work in the Maritime Provinces for several years. Not one single egg of the vast quantity coming in yearly goes ungraded, and every egg is paid for on a quality basis. Five years ago Prince Edward Island had the worst eggs between the two oceans; now the Island can challenge any district in Canada for quality in carload lots. Quality payment has had a decided influence on production and improved flocks. "Canada First" is the motto of the Island poultrymen. Eggs are shipped all over the Maritime Provinces, but many eggs go to Montreal and Boston. The basis of successful co-operation is "a square deal for every man," not merely "more cash for the producer." "We cannot live unto ourselves," said Mr. Kerr, "and this is what the Island poultrymen have come to realize."

A discussion of provincial department activities occupied the attention of the conference at the afternoon session on Tuesday. Professor W. R. Graham contended that the only way to get the result of experimental research or investigational work to the people, is to take it to them. Bulletins and publications are not generally read. Local associations and clubs are the logical media through which to reach the people. A. C. McCulloch, New Brunswick Department of Agriculture, emphasized the value of boys' and girls' clubs for the production of more and better utility poultry. These clubs in New Brunswick will hold fairs each year, and other lines of work such as fattening, etc., will be undertaken. Not much has been done in the way of publications except for a few pamphlets written especially for the club work. Production is at a very low ebb in New Brunswick even in the summer season. J. R. Terry, British Columbia Department of Agriculture, drew attention to the great variety of climate in British Columbia, and the small population in proportion to area. Inspection work under the Egg Markets Act occupies much attention. Importation of Chinese eggs has caused some difficulty, but this is gradually being overcome. Utility breeding is featured, and although some adjustments have had to be made in farming methods, no fault could be found with profits from poultry during the last two years. The average egg production per bird is about 130 to 140 eggs per year among commercial breeders, while among farmers the average production is from 80 to 100 eggs.

Father Ligouri, of the Quebec Department of Agriculture, reported great progress in combatting a prevalent opinion that fowl cannot stand cold, by the erection of



numerous small sanitary houses to house from 50 to 100 hens. These have led to rapid changes in housing methods. The most popular breeds are Rhode Island Reds and Barred Rocks. Professor Baker, of the Saskatchewan Department of Agriculture, referred to the large area of arable land in the province and the work of the fattening stations in connection with the Saskatchewan Co-operative Creameries. In 1916 a travelling poultry marketing station was operated by means of a properly equipped baggage car. This ran for six weeks from place to place, and afterwards a permanent marketing station was established at Regina. This work, in addition to co-operative egg marketing, has since been taken over by the Saskatchewan Co-operative Creameries. Extension work from the College of Agriculture at Saskatoon was interfered with by the war, but splendid facilities are now available, and it is expected that good work can be done. Stock inspection, involving the examination of 13,000 birds, has also been undertaken this year. Open-front houses are in considerable use in Saskatchewan. About twice as much cotton as glass is used at the college in Saskatoon.

J. H. Hare, Poultry Marketing Commissioner, Edmonton, referred to the good effect of a co-operative poultry marketing service in Alberta under the joint effort and encouragement of the Provincial and Dominion Governments. This work was started in mid-summer 1917, and 22 districts at once took advantage of this service that year. Use is made, wherever possible, of the United Farmers' local organizations and the women's sections. A local committee looks after matters of local interest. The marketing service in 1918 handled 5,000 cases of eggs, practically half of the marketed production of the southern part of the province. This low production is responsible for the failure of co-operative egg circles in Alberta. In Prince Edward Island the egg marketing service of the Dominion Department of Agriculture was the vantage point upon which future work was built. The Egg Marketing Association, said Wm. Kerr, so dominates the marketing of poultry products that any Government wishing to do work, prosecutes it through this Association. About a million dozen of eggs are handled through this Association yearly.

Agricultural college activities in British Columbia were reported upon by Professor Lunn, Vancouver, B.C., who said that his department was established about a year ago as the fourth department in the agricultural college. Twenty-two acres have been set aside and an additional fifty acres requisitioned for future development. The principal work of the department in addition to teaching will be breeding and feeding. Teaching courses, which are varied, have been carefully planned.

Geo. Robertson, of the Poultry Department, Central Experimental Farm, Ottawa, discussed "Breeding Problems" at the Wednesday morning session, and the following is quoted:

"It is to the breeder of standard bred poultry that we must give the credit of producing all our best breeds. Where would the business be to-day without our Plymouth Rocks, Wyandottes, Leghorns or Rhode Island Reds? In this period of stress people have turned from the esthetic to the material. This is no less true with poultry than with other things. Where a few years ago the general public would ask 'What prizes did the bird win?' it now asks, 'How many eggs did the bird lay?' This is a change that will work much good, and although some may go to the extreme and neglect entirely the esthetic side of breeding, the influence of the careful breeder and the so-called fancier will in the end bring them back to the proper course which is a careful effort to combine in the same bird the qualities that both the fancier and the practical poultryman are striving for.

"After a couple of years of endeavor to pick out from a flock of a dozen or two, some standard-bred specimens that would be suitable for a foundation, we were forced to the conclusion that as the demand for bred-to-lay stock was so urgent, that we would have to let the proper breeding go by the board for a time until we could have flocks of bred-to-lay birds established, and then we could go back and develop the other lines more slowly. It is a big problem, but we firmly believe it can be done. We believe that strains can be produced—in some breeds at least—that will have both high productiveness and exhibition qualities. In White Leghorns, I have no hesitation in saying that this can be accomplished. The standard type is not one that is opposed to production, and there is no color problem to complicate matters. With White Wyandottes, it was thought that the extremely short backs that were favored some years ago together with the loose cochiny type of plumage was opposed to, practical qualities so the Wyandotte breeders wisely changed their ideals and the Wyandotte of to-day is a comparatively closely feathered bird with a fair length of back and better length of leg, than was in favor a few years ago. With the Barred Rocks, there is liable to be more conflict between the two lines. In type, we believe that they can come together but in color there is room for grave doubts. Those of you who have had experience with exhibition birds (Barred Rocks) know that it is the narrow barred birds that find favor in the show room. You also know that the narrow barred ones are slow featherers. Breeding for egg production has indicated that the rate of feathering has close connection with egg production. If it can be demonstrated that extremely narrow barred birds are necessarily slow featherers and that high production and quickness in feathering go hand in hand, is it not up to us to use all the weight of our influence to have the standard changed?

"Our greatest breeding problem at the present time is to produce strains of the leading varieties, the in-

dividuals of which will be heavy producers and at the same time not lack in exhibition qualities. Our main work is to see by every means at our command that these are produced. How are we going to do it? Not only by careful breeding work on our various farms, provincial and federal, but by encouraging individual breeders to breed along the same lines. We all know that at the present time there is a great deal of fraud being perpetrated in the poultry business. This man advertises a 200 egg strain, when as a matter of fact his flock will not average 150 eggs. Another man advertises 250 egg strain, when he happens to have had at some time or another one bird in his flock that reached that mark. This sort of advertising must be discountenanced and the logical way of doing it is by establishing a record of performance under direct Government control and by the holding of Government supervised laying contests.

E. J. Smith, Brockville, President of the Canadian Produce Association, paid tribute to the work of the Canada Food Board with regard to the sale of bad eggs and that that Order Number 24, the "loss off" order should be incorporated into any new Government egg regulations. The speaker referred to the possibility of evading the present regulations with regard to inter-provincial trade. That 4 bad eggs and 12 undergrade eggs be allowed for certain grades, has been requested by the Canadian Produce Association and that the number of cases specified for inter-provincial trade be increased from 100 to 200 cases had also been requested. Prince Edward Island and the Western Provinces seem to be getting more money and attention in proportion to the quantities of eggs received than the more heavily populated sections of the Dominion. The speaker urged that inspectors be empowered to inspect holdings of country storekeepers and prosecute for the sale of bad eggs, if necessary.

A. M. Wilford, Saskatchewan, read a letter representing the opinions of 16 dealers in the province and in favor of the appointment of inspectors who would approve of and supervise the grading of all wholesale eggs in Saskatchewan. It is estimated that \$80,000 went to waste last year in the province "simply because the dealers all over Canada pay a premium for rotten eggs." R. H. Ashton, Morrisburg, Manager of the Dundas Co-operative Association thought that something along the line of "The Fruit Marks Act" should be secured, because, from a producer's standpoint, the man who produces good eggs should not be called upon to pay for poor eggs produced by some other man.

The extension of co-operation in marketing as a means of increasing production and improving quality was the subject allotted to Dr. P. C. Gauthier, St. Louis, Prince Edward Island. "If we want to conquer," said the speaker "whether it be the English, French, or any other market, our whole army is quality. Our great national debt is not in bushels of potatoes or dozens of eggs but in dollars. We must therefore put a premium on quality so that the most money will be secured and production thereby increased. We must never forget that 75 per cent. of Canada's national debt must be paid from the sale of agricultural produce."

The Minister of Agriculture for the Dominion, the Honorable T. A. Crerar addressed the Conference briefly. "Of all branches of agriculture the poultry industry is perhaps the one in Canada that has received the least attention from Federal and Provincial Governments," said the Minister and remarked that but little or no emphasis is placed upon poultry by the average farmer. Reference was made to the fact that Holland and Denmark have in the past, purchased Canadian grain and feeding stuffs to turn them into bacon, butter and eggs with which to compete with our products on other European markets. Mr. Crerar laid great stress upon quality, especially in the marketing of perishable products. He welcomed the delegates to the conference and hoped that it would result in progress for he felt that the poultry industry had not received, in the past, the attention it deserved. "The farmers of Canada should have the very best that can be secured in the way of marketing facilities," said the speaker and when co-operative work is well planned, no branch of Canadian Agriculture need be afraid to compete in the markets of the world.

With regard to possibilities of export of breeding stock to Europe, R. J. Essex, Hamilton thought that poultrymen should take steps to take care of any possible business that may develop. Belgium is already taking steps to replace the stock removed by the Germans. The chairman suggested the appointment of a committee to cable for information to H. S. Arkell, Live Stock Commissioner, Ottawa, now in England and who it was understood was to cable the conference on the situation in European countries with regard to poultry.

John S. Porter, Live Stock Branch, Ottawa, discussed "Egg and Poultry Markets Reporting." Efficiency is the prime object in successful marketing or selling, said the speaker. Machinery should be provided to get market intelligence to the farmer or association as quickly as possible. Governments should have every kind of information at their disposal that is at the disposal of the trade; and, perhaps more so, because no private business is as big as that of the whole country. The weekly report and daily market wire of the Poultry Division now published, is greatly appreciated. A permanent market representative of the egg and poultry industry in England could be of untold value. Precision and promptness in decisions of policy is absolutely necessary in commercial concerns but does not seem possible in departments of governments. The Canadian poultry industry is capable of enormous expansion but this expansion can only come through co-operation, efficient marketing information and service.

On Wednesday afternoon Professor Graham introduced the subject of Record of Performance work for poultry. There is an increased demand, he said, for bred-to-lay strains of poultry. This has led to some deception in advertising pure-bred stock. It appears evident that egg production is inherited, to some extent at least, through the male, and in an endeavor to meet the demand for bred-to-lay stock, 125 breeding stations have been established in the Province of Ontario. The longest foundation stock for any record of performance work with poultry is our present fancy or exhibition stock, bred to lay. We need co-operation in breeding as well as feeding, and the fancier and the utility man must be brought together on some common ground. Fancy pure-bred stock of low-producing quality should not sell on the reputation of a very few high producers in a flock. The simplest system would be to trap nest on the owner's farm, under official inspection, because this would permit the test to be carried out under natural conditions for the hen. This work is decidedly of a Federal nature, but the Province of Ontario will start it if the Dominion does not. R. J. Essex, Hamilton, entered a plea for further consideration on the part of Department of Agriculture, of poultry fanciers. The fanciers, argued the speaker, are really responsible for any permanent improvement that takes place in the poultry industry.

The Chairman read a letter from Prof. Edward Brown, the English authority, inviting two delegates from the Dominion Government to attend an international conference of poultry instructors and investigators to be held in London, England, during the first half of March. Professor W. R. Graham, President of the American Association of Instructors and Investigators, reviewed the origin of the International Association and thought that this was a splendid opportunity for representatives of the Canadian poultry industry to gather information as to European conditions and market conditions. The speaker thought W. A. Brown and F. C. Elford should be granted authority immediately to proceed to England. A resolution was drawn up and a committee of three appointed to present the opinion of the conference to the Acting-Deputy Minister.

E. S. Archibald, Acting-Director of the Dominion Experimental Farms System, spoke for a few minutes at the conclusion of the conference on Thursday. The speaker expressed his willingness to assist in the development of the poultry industry in whatever way might be of advantage. The elasticity of the Experimental Farms System was emphasized, its growth during the past 30 years or more and the improvement in poultry quality on these farms during the past few years, briefly noted. A system for the producer, the Experimental Farms stands for whatever is good for the industry.

A summary of the recommendations drawn up and endorsed at this convention will appear in next week's issue.

## FARM BULLETIN.

### Session of Dominion House Opens Quietly.

It is safe to say that few sessions of the Dominion Parliament since Confederation, have opened so quietly, and under such a pall of deep mourning as the one now in session. The sudden death of Sir Wilfrid Laurier, Leader of the Opposition and former premier of the Dominion for many years, has served to bring home to everyone the quality of his statesmanship. Injected into the seething political comment that always precedes a struggle between the opposing parties in the House, there has come suddenly a new element of uncertainty as to what will happen. The Opposition, with ranks now badly depleted, looked to the leadership of Sir Wilfrid and the uncertainties of the times to regain some lost strength. The sudden loss of leadership, especially when combined with the loss of Canada's oldest statesman, leaves everyone in doubt as to what the result will be.

At the time of writing everyone seems entirely taken up with preparations for the state funeral, and thousands of people are wending their way, hour after hour, to look once more on the face of the late Liberal Chief. The opening of the House on Thursday, February 20, was very brief and entirely unimposing except for the heavy drapery of black and purple that everywhere proclaimed the sadness of the occasion. After a few brief moments the House adjourned until Tuesday out of respect for the late Sir Wilfrid Laurier.

But even the death of so eminent a statesman cannot dispel entirely the anxieties of party adherents as to the probable course of events. It is safe to say that at this date no one can predict with any degree of assurance what will actually come of the present session. Apparently Government and Opposition are both floundering; both of them without a leader. Sir Thomas White, as Acting-Premier, does head the Government, but with Sir Robert Borden in Europe and the issue of the Peace Conference still undecided, the road ahead is none too clear. Something depends, also, on the successor elected to follow Sir Wilfrid Laurier, as Opposition Leader. Of this little can be said except that it is rumored that a leader has been chosen, but that he is "a dark horse," and is not among those mentioned during the few days following Sir Wilfrid's death by the daily press. Speculation is rife, and possibly before the time this reaches our readers the real leader will be known.

Toronto (Union)  
Montreal (Pt.)  
Montreal (East)  
Winnipeg.....  
Calgary.....  
Edmonton.....

Toronto (Union)  
Montreal (Pt.)  
Montreal (East)  
Winnipeg.....  
Calgary.....  
Edmonton.....

### Market

Toronto (Union)

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# Toronto, Montreal, Buffalo, and Other Leading Markets

## Week Ending February 20

## Receipts and Market Tops

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

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13
Toronto (Union Stock Yards)	6,220	5,081	8,654	\$15.50	\$12.25	\$16.50	427	663	405	\$17.50	\$17.00	\$17.00
Montreal (Pt. St. Charles)	658	555	761	14.00	12.25	12.40	477	528	383	15.50	16.00	16.00
Montreal (East End)	894	648	485	14.00	12.25	12.40	204	376	290	15.50	16.00	16.00
Winnipeg	3,005	1,335	2,564	15.00	11.50	15.00	79	28	55	11.75	12.00	11.00
Calgary	3,672	885	2,263	15.60	11.50	16.00						
Edmonton	1,364	285	1,445	14.25	11.00	13.50	25	28	70	11.00	11.50	11.00

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13	Week Ending Feb. 20	Same Week 1918	Week Ending Feb. 13
Toronto (Union Stock Yards)	6,111	11,514	5,761	\$18.25	\$19.10	\$17.75	1,378	579	2,123	\$16.25	\$19.00	\$16.25
Montreal (Pt. St. Charles)	2,008	1,991	1,360	17.75	19.75	17.25	109	121	239	14.50	17.00	17.25
Montreal (East End)	777	1,348	471	17.75	16.75	17.25	219	85	204	14.50	17.00	17.25
Winnipeg	10,027	7,533	9,550	17.00	18.75	17.00	123	6	75	15.25		15.25
Calgary	4,154	2,756	3,648	15.75	19.75	17.15	1,654	104	44	13.50		13.50
Edmonton	1,116	713	995	16.00	18.75	17.25	295	17	115	13.00		13.00

### Market Comments.

#### Toronto (Union Stock Yards.)

Following a sharp decline on the American markets, local prices on butcher cattle received a set back of about twenty-five to fifty cents on most grades of cattle during Monday's trading, followed by a further decline of fifty cents on Tuesday. However, with comparatively light receipts on Wednesday a good deal of the decline was recovered and the improved trading was followed by a stronger market and higher prices on Thursday when only three hundred cattle were on sale. Prices on the latter day were about on a level with the closing prices of the previous week. The American demand continued and eighteen hundred to twenty hundred cattle were purchased. Shipments of butcher cattle were also made to Montreal and Hull, Quebec. In addition to the outside demand, local abattoir buyers were in the market with larger orders, and these were mainly responsible for the recovery of prices on the last two days of the week. Providing the farmers do not flood the market with unfinished stock, it can reasonably be expected that choice cattle will remain consistently high during the spring months, and experienced dealers are predicting record prices for May and June deliveries. The quality of the offering was not equal to that of the previous two weeks and only a few loads of really choice cattle were on sale on Monday. A few head of heavy steers sold at \$17.50, two or three loads at \$15.50 to \$16, while quite a number of loads of eleven hundred to twelve hundred pounds average sold from \$14 to \$15. Handy-weight butcher steers sold up to \$13.75 per hundred and most of those of good quality from \$12.50 to \$13.25. Few heifers reached \$13, the class sold mostly under \$12.75. Choice cows and bulls were in good demand all week and prices remained steady and even appeared a shade higher in some instances. Several loads of bulls were bought for outside shipment and this was responsible for the stronger market. Most of the good to choice bulls sold from \$10 to \$11, while one of two sales were made at \$11.25 and \$11.50 per hundred. One choice load of cows sold at \$12.10 per hundred, but this price was away above the average transaction, as most of the good cows sold from \$9.75 to \$10.75 per hundred. Canners and cutters were about steady, and stockers and feeders were unchanged with only a limited demand prevailing. Calves sold at about steady prices, top calves reaching \$17.50 and the majority selling from \$15 to \$16.50 per hundred. Lambs and sheep were inclined to be a little easier with best lambs realizing \$16.25.

The hog market strengthened during the week and \$18 to \$18.25 per hundred were paid for fed and watered hogs on Monday. For the balance of the week \$18 per hundred appeared to be the prevailing price. Anticipation of the opening overseas outlet was responsible for the advance in price.

Of the disposition from the Yards for the week ending February 13, Canadian packing houses purchased 140 calves, 4,119 butcher cattle, 167 hogs and 1,074 lambs. Local butchers purchased 223 calves, 150 butcher cattle, 229 hogs

CLASSIFICATION	No.	TORONTO (Union Stock Yards)				MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range	Bulk Sales	Top Price	No.	Avg. Price	Price Range	Top Price
STEERS									
heavy finished	54	\$15.75	\$15.00-\$16.00		\$17.50				
STEERS good	506	14.30	13.75-15.00		15.50	29	\$13.75	\$14.00-\$	\$14.00
1,000-1,200 common	29	12.50	11.75-13.00		13.00				
STEERS good	1,294	12.94	12.00-13.50		13.50	54	12.00	11.00-12.50	13.00
700-1,000 common	569	10.77	10.50-11.50		11.75	126	10.50	8.50-10.75	10.75
HEIFERS good	813	12.48	12.00-13.00		13.00	5	10.50	10.00-11.00	11.00
fair	327	10.71	10.00-11.75		11.75	23	9.00	8.50-10.00	10.00
common	24	9.25	8.75-9.50		9.50	29	7.75	7.00-8.50	8.50
COWS good	472	9.97	9.50-10.50		11.00	35	9.75	9.00-10.50	12.00
common	827	7.50	7.00-8.25		8.75	65	8.00	6.50-8.75	9.00
BULLS good	100	9.96	9.50-10.50		11.00	7	10.00	9.00-10.50	11.00
common	109	7.84	7.50-8.50		9.50	73	7.50	6.00-8.50	9.00
CANNERS & CUTTERS	189	6.00	5.75-6.25		6.25	132	5.00	4.75-5.50	6.00
OXEN						2			
VEAL veal	411	15.43	14.00-17.00		17.50	468	14.50	14.00-15.00	15.50
grass	16	7.00	6.00-8.00		8.00	9	6.50	6.00-7.00	7.00
STOCKERS good	325	9.78	9.50-10.50		10.50				
450-800 fair	201	8.48	8.00-9.50		9.75				
FEEDERS good	272	11.50	11.00-12.00		12.00				
800-1,000 fair	109	10.60	10.00-11.00		11.00				
HOGS selects	5,727	18.18	17.50-18.25		18.25	1,247	17.75	17.75-	17.75
heavy	2					16	16.75	16.75-	16.75
(fed and watered) lights	212	16.00	15.50-16.00		16.00	98	15.75	15.75-	15.75
sows	165	15.48	14.50-16.00		16.00	16	14.75	14.75-	14.75
stags	5	12.90	12.50-13.00		13.00	5			
LAMBS good	1,140	15.50	15.25-15.75		16.25	19			
common	105	12.25	11.00-14.00		14.00	66	14.25	14.00-14.50	14.50
SHEEP heavy	53	9.00	8.00-9.50		9.50				
light	53	9.90	9.00-10.50		10.50	11	10.50	10.50-	10.50
common	27	6.00	5.00-7.00		7.00	13	9.50	9.00-10.00	10.00

and 960 lambs. Canadian shipments were made up of 24 calves, 85 stockers and 79 feeders. Shipments to United States points consisted of 159 calves, 3,726 butcher cattle, 115 feeders and 19 hogs.

The total receipts from January 1 to February 13, inclusive, were: 40,848 cattle, 3,413 calves, 44,081 hogs and 18,633 sheep; compared with 27,099 cattle, 2,897 calves, 50,434 hogs and 7,454 sheep, received during the corresponding period of 1918.

#### Montreal.

While the top sales of cattle were made at much higher prices than those of the previous week, this was owing to a better quality of stock; there was very little change in values. The best load of steers was shipped in from the east and averaged eleven hundred and seventy-five pounds per head, and sold at \$14 per hundred. A small lot of lighter steers sold at \$13.25. Many of the steers offered weighed from nine hundred to ten hundred pounds each, and were in only fair to medium flesh; these sold from \$10.75 to \$11 per hundred. One lot of young steers of dairy breeding sold at \$7.25 and one or two good cows and a good heifer sold at \$12. There was a better quality in the common grades of butcher cows and the best of these sold up to \$9. Poor cows

sold from \$6.50 to \$7.25, cutters from \$5.25 to \$6 and canners at \$4.25. Canner bulls sold from \$6 up and fat bulls from \$9 to \$10.50, according to quality and breeding. The veal calves offered were all of dairy origin and sold in most cases from \$14 to \$15 per hundred.

Lambs sold generally at \$14.50 per hundred, regardless of quality, while a few of the best sheep sold at \$10.50.

Hogs were steady at \$18 per hundred for selects, off cars, with a much better quality offered. The feeling about the market does not indicate a higher price for the next week's market.

Pr. St. CHARLES.—Of the disposition from the Yards for the week ending February 13, Canadian and local butchers purchased 383 calves, 196 canners and cutters, 101 bulls, 435 butcher cattle, 669 hogs and 78 lambs. No shipments were made to United States points during the week.

The total receipts from January 1 to February 13 inclusive, were 5,557 cattle, 1,659 calves, 7,585 hogs and 4,483 sheep, compared with 4,254 cattle, 1,249 calves, 6,909 hogs and 4,706 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending February 13, Canadian packing houses and local butchers purchased 290 calves, 334

butcher cattle, 471 hogs and 7 lambs. Canadian shipments were made up of 31 butcher cattle. Shipments to United States points consisted of 74 butcher cattle and 197 lambs.

The total receipts from January 1 to February 13, inclusive, were: 6,369 cattle, 1,123 calves, 4,365 hogs and 4,721 sheep, received during the corresponding period of 1918.

#### Buffalo.

Cattle.—Cattle prices showed a substantial decline at Buffalo last week, the result of a more liberal supply than the needs called for. There were around 150 cars of Canadians, mostly steers and a desirable kind of fat heifers. Prices on steers ranged from 15c. to 25c. lower on the tippy grades, while a medium and fair kind showed as much as 50c. to 75c. decline, as compared with the previous week. Best native steers sold up to \$17.75 to \$18.25, with the best Canadian steers landing around \$16. Practically all grades of butchering cattle were a big half dollar lower. Western markets were well supplied, and this contributed towards a weak trade at Buffalo. On stockers and feeders the demand was for the better kinds of feeders, which sold up to \$11.50 to \$12, finding fairly good sale.

ETIN.

use Opens

of the Dominion opened so quietly, as the one now Wilfrid Laurier, premier of the to bring home to ship. Injected that always pre parties in the element of un The Opposition, d to the leader- es of the times loss of leader- loss of Canada's ubt as to what

seems entirely ate funeral, and way, hour after the late Liberal on Thursday, ely unimposing and purple that the occasion. adjourned until Wilfrid Laurier. statesman cany adherents as safe to say that any degree of present session. ion are both r. Sir Thomas e Government, and the issue of the road ahead also, on the Laurier, as Op- id except that en, but that he ose mentioned rid's death by possibly before leader will be



Every farmer who desires  
to do business with

### The Molsons Bank

is always assured of a courteous reception by local managers. And their object is to assist the farmer in a legitimate way, to make his land and stock more productive.

Bulls of all kinds were lower, while a steady market value was maintained on the better grades of milk cows and springers. Offerings for the week totaled 6,850 head, as against 7,375 for the previous week, and as compared with 2,675 head for the corresponding week a year ago. Quotations:

Shipping Steers, Natives.—Choice to prime, \$17 to \$18.50; fair to good, \$16.25 to \$16.75; plain and medium, \$12 to \$14; coarse and common, \$10.50 to \$11.

Shipping Steers, Canadians.—Best heavy, \$15.50 to \$16; fair to good, \$13.50 to \$15.25; medium weight, \$12 to \$15; common and plain, \$10.75 to \$11.

Butchering Steers.—Yearlings, choice to prime, \$16 to \$17; choice heavy, \$16 to \$16.50; best handy, \$14.50 to \$15; fair to good, \$12.50 to \$14; light and common, \$10 to \$11.

Cows and Heifers.—Best heavy heifers, \$11.50 to \$12; good butchering heifers, \$11.25 to \$12; fair butchering heifers, \$10 to \$10.50; light common, \$8 to \$9; very fancy fat cows, \$10.50 to \$11; best heavy fat cows, \$9.50 to \$10; good butchering cows, \$9 to \$9.50; medium to fair, \$7.75 to \$8.25; cutters, \$5.50 to \$6; canners, \$4.75 to \$5.

Bulls.—Best heavy, \$10 to \$10.50; good butchering, \$10 to \$10.25; sausage, \$8 to \$9; light bulls, \$7.25 to \$8.

Stockers and Feeders.—Best feeders, \$10.50 to \$11; common to fair, \$8 to \$9.50; best stockers, \$8.75 to \$9.25; fair to good, \$8.25 to \$8.75; common, \$5 to \$7.

Milchers and Springers.—Good to best, small lots, \$100 to \$135; in carloads, \$90 to \$100; medium to fair, small lots, \$80 to \$85; in carloads, \$70 to \$75; common, \$50 to \$55.

Hogs.—Buffalo had a big run last week, as a result of which prices were on the decline. Monday values went off 45 cents from the previous week's close. A few decks of heavies made \$18.25, but the bulk of the good native hogs sold at \$18.15 and Canadians, of which there were only ten decks, ranged from \$18 to \$18.15. Pigs dropped 50 to 75 cents, those selling largely at \$16.50. Tuesday prices showed a further decline, top being \$18, bulk landed at \$17.90, and pigs went as low as \$16. Wednesday the trade was still lower. Top was the same as Tuesday—\$18—but only one deck sold above \$17.90, and the bulk of the hogs that weighed under 220 pounds went at the minimum price of \$17.70. Pigs ranged as low as \$15.75. Thursday the market was strong to a dime higher, bulk of the good hogs selling at \$17.80, with few pigs landing below \$16, and Friday heavies sold mostly at \$18, decks weighing from 215 to 240 pounds sold mostly at \$17.90, and those averaging less than 215 pounds went largely at \$17.80, with some that ran pretty light down to \$17.75. Pigs were steady, bulk going at \$16. General price for good throwout roughs was \$15.50, and stags ranged from \$13 down. The past week's receipts reached 36,200 head, being against 24,753 head for the week before, and 19,800 head for the same week a year ago.

Sheep and Lambs.—Lamb values were on the jump the first four days of the past week. Monday tops sold at \$18 and \$18.15, with culls going from \$16.75 down, and by Thursday the best lots brought up to \$18.70 to \$18.85. Friday the trade was lower, top being \$18.50. Cull lambs were strong the latter part of the week, best in this line bringing up to \$17.50. Sheep were active all week. Top for yearlings was \$16.50, two-year-olds sold up to \$15, top for wether sheep

## FARMERS' BUSINESS

For the past 54 years, this Bank has given particular attention to the business of Farmers.

We have helped many over the rough places, and have aided many more to the highest plane of success.

We are prepared to extend you every aid within legitimate banking practice.

Come in at any time and talk over your affairs with us. You are always welcome.



## THE MERCHANTS BANK OF CANADA

Head Office: Montreal. Established 1864.  
With its 107 Branches in Ontario, 34 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 25 Branches in Manitoba, 34 Branches in Saskatchewan, 65 Branches in Alberta and 8 Branches in British Columbia serves Rural Canada most effectively.  
WRITE OR CALL AT NEAREST BRANCH

was \$14, and ewes ranged from \$12.50 down. The past week's receipts were 19,700 head, as against 22,791 head for the week preceding, and as against 16,700 head for the same week a year ago.

Calves.—An active trade was had all of the past week, and prices were on the jump. Monday tops sold at \$19.50; Tuesday's top was \$20; Wednesday some brought \$20.25; Thursday the bulk made \$20.50, and Friday prices were a dollar higher, majority going at \$21.50. Cull grades were little changed all week, selling mostly from \$16 down. Receipts for the past week were 3,300 head, being against 4,280 head for the week before, and 2,100 head for the same week a year ago.

### Toronto Produce.

Receipts at the Union Stock Yards, West Toronto, on Monday, February 24, consisted of 192 cars, 3,708 cattle, 242 calves, 1,962 hogs, 344 sheep and lambs. Active market at prices steady with last week's. Quality of offering generally poor and consisting of light steers and heifers. Top for loads, \$15.50 for twenty steers averaging 1,150 pounds each. Cows strong; tops at \$11 to \$11.75. Bulls strong; best at \$10.50 to \$11.50. Calves, 25 to 50 cents higher; top, \$18. Sheep steady. Lambs higher; top \$17 for 26 head averaging 90 pounds each. Hogs, \$18, fed and watered.

The United Farmer's Co-operative Co., Ltd., commenced operations last week. While they had only a limited number of cars, they, however, topped the market for butcher cows when they sold 11 head at \$12.10 per cwt. They also topped the lamb market when they sold 44 head, average weight 107 lbs., at \$16.40 per cwt. Charles McCurdy, who has been connected with the cattle trade in Toronto for the past 30 years, is in charge of the selling staff, while Mr. Fullthorp is in charge of the office end of the business.

Wheat.—Ontario f.o.b. shipping points, (according to freights). No. 1 winter, per car lot, \$2.14 to \$2.22; No. 2 winter, per car lot, \$2.11 to \$2.19; No. 3 winter, per car lot, \$2.07 to \$2.15; No. 1 spring, per car lot, \$2.09 to \$2.17; No. 2 spring, per car lot, \$2.06 to \$2.14; No. 3 spring, per car lot, \$2.02 to \$2.10. Manitoba wheat, (in store, Fort William, not including war tax)—No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11½.

Oats.—Manitoba (in store, Fort William), No. 2 C. W., 70½¢; No. 3 C. W., 62½¢; extra No. 1 feed, 63½¢; No. 1 feed, 60½¢; No. 2 feed, 56½¢.

Oats.—Ontario, (new crop), according to freights outside; No. 2 white, 58¢ to 61¢; No. 3 white, 57¢ to 60¢.

Corn.—American, (track, Toronto, prompt shipment), No. 3 yellow, \$1.50; No. 4 yellow, \$1.47.

Barley (according to freights outside)—malting, 75¢ to 80¢.

Barley.—(Manitoba in store, Fort William), No. 3 C. W., 83½¢; No. 4 C. W., 78½¢; rejected, 70½¢; feed, 70½¢.

Rye (according to freights outside)—No. 2, \$1.25, nominal.

Peas (according to freights outside)—No. 2, \$1.75 to \$1.80, nominal.

Buckwheat (according to freights outside)—No. 2, 95¢, nominal.

Flour.—Ontario (prompt shipment) Government Standard, \$9.75, in bags; Montreal and Toronto. Manitoba,

Government Standard, \$10.85 to \$11.10 (Toronto).

### Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$20 to \$21; mixed, per ton, \$18 to \$19.

Straw.—Car lots, per ton, \$10 to \$11. Bran.—Per ton, \$40.25; shorts, per ton, \$42.25; good feed flour, per bag, \$3.25 to \$3.50.

### Country Produce.

Butter.—Butter had an easier tendency on the wholesales, though prices on fresh-made creamery kept stationary, the solids declining slightly. Creamery, fresh-made lb. squares, 56¢ to 57¢ per lb.; creamery cut solids, 53¢ to 54¢ per lb.; dairy, 45¢ to 50¢ per lb.

Oleomargarine kept stationary in price, selling at 33¢ to 34¢ per lb.

Eggs.—New-laid eggs again declined selling at 50¢ per dozen, wholesale; selected, in cartons, bringing 53¢ to 55¢ per dozen.

Cheese.—New, 28¢ per lb.; twins, 28½¢ per lb.

Honey.—Honey prices eased slightly on the wholesales, being quoted as follows: 5, 10 and 60-lb. pails, 28¢ to 25¢ per lb.; comb sections, 30¢ to 40¢ each.

Poultry.—Prices being paid to producer, live weight: Chickens, crate-fed, 27¢ per lb.; chickens, 25¢ per lb.; hens, under 4½ lbs., 23¢ per lb.; hens, 4½ to 5 lbs., 26¢ per lb.; hens, over 5 lbs., 30¢ per lb.; roosters, 20¢ per lb.; ducks, 32¢ per lb.

### Wholesale Fruits and Vegetables.

Business continued in its dull, draggy condition on the wholesale fruit and vegetable market; prices remaining practically stationary on the bulk of the offerings.

Beans.—Prime white beans ranged from \$2.75 to \$3 per bushel, according to quality; hand-picked at \$3 to \$3.50 per bushel.

### Montreal.

Dressed Hogs.—Dressed hogs were in good demand, and the general tone of the market was firm. Country dressed hogs sold at 22¢ to 23¢ a lb. for medium and light weights.

Poultry.—Prices of turkeys were firm with choice stock selling at 43¢ to 45¢ per lb. Chickens raised from 35¢ to 40¢, according to quality, and fowls at 28¢ to 32¢. Ducks sold all the way from 33¢ to 38¢, and geese 27¢ to 30¢.

Eggs.—Consumption of eggs has been quite large at the lower prices prevailing. Wholesale prices for new-laid stock were unchanged at 55¢, while the cold-storage stock ranged from 47¢ to 50¢. At these prices, high though they are, eggs are said to be relatively cheaper than meat.

Butter.—The butter market drags along without much alteration, and it is doubtful if anything new will transpire until new butter is available. Creamery was quoted at 51½¢ to 52¢ for finest, and at 51¢ to 51½¢ for fine. Dairies were 42¢ to 45¢.

Cheese.—Prices were unchanged with the Commission still quoting 25¢ per lb. for No. 1, 24½¢ for No. 2, and 24¢ for No. 3.

Grain.—Canadian No. 2 Western oats were quoted at 82¢; No. 3 were 77¢; extra No. 1 feed, 78½¢; No. 1 feed, 75½¢; No. 2 feed, 71½¢. Ontario No. 2 white, 72¢; No. 3 white, 71¢; Ontario extra No. 3 barley, 89¢; No. 3, 97¢; and

## THE ROYAL BANK OF CANADA

Capital Authorized - - \$ 25,000,000  
Capital paid up - - - 14,000,000  
Reserve Funds - - - 15,000,000  
Total Assets - - - - 393,800,000

HEAD OFFICE: MONTREAL

Branches throughout every Province  
of the Dominion of Canada.

ACCOUNTS OF FARMERS INVITED  
SALE NOTES COLLECTED

SAVINGS  
DEPARTMENT  
AT ALL BRANCHES

Manitoba sample barley, 90¢ per bushel, ex-store.

Flour.—The price of flour declined during the past week. Car lots of Manitoba spring wheat Government Standard flour was \$11 per barrel, for shipment to country points, Montreal freights, or to delivery to city bakers, ex-track, with 10¢ off for spot cash. Ontario winter wheat flour was \$10.20 to \$10.30 per barrel, in new cotton bags. Substitute flour was in poor demand with white corn flour at \$9.60 and rye flour at \$10.50 per barrel, in bags, delivered.

Millfeed.—Straight cars of shorts were quoted at \$44 to \$44.50 per ton, with some asking higher. Bran was \$40.25 to \$40.50 in limited quantities; pure grain mouille, \$64; oat mouille, \$60 to \$62; pure barley feed, \$50 to \$52; mixed grain mouille, \$47; and dairy feed, \$43 per ton, delivered.

### Gossip.

#### Sale Dates.

March 3 and 4, 1919.—Union Stock Yards, Toronto, Ont.—Horses.

March 5, 1919.—Guelph Fat Stock Club, Guelph, Ont.—Pure-bred Stock.—J. M. Duff, Secretary.

March 5, 1919.—Elsworth Plant, Burford, Ont.—Holsteins.

March 6, 1919.—Bruce County Breeders' Club, Walkerton, Ont.—Shorthorns. N. C. McKay, Secretary.

March 12, 1919.—Irwin McMahon, Hawkstone, Ont.—Shorthorns.

March 6, 1919.—Caledonia Shorthorn Breeders' Consignment Sale.—Shorthorns. H. A. Scott, Secretary.

March 6, 1919.—Geo. E. Morden, Oakville, Ont.—Shorthorns.

March 11, 1919.—Simeon Gingrich, R. R. 1, Blair, Ont.—Jerseys.

March 12, 1919.—Perth District Holstein Breeders' Club, Stratford, Ont.—A. C. Park, Secretary.

March 13, 1919.—London District Holstein Breeders', London, Ont.—John McMillan, Sec.

March 13, 1919.—Wm. T. McCormick, R. R. No. 1, Paris, Ont.—Shorthorns, Horses, etc.

March 14, 1919.—H. B. Taylor, Mount Elgin, Ont.—Holsteins.

March 18, 1919.—A. Hughes & Son, Sarnia, Ont.—Jerseys.

March 19, 1919.—John Elder, Hensall, Ont.—Shorthorns.

March 19, 1919.—Oxford Holstein Breeders' Club, Woodstock, Ont.—W. E. Thomson, Sec.—Treas.

March 20, 1919.—W. B. Poole and A. Groves, R. R. No. 5, Ingersoll, Ont.—Holsteins.

March 25, 1919.—Mrs. S. A. Moore, Caledonia, Ont.—Shorthorns.

March 26, 1919.—Brantford Holstein District Club, Brantford, Ont.—N. P. Sager, Sec., St. George, Ont.

March 26, 1919.—Western Ontario Consignment Sale, London, Ont.—Shorthorns.

March 27, 1919.—Elgin Holstein Breeders' Club Sale, St. Thomas, Ont.—E. C. Gilbert, Sec.

April 1, 1919.—J. J. Merner, Seaford, Scotch Shorthorns.

April 2, 1919.—Belleville District Holstein Breeders', Belleville, Ont.—Jas. Caskey, Sec., Madoc, Ont.

April 3 and 4, 1919.—Western Canada Shorthorn Show and Sale, Brandon, Man



**ROYAL BANK  
CANADA**

Authorized - - \$ 25,000,000  
 Capital - - - 14,000,000  
 Reserves - - - 15,000,000  
 Total - - - 393,800,000  
 OFFICE: MONTREAL

throughout every Province  
 Dominion of Canada.

OF FARMERS INVITED  
 NOTES COLLECTED

SAVINGS  
 DEPARTMENT  
 ALL BRANCHES

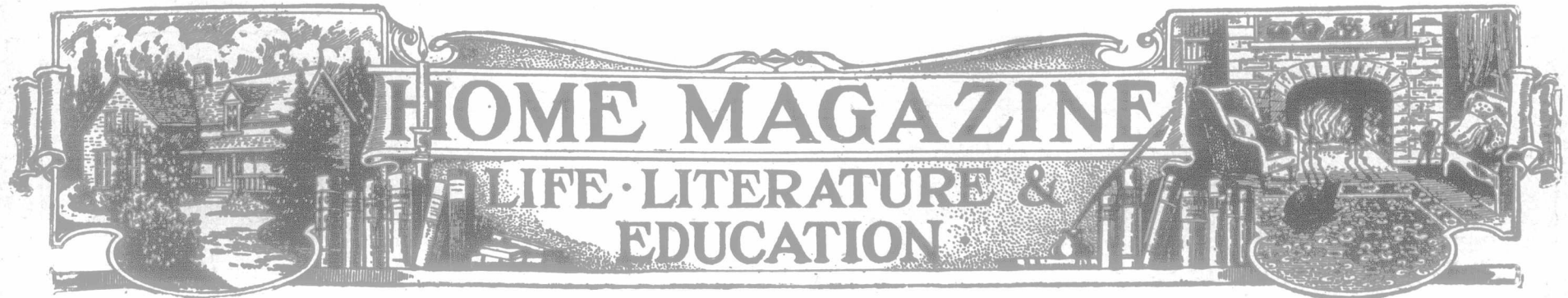
barley, 90c. per bushel.

price of flour declined  
 last week. Car lots of  
 wheat Government  
 was \$11 per barrel, for  
 country points, Montreal  
 delivery to city bakers,  
 10c. off for spot cash.  
 wheat flour was \$10.20  
 barrel, in new cotton bags.  
 was in poor demand with  
 at \$9.60 and rye flour at  
 el, in bags, delivered.  
 straight cars of shorts were  
 to \$44.50 per ton, with  
 higher. Bran was \$40.25  
 in quantities; pure grain  
 oat mouille, \$60 to \$62;  
 d, \$50 to \$52; mixed grain  
 and dairy feed, \$43 per ton,

**Gossip.**

**Market Dates.**

- 1919.—Union Stock  
 Ont.—Horses.
- 1919.—Guelph Fat Stock  
 Ont.—Pure-bred Stock—  
 Secretary.
- 1919.—Elsworth Plant, Bur-  
 stons.
- 1919.—Bruce County Breed-  
 kerton, Ont.—Shorthorns—  
 Secretary.
- 1919.—Irwin McMahan,  
 nt.—Shorthorns.
- 1919.—Caledonia Shorthorn  
 signment Sale.—Short-  
 scott, Secretary.
- 1919.—Geo. E. Mordein,  
 —Shorthorns.
- 1919.—Simeon Gingrich,  
 Ont.—Jerseys.
- 1919.—Perth District Hol-  
 Club, Stratford, Ont.—  
 retary.
- 1919.—London District  
 ers', London, Ont.—John
- 1919.—Wm. T. McCormick,  
 Paris, Ont.—Shorthorns,
- 1919.—H. B. Taylor,  
 nt.—Holsteins.
- 1919.—A. Hughes & Son,  
 erseys.
- 1919.—John Elder, Hensall,  
 s.
- 1919.—Oxford Holstein  
 Woodstock, Ont.—W. E.  
 reas.
- 1919.—W. B. Poole and A.—  
 No. 5, Ingersoll, Ont.—
- 1919.—Mrs. S. A. Moore, Cale-  
 northorns.
- 1919.—Brantford Holstein  
 Brantford, Ont.—N. P.  
 George, Ont.
- 1919.—Western Ontario  
 le, London, Ont.—Short-
- 1919.—Elgin Holstein Breed-  
 St. Thomas, Ont.—E. C.
- 1919.—J. J. Merner, Seaforth,  
 ns.
- 1919.—Belleville District Holstein  
 ville, Ont.—Jas. Caskey,  
 t.
- 1919.—Western Canada  
 and Sale, Brandon, Man



# The Passing of a Great Canadian Statesman.

"To be great is to be misunderstood."  
 —EMERSON.  
 "In joys, in grief, in triumphs, in retreat,  
 Great always without aiming to be  
 great."

AS this is being written there lies, surrounded by flowers, in the drawing-room of a dignified but unpretentious home in Ottawa, the mortal body of Canada's great statesman, Sir Wilfrid Laurier. Nor are the thousands of flowers pouring in upon the Laurier home the most beautiful of the tributes dropping everywhere to honor the memory of the great thinker and perfect gentleman who stepped out of life, so gently, on the afternoon of Feb. 17th: even more fair, in very truth, are the words of appreciation and praise, appearing in every paper in the Dominion, irrespective of sect or party. When Death comes to the truly great, hard thoughts and words fall away unnoticed and uncared for. Perhaps this is suggestive of the subconscious goodness of man.

Now that the stately figure of Sir Wilfrid will no longer be seen on the streets of Ottawa and in its place in the House, the whole story of his life is everywhere told, and the real greatness of the man appears as never before. In his death he will be better known, even to his followers, than he ever was, except to a few close friends, in his life.

Briefly.—He was born at St. Lin, Que., on the 20th of November, 1841, the eldest child of Carolus Laurier, a land surveyor, and his first wife, Marcelle Martineau Laurier. He was educated at New Glasgow, Que., (where he lived with a sturdy Scots Presbyterian,) at L'Assomption College and McGill University. In 1864 he became an advocate, practising first in Montreal and later at Arthabaskaville where, for a short time, he carried on a newspaper. In 1871 he was elected to the Quebec Legislature for Drummond and Arthabaskaville, and in 1874 was sent by the same constituency to the House of Commons where, immediately, because of his striking personality and wonderful oratory he became a notable personage. During 1877-8 he was Minister of Inland Revenue in the Mackenzie Government; in 1887 he became Leader of the Opposition, and in 1896 Prime Minister, which office he held until his Government was defeated in 1911 on the reciprocity issue. From that time until his death he was continuously Leader of the Opposition. In 1868 he married Mlle. Lafontaine of Montreal, who survives him.

These are the outlines. Between runs the story of struggle and criticism, triumph and confidence and occasional defeat, which lies about the pathway of every man who mounts to eminence. Sir Wilfrid was always marked by independence of thought and action. Although a devoted member of the Roman Catholic Church he did not hesitate to go against its disapproval of an earlier day when it conflicted with his ideals and his membership in the *Institut Canadien*, nor to set at naught the warnings of the local bishop against the liberal utterances to which he gave voice in his newspaper at Arthabaskaville, even though such defiance brought upon it the ban of the bishop and its subsequent collapse for lack of subscribers. Throughout his life, his untiring efforts were for a United Canada and peace and industry under the British flag. The period of his administration as Premier was marked by a growing prosperity, and history will

record the success of his efforts in establishing the British preferential tariff, in promoting the settlement of the West, and in the construction of a second transcontinental railway of which half is owned by the people. During the past year there came a split in his party, because of his opposition to conscription, and consequently he suffered defeat in the election of 1917. He refused to enter the Union Government, but put no stone in the way of its efforts. Conscription, he held, is contrary to liberal principles, and even in such emergency as the War he trusted the people to supply, if properly approached, the required quota of men. Since his death, also, the words of a prominent politician have been published in the papers, to the effect that Sir Wilfrid had told him, at the time of the agitation to "go ahead and do what he thought right." As for himself he "must hold the French," as otherwise they might go over to Bourassa and a rebellion be the result. However that may be, when defeat came he accepted it as gracefully as he had ever accepted triumph. Those who knew him best have told also of the serene loveliness of his home life and his great love for little children, although he had none of his own. His last days on earth came as he

could have wished. While getting ready for church on the morning of February 16th he was stricken with paralysis. There was no pain, no suffering. Little by little life ebbed away, and those who look upon the dead face to-day say that upon it rests the smile of a great serenity.

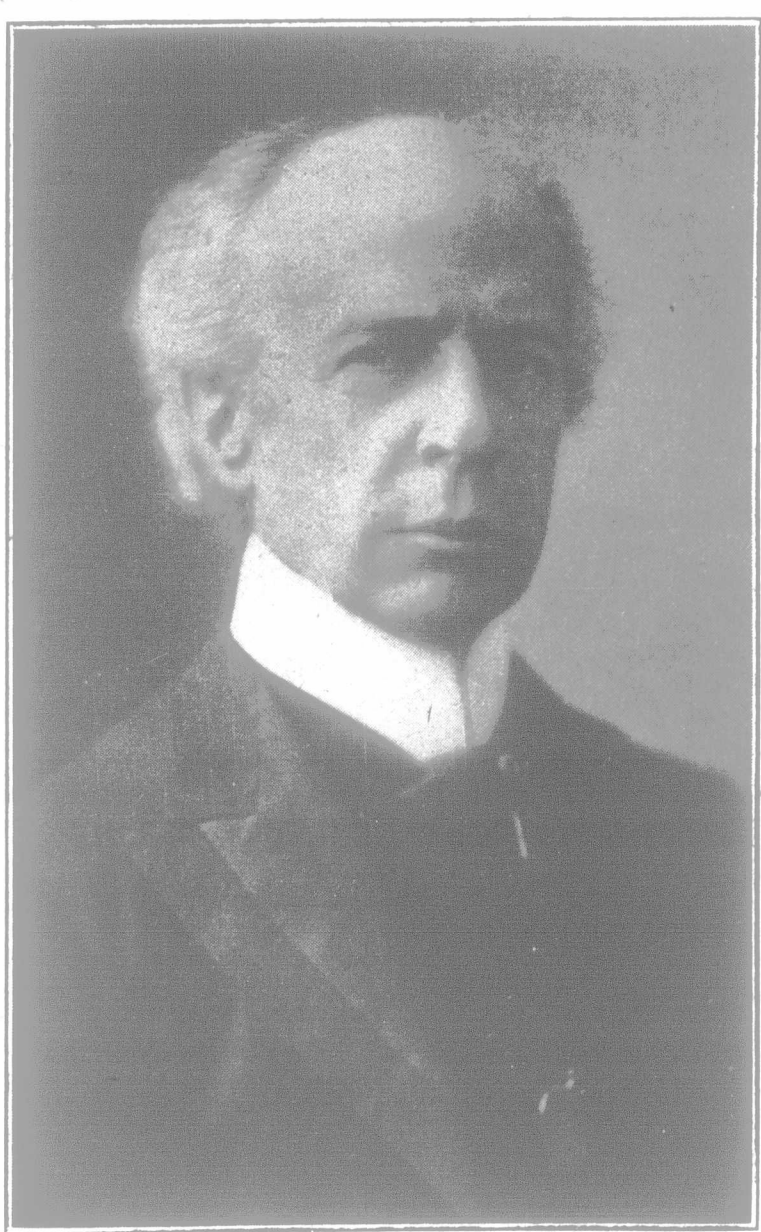
**The Last Great Scene.**

SINCE the above was written the last and greatest scene in the career of the departed statesman has taken place. In death, no matter how bright one's conception of the life to come may be, there is always a note of inexpressible sadness, a sense of the loneliness of coming years bereft of the smile, and the touch of the hand and the sound of the voice that will be heard no more on earth; but in the burial of the body of Sir Wilfrid Laurier there was a great beauty that, had one looked deep enough, must far have transcended the burden of loneliness and loss.—That great beauty was that the event was distinguished, most of all, by an absolute unity. Speaking to the young Liberals of Ontario at London, not so very long ago, this man who had striven all his life for the unity of Canada had said: "As for you who stand to-day on the threshold of life. ...I shall

remind you that many problems rise before you: problems of race division, problems of creed differences, problems of economic conflict, problems of national duty and national aspiration. Let me tell you that for the solution of these problems you have a safe guide, an un-failing light, if you remember that faith is better than doubt and love is better than hate. Banish doubt and hate from your life. Let your souls be ever open to the strong promptings of faith and the gentle influence of brotherly love. Be adamant against the haughty; be gentle and kind to the weak. Let your arm and your purpose, in good report or in ill, in victory or in defeat, be so to live, so to strive, so to serve as to do your part to raise the standard of life to higher and better spheres."—These words the veteran in life's lessons had said, and as his tired body went to its last resting place, through the streets of a city draped in mourning and lined with tens of thousands of silent people, race, creed and politics were all forgotten—the really great heart of Canada that lies beneath all friction beat with but a single thought, sorrow for the passing of a great man, and the aspiration that comes of the memory of a life that ever looked "up, not down."

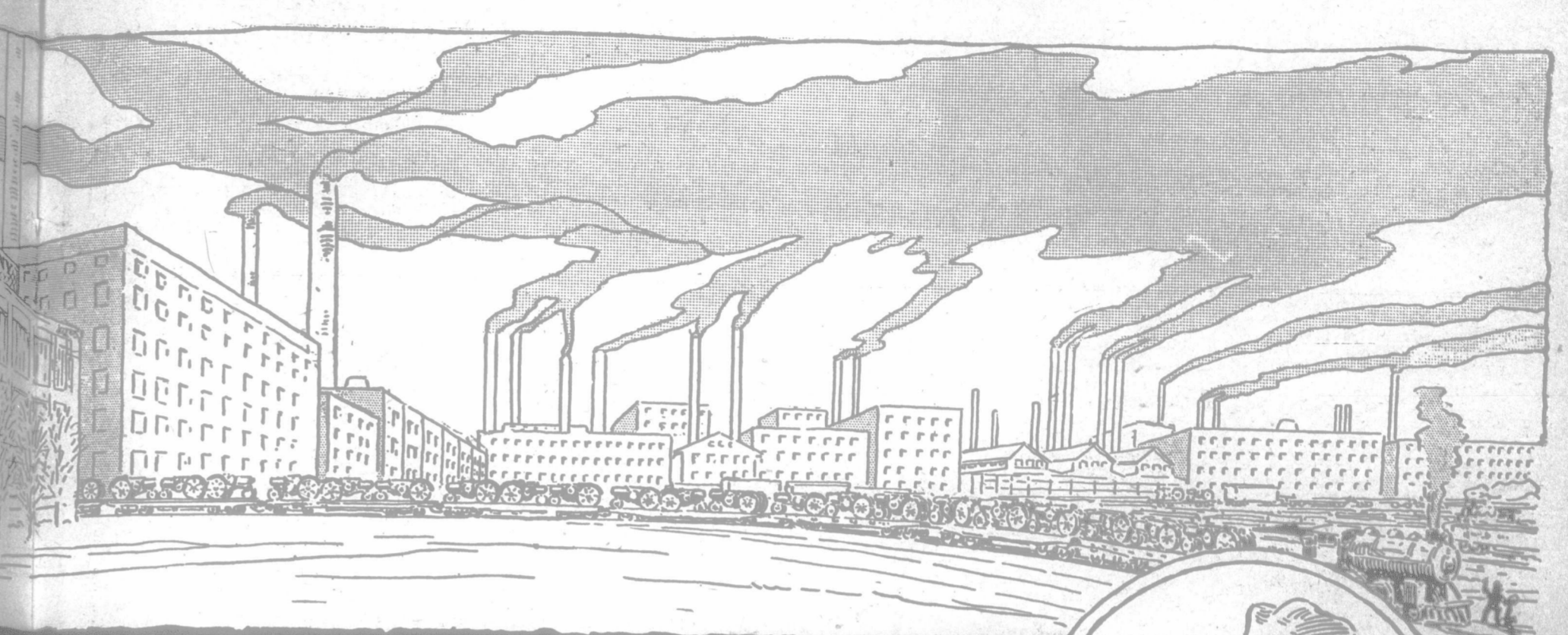
At the Basilica to which the body was removed for the last rites of the Church to which Sir Wilfrid had belonged, Catholic and Protestant united, all differences forgotten, as they should be always among human beings who, when all has been said, are really striving to attain the same ends. There, while the strains of sacred song from the lips of seventy-five singers filled the dim aisles, and following the solemn Pontifical Mass officiated by Mgr. Pietro di Maria, Apostolic Delegate to Canada, eulogies were spoken of the one who had gone, the mortal body of Sir Wilfrid lay beneath wreaths sent by the Government of Canada, the citizens of Montreal, and the Syrian community of Ottawa. When the funeral cortege left the cathedral, seven great sleighs carried the flowers sent as tributes from every part of the Dominion. At either side of the hearse walked the honorary pall-bearers: Sir Thomas White, Sir James Loughheed, Sir William Mulock, Hon. Sydney Fisher, Hon. Senator Belcourt, Sir Allen Aylesworth, Hon. Rodolphe Lemieux, Hon. Charles Murphy, Hon. Senator Dandurand, J. A. Robb, M. P., Hon. Senator Edwards, Hon. Senator David, Hon. Jacques Bureau, M. P., Sir Lomer Gouin, Hon. Frank Oliver, Mayor Lavigneur of Quebec. In the funeral procession there was no equipage save those carrying the representatives of Royalty, the Duke of Devonshire and his entourage. No martial music, no tramp of soldiers with bayonets reversed marked the way to the cemetery.—Just a procession of "plain people", two miles in length, followed the coffin—members of the Cabinet, Senators, Members of Parliament, Ambassadors of every county represented at the Canadian capital, the rich, the poor, farmers, Labor men.—Truly in his death Sir Wilfrid had accomplished what he had striven for in his life.—Canadian unity.

As the cortege passed Parliament Hill, the scene of the old orator's many triumphs, the eyes of the masses of people, lining the streets and in the procession, must have raised just once to the half-built House of Parliament, draped in mourning. And so on to the Cemetery of Notre Dame, where in a grave near the main entrance, shaded by stately poplars and close to a hedge of Canadian cedars, the casket was laid tenderly away.



Sir Wilfrid Laurier.





# 5% Early-Delivery Discount

EVERY industry in Canada and the United States is facing conditions today unlike any it has had to meet in the past. The reabsorption of millions of men back into their regular work without throwing men in the present organization out of employment is one problem that must be solved. This is far more serious for some industries than for others. For the Harvester Company it means taking back nearly 5,000 men into an organization, which, as an essential industry, it maintained at a high state of efficiency throughout the period of the war. It is going to be no easy matter to do the right thing by these boys, but the Company can and will do it. You can help if you will, and profit by helping.

To assist in providing places for these boys who are now coming back, many of whom left the tractor factories to join the ranks, it will be necessary to bring about an immediate increase in tractor production. The tractors will be needed, but before the Company can handle any greatly increased number of them, we must move forward to the farms some thousands that have been ordered for delivery at various dates up to May 1st.

### Too Many Say, "Ship My Tractor in April"

Many of you remember the difficulties connected with April and May shipments of tractors in past years. Do the best we could, we have never been able to supply the demand or make all deliveries as ordered. The need of tractors for Spring work comes at just the period in the year when great quantities of all kinds of Spring tools and implements are being rushed forward. Tractors cannot be moved as readily as implements.

Their size is against quick movement, and there is always more or less delay in securing flat cars. Railroad congestion must also be given serious consideration.

We naturally want to avoid these difficulties and escape the blame which we unjustly earn for being unable to fill late orders of tractors for Spring use. While the Company has already shipped 170 per cent more tractors this year than at the same time last year, yet the number of orders we are receiving for April shipment is so large that we shall not be able to make deliveries in time unless we can ship a large number of them at an earlier date.

Farmers who cannot take their tractors until later deserve as much consideration as those who must have theirs in April or early May, which is the peak month for the work of spring seed-bed preparation. Many farmers have placed their orders for delivery in April who could just as well take their tractors now, thus avoiding any chance of disappointment in delivery and enabling us to take care of the later orders, which we could not otherwise handle.

## Our Early-Delivery Discount Plan

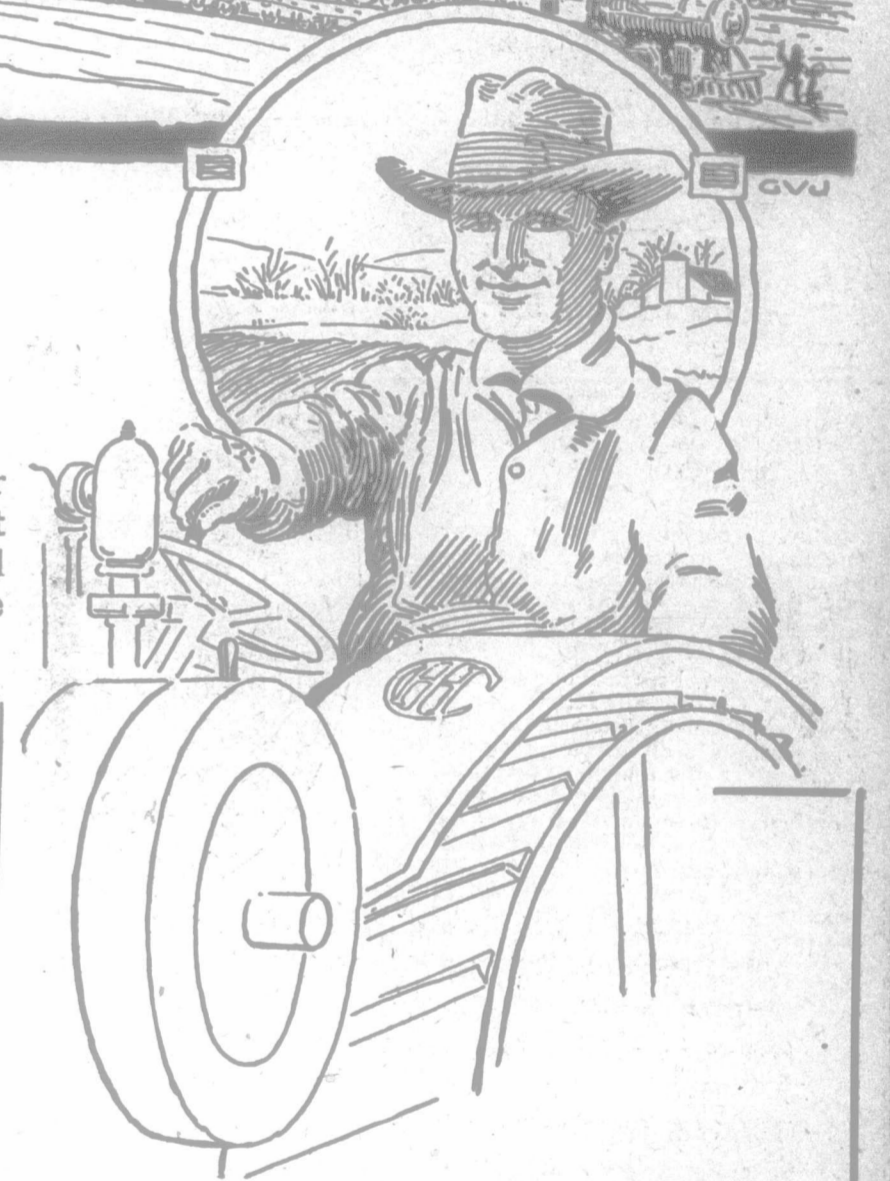
To you men who have already placed your orders for Mogul or Titan 10-20 tractors and who can accept deliveries immediately—and this applies equally well to those who have not yet ordered — we have the following proposition to make:

If you will take your Mogul or Titan tractor now instead of waiting for your specified delivery date we will reward your co-operation as follows:—

To those who will accept delivery of a Mogul or Titan 10-20 on or before March 15th we will give an Early-Delivery Discount of 5 per cent from the cash delivery price of the tractor. (This amounts to about \$60.00.)

After March 15th the following discounts will be given:

For delivery during week of March 17 to March 22 incl.	4%
" " " " " 24 " " 29 "	3%
" " " " " 31 " April 5 "	2%
" " " " " April 7 " " 12 "	1%



This discount will go a long ways toward paying the fuel bills of your tractor during this season.

By taking advantage of this Early-Delivery Discount, you will not only be helping yourself, but will enable the Company more easily to put back to work all the boys who have served their country so well without breaking up our present organization.

You will find that you need a few weeks to get acquainted with your new tractor. The man who gets his tractor early can become familiar with it, so that when the first day of good plowing weather dawns he will be able to get in the field without a moment's lost time. In itself we should deem that a sufficient reason for taking early delivery, but when you add to this the early delivery discount authorized above, we are sure you will agree that the man who has placed an order

for a tractor cannot possibly do better than ask for immediate delivery. Likewise, those who are thinking of buying some time this spring can well afford to make up their minds immediately that their tractor is going to be a Mogul or Titan 10-20 and that they are going to have it sent out to their farms at once.

Now that you know the situation, may we hope that you will act upon it at once? We have tried to set it before you in a broad-minded manner; one that would be fair and beneficial to everybody concerned. We await your response confident that you will see the wisdom of accepting this offer.

Go to your agent and tell him that you will accept immediate delivery of your Mogul or Titan 10-20 n. p. tractor, so he can make up his carload shipments without delay.

## INTERNATIONAL HARVESTER COMPANY OF CANADA, Ltd.

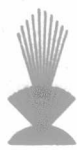
Branch Houses

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

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



# Flowers, Vegetables, Fruits, and a More Beautiful Canada.



[Farmers and farmers' wives have not, as yet, taken great interest in the association whose chief concern is with the things that are dealt with below.—But they are beginning to do so in some places.—And the interest is bound to become general, sooner or later. We ask a careful

reading of the report that follows. Not a step has been taken in any city or town that cannot be taken in any country place. Enthusiasm and effort will bring about any reasonable result. The towns, through the Association, are rapidly becoming beautiful; why not the country?

—Of necessity this report has been very greatly condensed, but a verbatim account will be published in the *Annual Report of the Horticultural Societies of Ontario*, which each present member and each member of any society formed during the year will receive.]



## Flowers and Birds.

BY JAMES RHODES, AUSTRALIA,  
in "Words of the Wayside."

Are flowers the very thoughts of God  
Made visible to bliss?  
If so it be, O happy ye  
Who such a faith confess,  
As led by April blossom-crowned  
Ye roam o'er vale and hill,  
With every here a cowslip crowned,  
And there a daffodil!

Are the birds' songs but jets of joy  
From the eternal Bliss?  
If it be true, O happy few  
With such a faith as this,  
As thrilled by many a feathered throat  
Ye roam o'er hills and vales,  
With every now the cuckoo's note,  
And then the nightingale's!

## The Horticultural Parliament of Feb. 5-7.

FOR four years the chief topic of papers and conversation at the Horticultural Association's Annual Convention has been "greater production." At the recent assembly, while the practical was by no means thrown aside, there was, quite noticeably, a joyful swing back towards the old concern about flowers, and the beautifying of homes, and building up of a more beautiful Canada. Now that the war is over, it was evidently felt that we can with a clear conscience turn some part of our attention again to these bright ways.

The sessions were held in the Forester's Hall, 22 College St., Toronto, in which some attempt had been made to rampart the platform with flowers. Incidentally, this was the first time any effort toward this end has been made at all, and the step may mark a beginning. Most public halls are, perhaps, a sorry place for choice growing plants, but a few jars of really fine cut flowers would be especially appropriate at the Horticultural Association's Assembly. Perhaps some of the delegates, the most of whom are, presumably, flower-growers, would be glad to contribute. The only contribution from the members, at the recent convention, was a collection of potatoes and other vegetables, including some splendid onions, which had been brought from Northern Ontario by Mr. Whorley of Haileybury.

### An Old Year and a New.

The sessions opened with the President, Mr. T. D. Dockray of Toronto, in the chair, and the Secretary and Editor, Mr. J. Lockie Wilson, occupying his accustomed place on the platform.

Both of the officers just mentioned, in setting the Convention going, touched on the work of the Association during 1918 and gave forecast of the work to be attempted during 1919. Mr. Dockray noted that while greater production of vegetables had been the chief work of the year the Horticultural Societies had been able to give valuable assistance to the Resources Committee whose work was given over to broader problems such as securing helps for farmers, money from the banks for production necessities, etc. During 1919 greater production must still be kept up, both for the sake of the stricken countries of Europe and for the development of thrift in ourselves. "The thrifty war-garden must not be permitted to become a weedy victory-garden."

Mr. Wilson, as Superintendent and Secretary, gave a synopsis of the outstanding features in the work of the various branches, of which there are now 99 with a membership of 18,000. Everywhere the growing of foodstuffs had been the first concern, but civic improvement had not been neglected, as this also was considered an obligation toward the

boys returning from the front. The branch reports in general told of extensive vegetable growing, holding of flower and vegetable exhibitions, distribution of seed to school children, etc. A few of the extra features, given here especially to show the scope of the Horticultural Association's work, were as follows:

**Hamilton**—Prizes for campaign against the tussock moth. **Chatham**—Very fine gardens; the beginning of an effort to make the place one of the most beautiful on the continent. **Lindsay**—Great extension of flower-beds and vacant-lot gardening. **London**—Three flower shows and experiments with growing peaches. **Toronto**—Use of Wright's Encyclopædia of Gardening. **Windsor**—Prizes to children for fresh and canned vegetables. Prosecutions for destruction of songbirds. **Winchester**—Planting of shade

grown as far north as the Peace River and the Yukon.

Mr. Whyte's garden was a great testing ground, where information was always available. He himself was one of the most enthusiastic members of the Ottawa Horticultural Society, and in 1912 he started the potato-growing contest for boys, which eventually covered both Carleton and Russell Counties, and had added to it a canning competition for girls. Mr. Whyte furnished the money for the prizes and literature, and by his will left \$500 a year to carry on this work. At various times he held the position of President of the O. H. A., and Director for his District. His death came quietly and suddenly on April 15th; but a few minutes before he had been working in his garden. He was 67 years of age.

Truly Mr. Whyte was, as Rev. Dr. Scott remarked later in the Convention, a great man and "a true friend of the boys and girls."

### Mutilation of Shade Trees.

This subject was introduced by Mr. Dockray, who said that the Guelph Society had, under the Tree Planting Act, prosecuted and secured the conviction of a lineman who had mutilated trees along a highway. Subsequent discussion brought out that the Hydro Electric Co. one of the chief offenders against trees, has taken shelter behind a provision that inserts the word "reasonably" in the clause governing its actions concerning trees, and so has done about as it liked. Dr. Bennett thought the subject should be brought before the Legislature. Finally a Committee (Mr. J. Lockie Wilson, Mr. Evans, Toronto, and Mr. V. A. Sinclair, Tillsonburg) was appointed to draft resolutions re this and other matters and present them to the Government.



Mr. T. D. Dockray.

Retiring President of the O. H. A., now  
Honorary Director.

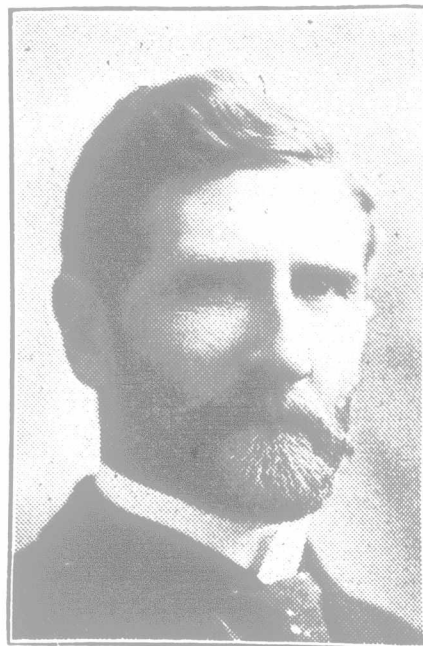
trees and perennials. **Carleton Place**—Specializing in peonies and tulips. **Ottawa**—Lectures attended by 10,000 people. Exhibitions: **St. Thomas**—Purchased 100,000 tulips, 35,000 gladioli and a thousand oaks to be put in Pinafore Park. Leaves collected for manure. Teaching of agriculture at the Collegiate Institute and all public schools.

Interest in the work of the Association, Mr. Wilson said, extends all over the province. We are all affected by environment, and the boys and girls especially should see beautiful flowers and trees everywhere about the homes and schools. Incidentally, any rural municipality can organize a society with a starting-point of 25 members and receive the grant.

The address closed with a tribute to the memory of Mr. R. B. Whyte, one of the Association's most esteemed members, who died during the year; and the President called upon Prof. Macoun, of the Experimental Farm, Ottawa, to read a paper on his life.

### The Late Mr. R. B. Whyte, Ottawa.

Mr. R. B. Whyte, Ottawa, was one of Canada's greatest horticulturists, and a man of great knowledge in all that pertains to botany and horticulture. "He was interested in everything that grows, and he was a born experimenter." In his wonderful garden in Ottawa he had some of the choicest peonies, iris, gladioli, narcissi, Darwin tulips and many other flowers. His specialty of late years was the English gooseberry, which he was trying to adapt to this climate; but perhaps his greatest contribution to horticulture was his development of the hardy "Herbert" raspberry, which can be



Mr. J. Lockie Wilson.

Secretary and Editor.

### Growing More Foodstuffs.

This subject, "Greater Production," was taken up by Mr. G. H. M. Baker, Lindsay and Mrs. Potts, Hamilton, who dealt with Home Gardens; and Rev. W. M. McKay, Weston and J. A. Taylor, B. A., St. Thomas, who talked about "Children's Gardens."

**Farmers Ask Instruction.**—Mr. Baker emphasized the advisability of securing all the necessary information possible about horticultural work. This had been done in Lindsay. "We find out," he said, "how they do it in St. Thomas, Guelph, Chatham, and other places." Also reliable bulletins, and other literature had

been secured. As a result the gardens in Lindsay were so fine that last year even farmers asked for information and copies of the pamphlets. An incidental hint thrown out by the speaker was that beans will not rust if hoed after the dew has all gone off the leaves. This year special prizes are to be offered to the children of returned soldiers, who will be helped to health of mind and body while working with their children.

**Valuable Corners.**—Ottawa's report, brought in here, stated that 100,000 bushels of vegetables were raised last year in the back yards and vacant lots of Ottawa. In 1917, the total expenditure was \$2,400, and the results were valued at \$26,000; in 1918, \$3,500 was spent and \$55,000 returned. Who says gardening cannot pay?

**Community Gardens.**—In a paper by Mrs. Potts, Hamilton, the history of "a community garden" was given, with the suggestion that other lines be incorporated with such gardens, e.g.: a tussock-moth campaign and the burning of the cocoons in a bonfire; weeds campaign; annual exhibitions, etc. The writer considered one-eighth of an acre a good average size for each allotment.

**Children's Gardens, and Potatoes.**—Rev. W. M. McKay, Weston, in speaking of experiments in that locality, said that potatoes imported from New Brunswick proved superior, for seed purposes, to the home grown. "Cobbler" and "Green Mountain" were the favorite varieties. Children's gardens, in Weston were very successful last year. The Horticultural Society supplied seed to the children, and gave them instructions on gardening—including spraying, storing and marketing—both in class and in the field. Field classes of ten minutes duration were always held preceding the actual work, and a bulletin board proved useful in keeping the dilatory up to the mark. Reports in proficiency were kept and prizes awarded. The net returns averaged \$6.50 per plot, or at the rate of \$435 per acre. In the fall an exhibition was held. Points necessary in conducting children's garden efforts were tabulated as follows:

1. Necessity for grading according to age.
2. Proper supervision.
3. Marketing.
4. Banking (to teach thrift and business methods).
5. Play hours must not be forgotten.
6. Children should be taken to see other efforts, exhibits, etc.

In all juvenile garden work there is the possibility of bringing the children to learn the rudiments underlying the things that make for peace and order in the industrial world,—the things that, later, are needed in dealing with such problems as Capital and Labor, Taxation, Distribution, Health and Sanitation.

In Weston marks had been awarded for punctuality, honor, etc., as well as for garden accomplishment. The speaker suggested that Provincial Diplomas be prepared to stimulate the children in their work.

Mr. Taylor, School Inspector, St. Thomas, told of the wonderful work done by the children in his city, and urged that gardens be established in connection with schools were it only for the moral results. In St. Thomas it was found that idleness caused the majority of juvenile court cases and that boys were kept out of mischief through having something interesting to do. Another idea that has taken hold in St. Thomas is that environment plays a tremendous part in human history;—Gerrard in his book on Germany lays one great cause of the war to the hardness of the people in Prussia, where the surroundings are bleak and cheerless. In St. Thomas the children have been required to help in the great work of making the place beautiful. Also scientific instruction

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in agriculture is regularly given in all of the schools. As a result of all this it has been found that the school gardens spread to the back yards and home grounds and community improvement has been the result. . . Another result is to teach thrift. No country in the world except the United States, is as extravagant as Canada. The children must be taught better than this. . . Children's gardens teach industry and dignify labor; help to do away with public parasites; give opportunity for practical arithmetic, and even give practice in composition since the children should be required to describe their operations on paper. The work, moreover, cultivates a spirit of co-operation and team-work; develops the instinct of ownership, and teaches the principle that each child must contribute to its own support. . . In closing, Mr. Taylor said the country should look after the orphans of soldiers and see that they have their chance equal with that of other children. The boys overseas have learned how to be unselfish. Coming home, they expect us to be more unselfish than before.

**A Home Garden Brigade.**—The subject of children's gardens seemed to be very much to the fore this year at the Convention, probably because people are at last learning that as the children are so will the people and the nation of a later day be; and, later in the Convention, Mr. Hesson took the opportunity to tell of the accomplishments made in St. Catharines by the children and those in charge. Early in the season a "Home Garden Brigade" is organized, application blanks are given to the children and a circular addressed to the parents. Later a "Red card" certificate is issued to each child. Lots of recognition is given to everything the boys and girls do, besides the prizes, one of which is a savings bank book with \$2.00. Two shields, one bronze, the other silver, have been prepared for a competition among the classes in the schools, and are kept up from year to year as a continual reminder that there is a horticultural feature in the surroundings.

**"The Flower City."**

The St. Thomas Horticultural Society whose leading spirit is Dr. Bennett has become known, through its enthusiastic and progressive work, all over the American continent, hence it was not surprising that Dr. Bennett refused to be held down to the dry subject, "The Financing of Horticultural Societies," but chose rather to deal with "The things we do which bring money for our society," summed up in two words, "Make good."

The Society began its work for the beautification of St. Thomas by making one flower bed on public grounds. Now there are beds and boulevards all over the city; educational collections of shrubs and other things are under way; hundreds of thousands of bulbs and plants have been set growing in home gardens and in Pinafore Park; and a municipal greenhouse—a striking innovation—has been established. Indeed St. Thomas is now known, not as "The Railway City," but as "The Flower City." Interest and work, in all this, have been stimulated by distribution of seeds and bulbs, displays in store windows, regular exhibitions, and constant advertising in the papers. Always at exhibits the names of both species and grower are given. One hundred per cent of the school teachers belong to the society, and the children have made bird-houses as well as gardens. . . As much fertilizer is needed for gardens "conservation piles" of leaves have been made for compost. Also vetch and rye have been sown to turn under for fertilizer in some places.

Considering all this, it has not been hard to get new members—with their fees—and subscriptions from the Council and private individuals. Last year a total of \$8,200 came in. The expenditure, for further beautification of the city, has been practically the same.

**Horticultural Societies in Rural Districts.**

The Farmer's Advocate and Home Magazine feels inclined to put the above heading in capital letters, but perhaps that would not be fair. The address was given by Mr. V. A. Sinclair, M. L. A., Tillsonburg, who always shows much interest in the advancement of the rural districts, and who works for the farming communities at these conventions where, so far, scarcely a farmer has been present to hear him. His chief point in

this year's address was that the Horticultural Societies should exert themselves to make a more beautiful Rural Canada, not only for the sake of the character and happiness of the people here, but also for the sake of the returning soldiers, who have seen the beautiful gardens abroad and will miss them if they are not to be found here. England is beautiful with trees, hedges, vines and flowers; there is no reason that Canada should be less so.

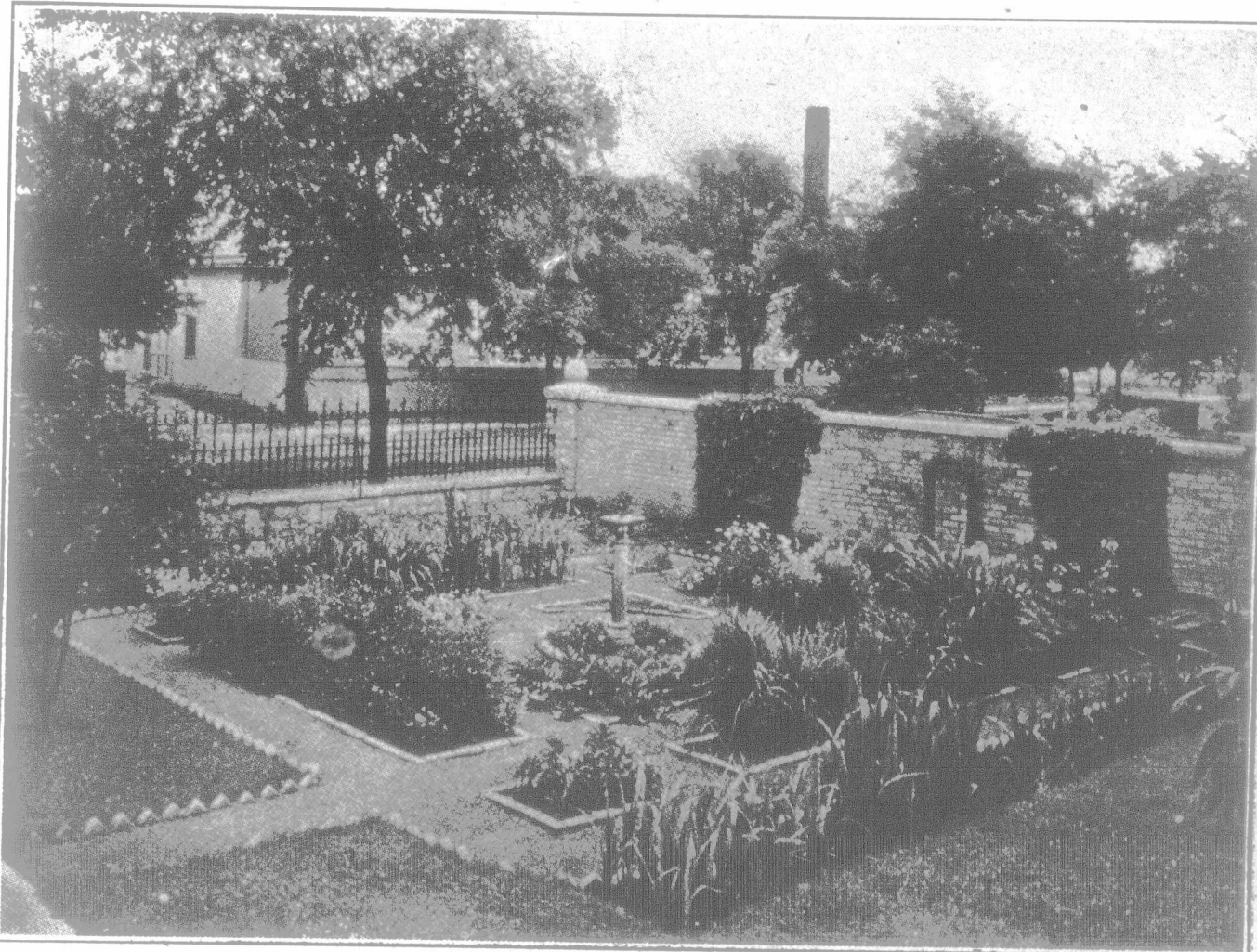
Our pioneer days are over and now the farmer should find more time to

beautify his home and community. In general he is spending much money on barns and machinery—"the money-making end of the farm." In some places Oxford County for example, he is installing electric lights. Pianos are being bought and fine rural houses built. But as yet the trees and vines are lacking; too often the house looks only a house, not a home, while next door to it may be a little cottage with trees, a climbing rose and flowers in the garden that mark it out as a real beauty spot.

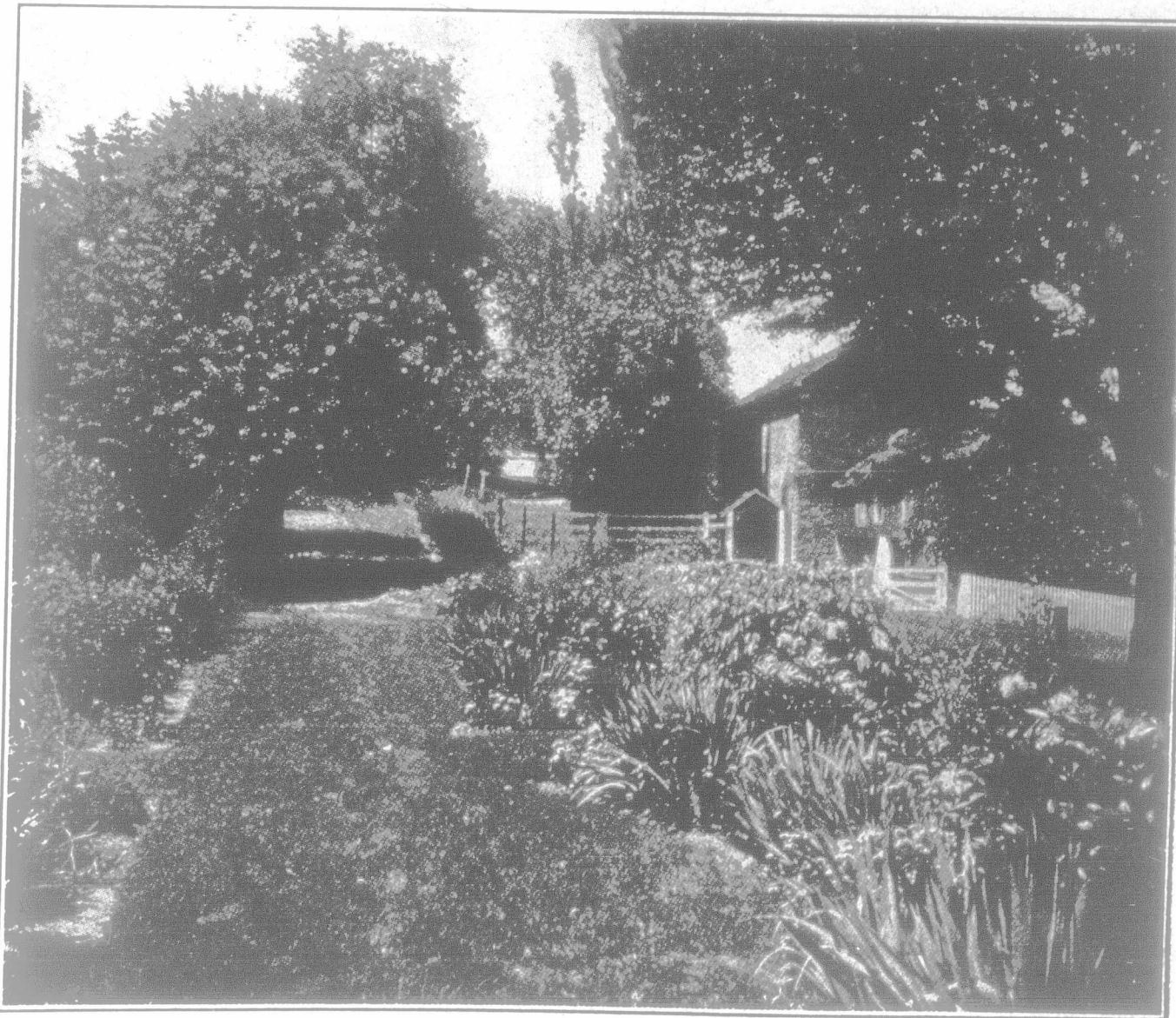
Country people really have a much

better chance than city folk for a garden hobby. They have land, fertilizer, and a soil full of humus. The best investment they could make would be to make their places beautiful. Such places would be better to live in and would sell better and more easily.

Mr. Sinclair considered that the Horticultural Association has not done its duty by the country people. It should make a more determined effort to push societies—and their work—into the rural districts. He believed the farmers were ready if asked to join; 80 per cent. of those



You May Have a Garden Like This If You Choose, But—



One Like This Is More Practicable for the Farm. It is Quite as Beautiful Also.



about St. Thomas, when canvassed, signified their willingness to join. One farmer, who competes in Tillsonburg, has a fine farm that is noticed by everyone who passes, and can take prizes whenever he likes. Farmers had often asked Mr. Sinclair what shrubs to put in;—the societies could help in this everywhere. Horticultural Societies should be formed in every rural district, and Mr. Sinclair had had that in view when he brought in the Bill in the House to make it possible for townships to have such societies. The District Representatives might also take up the work, while it should be more widely known that the services of Mr. Tomlinson, Landscape Gardener at Guelph, can be secured by those who invite him. The school should be an example in beautiful surroundings as well as a center of community life. It should have a lawn, shrubs, and bulbs and flowers that will bloom during school terms. Get the schools and the future is assured. There are many ways of keeping up interest and effort, not the least of these advertizing in the agricultural papers to show farmers how they can get the shrubs, bulbs, etc.

#### The Minister of Agriculture.

Hon. Mr. Henry, Minister of Agriculture, said that so far the average man on the farm had so much to do that he has had a tendency to sacrifice his garden to his fields. Everything must be done to overcome this apathy. We are moving rapidly in the rural districts with our rural mail, telephones and so on, and are fitting the highways for motor use. The ambition of the administration now is to develop agricultural training in the schools. Last year there were classes in agriculture in 1,000 schools, and between 600 and 700 teachers took short courses at Guelph. It is only natural that Horticulture should be hitched up with all this advance.

Regarding a memorial for the soldiers the Minister said he had received many letters from anxious people regarding the bringing of poppy seeds from Flanders to this country, and he then read a letter from Prof. Howett of the O. A. C., Guelph, containing a caution in regard to the matter. The speaker regarded favorably the planting of trees, and mentioned that one of the States is going to plant them along both sides of a roadway for 400 miles. The Government, he said, is enthusiastically supporting everything that will improve and beautify our Province. Our boys have written "Canada" large on the map. This is only an indication of what we can do;—we have the initiative

Rev. Dr. Scott of Perth moved, and Mr. Hartry, Seaforth, seconded a resolution of thanks to the Minister for his coming and address.

#### Beauty for the Home.

A paper by Mr. Thos. Adams of the Commission of Conservation, Ottawa, was read by Mr. Buck.

Home, he said, is always the unit, a nursery for developing the men and women. Good homes should have beautiful surroundings, and to this poverty should be no barrier, since the public should provide much to help. Personally the writer would prefer the simplest wooden dwelling with plenty of light and garden space well planted to the finest dwelling without these things.

Home should be more than a shelter. It is the chief center of education, and the mother is the chief educator. Family virtue can grow best in the midst of natural beauty. In this work of beautifying the homes the Horticultural Societies are playing a great part, especially in some of the towns of Ontario, which are doing more than any place else.

Details of planting, the outcome of intelligence and experience, are available, and we need only utilize them. Trees, perhaps, require the most care, as we need to study the planting carefully to bring out the beauty of individual trees. Horticulturists should bear in mind that beauty is essential to a prosperous country, and that the horticulturist is, therefore, one of our most constructive statesmen. He is building better than he knows. Touching on decoration of public buildings, Mr. Adams said it would be well to leave out much of the ostentatious ornament all too often seen and spend the money in more beautiful surroundings. The illustrations for the address were then shown.

#### Horticulture in Schools.

Mr. S. B. McCready, Toronto, took up this subject, dwelling especially upon the work the Horticultural Societies can do with children. "As the twig is bent, so the tree will grow." A safe democracy is built on character, and in this the societies can help; even a bad character can be transformed by gardening. We want the children to become capable and industrious without being carried away by gross materialism.

"Happy is the teacher," said the speaker, "whose pupils are gardeners."

Practical suggestions as to the work that can actually be done were then given regarding (1) the education of public opinion, and (2) practical teaching. There should be talks in schools, and might be a lecture staff in every society. Periodical exhibits should be held, as well as the fall fair. He thought there should be abundance of work in this field for a municipal expert. Also the societies might do much towards bringing agricultural education into the colleges. Agriculture is really cultural, and a term spent on a farm might be reasonably required as one of the branches for matriculation or normal school.

All this, in short, not so much to solve the rural problem, as worked out by the new kind of country school, as to enrich the lives of the coming men and women.

#### Here and There in Ontario.

The Directors of the various districts for last year brought in reports of the work done throughout the province: District 1: Rev. Dr. Scott, Perth; Dis. 2: Mr. G. H. M. Baker, Lindsay; Dis. 3: Mr. Whorley, Haileybury; Dis. 4: Miss Yates, Port Credit; Dis. 5: Mr. Webber, Hamilton; Dis. 6: Mr. Hartry, Seaforth, speaking for Mr. Grieves; Dis. 7: A representative spoke for Mr. Brown, Kitchener; Dis. 8: Dr. Bothwell, Stratford; Dis. 9: Mr. Brown, Walkerville.

The nomination of officers, followed later by election, resulted in the following returns, suggestive to readers of this paper who may wish to write to someone in their own district regarding horticultural work.

President.—Mr. Wm. Hartry, Seaforth. 1st Vice-Pres.—Mr. G. H. M. Baker, Lindsay.

2nd Vice-Pres.—Miss Yates, Port Credit.

Secretary and Editor.—Mr. J. Lockie Wilson, Dept. of Agr., Parliament Buildings, Toronto.

Directors: District 1.—Mr. J. W. Ross, Winchester.

District 2.—(To be named later.)

District 3.—Mr. Geo. J. Overend, Orillia.

District 4.—Rev. W. M. McKay, Weston.

District 5.—Mr. W. B. Burgoyne, St. Catharines.

District 6.—Mr. J. A. McGee, Hanover.

District 7.—Mr. Geo. H. Ryerson, Brantford.

District 8.—Mr. S. F. Woods, Hobbs Manufacturing Plant, London.

District 9.—Mr. John Glassford, Chatham.

Honorary Director.—Mr. T. D. Dockray, Toronto.

#### Potatoes.

An excellent talk on "Potatoes" was given by Prof. Zavitz, O. A. C., Guelph. Almost any fertile soil will grow potatoes providing it is friable and well-drained, but sandy loam is especially good for early varieties. The best seed comes from heavy and muck soils.

Cultivation of the ground previous to planting should be deep and thorough, and the plowing (or spading) may be done in fall or spring. Heavy clay needs deep working up in fall; a good plan is to put it in high ridges so the frosts of winter can act on it and on the subsoil.

Fertilizer.—Farm manure is the best fertilizer, put on at the rate of 20 to 25 tons per acre in autumn; if put on in spring it should be very well rotted. Some of the commercial fertilizers are also to be recommended. A good home-made one consisting of a mixture of 7 lbs. nitrate of soda to 16 lbs. acid phosphate and 9 lbs. sulphate of potash. This applied at 320 lbs., 640 lbs. or 960 lbs. per acre gave good results.

Varieties.—About 400 varieties have been tested at Guelph to find out the best for home use. Prof. Zavitz recommended "Irish Cobbler" for early and

"Early Ohio" for very early; "Green Mountain" for late; and "Empire State," a large yielder, of fine quality.

Seed.—The best results in tests for seed came from potatoes brought from the north, especially Muskoka, Thunder Bay and New Brunswick. The experiments at Guelph showed that immature potatoes produced the highest yield. When cutting seed it is a good plan to cut the potatoes in good sized pieces, 1 to 2 oz. in weight, with 2, 3 or 4 eyes in each, then throw the pieces in land plaster and plant at once. This will give a great increase in yield.

Planting.—The best returns come from planting in rows 28 inches apart and placing the sets singly. Never put more than one piece in a hill, and have them 12 to 15 inches apart in the rows. Hilling is better than level cultivation.

To secure extra early potatoes put some to sprout in a fairly warm room and a moderate light for three weeks. Short prouts should come on, which may be carefully planted. Potatoes with long sprouts in the cellar are no good.

Care of Growing Potatoes.—Careful spraying with Bordeaux mixture, both under and on top of leaves, will give an increased yield even when no rot is present. Three sprayings in this way are better than 5 on top alone. For potato bugs hand-picking will answer in a small plot, but for a larger one use spray,  $\frac{1}{2}$  lb. Paris green, 2 lbs. arsenate of lead, and 40 gals. water.

Digging.—When digging expose to the sun just as little as possible. Keep the potatoes in a cool, dry place; a temperature fairly constant at about 35 degrees above zero is best. Keep the potatoes from sprouting before planting.

#### After Dinner Speeches.

The after-dinner speeches gave space for social amenities as well as more talk about the work in which the Association is interested. Rev. Dr. Scott moved a vote of thanks to Mr. Dockray for the entertainment, including coffee, cake and ice-cream, which he so kindly provided each night at the close of the sessions; also to Miss Yates and the other ladies who assisted in serving. The Chatham delegate read an article from The Globe describing the work of the Chatham Horticultural Association.

Miss Blacklock told something of her work in hybridizing at Meadowvale. Mr. Tomlinson of the O. A. C., made it clear that he is at the disposal of any society that sends for him to lecture, or assist in landscape garden planning. Mr. Brown of Kingsville, having had no opportunity at the close of Dr. Zavitz paper, told how he grew "best potatoes," remarking that he did not think that all the experiments were conducted at Guelph, although we are indebted to that Institution for a great deal of our success in gardening.

He stated that in the spring he purchased one bushel of "Irish Cobbler" potatoes from an Eastern firm. Out of this bushel there were some bad ones, and some small ones, so that he only had 56 lbs. of good potatoes to start with. These he cut into sets, having one eye in each piece, except in the case of some very small potatoes, which he put in whole.

These potatoes were put into a bed the first week in April, high up from the ground, exposed to the sun, and very lightly covered and were allowed to sprout for five weeks, at which time the potatoes were about four inches high and had a good root. The ground in the lot was then plowed and harrowed, and the furrows—not too deep—seven feet apart. After plowing the ground was allowed to dry out before the plants were put in. The plants were then taken up and set in these furrows, every twelve inches apart. They were covered over lightly, leaving the tops of the potatoes out to the sun and air. They were hoed in one week from that time, and some more covering put on the plants. A week later they were hoed again, and some more dirt thrown over the plants making the ground level. Shortly afterwards the seven feet of ground between the rows was thoroughly cultivated. This was done twice, about two weeks apart; by this way the ground was very clean. The potatoes grew very rapidly (with very strong tops) and with the exception of a few times picking the bugs from the vines which came from the sets having two or three eyes, these being weaker, there was no spray used on them.

On the 26th of May he planted Stowe's

Evergreen Sweet corn between the rows. The potatoes made very rapid growth, and the vines grew from three to three and a half feet high. The row measured about four feet across the top. The corn was slow in coming and did not prevent plenty of air reaching the potatoes.

On Sept. 2nd he dug his potatoes, and from the original fifty-six pounds of seed there were 846 lbs., or fourteen bushels, and the potatoes were all large, averaging 150 potatoes to sixty pounds. Under each set there were from two to five large potatoes no small ones. There was only one bushel of small and medium potatoes out of the fourteen bushels, and the large potatoes were from the sets with one eye, the smaller ones coming from the sets with two or three eyes.

The potato vines falling down as the potatoes ripened, gave plenty of air and room for the corn, and he also had an excellent crop of sweet corn.

It is wonderful what a little patch of ground will produce if scientific methods are employed, and the proper care taken, even by amateurs.

There were other speakers whose names the reporter did not catch.

#### Judging the Decorative Classes.

Following a statement by Mr. F. E. Buck, Ottawa, that score cards are to be printed and sent out to the societies. Miss Yates, Port Credit, talked about judging bouquets and floral arrangements at shows. She thought classes should be encouraged for development of the sense of artistic values, and especially in the arrangement of wild flowers, which might be made the center of interest at fairs. An arrangement that secured a handsome prize at one fair had for its basis blue pottery and the little yellow flower known as "butter and eggs." The general taste at present is in favor of loose, natural arrangements of long-stemmed flowers. The old-time solid pyramid is taboo. In Japan, where a study of this subject has been made for thousands of years, stress is placed on individuality, refinement, perfume, and, in another arrangement, balance. For home decoration super-abundance, even of flowers, should be guarded against; it coarsens and cheapens the home. Always beauty of line should be considered, and usually the stems should be exposed. Simplicity should be the rule,—no bows, gilding or paper ornament permitted. The suitability of the container also is important; the sense of proportion should be retained. Last, but not least is the color scheme which must be pleasing whether harmony or contrast is made the foundation.

#### Raspberries and Currants for Small Gardens.

Prof. Macoun of the Central Exp. Farm, Ottawa, dealt with this subject. No garden should be without fruit, especially strawberries, raspberries and currants. Both raspberries and currants need abundance of moisture and full sunlight.

Raspberries.—Should be planted 3 ft. apart in rows 6 ft. apart, or 5 feet apart each way. The yield from 12 plants will depend upon variety, soil, care, and the kind of winter. Best results at the Experimental Farm have been secured from the "Herbert" variety. Usually, from a good kind an average of 2 lbs. from each plant may be expected. Plants set in spring bear no fruit that year, but the next year there will be half a crop, and the third year a full crop.

Plant either in autumn or spring; a good plan is to put two together, as one is likely to live. Make the soil firm, setting deeper after transplanting. When planting cut the stems to within 6 inches of the ground. The soil should be good, and the oftener the surface is stirred the better.

The second year suckers may appear. It is best to keep them hoed out and depend on canes from the first plant. Cut out all dead canes and the weaker new ones, leaving about 6 to a place and tying these loosely to a stake, or to a framework made by placing two posts with cross-pieces to which wire is fastened to go along each side of the bushes. If the canes seem too long never cut them back until spring. Where winter protection is necessary the canes may be bent over in fall and fastened at the tips.

In the warmer parts of Ontario the "Cuthbert" is a satisfactory berry. The "Herbert" is somewhat juicier. The "Columbian" is the best purple variety; it does not sucker, but is more acid. Black caps are not so easy to grow.

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Also red currant.

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# Candy not a Luxury

**I**T would be folly indeed if a belief detrimental to the public welfare—and proven false—was allowed to last any longer. That false belief is that candy is a luxury.

Candy is food in one of its most useful and attractive forms.

All elements used in the composition of Candy are recognized useful foods.

Candy contains large quantities of sugar, some fats such as butter; also nuts, fruits, corn syrup, chocolate and flavoring.

Combine these ingredients in proper proportions and you have a balanced ration—the high food value of which is recognized by all leading food and medical authorities.

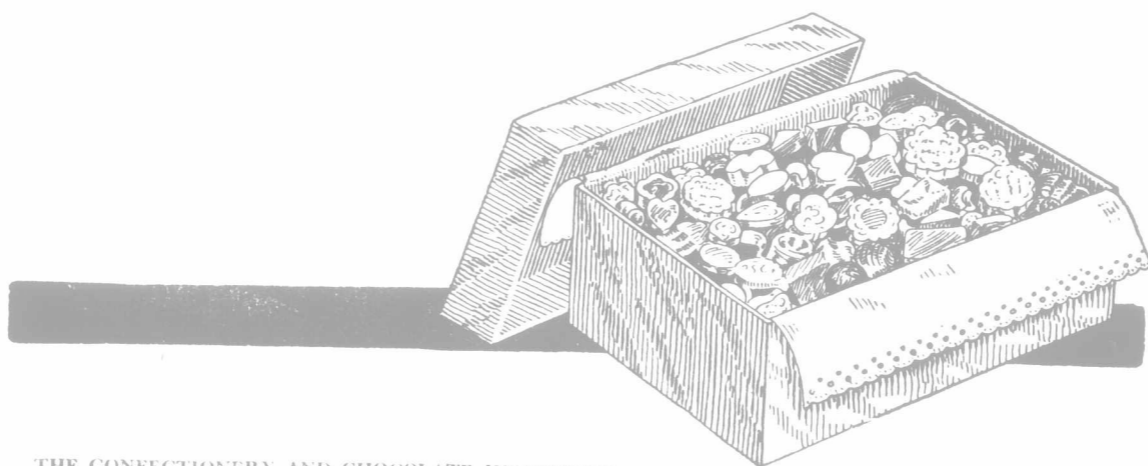
Sugar supplies the bodily demand for fuel. Fruits and nuts produce essential nutriment; chocolate is a most nourishing fat food and delightful stimulant. The flavorings stimulate the digestive organs and increase the flow of saliva and gastric fluid.

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Medical science has established its value as an energy-producing food.

*Serve Candy as a Dessert.*

*It is a Splendid Food.*



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OF CANADA

getting, paid for by money which they have not earned.

"But, mark you," he says, "someone earns that money. There is nothing spent that is not earned,"—which seems to me very reasonable, as is also his contention that the men and women who work hardest and most honestly should have the greatest rewards from their labor.

"Sir Peregrine Maitland kept his eyes blind to the needs of the people," he thunders, "Sir John Colborne would not see, Sir Francis Bond Head will not see. Eyes have they but they will not see; ears have they, but they will not hear; hearts have they but they will not feel. What are the people to them but beasts of burden?—hewers of wood and carriers of water to keep them in ease and luxury?"

—And then he goes on in sharper words to upbraid the doings of those, more of our own people, who should feel sympathy for us but, apparently, do not.

He has told us much which we did not know before of the Union Meetings which Mackenzie has been holding "for political organization," chiefly in North York and Simcoe, where, it appears,—and especially about Holland Landing—men named Lount, Lloyd, Gibson, Gorham and others, most of them farmers, have given him ear and are lending him every assistance in their power.

To the question raised at our last assemblage as to whether Mackenzie meditates actual rebellion, the Schoolmaster said he thought not, but that demonstration might be necessary to secure reforms. (Nevertheless, as I have before mentioned in these writings when, in private conversation, he has seemed to talk as though such a thing were possible and even probable. Upon this matter, I have an idea, he is not very clear himself.)

With that Hank's father got up and drew a paper from his pocket. "But what do you think of this?" he said, finding the place with some difficulty, in the flickering light. "Men, this is a copy of *The Constitution*, published on August the fifth. In it I find the words, and presumably William Lyon Mackenzie was the author of them"—and then he read a paragraph, laying great stress upon each word of the closing sentence: "Will—Canadians—declare—their independence—and shoulder—their muskets?"

But the Schoolmaster waived the matter aside.

"All a part of the demonstration," he said, shortly. "All a part of the demonstration. Delegations enough have gone up empty-handed, heaven knows!—what has been their reception?—Politeness, gentlemen, politeness. Have you forgotten how the deputation of nine hundred men that went up to the Lieut.-Governor in 1832 was satisfied?—'Gentlemen,' said Sir John Colborne, 'I have received the petition of the inhabitants'. . . That has been the history of our deputations and will be the history of them unless they can make some show of force. This Sir Francis Bond Head laughs at our delegations, gentlemen—laughs at them! A social personage, a wine-bibber of the nineteenth century, gentlemen; what does he care for the people of Upper Canada? Here to-day, gone to-morrow! No sense of responsibility to the world! Alas, gentlemen, our 'Tried Reformer' has proved but a peacock and a pleasure-seeker. What will he do better than the Governors of the past?—But if our men go up armed, then perchance he will listen."

And then Red Jock sprang to his feet. "Is it laffin' at us they are the noo?" he said, shaking his fist, "Gie us the arms, as ye say, sir, an' mebbe they'll laff on the ither side o' their faces. . . Oh aye, sir, it's been politeness an' politeness, an' 'we'll tak' it into oor seerious conseederation', but politeness 'll no fill hungry wames or hungry herts, an' takin' things into seerious conseederation gives a braw chance fer long waitin'."

"Not that we may have to use the arms, Jock," said the Schoolmaster.

—And then he went on to speak of the growth of the soul that comes of self-sacrifice, and to tell in illustration the story of Garibaldi, and Kosciusko, and Arnold von Winkelried, the Swiss patriot, who in the great battle of Sempach, when the Swiss had failed to break the ranks of the Austrian knights, rushed forward to the enemy and gathered a number of their spears together to his breast so that over his dead body his comrades rushed on to victory and freedom.

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**COLLIE-DOG 13 MONTHS OLD, CATTLE dog, sable and white, beautifully marked. \$15.00. T. H. Collings, Langton, Ont.**

**FOR SALE—100 ACRE FARM, LOT 6 CON. 8 London Township, rich clay loam, sugar-bush, bank barn well equipped, silo, henhouse, drive shed, fine two-story brick house—slate roof, furnace. Geo. Smith, R. 1, Ettrick, Ont.**

**FOR SALE—94 ACRES OF GOOD LAND, County Middlesex, good frame house, with furnace, telephone, rural route, bank barn, hay shed, drive shed and pig pen. Lots of water, with windmill to pump same. Half mile from village, church, station, etc. Purchaser has privilege of renting adjoining 50 acres. For particulars etc. apply Roy Eddie, Appin, Ont.**

**FOR SALE—NEAR FREDRICKTON—FARM—Four hundred acres, fifty high land, 30 interval. Abundant lumber. House, fifteen rooms, also small house 4 rooms, 2 barns. Lascelles Belmont, Fredrickton, New Brunswick.**

**FOR SALE—SPLENDID STOCK FARM OF 200 acres and suitable buildings, in Township of Beverley, six miles from Galt, Ont. This valuable property can be purchased reasonable, and smaller farm in vicinity of London may be considered as part payment. If interested, enquire for further particulars at Box 652, London Post Office.**

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

**FARM SALE—DESIRABLE THREE HUNDRED acre Homestead. Rich, heavy producing grain stock farm. Splendid district. Large modern basement barns, silo, water service, stables, brick house, furnace, close to railways, county town. April. Investigate Frank Quantz, Barrie.**

**WANTED—MAN EXPERIENCED IN ALL lines of farm work and in handling stock, a good milkster and capable of feeding and caring for cows on record work. Apply box 25, Farmer's Advocate, London, Ont.**

**WANTED—THOROUGHLY UP-TO-DATE Farmer for farm run in connection with large manufacturing establishment located in town in one of the most beautiful districts in Ontario. House with hard-wood floors, electric lights, modern bathroom, hot and cold water, rent, light and heat free. Good opportunity for right man who must be a good worker, and particularly a good milkster. Applicant must state full particulars of experience, age, etc., and must be prepared to arrange personal interview if required. Apply Box No. 23, Farmer's Advocate, London, Ont.**

**WANTED—POSITION AS FARM MANAGER. Have had twenty-five years experience in handling farm work and caring for herd of dairy cattle. References can be furnished. Apply Box 26, Farmer's Advocate, London, Ont.**

**WANTED—WORK ON FARM LOOKING after stock, etc. K. M., Box 552, Orillia.**

**YOUNG MAN DESIRES WORK WITH large pure-bred stock breeder. Experienced on stock. Can handle horses and general work on farm. Apply Box B, Farmer's Advocate, Toronto.**

to try to look up, always, don't you think?—seeking for the bright things. Don't you think if life means anything it means that there must be brightness—always—at the end?"

"I like to hope so," I assented. "The Schoolmaster's little sermon—that you told me, you remember—helped me to see that," she went on. "And today the mood came to me to throw away the sad, black things and dress for the woods. I had to keep to the woods, too, all the way so no one would see me."

"I've had so little of you, for so long, Barry," I said.

"I've missed you," she replied, simply, and the words went to my head like wine.

"Then," I exclaimed, "why didn't you call me sooner?"

"Because," she began, confused again, as I had never before seen her.—"Because—oh, there are too many because! Besides, I've been poor company. It's all been so cheerless and gloomy—all," she corrected herself, "but for one bright dream."

"Will you tell me that?" I asked gently. But she drew herself away a little, very quickly.

"Oh, no," she said. "I cannot tell you that."

Then, with elbow on knee and chin in the cup of her hand, she became very pensive, and looked out for a long time across the shining field, forgetful, I think of me, for her eyes were looking far away, into some realm into which I could not follow.

Patiently I waited, and after a time she came back to the Golden-Winged Woods again.

"I've had a strange life, Alan," she said presently, and I listened almost breathlessly, for never before had she spoken to me of her past, except of her three-days' adventure with the Indians, when a child. And yet her past mattered nothing whatever to me, for was she not Barry?"

"After all," she went on "there is not much to tell." We have been, for the most part just going around in a circle,—always roaming about from one inn to another, keeping away from the towns. It has only been strange because the tavern life has been foreign to me, always. I've hated it, Alan—just hated it,—and I don't think my mother loved it either."

Again she paused, and looked far out over the stubble, and between her eyes came a little wrinkle as though she had drawn it there in pain or perplexity.

"I don't think it's wrong to tell you this, Alan," she went on, after a little. "I have never told anyone—and sometimes—sometimes, you know, one just has to tell someone things. Most people have some relative, some friend. I have no one—at least no one to whom I can open my heart, but you."

And then I raised her red scarf and touched it to my lips, at which she smiled—a wistful little smile.

"I want to tell you just a little—about us," she continued, "then if ever you hear things, you will, perhaps, understand."

"I don't need to understand! I accept you just as you are, Barry!" I exclaimed for which she thanked me.

"But I want to tell you," she said.—And then, quick as the wind, she changed her mind.—"No, I will not tell you," she said. "After all the past belongs to those who lived in it. And, too, there was so little that I understood.—Only this I know, Alan—that money alone never satisfied any human heart; that we may hide, but not from ourselves; and that it takes a great love—for someone—perhaps for some work—to make life worth while."

The words, it may be sounded like an invitation to a lover's declaration, but there was that in the look and the tone that told me that Barry was again slipping away from me. In the very agony of knowing that, I arose and sat beside her, and caught her in my arms, and the words that I said I do not know, nor, if I did, would I confide them even to this my journal, for so sacred were they that I think they are held somewhere in the Universe and will one day come back to me—and surely she will bring them and ask me to claim them with her. Surely such great love-speech cannot be lost, but must sometime find mark—and then—yes surely she will bring them

## Prove that Quality is More Important than Price

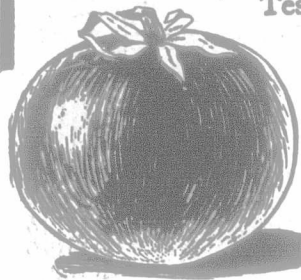
Start right, with good seed. Plant McDonald's Tested Seeds and you are sure of good crops. It does not pay to use up valuable time and mighty hard work putting in seed that may not give results. Make quality your standard and you will find it a wise economy to plant McDonald's Tested Seeds.



LETTUCE	pkg.	oz.	1/2 lb.
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Bonny Best	10c.	60c.	\$1.75

Our new Catalogue is ready—write for a copy.

**KENNETH McDONALD & SONS**  
Limited, 2 Market Square, Ottawa



## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at four cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 60 cents.

**AFRICAN GANDERS, INDIAN RUNNER, Pekin and Muscovy ducks, Barred Rock cockerels. John Annesser, Tilbury, Ont.**

**BRED-TO-SHOW LAYING STRAIN BARRED Rock eggs for hatching. Write for catalogue. Chas. Barnard, Leamington, Ont.**

**BARRED ROCKS, THE SAME OLD STRAIN that wins in egg and show contests; cockerels, two and three dollars; also a few nice pullets. Central Ontario Poultry Yards, Colborne, Ont.**

**BABY CHICKS FOR SALE FROM THE BEST flocks in Canada in S.-C. White Leghorns, White Wyandottes, Barred Rocks and Reds, \$30 per hundred. Small deposit books your order for when you want them. Guaranteed 98% safe arrival in shipment. Fred J. Hind, Baby Chick specialist, 1,378 Queen St. East, Toronto, Ont.**

**BARRED ROCK SPECIALIST TWENTY years. Eggs from choicest matings \$3.00 per 15. Earl Bedal, Brighton.**

**CLARK'S BUFF ORPINGTONS FOR SALE—30 strong vigorous cockerels, good type and color. Same breeding as 1st and 2nd Ontario 1918, at \$4. \$5. \$8. each. 50 pullets and hens good breeders, \$3. \$4. \$5. each. All good laying strains, a good breeding pen of 5 birds properly mated at \$20, \$25. Will start you right and please you. Mating list, free. J. W. Clark, R.R. 1, Cainsville, Ont.**

**CANADIAN RINGLET BARRED ROCKS—Trapnested daily for 5 years. Send for records. F. J. Coldham, Box 12, Kingston, Ont.**

**FOR SALE—BARRED ROCK COCKERELS—bred-to-lay strain, 3 and 5 dollars each. Wm. R. Goff, Route 1, Glencoe.**

**MAMMOTH BRONZE GOBFLERS, WHITE Orpington, White Leghorn and Ancona cockerels. Embdem Gander, Menno Shantz, Ayr, Ont.**

**MAMMOTH BRONZE TURKEYS, W. H. Beattie, R.R. No. 1, Wilton Grove, Ontario.**

**SILVER LACED WYANDOTTE, ANCONA Cockerels, bred from good laying strains. Price \$3. John Annot, Bright, Ontario.**

**SINGLE COMB WHITE LEGHORN BABY chicks from our celebrated laying strain, for sale. Utility Poultry Farm, G. O. Aldridge, Mgr., Lt. Col. T. G. Delamere, Prop., Stratford, Ont.**

**TWO PENS SINGLE COMB RHODE ISLAND Reds for sale (seven pullets and cockerel) at \$15. Owen Farms strain. Also hatching eggs after 1st March. For further particulars write: H. W. Pringle, Napanee, Ont.**

**TURKEYS AND GESE—WE HAVE THIS spring 40 healthy Bronze turkey hens, mated to husky young toms. Eggs in season, \$5.00 per 10. 30 choice Toulouse geese, also well mated; eggs now ready, \$4.50 per 9. Few toms and ganders on sale. Everything in pure-bred land and water fowls. Write us first. Stamps for early reply. Yamaska Poultry Farms, St. Hyacinthe, Que.**

**WHITE ROCK COCKERELS—EXTRA choice birds from first prize and sweepstakes cock at big fair. Prices \$5.00 up. John Templin & Son, Fergus, Ont.**

**WANTED—SIX CHOICE BARRED ROCK utility cockerels; must have a good record. Write, describing strains and pedigrees. Box 62, Clarkson, Ont.**

**WHITE LEGHORN COCKERELS (PEDI-GREED), from trap-nested stock, trapped by myself, from heavy producers; to improve your flock nothing else would do you. Write to-day. Bradley Linscott, Brantford.**

**WHITE WYANDOTTES AND WHITE LEG-horns bred from prize-winning stock. Eggs \$2 per 15. Esra Stock, Woodstock, Ontario.**

back to me with her own love-words added to them.

I know that I asked her to be my wife. But very gently and sweetly she repulsed me.

"Alan, dear, dear friend, not now," she said. "Don't let us speak of this now.—I think you will forget me. You must forget me if you can." And then the tears ran down her cheeks, and together we walked through the woods to her home.

When we had almost reached it, she spoke.

"Alan," she said, "I'm sorry, so sorry. You've been such a—boy—in some ways. I never knew that you could care like this. —You must forget me, Alan.—You must! There will be someone better than I am for you."

But nowhere in all this world will there be one better than Barry for me. And so I shall try to be patient—and, some day, she will hear me. Yes, I swear it by the silver stars above me this night—Some day, worthy of her, if I can make myself so, I will speak—and then, perhaps, she will hear me.

—Yet I am downhearted, too, for who can tell whether these things can surely be?

(To be continued.)

John Galsworthy, famous English novelist, delivered a notable speech at the James Russell Lowell centenary celebration in New York on Feb. 20. He urged against permitting afterwar reconstruction to be formed and guided "solely by the spirit of the market place."

Philip Gibbs, the Englishman who has become famous as the world's greatest war correspondent, has been lecturing to capacity audiences in New York. He is devoting his pen and voice, he says, towards bringing about a closer friendliness between the British Empire and the United States

## Essex County Seed Corn

Wisconsin No. 7, germination guaranteed. \$3.25 per bushel f.o.b. Sacks free.

**W. B. McGorman, R.R. No. 3, Cottam, Ont.**

## Seed Oats

From O.A.C. seed. Weighs 37 lbs. per measured bushel. Free from weed seeds and wild oats. \$1.00 per bushel. Sacks free.

**EARL BEDAL, Brighton, Ontario.**

## SHROPSHIRE

I am offering for sale a few very choice Shropshire yearling ewes, bred to lamb about May 1st. Prices reasonable.

**Alex. Gray, R.R. No. 2, Claremont, Ont.**

## Dual-Purpose Shorthorns

For Sale. One choice bull 10 months old. Two heifers 22 months and 10 months. Bred from R. O. P. dams with records 11531 and 7848 as a two-year-old.

**JOHN ARNOTT - Brighton, Ontario**

## Pure Seed Grain

O. A. C. No. 72 oats \$1.10 per bus.

O. A. C. No. 21 barley \$1.35 per bus.

Japanese Buckwheat \$1.80 per bus. Bags free. We make a specialty of growing pure seed grain.

**E. Broderick R. R. No. 1 Exeter**









Receives loyal and hearty backing from its subscribers. The Farmer's Advocate has been working steadily persistently and effectively to advance the interests of Canadian Farmers since 1866, and those who read the paper regularly know that it has been the means of bringing about many great improvements in methods and conditions, and has been always on the alert to point out dangers concealed in proposed legislation, which would be harmful to the Agricultural Interests of the country.

**NEARLY FIFTY-THREE YEARS OF LOYAL SERVICE**

To the Farmers of Canada has made a separate and distinct place for the Farmer's Advocate. Its subscribers know that it has no political axes to grind, that it has never sought to advance the interests of private parties, moneyed or political, but that on every issue it comes out squarely for FAIR PLAY and JUSTICE for the farmer.

**LETTERS LIKE THIS COME EVERY DAY.**

Feb. 6, 1919.

"Excuse me for not sending my subscription sooner. I am sending you a NEW SUB-  
 scriber. I wish every subscriber would do the same. I think the Farmer's Advocate by  
 far the best farm paper published in Canada to-day. The Christmas Number for 1918 is the  
 best I have seen yet. It is well worth twice the subscription price of the paper. I would not  
 be without the yellow-covered paper on any account."  
 (Name of writer furnished if desired.)

**MAKE YOUR INTEREST AND SUPPORT PRACTICAL**

And send us the names of new subscribers to the Farmer's Advocate and Home Magazine, the paper that began its fight for the farmers' interests, and organization long before there were any farm organizations to see that the farmer got fair play.

**IN RETURN FOR YOUR PRACTICAL ASSISTANCE**

Each subscriber who sends in the name of a New Subscriber, and the sum of \$1.50 collected, will have his own subscription extended for FOUR MONTHS, FREE OF CHARGE.  
 Send in the names of THREE NEW SUBSCRIBERS, and the sum of \$4.50, and your own sub-  
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Gentlemen:

Enclosed is Money Order value \$..... to pay for one year's subscription to the  
 Farmer's Advocate and Home Magazine for the following subscribers. Please extend the date of my  
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## A Simple Test for Soil Acidity

**Y**OU can easily find out whether your soil contains too much acid to produce the best results. At any drug store secure a small supply of "blue litmus paper." Keep this paper in a clean, dry bottle, and when tearing off a piece use forceps or scissors, as your fingers may spoil it for testing purposes.

With spade or trowel, take a little of the surface soil from several different parts of your fields. Mix these different lots of earth together, but do not touch them with your hands.

Take a few ounces of the mixed soil, put it in a clean cup or tumbler, pour on a little boiled water and stir with a clean stick until a pasty mass is obtained. Then press a strip of the litmus paper into this "mud" for half its length.

In fifteen minutes, draw out the paper, and if the part that came in contact with the soil is red, then that soil is acid and should be treated as explained below.

### To correct Soil Acidity treat your land with **AGRI-LIME**

Agri-lime is the new agricultural limestone—ground so fine as to have an active and beneficial effect on the soil to which it is applied. It supplies the deficiency of lime in your soil and so neutralizes the acid formed by the decay of vegetable matter.

Farm crops cannot make their maximum growth in soils carrying insufficient lime. Supply the lime by the use of Agri-lime, and immediately the soil will begin to regain its strength.

You can spread Agri-lime on your soil almost any time; after plowing is best, but even in winter it may be spread over a field if the snow is not deep.

Sign the coupon and mail it promptly—we will send you, free of charge, our folder entitled "More Crop to the Acre," that gives full particulars of the need of Agri-lime and the methods of applying it.

For Agri-lime in large or small quantities, see your nearest Canada Cement dealer. If, for any reason, he cannot supply you, write our nearest Sales Office.

## Canada Cement Company Limited

901 HERALD BUILDING MONTREAL  
Sales Offices, Montreal - Toronto.

*Send me your folder on Agri-lime*

NAME

ADDRESS



### The Effects of Underdrainage at the Experimental Station, Fredericton, N. B.

With a rolling surface, sandy loam soil and a stiff clay subsoil, there was but a small area on the station land that was naturally dry enough to enable spring cultivation and seeding sufficiently early to ensure good crops.

Extensive drainage both surface and by underdrains was a first necessity to the development of experimental work.

At first, in addition to the opening up of some main watercourses, a few stone underdrains were put in at strategic points and these have given excellent service. The next work was done on a six-acre slope at the foot of a steep hill where the ditches were dug by a steam ditcher at forty cents per rod. Too many boulders were encountered to make machine work profitable either to the ditcher or to the Station, so that

machine work was discontinued. These drains were spaced thirty feet apart and laid with three-inch tile. This six acres was by underdrainage converted from land where only light crops of poor hay could be grown, into soil that produced the first year after drainage one hundred and seventy-eight bushels per acre of good Green Mountain potatoes without manure or fertilizer of any kind, and has since been satisfactorily dry under fertilizer experimental plots.

A black mud swamp with stiff, white clay subsoil was underdrained with tile and care was taken to fill the ditches with surface soil and this has since been one of the earliest pieces of land on the farm.

Both clay and cement tiles have been largely used on the various areas since drained, placed from thirty to forty feet apart, both three-inch and four-inch tile being used with six-inch for main drains. The depth of drains has been rarely less than thirty-six inches and where care in filling the drains with surface soil was taken, the work has given excellent results. Where much of the clay subsoil excavated was put back over the tile, water

will lie on the surface immediately over the tile, sometimes for weeks, pointing to the necessity in clay soils of filling the drain with some sort of porous material if early and complete results are to be obtained.

Some of the cement tile used were not first-class and after four years in the ground they are, where examined, still soft and do not promise permanence, though as yet they are giving good results.

Spruce and fir poles, laid two on the sides and one on top, covered with eighteen inches of fine brush were used and are very effective. Their permanence should extend to twenty-five years at least. They are, however, more expensive than tile drains.

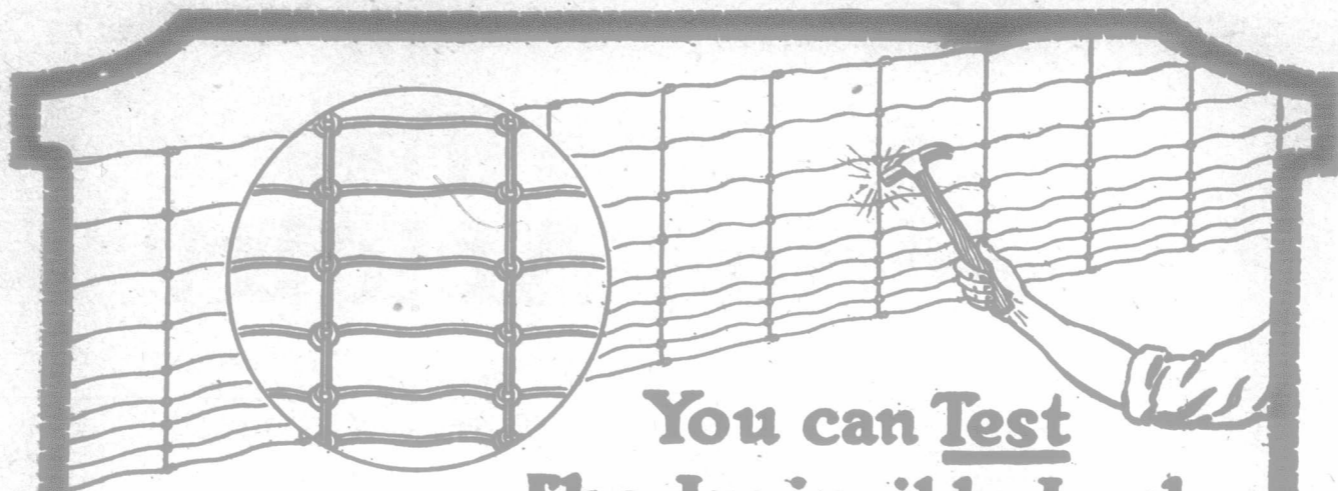
Without going into detail, which space forbids, it may be stated that underdrainage on the Station land has converted land quite useless for an ordinary crop rotation into soil that will, with less than average fertilizing, produce three hundred bushels of potatoes, nine hundred bushels of turnips, fifty bushels of oats, or two tons of hay per acre.—Experimental Farms Note.

### Gossip.

Jersey admirers should keep in mind the sale at Myrtry Lodge Dairy Farm, Sarnia, on March 18. A Hughes, the proprietor, is disposing of 40 head of high-quality utility Jerseys. His aim for the past sixteen years has been a cow producing 10,000 lbs. of milk, testing 5 per cent. He has some cows which give more milk and test up to 7 per cent. This herd has long been known for its producing and show-ring qualities, having won over 1,500 first and second prizes in the show-ring. Twenty head that are being offered are cows, mostly fresh; fifteen are heifers from three to fifteen months old, and there are a number of bull and heifer calves. Keep Tuesday, March 18, in mind, and plan to attend this sale. Write A. Hughes, R. R. 2, Sarnia, Ontario, for a catalogue giving full particulars of the herd.

Scotch Sergeant—"And noo we'll try the richt turn-rrn by numbers, and mind that ye don't move till ye hear the final syllable of the wor-rrd tur-rrn!"





## You can Test The Invincible Lock

To test the strength of a Fence and the "hold" of its "lock" strike the stay wires with a hammer or iron bar. Such a test applied to "wrapped lock" fencing, or even to the ordinary type of "ring lock" fence, will promptly reveal its weakness. The Bull-

Dog lock we use for our Fencing, while it belongs to the ringlock type, is superior to all other locks of this, or any other style. The "close up" formation of this lock each one perfectly formed in special dies holds the wires firmly in position.

## Invincible Fencing

superior to other fencing in this important detail of the lock, has other features of equal importance to the fence buyer. The wire used is of the highest grade, open hearth steel—the kind of steel which has been proven to possess lasting qualities far greater than the Bessemer Steel so generally used for fencing.

Making our own wire, from steel which we also manufacture ourselves, we are able to guarantee that in Invincible Fencing, you get pure, hard, strong wire, capable of resisting the most severe strain that may be put upon it.

It is but natural that we should be able to

offer you greater fence value than you can get elsewhere, because Invincible Fencing is made entirely by ourselves, from ore to finished product. We make a fencing that is heavily galvanized, perfectly woven, and securely locked—yet we are able to sell it to you at a moderate price. You buy Fencing, not for a year or for five years, but for a life-time. So insist on "Invincible"—the kind the better class of dealers sell and recommend.

It is made in Canada by Canadian workmen—by purchasing 'Invincible' Fencing you keep your money in circulation in your own country.

Catalogue will be sent you—on request.

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## OIL CAKE MEAL

THE FEED THAT MAKES MORE CREAM

The LIVINGSTON BRAND OIL CAKE is made from Pure No. 1 North Western Canada Flax Seed by the Old Patent Process which cooks the food, insuring its keeping for any length of time, and making it easier to digest.

**KEEPS STOCK IN GOOD CONDITION—INCREASES AMOUNT OF BUTTER**  
Fine Ground, Coarse Ground and Pea Size Grindings

**IMPROVE YOUR CALVES BY FEEDING THEM LINSEED MEAL OR THE WHOLE FLAX SEED**

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## WISCONSIN INCUBATOR AND BROODER BOTH FOR \$17.50

**130 Egg Incubator**  
**130 Chick Brooder**  
BOTH FOR  
**\$17.50** Freight and Duty PAID

If ordered together we send both machines for only \$17.50 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers fished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we guarantee before you buy. Remember our price of \$17.50 is for both Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time.



WISCONSIN INCUBATOR CO. Box 222 RACINE, WISCONSIN, U. S. A.

## Constitution and By-Laws of Horse Breeders' Clubs.

In the Horse Department of this issue will be found an outline of the federal scheme for assisting horse breeding. Before any grant is given the breeders must organize a club and the Live Stock Branch, Ottawa, require that the following constitution and by-laws be adopted and allowed to govern the conduct of the organization:

### Constitution.

NAME.

Article 1.—This Club shall be known as the.....

OBJECT.

Article 2.—The object of the Club shall be the improvement of the horse breeding industry of the district by the introduction of first-class stallions, and to take advantage of the Federal Assistance granted to such Clubs by the Dominion Live Stock Branch.

MEMBERSHIP.

Article 3.—Any member paying the annual fee of Five Dollars (\$5.00) may become a member of the Club. This money, after meeting all legitimate expenses of organization, etc., may be placed to the credit of the Club with a view to reducing the service fee to be paid by the members.

OFFICERS.

Article 4.—At the annual meeting, the Club shall elect a President, Vice-President, Secretary-Treasurer, and four Directors. These shall constitute the Board of Directors of the Club.

Article 5.—The Executive Committee shall consist of the President, Vice-President and Secretary-Treasurer. The Executive Committee shall execute the decisions made by the Directors and shall attend to the details of the execution.

DUTIES OF OFFICERS.

President.

Article 6.—It shall be the duty of the President to preside at all meetings of the Club, to decide all questions of order and to make any suggestions he may deem useful to the Club.

Vice-President.

The Vice-President shall assist the President. In the absence of the President he shall have the same power and the same obligations.

Secretary-Treasurer.

The Secretary-Treasurer shall be present at all meetings of the Club, of the officers and of the Executive Committee and shall keep minutes of the same. He shall conduct all correspondence and prepare all reports including the annual report. He shall have the power of managing director, acting under the control and with the approval of the Executive Committee. By virtue of his office he shall be a member of each committee. He shall receive all moneys belonging to the Club and shall keep account of same. He shall pay all bills and accounts approved by the Executive Committee and shall furnish, when required to do so, a statement in detail of the affairs of the Club.

Article 7.—At the annual meeting the Club shall also elect a deputation of..... members whose duties shall be to select and engage a suitable stallion to travel the district. Any member of the Club (members of the Board of Directors included) shall be eligible for a position on this deputation.

Article 8.—The Officers of the Club shall hold office for one year or until their successors are appointed.

Auditors.

Article 9.—Two auditors shall be appointed at the annual meeting. These auditors may be members of the Club, but shall not be officers for the year.

A copy of the financial statement shall be sent to each of the members at least one week before the annual meeting.

Meetings.

Article 10.—The annual meeting of each Club shall be held in January of each year and not later than the 20th day of the month, at a time and place fixed by the Executive Committee. At the annual meeting the report of the Board of Directors and the Auditor's report shall be presented and such other



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**Constitution and By-Laws of Horse Breeders' Clubs.**

The Horse Department of this issue found an outline of the federal grant is given the breeders organize a club and the Live Stock Ottawa, require that the following constitution and by-laws be adopted to govern the conduct of the association:

**Constitution.**

**NAME.**

1.—This Club shall be known as \_\_\_\_\_

**OBJECT.**

2.—The object of the Club shall be the improvement of the horse breeding of the district by the introduction of class stallions, and to take advantage of the Federal Assistance granted to Clubs by the Dominion Live Stock Branch.

**MEMBERSHIP.**

3.—Any member paying the fee of Five Dollars (\$5.00) may be a member of the Club. This fee after meeting all legitimate expenses of organization, etc., may be to the credit of the Club with a view to reducing the service fee to be paid to the members.

**OFFICERS.**

4.—At the annual meeting, the members shall elect a President, Vice-President, Secretary-Treasurer, and four Directors of the Club.

5.—The Executive Committee shall consist of the President, Vice-President and Secretary-Treasurer. The Executive Committee shall execute the duties made by the Directors and shall report to the details of the execution.

**DUTIES OF OFFICERS.**

**President.**

6.—It shall be the duty of the President to preside at all meetings of the Club and to decide all questions of order and to make any suggestions he may see fit to the Club.

**Vice-President.**

The Vice-President shall assist the President in the absence of the President shall have the same power and obligations.

**Secretary-Treasurer.**

The Secretary-Treasurer shall be present at all meetings of the Club, of the Board of the Executive Committee and keep minutes of the same. He shall conduct all correspondence and receive all reports including the financial report. He shall have the power to sign checks, acting under the approval of the Executive Committee. By virtue of his office he shall be a member of each committee and shall receive all moneys due to the Club and shall keep accounts of same. He shall pay all bills and accounts approved by the Executive Committee and shall furnish a statement of the affairs of the Club.

7.—At the annual meeting the members shall also elect a deputation of \_\_\_\_\_ whose duties shall be to select a suitable stallion to travel to the district. Any member of the Club who is a member of the Board of Directors shall be eligible for a position on the deputation.

8.—The Officers of the Club shall hold office for one year or until their successors are appointed.

**Auditors.**

9.—Two auditors shall be elected at the annual meeting. These auditors may be members of the Club, but not officers for the year. The auditors of the financial statement shall be each of the members at least one of whom shall be present at the annual meeting.

**Meetings.**

10.—The annual meeting of the Club shall be held in January of each year and not later than the 20th day of the month, at a time and place to be determined by the Executive Committee. The annual meeting shall be held at the meeting of the Executive Committee and the Auditor's report shall be presented and such other

**KEITH'S SEEDS**  
 PREPARE FOR AN EARLY SPRING  
 Make up your seed order now. We pay freight on orders of \$25.00 or more in Ontario and Quebec.  
**CLOVER**  
 (Gov't Standard) Per Bus.  
 No. 1—Red Clover "Sun" ..... \$30.00  
 No. 1—Red Clover "Special" ..... 28.00  
 No. 1—Timothy ..... 7.75  
 (Extra No. 1 for purity) ..... 7.25  
 No. 2—Timothy ..... 7.00  
 (Extra No. 1 for purity) ..... 6.50  
 No. 2—Timothy (Special) ..... 6.50  
 (No. 1 for purity) ..... 21.00  
 No. 1—Alsike ..... 21.00  
 No. 2—Alsike & Timothy Mixed (No. 1 purity) ..... 16.00  
 No. 2—Alfalfa—Ontario Variegated (No. 1 for purity) ..... 27.00  
 No. 2—Alfalfa Ontario Variegated ..... 24.00  
 No. 3—Alfalfa Ontario Variegated ..... 22.00  
 Sweet Clover—White Blossom—(Biennial) hulled seed ..... 13.50  
 Cotton Bags for Clover and Timothy, 65c. each.  
**MANGEL SEEDS**  
 Prizetaker, Giant half sugar, Yellow Intermediate, Yellow Levantine, Mammoth Long Red, A 1 Seed. Germination 112 to 160%. Price 60c. per lb., Post Paid 65c. per lb.  
**CORN ON COB** Per Bus. 70 lbs.  
 Bagg Free  
 Longfellow ..... \$4.50  
 White Cap ..... 3.75  
 Golden Glow ..... 3.75  
 Wisconsin No. 7 ..... 3.75  
 Bailey ..... 3.75  
 Improved Leaming ..... 3.75  
 Specially priced for early shipment, carefully selected, strong, vigorous seed. Recent tests show 95 to 98 per cent. germination.  
 If you order 25 Bushels of Corn or more we will allow a reduction of 25c per bushel.  
 Write at once for our new 1919 illustrated catalogue and compare our prices with others. We sell direct to farmers. No Middleman's profits.  
**BARGAIN IN BAGS. WRITE FOR PRICES**

**GEO. KEITH & SONS**  
 124 KING ST. E. TORONTO

**Cream Wanted**  
 Ship yours to us, as we must have it to supply our well-established trade with good quality butter. Therefore, we are prepared to pay you a higher price than any other creamery. We furnish cans and pay express charges. References, any bank.  
**MUTUAL DAIRY & CREAMERY**  
 743 King St., W., Toronto, Ont.

**Cream Wanted**  
 Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.  
**Ontario Creameries, Limited**  
 London, Ontario.

**Corn That Will Grow**  
 Canadian-grown seed Corn. Your money back if not satisfied.  
**J. O. Duke** & Ruthven, Ont.

**Poultry Wanted**  
 We require large quantities of heavy live hens. Also well fattened cockerels live or dressed. It will pay you to sell to C. A. Mann & Co., 78 King St., London, Ont. Canada Food Board. License 7-078.

business conducted as may be decided upon by the Board of Directors.

**NOTICE OF MEETINGS.**

Article 11.—For the annual, general or special meetings, a notice of at least one week in advance shall be given, indicating the place, the day and the hour of the meeting. This notice shall be given by a circular letter to each of the members.

Meetings of the Board of Directors or of the Executive Committee may be called to suit the convenience of the members thereof.

**QUORUM.**

Article 12.—For the transaction of the business of the Club ten members shall constitute a quorum. At meetings of the officers the quorum shall be four and at the meetings of the Executive Committee, two shall constitute a quorum.

**By-Laws.**

1. The deputation shall select and engage a suitable stallion to travel the district in the interests of the Club.

2. The maximum service fee (which shall not be less than Twelve Dollars per mare) shall be decided by the Board of Directors. The Board shall notify the deputation of their decision in this matter, and also the number of mares the Club can guarantee to a stallion. The deputation shall not exceed the maximum in either case. The Board shall also decide what period the breeding season shall cover and the initial and final dates.

3. The Secretary shall accompany the deputation when selecting and engaging a stallion. He shall attend to the filling in and signing of the necessary agreement, but shall have no voice in the selecting of the stallion unless he be a member of the deputation.

4. The Board of Directors shall attend to all affairs of the Club, decide any disputes, and see that the party in charge of the stallion complies with the agreement and carries out all instructions the Board may issue.

5. The annual membership fee of Five Dollars shall be payable each year on the 1st of January. Members not having paid up shall not have a vote at the annual meeting. A member wishing to resign from the Club must, in writing, intimate his intention to do so on, or before, the 1st of October. Otherwise, he shall be liable for the membership fee for the following year.

6. In the event of a member refusing to pay his annual fee, or such stallion fees as he may owe the Club, the Secretary may in the name and at the expense of the Club sue such member for the amounts due.

7. Any member wilfully infringing any of the rules of the Club may be expelled by act of the Board of Directors who shall meet specially to consider the case.

8. All members shall have equal rights as regards the number of mares each may breed to the stallion engaged by the Club. Each member of firm shall be entitled to the services of at least one mare, and not more than fifteen, and shall be bound to pay such stallion fees as may be fixed by the Board of Directors; said fees to be paid to the Secretary-Treasurer whenever the Board of Directors may desire.

9. Members wishing the services of the stallion must apply to the Secretary in writing on, or before, \_\_\_\_\_ stating the number of mares they wish to have served. In the event of a member being unable to provide a mare of his own, it shall be allowable for him to arrange for a substitute, provided such substitute be a member. If, however, no member wishes a substitution, a non-member may be accepted, but only with the permission of the Board of Directors and by the payment of an extra fee of Five Dollars (\$5.00) per mare. In the event of too many applications, the vacant nominations shall be balloted for.

10. If it should happen at any time that the number of mares guaranteed to the stallion be not forthcoming, then those members, unable to take advantage of the services of the stallion or to arrange a substitute, shall be liable to make good the deficiency in fees to the Club.

11. Any member having important business to bring up at the annual, or other, meeting, must give notice to the Secretary at least two weeks previously, and the Secretary shall embody such notice in the circular calling the meeting.

**Why Grow Culls Instead of Potatoes?**

**Six Steps to Good Potatoes:**

- 1.—Provide Root Room.
- 2.—Control Soil Moisture.
- 3.—Use Good Seed of Best Variety.
- 4.—Spray to control insects.
- 5.—Select disease-free stock and spray to control blight.
- 6.—Provide the Crop with abundance of suitable plantfood.

That a plentiful supply of Potash is necessary for best results in fertilized Potatoes is shown in the result of a 3-year test by Maine Agricultural Experiment Station.

Analysis of Fertilizer Used			Yield Per Acre
Ammonia	Phos. Acid	Potash	
5%	8%	0%	275 bus.
5%	8%	2%	306 bus.
5%	8%	8%	321 bus.

**The Dominion Experimental Farms Found:—**  
 1 acre potatoes unfertilized yielded 75 bus.  
 1 acre potatoes fertilized and manured yielded 200 bus.

This is an increase of 166% over the unfertilized. Practically the same labor was involved to prepare ground, cultivate and spray the 200 bushels crop as was needed for the 75 bushels crop.

**What they Say:**

"A study of the average returns from five stations is most interesting and reveals the fact that, without a single exception, fertilizers were profitably employed. . . . In vegetable growing the comparative yields from heavy manuring combined with chemical fertilizers corroborated the work of previous years in showing that larger yields and earlier maturity can be obtained at much less cost, by a combination of chemical fertilizer with manure, than by the application of manure only."  
 —Dominion Experimental Farms Report, 1918

Big yields, good quality, high percentage of marketable potatoes are produced by proper soil preparation and abundant, suitable fertilization.

**It Pays to Fertilize**  
 Write for Free Bulletins on Crop Production  
**The Soil and Crop Improvement Bureau**  
 of the Canadian Fertilizer Association  
 1111 Temple Building Toronto 26

**FERTILIZER**  
 USE THE BEST.  
**Stone Brands Never Fall**  
 To Increase Your Crops.  
**WM STONE SONS LIMITED WOODSTOCK ONT.**

**20,000 POULTRY RAISERS** are making big money the Peerless Way. You can do the same.  
**LET US START YOU** in a home plant of your own, either as a business or as a side line.  
**OUR CO-OPERATIVE PLAN,** the big factor in building up the poultry industry of Canada, will make it easy for you to start and get your share of the profits.  
**WRITE TO-DAY - NOW - ASK US TO SHOW YOU**  
**THE PEERLESS WAY**  
**THOMAS W. LEE CO. PEMBROKE ONTARIO CANADA.**



## A Tip Top Investment

Foresight is the greatest factor in saving yourself time, money and annoyance.

Don't continue sending good money after bad—by buying poor roofing to patch and repatch your old roofs. Invest in

# PAROID A NEPONSËT ROOF

and obtain lasting satisfaction, durability and economy.

Once Neponset Paroid Roofing is laid it forms an ideal roof, either on new buildings or over old shingles. It can be put on quickly without litter or fuss. Costs half the price of shingles and pays for itself by wearing for years.

Neponset Paroid Roofing can be used on any building no matter how large or small. Its fire and weather-resisting properties give it first place among roofings.

Neponset Paroid Roofing is made in three colors, red, green and slate grey.

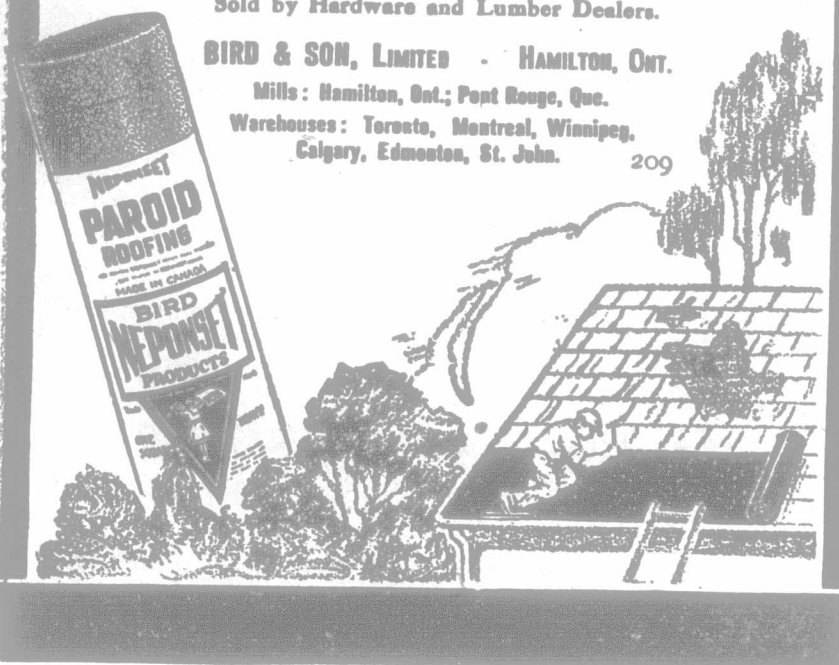
Sold by Hardware and Lumber Dealers.

BIRD & SON, LIMITED - HAMILTON, ONT.

Mills: Hamilton, Ont.; Pont Rouge, Que.

Warehouses: Toronto, Montreal, Winnipeg, Calgary, Edmonton, St. John.

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12. A special meeting of the Club shall be called by the Secretary, if requested in writing to do so by at least seven members, the requisition to state the object for which the meeting is called and to embody the form of any motion which it is proposed to submit therat.

13. The constitution and by-laws of the Club shall bind the Club and its members as if they had placed their hands and seals to the constitution.

### Stallion Regulations.

In order for a Club to participate in this Federal Assistance, the following conditions must be complied with:—

1. The stallion hired and used by the Club must be pure bred and registered in one of the records affiliated with the Canadian National Live Stock Records.

2. The Certificate of Pedigree must show the ownership of the party, or parties, hiring the stallion to the Club.

3. Each stallion must be guaranteed to be at least a 50 per cent foal getter. If the stallion be four years old, or over the Club and owner, or owners, must furnish satisfactory evidence to the Live Stock Commissioner that he has been at least a 50 per cent. foal getter.

4. The stallion must be a good specimen and typical of his breed, possess size,

correct conformation and true, straight action. Undersized and undeveloped stallions will not be accepted. Three-year-olds must be well developed in every particular.

5. Any of the following diseases, unsoundnesses, or malformations shall disqualify a stallion: Cataract, periodic ophthalmia (moon blindness), Laryngeal Hemiplegia (roaring or whistling), Pulmonary emphysema (heaves, broken wind), Chorea (crampiness, shivering, string-halt), Bone spavin, ringbone, sidebone, navicular disease, Thoroughpin and Bog spavin when associated with a predisposing conformation of hock, curby conformation of hock, with or without the presence of an actual curb. Weak, contracted or mis-shapen feet, or any other marked, faulty or weak conformation, or unsoundness, which may be transmitted to his progeny.

When an unsoundness is apparently the result of an accident, and, in the opinion of the examining veterinarian, is not of a hereditary nature he may recommend such animal for the Government bonus subject to the approval of the Live Stock Commissioner, but in all cases the veterinarian shall attach a full report of his reasons to his returns covering the case.

6. The stallion owner, or owners, as the case may be cannot belong to a Club.

7. A member of a Club shall not be allowed to breed over fifteen mares to the Club stallion. Clubs failing to comply with this regulation shall forfeit all claim to the grant.

8. While stallions whose service fees are not justifiably \$12 or higher, will not be considered, it should at the same time be clearly understood that the Branch will not allow owners to unduly raise rates and accordingly all fees must be approved by the Branch and are subject to revision, the maximum in no case to exceed \$25.

9. The guaranteed number of mares shall be regulated according to the age of the stallion as follows:—

3 year-olds—guarantee not to exceed 50 mares.

4 year-olds—guarantee not to exceed 75 mares.

5 year-olds and over—guarantee not to exceed 100 mares.

If the stallion be six years old or over and settles the first hundred mares guaranteed early in the season the Club may make application to the Live Stock Branch for permission to breed an additional number of mares, said number not to exceed 20.

10. In case of the death of the stallion



# Partridge Tires

Game as Their Name  
Wear Down All  
Road Resistance

Made by The F.E. Partridge Rubber Company, Limited, Guelph, Ont.

## 49 HEAD IN STRATFORD MARCH 12th

The 2nd Annual Consignment Sale of the

### Perth District Holstein Breeder's Club

Nine choicely bred-bulls ready for service, 40 females, these are a splendid lot, some in milk others just about to freshen. The most noted sires of the breed are well represented in the animals offered. If interested in Holstein investment get a Catalogue, ready about March 1st.

ADAM C. PARK, Secy.  
LISTOWEL

D. M. ARBOGAST  
Pres. and Sales Manager

THOS. SMITH, Auctioneer

When writing advertisers will you kindly mention The Farmer's Advocate.

the Club should immediately notify the Live Stock Branch giving the name of and other information regarding the stallion proposed to be substituted. Applications of Clubs failing to do this will be cancelled.

11. A club hiring a stallion that does not fulfil the above requirements shall not be eligible for the Federal Grant.

12. In all matters of dispute the decision of the Live Stock Commissioner shall be final.

J. Lloyd-Jones, of Burford, recently disposed of his sheep, Jerseys and ponies by auction. The sale was very well attended and the prices satisfactory. A choice lot of Shropshires and Southdowns were offered to the public. The Shropshires made an average of \$38 apiece; sixteen ewe lambs averaged \$33.50. Eleven Southdown ewes averaged \$45, and two Southdown ewe lambs averaged \$56 apiece. The Jerseys sold for grade prices. The five ponies brought \$675. Sir John Eaton, of Toronto, bought the Welsh filly. The Welsh mare, Dolly, has raised six foals that have sold for \$1,100, and she has won \$400 in prizes. Mr. Lloyd-Jones leaves for England the last of this month, where he intends to reside for the coming year.

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**The Use of Hot Beds and Cold Frames.**

A hot-bed is desirable wherever vegetables or flowers are grown in Canada. It is a means by which plants are grown through their earlier stages in a suitable temperature in order to shorten the time of reaching condition for use or of coming into flower. It is the early vegetables which are the most profitable and most appreciated. Furthermore, with a hot-bed it is possible to mature certain vegetables in parts of Canada where, if started in the open, they would not ripen before being killed by frost. Again, with a hot-bed it is possible to mature a large crop when without one the crop would be very small. Certain vegetables also, even if not subjected to actual frost, will not grow if the soil and air are cold, hence must be started in warm soil and warm air such as is afforded by a hot-bed, and the plants grown there are not set out in the open until warm weather.

Such crops as radish, lettuce, spinach, carrots, and other vegetables which will reach marketable size in a relatively short season and are easily handled while the weather is still cool in early spring, reach the stage when they are ready for use much sooner when kept in the hot-bed or cold frame than if one had to wait until the seed were planted in the open and the plants developed there. There is usually greater danger from keeping the hot-bed too hot for these particular vegetables than from its being too cool. Cauliflower also can be grown to maturity in hot-beds, and in places where it is difficult, owing to summer frosts or cool weather, to grow cucumbers and melons, a few plants in a hot-bed will provide a fair supply for the family.

In making a hot-bed the conservation of the heat in it is one of the chief considerations, and to assist in this the hot-bed should be in a protected place, preferably on the south side of a building, wall or close board fence where the cold winds will be broken and all the sunshine possible be obtained. The manure used should be hot when it is put in, and it should be kept hot by thoroughly banking the outside of the frame with manure to prevent the cold getting in and the heat getting out. It is easier to conserve heat in a bed that is low than one that is built high up.

Cold frames are much like hot-beds in outward appearance, but no manure is put inside as cold frames are used later in the spring than the hot-beds and less heat is needed, there being sufficient from the sun shining through the glass, and the glass and frame usually afford

**Important Public Sale**  
**Forty High-Class Holsteins**

DRAFTS FROM THE HERDS OF

**W. B. Poole** and **Alfred Groves**  
(FIRTH FARM) (BELLEVUE FARM)

Selling at Firth Farm 3 miles South of

**Ingersoll, Thursday, Mar. 20th, 1919**

The outstanding feature of this sale, aside from the splendid individuality of the offering throughout, is the large number of cows that will be freshening just at sale time. The majority of Mr. Poole's offering are due late in March, all to the service of the chief service sire at Firth Farm, King Johanna Rauwerd. The dam of this great young sire is the former champion R.O.P. cow, Calamity Johanna Nig, with 25,447 lbs. of milk and 1,007.5 lbs. of butter for the year. While his sire, Hill-crest Ormsby Count, is a son of the famous old "Rauwerd," Canada's first 29,000-lb. cow. The heifer calves that arrive before sale day will not be sold, and the 1918 heifers will also be retained.

Mr. Groves' consignment comprises seven mature cows, seven two-year-old heifers, four bull calves and Captain Snow Canary Hartog, the herd sire, with two exceptions the cows are all in full flow of milk and again re-bred to this sire. This bull is one of the strongest sires in the district, and should add much to Mr. Groves' offering. His 1918 and 1919 heifers are the only Holsteins that will be retained in the herd. The mature herd sells in its entirety, and, like the offering listed above it, should appeal to all who are in search of good breeding Holsteins of heavy-producing blood.

All requests for catalogues should be addressed to Mr. Poole.

Conveyances to the farm will start from Atlantic House, Ingersoll.

**W. B. Poole, Ingersoll, R.R. No. 5** **Alfred Groves, Salford**

sufficient protection from light frosts at night should there be such.

Details in regards to making hot-beds will be found in a pamphlet which can be obtained free on application to the Publications Branch, Department of Agriculture, Ottawa. Experimental Farms Note.

**Gossip.**

**The Maple Gore Holstein Dispersion.**

In the advertising columns of our last issue there appeared an announcement of the complete dispersion sale of the Maple Gore herd of pure-bred Holsteins owned by Elsworth Plant, of Burford.

As stated in the advertisement, the sale will be held at the farm, one and one-half miles from Burford, on Wednesday, March 5, and the number selling is 30 head. As seen recently by a representative of this paper, we have no hesitancy in saying that the herd is one of the most select small herds in Western Ontario. It is doubtful, too, if the breed has ever brought a better fitted herd into an Ontario sale-ring. In breeding the offering also deserves every consideration. The foundation females were the choice of the noted W. A. Hartley herd, which will be remembered as one of the oldest established herds of Oxford County. Seven females, the best from this herd, was Mr. Plant's first purchase, and from these practically the entire herd now advertised were bred. Although Mr. Plant has done very little official testing he has made several very creditable records, including one 28.2 lb., 7-day record; one 13,666-lb. yearly record (4-year-old), and several more above 20 lbs. of butter in 7 days. A two-year-old heifer going out from the herd last year at the Oak Park sale has also finished a three-year-old, 7-day record of 32 lbs. of butter, and several more of similar breeding will be found in the catalogue. Several of these are freshening around sale time to the herd sire Sir Segis Alcartra, a 27.73-lb.-bred grandson of King Segis Pontiac Alcartra. This is one of the best individual young sires in the district, and his dam, King Segis Walker Pietertje, has 709.6 lbs. of milk in 7 days. He will have eight heifers in the sale and they should, along with their sire, prove a drawing card to all who appreciate a strong combination of breeding and individuality. For catalogues address Elsworth Plant, Burford, and mention the "Advocate."

Two "kilties" from the same Scottish town met in a rest camp "somewhere in France," and started to exchange confidences. "What like a send-off did yer wife gie ye, Sandy, when ye left for France?" asked Jock, presently.

Sandy lit a fresh cigarette before replying. "Says she, 'Noo there's yer train, Jock; in ye get, an' see an' do yer duty. By jingo, ma man, if I thoct ye wad shirk oot yonder I wud see ye was wounded afore ye gang off! That's the send-off she gaed me, Sandy."

Casey—"When ye're licked in a foight ye ought to say ye've had enough."

Dolan—"Shure if Oi can spake at all Oi'm not licked yet."—Boston Transcript.

**Thirty High-Class Holsteins**

**Complete Dispersion Sale**

of the entire Maple Gore Herd owned by

**ELSWORTH PLANT**

**Burford, Ont., Wednesday, March 5th, 1919**

As to individuality, or pedigree, or condition, Mr. Plant need make no apology regarding any individual animal in his entire herd. As regards to the latter, they are particularly striking. At no time in Ontario has there been a better conditioned herd in a public sale; and at no time, in fact, in Mr. Plant's 6 years of Holstein breeding has the herd been other than fit at all times. A review of the breeding of the foundation females in the herd, as outlined in the regular advertising copy in our issue of February 13th, will reveal to all the splendid breeding carried by each individual family selling. They were selected by Mr. Hartley, from whom they were purchased, to be retained from his herd after 20 years of careful breeding, and while Mr. Plant has done very little testing, a visit to the farm on sale day will show they have, in no way, been neglected. For good individuals for good breeding and for healthy, well-fitted animals you should attend this sale. G. T. R. trains from Toronto and points East will stop at crossing one mile from farm on sale day. Conveyances from there. Trains from the West will be met at Burford station. Sale under cover. At this late date, better wire for catalogues.

**ELSWORTH PLANT**

Remember there will be no Reserve.

**Burford, Ont.**

**Important Sale of**

**SHORTHORNS**

**FORTY HEAD**

The entire herd belonging to John Elder and selling at the farm near

**Hensall, Ontario, Wed., March 19**

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**JOHN ELDER,**

**HENSALL, ONT.**

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**The Question of Exchange.**

EDITOR "THE FARMER'S ADVOCATE":

Normally the imports into a country are paid for in three ways:

1. By giving goods or rendering service in exchange.  
2. By borrowing money from some outside nation to settle the bill.

3. By the shipment of gold.  
At the present time Canada prohibits the export of gold, therefore our imports from the United States must be paid in some other way. As we purchase more from the United States than we sell to the United States, there are more Canadians who want to remit money to the United States than Americans who want to remit to Canada; hence, as there are more buyers of exchange in this market than sellers, we have to pay a premium for what we call New York funds.

If we could export gold, the rate of exchange in New York would be little if any, in excess of the cost of boxing up the gold and paying express and insurance to destination. But this is not the case, so exchange costs something to us. Its economic effect is precisely the same as an addition of this item to our protective tariff.

High freights, ocean or otherwise, adverse rates of exchange, delay in transportation all bring grist to the mills of the Protectionists. One might almost say that the stars in their courses fight for the increase of tariff restrictions.

Now, there are methods of putting our currency upon a sound basis, and the only impediment to their adoption is that they are sane, wise, natural and certain in their efficacy.

We have certain basic industries in Canada. They are farming, mining, lumbering and fishing. If we could induce our ruling classes to remove the hampering restrictions of tariffs and land monopoly, these industries would thrive and prosper. Their productive power would increase vastly. Nothing could prevent it. Our exports would increase—the question of exchange would soon settle itself—adverse rates would be a thing of the past.

As it stands, we are carrying many industries at an economic loss. We have industries which should be buried deep in Flanders' fields. They are so economically unprofitable that if the Government were to buy them out, pension all the employees, pay interest on the capital invested for all time, destroy the whole industry by fire and then remove the tariff, it would be a big saving to the Canadian people. Obviously, if the new arithmetic is correct—if 2x2 equals 4—then men in these industries are engaged in unproductive work. We have to import a lot of things to feed them, and exchange goes against us.

We are ringed round with "special privilege." You will find lawyers and professional men luxuriating in every burg. Our educational system trains them. The lawyers run our parliaments. Special arrangements are made for these people to fatten on the social life of the country. They make their own fees. They charge for collecting them. The ordinary law of supply and demand does not operate with them. If lawyers become numerous and each does less business, the Law Society meets in special session and raises the fees, so that there is enough to go round. Germany—despised Germany—puts her legal code in 160 pages and begins at the first of the book. We put ours in all the law books from the days of Alfred right down to Borden and Sifton, and when we want to find out anything, we start at Alfred and work forward. It takes a lot of men to do this, and they produce nothing but trouble.

This sort of thing could be multiplied indefinitely. Our entire system of existence is a multiplicity of duplication. Canada is probably more over-burdened with such useless disorganization than any other country on the face of the earth.

But there is one other way to fix our exchange rates—go over the list of our imports from the United States—you can pick out many items which are imported purely for the benefit of our idle rich—the fellows with incomes of over \$20,000.00 a year. Curtail those imports! How, by customs tariff? Not on your life! No, never! Curtail them by imposing a drastic income tax. Make our income tax as sharp in its impact as it is in Great Britain. That would run it up four or five times its present rate. This will take so much from our wealthy classes

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that they will not be able to spend so much on imported luxuries. And as this will reduce the imports of these goods, it will help to restore the rate of exchange. And this should be done, not in any spirit of antagonism to our men of wealth, but purely for their own good. Have you never heard from the lips of the rich the tale of the blessings of want—how character is developed—how lives of great men all remind us that poverty is a stern mentor but a great one—great in its power to make men? Let us have the equalizing influence of a system of taxation so placed as to remove in part at least the danger of over-indulgence among our men of wealth, and, besides, such taxes will help our adverse exchange rates, is it not so?—R. J. Deachman.

**Gossip.**

**Premier Holsteins.**

Of the numerous pure-bred herds reviewed from time to time in these columns there are but few that are more deserving of mention than the Oak Park herd of pure-bred Holsteins, owned by the W. G. Bailey estate, of Paris, Ontario. The official records for milk and butter production as well as the show-ring record of many individual animals in the herd have in the past 5 years been sufficient to impress strongly the name Oak Park, on the minds of all who follow Holstein events and have the interests of the breed at heart in Canada. The repeated winnings of Lakeview Dutchland Hengerveld 2nd, until recently senior sire at Oak Park, is still fresh in the minds of breeders who keep in touch with the show-ring at Toronto and elsewhere, and the impression this bull has stamped on his offspring marks him as one of the greatest breeding sires the breed has ever boasted of in the Dominion. By the way of remembrance, it might be well to add here that he also carried 75 per cent. of the blood of Lakeview Dutchland Artis, Canada's only 43-lb. cow. "Dutch," as he is spoken of by the management, now has a score of daughters in the herd, and is also the sire of several of the young bulls now advertised. To breed on these daughters Mr. Bailey has been extremely fortunate in obtaining as the present chief sire the young bull King Sylvia Keys (also a choice individual), sired by Inka Sylvia Beet's Posch, sire of the great May Echo Sylvia. On mating with these heifers he will be afforded every opportunity to make good. His first calves to arrive, as seen at the farm by an Advocate representative recently, have promise. A bull of this breeding should improve most herds.

With the mature cows, those that make up the breeding herd, there has also been events happening this winter that are well worth recording. Helbon Beauty Bonhure and Maple Grove Hesseltje De Kol, two foundation cows in the herd, have recently made 31.59 lbs. and 32.79 lbs. of butter in 7 days, respectively. The former was the grand champion female at London in 1917, her production in milk for the 7 days was 638.5 lbs., while the amount given by Maple Grove Hesseltje for the same period was 755.8 lbs. She also produced 3,091.3 lbs. of milk and 132.62 lbs. of butter in 30 days. Her best day's milk during the test being 110.4 lbs. The records of both cows were finished in January, and while they are the highest official record cows in the herd at present, there are several others that have given almost as large a flow of milk, and two of these are freshening soon and will, barring accidents, also be tested this season. Mr. Bailey has recently published a nicely engraved calendar on which is printed considerable data regarding these and other records in the herd, and the same will be mailed to all on request.

In Yorkshires and Shropshires there is the usual offering. Both departments being in a position to furnish males or females of the usual Oak Park standards. Let them know your wants by mentioning this paper. Address all correspondence to H. H. Bailey, Manager Oak Park Farm, Paris, Ont.

Smith offered his open cigar case to a friend on his right, who thanked him, saying he did not smoke. His friend on the left also refused, with the same reply. The smoker was putting his cigar case away when his wife whispered to him:

"John, you have forgotten Mr. Jones over there."  
"Oh, no!" was the reply. "He smokes."

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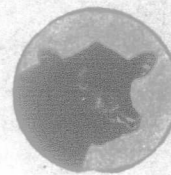
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Correspondence and Inspection Invited  
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A few choice bulls of Bonnie Ingleside 7th, Dock Publisher & Beau Albany, breeding from seven to eight months of age. No females to spare at present. W. READHEAD, Milton.

**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.

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**WM. GRAINGER & SON, Auburn, Ont.**

**Graham's Dairy Shorthorns**  
I have a choice offering in cows and heifers in calf. Bulls from the heaviest milking strains. Satisfaction guaranteed.

**Charles Graham, Port Perry, Ont.**

### SHORTHORNS

Present offering, 6 choice young bulls and a few females, their dams are good milkers and best of breeding. Prices moderate.

**Stewart M. Graham, Lindsay, Ontario.**

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For Sale. Three choice Bulls, 10 and 12 months old; also herd sire, 3 years old; his dam's R.O.P. is 10340 lbs. Satisfaction guaranteed. E. R. Wood, R.R. No. 2, Freeman, Ont.

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Offering two bulls 12 months old by St. Clare, R.O.P. No. 5. S. W. Jackson, Woodstock, Ont.

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I have for sale 4 very high-class Shorthorn bulls, 2 yearlings and two years old. These bulls are to be sold immediately, and the price will be right. Don't over-look this chance. Barred Rock Cockerels, \$5.00 apiece. S. Dyment, Barrie, Ont.

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

### FOR SALE

Shorthorn bull, roan, 13 months old. Dam Dorothy Rose 118995 a typical dual-purpose cow with R.O.P. of 9804 lbs., testing 369, made under adverse conditions. Sire Lavender Herd 109900 grandson of Right Sort. Priced to sell or would exchange for good female. George C. Burt, Hillsburg, Ont.

### Maple Leaf Farm Shorthorns

A high quality Miss Ramsden bull calf and Scotch bred females for sale. Shropshires—Some good ewe lambs. JOHN BAKER, R. No. 1, Hampton, Ont. Bell phone. Solina, C. N. R.; Bowmanville, G. T. R. and C. P. R.

## Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd—Questions should be clearly stated and plainly written on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

### Miscellaneous.

#### Bull at Large.

A put a herd of heifers in B's pasture with the understanding that there was to be no bull allowed in the pasture. C's bull got in and two of the heifers are in calf. Is B responsible or can he collect damage from C?

W. J.

Ans.—If the agreement was between A and B, A should look to B for redress. B in turn should look to C to reimburse him for damages done unless B's fence was defective and the bull got through there. B must have known that the bull was running in the pasture adjoining his farm and should have taken every precaution to prevent the bull breaking into his farm.

#### Wire Worms.

1. Are wire worms likely to infest high land that was in old sod for eight years? It was plowed last fall and harrowed twice.

2. I have a field that was plowed out of sod last year which is very thick with sow thistle. It did not injure the crop last year; is there any likelihood of it injuring the crop this year? Will sowing fertilizer help to keep the grain ahead of the sow thistle?

3. Will frost kill sow thistle roots? I plowed and cultivated the field with a spring-toothed cultivator and noticed that it brought a lot of roots to the surface.

M. S.

Ans.—1. It is possible that the wire worms have infested the old sod field. We find them working on high as well as low land. They are a pest which are controlled largely by short rotations of crops. We doubt if there is any crop which is immune from attacks by these worms. One cannot tell very well whether the worms will be very destructive or not, until the season advances. Some farmers have apparently stopped the destruction of the crop by these worms by giving the soil a light coating of salt after the crop is up. If the season is favorable the crop may get off to a good start before the worms do much damage.

2. If the roots of the sow thistle are very thick in the field, it is altogether likely that this weed will be present this coming year. Sow thistle apparently chokes out the grain, and it spreads so profusely that it is a weed which should be strenuously fought. We doubt if the fertilizer would give the grain a sufficient start over the sow thistle to be of material advantage. Sow thistle roots are of the nature that they send up new growth from practically every inch of the root. Frost may have some effect on the roots, but it is doubtful if it will kill many of them. Hot, dry weather, during which time the field is being thoroughly cultivated, is the best means of eradicating the weed from the field.

## Gossip.

### Annual Sale at Guelph.

Some sixty head of Shorthorns make up the offering for the annual sale to be held in the Winter Fair Buildings at Guelph on March 5. Several real herd headers suitable for pure-bred herds are included, and about a dozen females; some of them safe in calf. Many of the animals are of fashionable breeding, and all are in good condition. Breeders and farmers who are in need of a herd sire, or a few choice females will find that this sale affords a golden opportunity to make their selections.

For catalogue and other information address J. M. Duff, Secretary Fat Stock Club, Guelph, Ontario.

Plan to produce something exceptionally good for the school fall fair. Get the best seed you can and select a good plot of land.

### For Quick Growth and Early Maturity, Feed

## GARDINER'S CALF MEAL

It replaces perfectly the cream in skim milk, and provides the nourishment necessary for quick, vigorous growth. It is rich in protein, and several points higher in fat than any other meal on the market.

Feed Gardiner's Calf Meal first with skim milk, then with milk-and-water, and finally with water only, and your breeding calves will mature earlier and your young steers will be ready for market sooner. It is equally good for colts, lambs and little pigs.

Put up in 25, 50 and 100-lb. bags. If your dealer doesn't handle it, write us for prices, and for information about Gardiner's other products—Ovatum, Pig Meal, Sae-a-fat and Cotton Seed Meal.

GARDINER BROS., Feed Specialists, SARNIA, Ont. 15



### Beach Ridge Shorthorns and Yorkshires

Shorthorn herd headed by Sylvan Power 95871, a junior champion on Canadian circuit in 1914, and sire of the G. Champion Bullock at Guelph Winter Fair 1918. Young stock of all ages, both sex, for sale; also young cows with calf at foot or in calf to Sylvan Power. We can supply any want in Yorkshires.

R. D. HUNTER, EXETER, ONT.

### A FEW SCOTCH SHORTHORN BULLS

Several are old enough for service and all are got by a grand son of the great Superb Sultan. Individually they are strong enough to head the best of herds, and the breeding is unexcelled. Write us also for any thing in Shropshires or Clydesdales.

**ROBERT DUFF & SON, R.R. Stations C.P.R. - G.T.R., Myrtle, Ont.**

**Shorthorn Bulls and Females**—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (imp.). Our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

**PRITCHARD BROS., R.R. No. 1, Elora, Ont.**

**Beechwood Shorthorns**—Herd sire, Browndale Victor "117469." Four young bulls for sale: 1 choice bull, 14 months old, weight 1,100; 2 splendid bulls, 12 months old; 1 nice, mellow roan calf, 9 months; also two Scotch heifers with calves at foot.

Long-distance 929 Erie phone. **J. WATSON ROULSTON, R.R. 5, Hagersville, Ont.**

### Choice Shorthorn Females

Mysie, Rosemary's, Clementinas, Missie, Miss Ramsdens, Cruickshank, Fragrance, etc., all good pedigrees and all good breeding cattle in calf to young bulls. Prices right. Also a few bull calves. Correspondence solicited.

**JAS. K. CAMPBELL & SONS, PALMERSTON, ONT.**

## NICHOLSON'S SHORTHORNS

We have about a dozen young bulls (ages 8 months and upwards), sired by our herd headers. Best Boy =85532= and Browndale winner =106217=. Write or come and see.

**R. and S. Nicholson, Parkhill, Ont.**

### PINEHURST R. O. P. DUAL-PURPOSE SHORTHORNS

Herd headed by "Burnfoot Champion" =109945=, whose dam holds the two year old record of Canada, and his dam on sire's side has an R.O.P. record of 13535 lbs of milk and 540 lbs of fat. "Buttercup" =11906= has just completed her test in 4 year old form with 16596 lbs of milk in twelve months. Could spare a couple of females. Visitors welcome to the farm at any time.

**G. W. CARTER, Pinehurst Farm, Ilderton, Ont.**

## SHORTHORNS, CLYDES

Have a few choice bull calves left. See these before buying elsewhere. Also six Clyde Mares and fillies rising one to 6 years of age. Each by imported sire and dam. **WM. D. DYER, R. No. 3 Oshawa, 2½ miles from Brooklin, G.T.R., 4 miles from Brooklin, C.N.R. or Myrtle, C.P.R.**

### "DUAL-PURPOSE SHORTHORN BULL"

"Commander" =115964= calved Jan. 20, 1917, dark red, a model for type, sired by Burnfoot Chieftan whose dam gave 13535 lbs. milk in R.O.P., his dam is Jean Maisie giving 7850 as 3 yr. old in R.O.P., she is sister to Jean Lassie who gave 13819 in R.O.P. He is strong and sure and price is right. Also have two 10 months old red bulls, strong milk backing, priced to sell. Write for particulars or come and see them.

**Hugh A. Scott, Caledonia, Ont. Phone 5-18, R.R. No. 3. (Will meet Caledonia trains).**

### PEART BROTHERS SHORTHORNS

We are offering our Scotch Bred herd sire Nonpareil Counsel 96931, also ten young bulls of his get practically all ready for service, from cows of both beef type and dual-purpose, one of which has qualified in R.O.P. Prices reasonable. Inspection invited. Pleased to meet trains at Hagersville, M. C.R., Caledonia, G.T.R.

**PEART BROS., Phone 70-16, Caledonia, Ont., R.R. No. 3.**

### SHORTHORNS and CLYDESDALES

Herd still headed by Proud Victor =102587=. For Sale—One red, 20-months old, and eight 10-months-old choice reds and roans. Also females of all ages.

**J. B. Calder** **Glanford, Sta. R.R. 3**

### SPRUCE GLEN FARM SHORTHORNS

We have for sale a number of young bulls fit for service and a few choice heifers.

**JAMES MCPHERSON & SONS** **DUNDALK, ONTARIO**

### Shorthorns

Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head.

**A. G. FARROW** (between Toronto and Hamilton) **OAKVILLE, ONT.**

### Spring Valley Shorthorns

Herd headed by Sea Gem Pride =96365=. Present offering includes two real herd headers. One imported in dam, the other by Sea Gems.

Pride and from a show cow. A number of other good bulls and a few females. Write for particulars. Telephone and telegraph by Ayr.

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

### Glengow Shorthorns

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

**WM. SMITH, COLUMBUS, ONT.** **Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.**

### Pure Scotch and Scotch-Topped Shorthorns

We have several choice young bulls for service. Two are by Rapheal (imp.), one by Right Sort (imp.), one by Sittytton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices right.

**R. M. MITCHELL, Freeman, Ont., R.R. No.**

### Creekside Scotch Shorthorn Heifers

A select lot with the choicest of breeding, (reds and roans). Several of these are bred to my present herd sire Gainford Count a Stamford-bred son of the great Gainford Marquis (imp.). The prices quoted on these are right. I have only two bulls left that are old enough for service.

**GEO. FERGUSON, Elora, Ontario.**

### 6 BULLS BY ESCANNA FAVORITE

A son of the famous Right Sort (imp.). All are ready for service and priced to sell. We have others younger and could spare a number of young cows calving early to the service of the same sires. Write, don't delay.

**W. G. GERRIE, C.P.R. Station on farm, Bell Phone Bellwood, Bellwood, Ontario.**





## Caledonia Shorthorn Breeders' Consignment Sale of SHORTHORNS AT CALEDONIA, ONTARIO

IN KEEFER'S FEED STABLES **Thursday, March 6th, 1919** Consisting of 24 males and 17 females, a total of 41 lots.

Among the offering is a lot of cows with calves at foot, a number of good, young bulls of the best Scotch breeding, some good dual-purpose bulls from cows with good records, females with strong milk backing, and a number of choice, thick, smooth heifers, bred right. Every animal listed an assured investment. A grand opportunity to start in Shorthorns.

CATALOGUES ARE NOW READY, POST CARD WILL BRING ONE.

**CAPT. TOM. ROBSON**  
**A. E. SMITH** } Auctioneers

**HUGH A. SCOTT, Secretary**  
CALEDONIA, ONTARIO

**Yorkshires**  
on Canadian circuit in 1916, and young stock of all ages, both sex, for sale. We can supply any want in R. D. HUNTER, EXETER, ONT.

**DRN BULLS**  
son of the great Superb Sultan. The breeding is unexcelled. Write Myrtle, Ont.

headed by Ruby Marquis, a son of Gainford Marquis (imp.). Our few females in calf to him. Get our R.R. No. 1, Elora, Ont.

Victor "117469." Four young bull, 14 months old, weight 1,100; months old; 1 nice, mellow roan calf. R.R. No. 5, Hagersville, Ont.

**Females**  
skhank, Fragrance, etc., all good prices right. Also a few bull calves. & SONS, PALMERSTON, ONT.

**SHORTHORNS**  
sired by our herd headers. Write or come and see. S. Nicholson, Parkhill, Ontario

**SHORTHORNS**  
olds the two year old record of lbs of milk and 540 lbs of fat. Form with 16596 lbs of milk in come to the farm at any time

**CLYDES**  
where. Also six Clyde Mares and WM. D. DYER, R. No. 3 Oshawa, Myrtle, C.P.R.

**BULL**  
for type, sired by Burnfoot Chief, giving 7850 as 3 yr. old in R. strong and sure and price is right. to sell. Write for particulars or one 5-18, R.R. No. 3. (Will meet

**SHORTHORNS**  
also ten young bulls of his get dual-purpose, one of which has to meet trains at Hagersville, M. 6, Caledonia, Ont., R.R. No. 3.

**ESDALES**  
red, 20-months old, and eight Glanford, Sta. R.R. 3

**SHORTHORNS**  
and a few choice heifers. DUNDALK, ONTARIO

of Escana, a great son of lls and a few females with Herd of over seventy head. OAKVILLE, ONT.

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**Heifers**  
of these are bred to my present Marquis (imp.). The prices ough for service.

**AVORITE**  
and priced to sell. We have y to the service of the same ood, Bellwood, Ontario.

### Bruce Breeders' Third Annual Sale of SHORTHORNS

Scotch and Scotch-Topped Forty-five Lots

Cows with calves at foot, heifers bred and open, bulls of breeding age, at

**Walkerton, Thursday, March 6, 1919**

The offering consists of selected animals from the best herds in the County, sired by outstanding bulls of the purest Scotch breeding. For catalogue, apply to Secretary.

**W. A. TOLTON**  
Walkerton, President

**N. C. MACKAY**  
Walkerton, Secretary

### Annual Sale of Pure-bred Cattle

(BEEF BREEDS)

The annual sale of pure-bred cattle (beef breeds) under the auspices of the Ontario Department of Agriculture and management of the Guelph Fat Stock Club, will be held in the

WINTER FAIR BUILDING, GUELPH, ON

**Wednesday, March 5th, 1919**

There will be offered about 50 head (males and females)

For further particulars, apply to

**C. L. NELLES**  
President

**J. M. DUFF, Secretary**  
Guelph

### Conditions in Pontiac County.

In my last letter to "The Advocate" I described conditions in Pontiac up till July. The first 20 days of that month were ideal for growth—plenty of rain and a high temperature. The hay which was a light crop (the clover having been pretty much all killed by spring frosts), was left uncut till after the 20th of July when the weather became more settled. Though help was scarce the crop being light and the weather fine no great difficulty was experienced in getting it in in good condition. On August 7, after a very hot day, about 5 p.m. the sky presented a formidable appearance which soon culminated in the worst storm Pontiac County has had for years. Hail, lightning and wind all combined in a few minutes and rendered much hard labor fruitless. Crops were destroyed in narrow strips here and there; barns, silos, etc., were blown down and in a number of cases reduced to ashes through lightning. No lives were lost however, that is human lives (there were quite a number of animals killed and burned) so the victims in most cases, thankful their lives and that of their families had been spared set quietly and resolutely to work to repair, as far as possible, the damage done. Those who were fortunate enough to have been spared any loss were in most cases eager and ready to assist their less fortunate neighbors in getting buildings again fixed up for in few localities does the spirit of helpfulness and sympathy of a practical sort find a more ready expression than among Pontiac farmers. Very rarely indeed does a case of hardship or need of assistance come under their notice that does not meet with beneficent response. After the storm had passed the heavy fields of grain, of which their owner had been justifiably proud, presented a sorry sight. They were laid as flat in many cases as though an immense roller had passed from West to East over it. Many fields had to be cut one way but as the ground was dry in most places during the cutting season

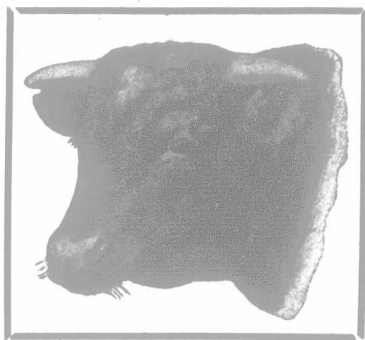
### Important Clearing Sale

40 Scotch and Scotch-Topped 40

## SHORTHORNS

SELLING WITHOUT RESERVE AT

**Oakville Ontario, March 6th**



This lot comprises my entire herd. They are a select breeding lot throughout, selling in very ordinary condition and are of the sort that never fail to make good buying. The pedigrees contain much of the most fashionable of present day families including Nonpareils; Jealousys, Lavender's, etc. A large number of the breeding cows will have calves at foot by our herd sire Gainford King and the majority of the others are selling well forward in calf to the service of the same sire. Gainford King is a grandson of the great Gainford Marquis (imp). He is also included in the sale. Write for catalogue.

Remember the date **Thursday, March 6th.**

**Geo. E. Morden** ALL TRAINS MET ON DAY OF SALE **Oakville, Ont.**

and the grain heavy the crop in most cases was taken off pretty clean. The weather from August 8 till the end of the month was fine and any who were fortunate enough to get their grain in had no cause to complain. Early in September the weather became showery again. One or, at the most, two dry days were followed quite frequently by a heavy downpour of rain. Grain still in stook, and there were many fields in that shape, was badly spoiled and in some cases had to remain out till well on in October and then hauled in and threshed, though not by any means dry. The ground became so soft and water filled that plowing stubble lands on loamy and clay soil had to be left off. Frost came early and killed the corn which was chiefly of the Southern varieties making a silage that is none too palatable. Owing to the early frosts and continued wet weather, pastures failed early. Cattle did not improve in flesh or milk as they should have under better conditions and stable feeding began earlier than usual. The prices of cattle went down much lower than farmers expected and many cattle were sold at a price that would have been refused for the same cattle last spring. Potatoes were a fair crop where no rot set in. A great many were sold at from \$1.25 to \$1.40 a bag before winter. The Pontiac Wool Growers and Co-operative Association handled quite a few car loads as well as live stock of all kinds. They are now doing quite a trade in grain, hay, straw and mill feeds of all kinds. The winter so far has been very mild, only a few cold days yet. It is very easy on cattle fodder and the wood pile. The "Flu" is still with us. It broke out worse than ever in this section the first week in January. The death rate has not been high but some very sad homes are left in its wake. The Shawville Dairy has been in operation all winter though a good deal of the cream still goes to Ottawa from this district.

Hay is in good demand and selling at from \$22 to \$27 per ton. Hogs at 16 cents; cattle from 5 cts up according to quality; butter-fat at 55 to 60 cents; eggs 55 to 70 cents.

Pontiac Co., Que.

B. H.

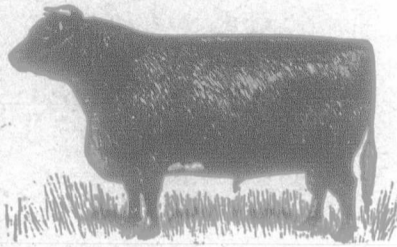


# For High-Class Shorthorn Cattle

ATTEND THE McCORMICK DISPERSAL (COLEMAN HOUSE FARM)

Paris, Ontario, Thursday, March 13th, 1919

## THIRTY HEAD



Breeders wishing to obtain choice breeding Shorthorns will find it to their advantage to attend this sale. Individually, or collectively they compare favorably with the best ever catalogued for a small sale in Ontario. All are selling in excellent condition and the majority carry fashionable pedigrees. Of the thirty, eleven are breeding cows; three are bred heifers and with the herd sire the remaining numbers are made up of yearlings and 1918 calves. Among the later are three young bulls old enough for service. If you are an admirer of good Shorthorns this offering is guaranteed to please.

WRITE FOR CATALOGUE

As the farm has been leased for a term of years there will also be sold, 22 two-year-old steers and heifers, 8 horses, (one matched span of Percheron mares (6 yrs old) one matched Clydesdale team, one Belgian mare and two geldings, all grades). Hay, Grain, etc.

Wm. T. McCormick

Sale at the farm one mile East of town limits.

Paris, Ontario

### Flintstone Farm

Breeders of

Milking Shorthorn Cattle, Belgian Draft Horses Berkshire Swine.

We offer animals that will raise herds to a level of war-time efficiency. Bull calves from \$125 up

DALTON

Massachusetts

### Mardella Shorthorns

Herd headed by The Duke, the great, massive 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R. O. P. test. I have at present two exceptionally good, young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call.

Thos. Graham, R. R. No. 3, Port Perry, Ont.

### Europe Wants HOLSTEINS

Little Belgium alone requires 20,000 pure-bred and 100,000 grade Holsteins. Other European countries are in similar condition. BREED WHAT THE WORLD WANTS. IF YOU CAN'T BUY A HERD, BUY A HEIFER.

Information from the HOLSTEIN-FRIESIAN ASSOCIATION President, Dr. S. F. Tolmie, M. P., Victoria, B. C. Secretary, W. A. Clemons, St. George, Ont.

### Holstein Bulls

Ready for service and younger. Cows and heifers bred to ORMSBY JANE BURKE, whose two nearest dams average 38.82 lbs. of butter in 7 days. The three nearest sires' dams and his dam's records average 35.69 lbs. for 7 days, and 112 lbs. milk for one day.

R. M. Holtby, R.R. 4, Port Perry, Ont.

### U. S. SHEARING TESTS

Tests conducted by the U.S. Bureau of Animal Industry at Laramie, Wyoming, demonstrated that sheep sheared with a machine not only produce more wool the first season, but grow more wool every successive year. Wool commands high prices. Get a Stewart No. 9 Ball Bearing Shearing Machine and make more money. If dealer can't supply you send us his name. Write for catalogue. CHICAGO FLEXIBLE SHAFT COMPANY Dept. B 161 12th St., and Central Ave., Chicago, Ill.

### Imported Shorthorns

SIRES IN SERVICE:

Imp. Collynie Ringleader (Bred by Wm. Duthie)

Imp. Clipper Prince (Bred by Geo. Campbell)

Imp. Orange Lord (Bred by Geo. Anderson)

We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

J. A. & H. M. PETTIT - Freeman, Ontario

Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

### MILKING SHORTHORNS

Herd headed by Dominator 106224, whose two nearest dams average over 12,000 pounds of milk in a lactation; cows with records up to 11,000 pounds of milk in a year. Bulls from three to ten months of age, also heifers and cows for sale. Weldwood Farm, Farmer's Advocate, London, Ont.

### SHORTHORNS

F. W. EWING, R.R. No. 1, Elora, Ont.

Shorthorns—Herd headed by Victor Stamford 95959, and Master Marquis 123326, a great son of Gainford Marquis. I now offer for sale my stock bull, Victor Stamford, which has proven himself quite equal to his great sire, Mildred's Royal 45353. Also young Shorthorns of either sex, Oxford Down ewes and ewe lambs, a 3-year-old Clydesdale stallion, and Scotch Collie pups.

GEO. D. FLETCHER, R.R. 1, Erin, Ont. Erin Sta., C.P.R. L.-D. Phone.

### WILLOW BANK STOCK FARM

SHORTHORN CATTLE and LEICESTER SHEEP. HERD ESTABLISHED 1855—FLOCK 1848. The great show and breeding bull, Brownale =80112=, by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of rams and ewes all ages. Imported and home bred. JAMES DOUGLAS, CALEDONIA, ONTARIO.

### Cedarbrook Farm Holsteins

For sale, two bulls—one a 32.74-lb., ready for service, and one five months old; sire, the 34.53-lb. son of the great cow, Jennie Bonerges Ormsby; dam, a two-year-old untested grand-daughter of the same cow; fine individuals; priced to sell.

Address—T. JENKINS, 15½ Toronto St., TORONTO

Young Bulls for Sale from R.O.P. champions and dams and sisters of R.O.P. champions, sired by Canary Hartog, and some by a son of Queen Butter Baroness, the dam of two champions in 7-and-30-day tests. We invite inspection, and will meet prospective buyers at G. T. R. or C. P. R. stations—Woodstock or Ingersoll.

WALBURN RIVERS & SONS (Phone 343 L Ingersoll, Independent Line), R.R. 5, Ingersoll, Ont.

Silver Stream Holsteins—We are offering a choice lot of young bull calves, all age on hand at present. We also have some richly-bred young cows due to freshen soon to offer

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

"The O'Rielly Stock Farm" Holsteins—We have several beautiful young cows and heifers in calf to "King Segis Pontiac Posch," son of the \$60,000 foundation or an addition to the herd, write us, or come.

J. O'RIELLY, R.R. No. 9, Peterboro, Ont.

### CLOVERLEA FARM HOLSTEIN-FRIESIANS

Offers for sale some choice young bulls ready for service from tested dams. Priced right for immediate sale. Phone or write.

GRIESBACH BROS. COLLINGWOOD, ONTARIO

### ORCHARD LEIGH HOLSTEINS

Present offering—3 young bulls ready for winter service. Good individuals with good R. O. M. and R. O. P. backing. Also one good March calf. Write or better come and see them.

JAS. G. CURRIE & SON, (Oxford County) Ingersoll, Ont.

### RIVERSIDE HOLSTEINS—CHOICE BULLS

We have several 10 months old, from dams with official records up to 100 lbs. of milk per day and 32.32 lbs. of butter in 7 days. These are well marked and straight individuals. Inspection invited.

J. W. RICHARDSON, Caledonia, Ont.

### Questions and Answers. Miscellaneous.

#### Heating a Living Room.

Would it be possible to heat a living room 13 by 22 feet with hot water radiator attached to the kitchen range? The radiators would be about 16 feet from the range.

Ans.—It is quite possible to heat the room with radiators connected with range. We cannot give the exact cost as the price of material and the cost of labor varies considerably in different districts. It would be advisable to secure this information from your local plumber.

#### Fixtures—Days of Grace.

1. A sells B his farm, there is a furnace in the house. Does the smoke pipes legally belong to B? They were not mentioned in the deal or can A take them?  
2. A has agreed to give B possession on March 1. Can A claim three days grace, or has A got to be out of the house under any circumstance?

Ans.—1. We think that they belong to B.  
2. There are no days of grace as suggested.

#### Rate of Seeding.

How much grain per acre should be sown, on gravelly loam, of spring wheat, oats, barley, peas and red clover? R. J.  
Ans.—The amount to sow depends a good deal upon the fertility of the soil, the conditions of the seed bed, size of the seed sown and the vitality of the seed. In the case of oats, it depends somewhat on the stooing quality of the variety sown. The following rates of seeding are frequently adhered to: Spring wheat, 1½ bushels; oats, 2 to 2½ bushels; barley, 1¾ to 2 bushels; peas, 2½ bushels; red clover, when sown alone, 10 to 12 pounds—when mixed with timothy and alsike, about 8 pounds.

#### Material for Wall.

How much gravel and cement would it require to put a wall around a shed 50 feet long and 24 feet wide; the wall to go one foot in the ground and be 10 inches thick? The wall is to be four feet above ground across one end and two sides.

2. What material would be required for a floor of a pig pen 24 by 34 feet?

Ans.—1. For the wall it will require 18 cubic yards of gravel and 15½ barrels of cement, if mixed in the proportion of one to eight.  
2. Mixing at the rate of one to eight, and putting in a floor 4 inches thick, it will require 10 cubic yards of gravel and 8½ barrels of cement.

#### Tuberculosis.

I have a cow five years of age that appears to be getting thinner every day. She is heavy in calf. She eats well but appears to have a dry cough. W. J. B.

Ans.—We are inclined to believe from the symptoms given that your cow is suffering from tuberculosis. A tuberculin test made by a veterinarian would indicate whether the cow is affected with this disease or not. Treatment is of no avail and the cow may be a spreader of the disease and thus a menace to the entire herd. The calf is likely to be free from disease at the time it is dropped, but it should be immediately removed from its dam and fed on milk from a healthy cow. If the cow is diseased, as we believe she is, it is not advisable to keep her in the herd.

#### Veterinary.

##### Legs Swelling.

The legs and joints of my 14-year-old mare swell when she is idle. She is troubled this way especially in winter.

Ans.—Some horses are practically predisposed to this trouble, but it is liable to occur in any horse. Purge her with 8 drams aloes and two drams ginger and follow up with 2 drams nitrate of potassium twice daily for 4 days. Hand-rub the swollen legs well. After purgation ceases see that she gets regular exercise. It will be wise to have her teeth examined, and if necessary dressed. If any of the points continue to swell, bathe them frequently with hot water and after bathing rub well with hot camphorated oil.

Holste County be not Under over 46 have fr cows w King S

Th weight, TE

H. E Farm 4

### Questi

I have a much milk bloated suffi  
Ans.—Fee been added Allow smal give often quantity and as digestion

Five-year in her shoul  
Ans.—Rh unsatisfacto Keep her c dry well-be floor. Purg linseed oil salicylic aci affected par and after camphorated

Cow  
1. Cow the udder ge

2. Calf of a goose e  
Ans.—1. milk 3 ti points of th or 4 times alum 1 oz. give tempo mend the ap compress t but these ar tight and enoough. N treatment h

2. This The applica the hernia u a cure or a by a veteri plan will be it is gradu



**Questions and Answers.**  
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R. B.

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A. D.

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**Rate of Seeding.**  
How much grain per acre should be sown on a gravelly loam, of spring wheat, red clover, peas and red clover? R. J.  
The amount to sow depends upon the fertility of the soil, the condition of the seed bed, size of the seed and the vitality of the seed. The use of oats, it depends somewhat upon the quality of the variety. The following rates of seeding are recommended: Spring wheat, 2 1/2 bushels; oats, 2 to 2 1/2 bushels; peas, 2 1/2 bushels; red clover, when sown alone, 10 to 12 bushels; when mixed with timothy and alfalfa, 8 bushels.

**Material for Wall.**  
How much gravel and cement would be required to put a wall around a shed 20 feet long and 24 feet wide; the wall to be 4 feet high and 10 feet thick in the ground and be 10 feet thick at the top? The wall is to be four feet thick across one end and two feet across the other.

**Material for Wall.**  
What material would be required for a pig pen 24 by 34 feet?  
A. C.  
For the wall it will require 1500 lbs. of gravel and 15 1/2 barrels of cement, if mixed in the proportion of 3 parts of gravel to 1 part of cement. The wall should be 4 feet thick at the rate of one to eight, and in a floor 4 inches thick. It will require 10 cubic yards of gravel and 10 barrels of cement.

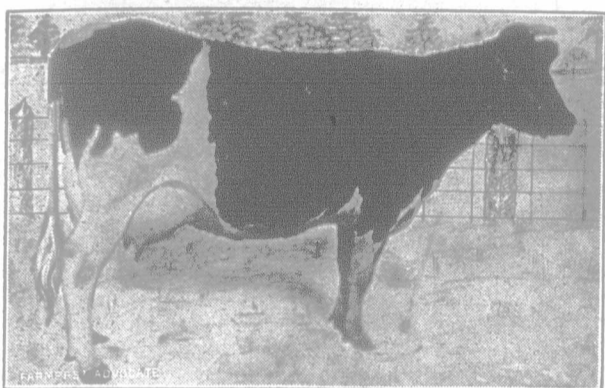
**Tuberculosis.**  
A cow five years of age that has been getting thinner every day. She eats well but has a dry cough. W. J. B.  
We are inclined to believe from the symptoms given that your cow is suffering from tuberculosis. A veterinarian would be able to determine whether the cow is affected with tuberculosis or not. Treatment is of no value in the case of a cow that has tuberculosis and thus a menace to the herd. The calf is likely to be free from the disease at the time it is dropped. It should be immediately removed from the herd and fed on milk from a healthy cow. If the cow is diseased, as she is, it is not advisable to keep her in the herd.

**Veterinary.**  
**Legs Swelling.**  
The joints of my 14-year-old horse when she is idle. She is lame in the hind legs especially in winter.  
A. R. H.

Some horses are practically free from this trouble, but it is liable to occur on any horse. Purge her with 2 drams of ginger and 2 drams of nitrate of potassium for 4 days. Hand-bath her legs well. After purgation see that she gets regular exercise and that she is well fed, and if necessary dressed. The points continue to swell, frequently with hot water bathing rub well with hot oil.

**Important Dispersion Sale of  
HIGH-CLASS  
45 Holsteins 45**

Comprising the entire herd of H. B. TAYLOR, and selling at the farm,  
**Mt. Elgin, Ont., Friday, March 14th**



Holstein breeders will find this one of the select untested herds of Oxford County, and while there has never been an official tester on the farm, it will be noted that practically every female listed has officially-tested ancestors. Under private test a number of the mature cows in the herd have run well over 400 lbs. of milk in 7 days on twice-a-day milking, and 23 of these will have freshened from December up to sale time. The heifer calves from these cows will be retained, every other animal in the herd sells without reserve. King Segis Alcartra Bakker, the sire of the last mentioned calves, also sells.

WRITE FOR CATALOGUE.

There will also be sold one matched span of grey Percherons (grades), weight, 3,300 lbs. (one rising 4 and one rising 5 years).

TERMS OF SALE:—Cash, or 6% per annum on bankable paper.

**H. B. TAYLOR, - Mt. Elgin, Ontario**  
Farm 40 rods from C.P.R. Station. T. MERRITT MOORE, Auctioneer

**The London District Holstein Breeders  
WILL SELL SIXTY-FIVE HEAD OF REGISTERED  
Holstein-Friesian Cattle**

At the Brunswick Hotel Stables, City of London  
**Thursday, March 13th, 1919**  
Commencing at 1 p.m. sharp

This sale consists of 14 young bulls from 34-lb. sires and dams with 27-lb. records. Also some heifers sired by Finderne King May Fayne 9810, Hill Crest Count Echo 29751 and Baron Colantha Fayne 12273, and from tested dams. These cows will mostly all be fresh or due near sale time. Sale will be held under cover. Send for catalogues to

**JOHN McMILLAN, Sec., R.R. No. 2, Glanworth, Ontario**  
H. C. HOLTBY, President. L. H. LIPSIT, Sales Mgr.  
T. MERRITT MOORE, Auctioneer.

WE ARE OFFERING A FEW

**Choice Grandsons of King Segis**

These bulls are all nearing serviceable age; real choice individuals, and from dams with records from 25 to 31 lbs. of butter in 7 days. All are sired by a 31-lb. son of King Segis. Prices right. Correspondence solicited.

**JOSEPH KILGOUR, Sunnybrook Farms Eglinton P.O., Ont.**  
(North Toronto)  
Phone Adel. 3900

**Highland Lake Farms**

For Sale: Two extra good (30-lb.) thirty-pound bulls ready for heavy service. Priced to sell. Also younger ones by a son of May Echo Sylvia.

**R. W. E. BURNABY - JEFFERSON, ONT.**  
Farm at Stop 55, Yonge St. Radial

**AVERAGE 114.1 LBS. OF MILK**

Premier Middleton Keyes, No. 39052; born Nov. 12, 1918, and about 75% white; a perfect individual and great size. His two near dams, and sire's sister average 30.97 lbs. butter and 78.4 lbs. of milk in 7 days and 114.1 lbs. of milk in a day. Sire:—King Sylvia Keyes—5 sisters and dam average 115 lbs. of milk in 1 day, a brother to May Echo Sylvia, world's greatest cow. Dam:—Princess Julian of Middleton, with 611 lbs. of milk and 23.71 lbs. of butter in 7 days, with 91 lbs. on her best day. He is priced to sell. Write at once, so that I may tell you more about him.

**H. H. BAILEY, Mgr., Oak Park Stock Farm Paris, Ontario, Canada**

**Questions and Answers.**  
Veterinary.

**Unthrifty Calf.**

I have a calf that scours if it drinks much milk and it also bloats and when bloated suffers acutely. W. L. S.

Ans.—Feed on new milk to which has been added 1/4 of its bulk of lime water. Allow small quantities at a time and give often and gradually increase the quantity and lessen the number of feeds, as digestion improves. V.

**Rheumatism.**

Five-year-old cow has rheumatism in her shoulder. C. H. K.

Ans.—Rheumatic affections are very unsatisfactory to treat in many cases. Keep her comfortable in a thoroughly dry well-bedded box stall with wooden floor. Purge her with 1 1/2 pints raw linseed oil and follow up with 2 drams salicylic acid 3 times daily. Bathe the affected parts frequently with hot water and after bathing rub well with hot camphorated oil. V.

**Cow Leaks Milk—Hernia.**

1. Cow leaks her milk. As soon as the udder gets full the milk runs out.  
2. Calf has a navel rupture the size of a goose egg. F. N. B. C.

Ans.—1. The better treatment is to milk 3 times daily. Immersing the points of the teats for a few minutes 3 or 4 times daily in a warm solution of alum 1 oz. to a pint of warm water will give temporary results. Some recommend the application of rubber bands to compress the teats between milkings, but these are liable to cause trouble if too tight and are ineffective if not tight enough. No effective and satisfactory treatment has been discovered.  
2. This may disappear spontaneously. The application of a truss that will hold the hernia up for 2 or 3 weeks will effect a cure or an operation can be performed by a veterinarian. Probably the wiser plan will be to give nature a chance unless it is gradually getting larger. V.

**Veterinary.**  
**Legs Swelling.**  
The joints of my 14-year-old horse when she is idle. She is lame in the hind legs especially in winter.  
A. R. H.

**LLENROC STOCK FARM.**

**DO YOU WANT A 38-LB. BULL**

to be the sire of your next Herd Bull? Then write at once for our prices on sons of such a sire. They are all from record dams too.

You will get type and production for the same price—and that price will be within your means.

Write us NOW for details

**W. C. HOUCK, R. R. 1 Chippawa, Ont.**

ON THE BOULEVARD OF THE BEAUTIFUL NIAGARA RIVER.

**33-LB. GRANDSONS OF LULU KEYES**

I have at present ten young bulls all sired by my own herd sire, King Korndyke Sadie Keyes, a son of Lulu Keyes, 36.05 lbs. of butter and 785 lbs. of milk in 7 days. These youngsters are all first-class individuals, and their dams' records run as high as 33.29 lbs. of butter in 7 days. Several of them must go quick to make room.

**D. B. TRACY (Hamilton House Farms) COBOURG, ONT.**

**HOSPITAL FOR INSANE  
HAMILTON - ONTARIO**

Present herd sire is one of the best sons of King Segis Alcartra Spofford; we have three of his sons born during May and June last, and also a grandson of Lakeview Lestrage. Apply to Superintendent.

**Raymondale Holstein-Friesians**

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pietertje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long. Write to-day.

**Raymondale Farm, Vaudreuil, Que.** **D. RAYMOND, Owner Queen's Hotel, Montreal**

**Manor Farm Holstein-Friesians**

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

**GORDON S. GOODERHAM, Clarkson, Ont.**

Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway.

**Alluvialdale Stock Farms Offer for Sale**

Two young Registered Holstein bulls fit for service. Dams official tested of Johanna strain, sire Sir Gelsche Walker whose 7 nearest dams average 30-lb. butter in 7 days. Write for price and pedigree.  
**T. L. Leslie Norval Station, Halton County, Ont.**

**How to Develop Speed.**

I have a 4-year-old horse that will pace a little, then trot a little and keep changing but if asked to go fast will start to run. How can I make him travel fast?  
J. S.

Ans.—The act of developing speed in horses is not easily acquired. This applies especially to mixed-gaited fellows. You must decide which gait you wish to develop and then teach him to go at this gait, of course, allowing him to go slowly at first and gradually increasing the clip. It frequently is necessary to use hobbles. If you wish him to pace hobble the fore and hind leg of the same side. If you wish him to trot cross the hobbles so that the off fore and near hind leg and, of course, the off hind and near fore are hobbled. It requires patience, practice and skill to properly gait a mixed-gaited horse. If symptoms indicate that he has extreme speed at either gait it will be wise to put him into the hands of an experienced reinsman for a couple of months, as a person with no experience is liable to make matters worse. V.

**Miscellaneous.**

**Material for Wall.**

I wish to put a cement foundation under my house, which is 18 by 26-feet. How many loads of gravel and barrels of cement would it require? What kind of stone should I use? I wish to put the wall four feet in the ground and two feet above.  
W. O.

Ans.—It will require about 20 loads of gravel and 22 barrels of cement if you build a one-foot wall and mix in the proportion of one to six. The amount of gravel could be lessened somewhat by using stone. However, care should be taken not to have the stone come within two or three inches of the outside of the wall. If you have quarry stone you might build a stone wall, using cement mortar. This would necessitate the use of sand in place of gravel.



DISPERSION SALE OF CANADA'S INTERNATIONAL  
**Champion Herd of Utility Jerseys**  
 TUESDAY, MARCH 18, 1919, AT MYRTRY LODGE  
 3 Miles from Sarnia, Ontario.

40 head. 20 cows, mostly fresh in; 15 young Heifers from 3 to 15 months old; besides some young Bull Calves and Heifers, and Stock Bull 2 years old.

Cows that "fill the pail, not the dipper." Carrie Nation, (648) winner of 68 first prizes, won the West Lambton Dairy Contest in lbs. of milk and butter fat, against Holsteins, Dairy Shorthorns, Holstein Grades and Jerseys. Produce 64½ lbs. of milk testing 5 3-5 in 24 hours.

This herd has won over 1,500 first and second prizes in 16 years and won all the first and second Herd and

Sweepstake prizes at Port Huron, Mich. We have the best blood and milking strains the Dominion or the Island of Jerseys can produce. Our standard for 16 years has been a cow producing 10,000 lbs. milk, testing over 5%. We have produced some milking more, testing as high as 7%.

Catalogues issued later. Send for one—and don't miss the sale March 18th.

Sale held under cover if stormy.

Yours truly,

**Myrtry Lodge Stock Farm**

Anthony Hughes

R. R. No. 2, Sarnia, Ontario.

Parties from a distance will be met at Vendome Hotel, all trains and boats, go there and report and ask for A. Hughes' sale

Use  
**Harab-Davies**  
**Fertilizers**  
 For Profit  
 Write for Free Bulletin  
**Ontario Fertilizers**  
 Limited  
 Toronto

JUST JERSEYS  
**Baldwin's**  
 REGISTERED  
 COATICOOK, QUE.

Twenty-five Years Breeding Registered  
**JERSEYS and BERKSHIRES**

We have bred over one-half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.

HOOD FARM - LOWELL, MASS.

WILL SELL FEW FRESH JERSEY COWS  
 Jersey Bull one year, dam Mabel's Poet Snow-drop, 1st prize as calf, 1st Junior Champion as yearling, 2nd prize two year old Toronto, four times 1st Woodstock, four times shown. Bull six months, dam Oxford's Silver Bell, milked 38 lbs. day, score 172 points at Guelph 140 days in milk. First calf 1915. I developed and was breeder of Beauty Maid Champion four year old butter cow of all breeds in Canada, also Woodstock Pat. Champion Berkshire Boar Eastern Prov. 1916-17. IRA NICHOLS R.R. No. 2, Burgessville, Ont.

**Glencair Ayrshires**—Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont. Copetown Station, G.T.R.

**City View Ayrshires**—Young cows just freshened, heifers due in January or February. You should have one of our service bulls; all R.O.P. bred.  
 JAMES BEGG & SON, St. Thomas, Ont.

**Choice Offering in Ayrshires**  
 AT SPECIAL PRICES. Several young bulls of serviceable ages. All from R.O.P. sires and dams. Come and see them.  
 JOHN. A. MORRISON, Mount Elgin, Ontario.

The Advocate Advt. Pay

**PUBLIC SALE**

The farm being sold, the undersigned auctioneer has received instructions from SIMEON GINGRICH to sell by public sale, on his premises, FRUIT HILL FARM, situated 6 miles south of Kitchener, 5 miles west of Preston, 2 miles southwest of the G. T. R. depot, Doon, at the hour of 12.30 p.m. sharp.

Tuesday, March 11th, 1919

His entire FARM STOCK AND IMPLEMENTS, consisting of

**TWENTY PURE-BRED JERSEYS**  
 FROM HIGH-TESTING STRAINS, AND EIGHT GRADES.

Ten of the above Jerseys are descendants of Sadie Mac, one time champion of Canada. Trains will be met at Doon, G.T.R., from Kitchener, due at Doon 9.40 a.m.; from Galt, due at Doon at 10.55 a.m.; from Kitchener, due at Doon 3.05 p.m.

TERMS: Ten months on approved security; 5% off for cash.

CATALOGUE ON APPLICATION.

SIMEON GINGRICH, Prop., R.R. 1, Blair. Phone 754 R2, Kitchener  
 E. J. SHANTZ, Auctioneer. O. S. KOLB, Clerk.

**PROSPECT FARM JERSEYS**

We have a large herd, and for over 30 years we have used only first-class sires, and are now in a better position than ever before to offer some choice young cows and heifers, "both registered and high grades," due to calve in March and April. They are all in the pink of condition, and the high grades will make ideal family cows. Choice young bulls six months and younger.

R. & A. H. BAIRD, New Hamburg, Ontario. Bell 'Phone

**Brampton Jerseys at National Dairy Show**

At the National Dairy Show at Columbus, Ohio, in October, Brampton Jerseys won among other major awards first for the best five females of the breed, which is perhaps the greatest award which can be won at this the World's Greatest Dairy Show. Among these was Beauty Maid, the champion four-year-old R.O.P. butter cow for Canada. We also bred and owned the dam and imported the sire of the mature champion R.O.P. butter cow for Canada. Why not make your selections from the Brampton herd?

B. H. BULL & SONS

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, ONTARIO

The  
**Woodview Farm**  
**JERSEYS**  
 LONDON, ONT.  
 JNO. PRINGLE, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD  
 Herd headed by Imported Champion Ronwer, winner of first prize with five of his daughters on the Island of Jersey, in 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

**GLADDEN HILL AYRSHIRES**  
 We have a choice selection of females, 35 head to choose from, every animal in the herd is for sale. If in need of a young bull having record of performance dams. Write or come and see them.  
 LAURIE BROS. AGINCOURT, ONT.

**SPRINGBANK R.O.P. AYRSHIRES**

We still have a few select young heifers for sale from our excellent herd sires, Netherton King Theodore (imp.) and Humeshugh Invincible Peter. All from R.O.P. dams. We also have four choice young bulls under 9 months of age. Inspection solicited.  
 A. S. TURNER & SON, Ryckman's Corners, Ontario.

**Homestead Farm R. O. P. Ayrshires**

At the head of our herd at present we have a grandson of the great Jean Armour. He is being used on the daughters of our former sire Garglaugh Prince Fortune (imp.). We can spare a few R. O. P. females of this breeding and also have young bulls. MacVicar Bros. Phone 2253, Harrietsville, Belmont, R.R. No. 1 Ont.

**Questions and Answers.**  
 Miscellaneous

**Sheep Farming.**

What is the fairest way of going in shares in sheep farming? Would a third of the buck lambs sold, and so much a piece for each lamb kept for breeding, be satisfactory?  
 A. C.

Ans.—One method which is claimed to have given satisfaction is for the owner of the sheep and the man who feeds and cares for them to divide the returns equally; each taking an equal share in the losses as well as in the returns.

**Ringling A Bull.**

I have a two-year-old bull that is getting somewhat stubborn. I have no ring in his nose. Can one be put in at this time?  
 A. O.

Ans.—Yes. Secure the bull firmly and then make a hole through the thin part of the wall between the nostrils. This can be done with any sharp pointed round instrument. Some use a hot iron and burn the hole through; others use a trocar, which is used for puncturing an animal that is bloated. This is the instrument which we ourselves use when putting a ring in a bull's nose. The ring is hinged and fastened with a small screw being inserted in the nose.

**Collection of Note.**

1. A holds a note against B who lives in Manitoba; can A garnishee B's wages?

2. If so how much is allowed B for supporting himself and family?

3. B also owns a house that is nearly paid for, could A get anything out of that?

4. What action would A have to take to get it?  
 W. C. K. Ontario.

Ans.—1. Yes.  
 2. \$40, and at the rate of \$40 a month if less than one month's wages is due.

3. No., unless it exceeds in value \$1,500. We assume that the house is debtor's actual residence.

**Conveyancing.**

Having the deed of a certain property could I by procuring the proper form give a mortgage without having to apply to a conveyancer? How about registration of same? Where could I procure said form and probable cost of same?  
 A. S. Ontario.

Ans.—These are all matters for the consideration of the mortgagee. He is the one to be satisfied, although the costs of mortgage and registration of same as well as of the examination of title and other usual searches are payable by the mortgagor. The mortgagee, who is the party advancing the money, is not at all likely to be satisfied with a mortgage prepared and the matter generally attended to in the way suggested.

**Concrete Tank.**

1. How much water will a cement tank 6 feet by 12 feet, inside measurements, hold?

2. What material is needed, how thick should the wall be, and is re-enforcement necessary for a cement tank?

3. A four-year-old mare had a sore spot on the point of her shoulder last summer, but it healed up this winter. On being put to work the shoulder again became sore, and swelled a little at night. What could I do for it?  
 F. W.

Ans.—1. Taking the tank as 12 feet in diameter and 6 feet high, it will hold approximately 4,216 gallons.

2. We have seen a number of cement tanks built with a 6-inch wall, mixing the concrete in the proportion of one of cement to six of gravel, and then plastering inside and out with cement mortar. It is well to use wire or quarter-inch round iron as re-enforcement. This could be put in about every 2 or 3 feet in the wall. The molds used for building silos come in very handy for building circular cement tanks.

3. We are inclined to believe that the collar does not fit just as it should, or else the hames are not adjusted properly. It is possible that while the skin healed over in the fall, the spot remained tender and it required but little irritation from the collar to make a raw surface. Bath with warm water and then apply a white lotion made of 1 ounce of acetate of lead and 6 drams of sulphate of zinc to a pint of water. After this sore heals, it is well to bathe it with salty water when the horse is working.



**Questions and Answers.**  
Miscellaneous

**Sheep Farming.**

is the fairest way of going in sheep farming? Would a third of the lambs sold, and so much a piece of lamb kept for breeding, be satisfactory?  
A. C.

One method which is claimed to give more satisfaction is for the owner to keep the man who feeds and shear them to divide the returns, each taking an equal share in the profits as well as in the returns.

**Ringling A Bull.**

Is it a two-year-old bull that is somewhat stubborn. I have a hole in his nose. Can one be ringled at this time?  
A. O.

Yes. Secure the bull firmly and make a hole through the thin wall between the nostrils. This is done with any sharp pointed instrument. Some use a hot iron in the hole through; others use a wire which is used for puncturing a tire that is bloated. This is the method which we ourselves use when ringling in a bull's nose. The ringling is fastened with a small plug inserted in the nose.

**Collection of Note.**

What holds a note against B who lives in Manitoba; can A garnishee B's wages?  
A. S.

How much is allowed B for himself and family? Also owns a house that is nearly paid for, could A get anything out of it?  
W. C. K.

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unless it exceeds in value. We assume that the house is the actual residence.

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These are all matters for the attention of the mortgagee. He is to be satisfied, although of mortgage and registration as well as of the examination of the usual searches are payable to the mortgagee. The mortgagee, who is advancing the money, is likely to be satisfied with a prepared and the matter attended to in the way suggested.

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**FEEDS**

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

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

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

**CRAMPSEY & KELLEY**  
DOVERCOURT ROAD, TORONTO

**Summer Hill Oxfords**



The Sheep for the Producer, Butcher and Consumer.  
Our Oxfords Hold an Unbeaten Record for America.

We have at present a choice offering of yearling ewes and rams, as well as a lot of good ram and ewe lambs—the choicest selection of flock-heads and breeding stock we have ever offered.

**PETER ARKELL & SONS**  
R.R. No. 1, Teeswater, Ontario  
G. C. Arkell, W. J. Arkell, F. S. Arkell

**Clip in the Spring**

Treat your horses with consideration. You wouldn't do your spring work wearing your winter overcoat—don't make your horses work while burdened with the winter's clothing. Clip them. Use a Stewart machine—lasts a lifetime. If dealer can't supply you, send us his name. Write for 1919 catalogue, showing complete line of clipping and shearing machines.

**CHICAGO FLEXIBLE SHAFT COMPANY**  
Dept. A 161, 12th St. and Central Ave., Chicago, Illinois

**Sprucedale Stock Farm Dorsets**

We are offering rams and ram lambs bred from prize winners. Also Canadian Beauty Seed Peas and Barred Rock Cockerels.

**W. LUCAS & SON**  
R.R. No. 1, St. Thomas, Ont.

**TOWER FARM OXFORDS**

Special offering: Ewes, different ages, bred to our Champion ram.  
**S. BARBOUR & SONS, R.R. 2, Hillsburg, Ont.**

**CHOICE DORSET YEARLING**

and two shear ewes heavy in lamb, also a quantity of ewe lambs for sale at a reasonable price.  
**STUART J. ROBERTSON, Hornby, Ontario.** (Formerly of J. Robertson and Sons).

**Shropshires**

Yearling rams and ewes. A few nice ram lambs by imported ram.  
**W. H. PUGH, R. R. 1, Myrtle, Ont.**

**Shropshires and Cotswolds**

A lot of young ewes in lamb to imp. ram, and ewe lambs, good size and quality, at reasonable prices.  
**JOHN MILLER, Claremont, Ont.**

**SHROPSHIRE SHEEP**

Breeding ewes of Kellock and Campbell breeds; bred to lamb in March and April, also ram and ewe lambs.  
**C. H. SCOTT, Hampton P. O., Oshawa, Station, all Railways. Bell Phone.**

**Questions and Answers.**  
Miscellaneous.

**Wooden Towers.**

In what year were those wooden towers erected throughout the country, and what were they intended for?  
R. C.

Ans.—We cannot give the exact date of the erection of these towers, but we believe it was ten or twelve years ago. However, they have been erected at different times. We understand they are for the purpose of studying the topography of the county and also for making observations regarding climate.

**Registration of Birth.**

Where could I get information as to the registration of my parents' birth, and if it would cost anything for same. They were both born in Ontario about the year 1837. I wrote the township clerk where my father was born, but they had no records of that early date. He referred me to the Registrar General at Toronto, with the same result. He was born in Township of Tyendinaga.  
SUBSCRIBER.

Ans.—It is possible that there may be a parish record, especially if their parents were Anglican or Roman Catholic; and we would recommend that enquiry be made of the Rector or Parish Clerk of the church parish in which they were born or baptised.

**Sweet Clover.**

1. Will sweet clover catch as well seeded in the spring on fall wheat as it would if seeded in the spring with barley?  
2. A gives B money to invest in a pure-bred heifer. B buys a two-year-old due to freshen in March. B is to furnish all feed and care for the cattle. What share of the proceeds is A entitled to?  
W. C.

Ans.—1. Sweet clover should catch all right on fall wheat. Practically all seeds do as well or better on fall wheat as if sown in the spring with other grains.  
2. Working on shares with cattle this way, it is rather difficult to figure out an equitable division of returns. If A stands loss due to the heifer dying, we believe he should have fifty per cent. of the returns. If however, A and B share equally any loss which might occur, then if A secures 33 per cent. of the returns, and B 67 per cent., it would seem like a fair division. Without knowing more of the facts of the arrangement, or whether the herd is to be increased or not, it is difficult to definitely answer the question.

**Hens Do Not Lay.**

Eighteen months ago I purchased 5 hens and a cockerel from a bred-to-lay strain. They laid about 60 eggs each in a year. I hatched thirteen pullets, seven of them commenced laying the last of December but they have dropped off lately. I feed 1 1/2 pints barley, wheat and oats, equal parts, in the morning and at night 3 quarts of boiled potatoes and turnips with one pint of cornmeal. They have grit and oyster shell before them all the time. I sometimes find a soft-shelled egg under the roost. Is there such a thing as a bred-to-lay hen? Am I feeding too much or not enough?  
A. L.

Ans.—With several breeds of fowl selection has been made to develop the laying strain. This has met with a good deal of success, and we can safely say that there are laying strains in a number of our breeds of hens. We are inclined to think that you are feeding too heavily, and that your birds are over-fat. You do not mention the kind of house in which you are keeping the birds. Dryness and good ventilation are two essentials. The pen need not be warm. We know of flocks this winter kept in a single-board building, with one-third of the front in cotton, which have been laying about sixty per cent. since the first of the year. The birds should be made to take a good deal of exercise. We would prefer feeding boiled feed at noon. There are two essentials which you have not mentioned, and they are meat and green feed, without which the birds will not lay very heavily. Skim-milk will take the place of meat feeds, and cabbage, mangels or steamed clover leaves will supply the green feed. If your birds are very fat, cut down on the feed.

**BEAVER BOARD**  
FOR BETTER WALLS & CEILINGS

**Real Panels of Lumber**

Handling a panel of Beaver Board, sawing it or nailing it, will quickly convince you of its sturdy and lasting qualities.

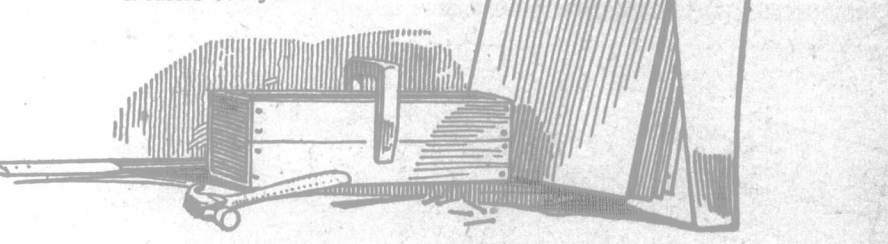
The spruce forests of Northern Canada supply the logs that go into Beaver Board. In our mills the strong, pure spruce fibres are built up into big knotless, crackless panels of Beaver Board.

Each piece is then treated with the Sealite process to prevent warping and to give it the ideal painting and decorating surface.

You can make your home more comfortable—a better place to live—because of attractive walls and ceilings—a happy atmosphere.

A Beaver Board Dealer is located near you. Beaver Board is easy to get and easy to use. Write us for a free copy of our book "Building more Comfort into the Farm Home."

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314 Wall Street, Beaverdale, Ottawa  
Plants at Ottawa and Thorold, Ont.  
Distributors in principal cities.  
Dealers everywhere.



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**Geo. H. Belton Lumber Company, London.**  
**Guelph Lumber Company, Guelph.**  
**Windsor Lumber Company, Windsor.**

**TAMWORTHS**

Boars ready for service—a choice lot to select from; also young sows bred for spring farrow. Write: **John W. Todd, R.R. No. 1, Corinth, Ont.**

**Big Type Chester Whites**—Three importations in 1918. 25 bred sows and gilts for sale, some imported, others by imported sires. All bred to imported boars.  
**JOHN G. ANNESSER, Tilbury, Ont.**

**Sunnyside Chester Whites and Dorsets.** In Chester Whites both sexes, any age, bred from our champions. In Dorsets ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London and Guelph winners.  
**W. E. Wright & Son, Glanworth, Ont.**

**ELMHURST LARGE ENGLISH BERKSHIRES**  
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply selected breeding stock all ages. Satisfaction and safe delivery guaranteed.  
**H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO.** Langford Station on Brantford and Hamilton Radial.

**Newcastle** Herd of Tamworths and Short-horns—Choice lot of boars and sows, three months old. Several young sows bred to farrow in January, February and March. Also a grand breeding sow carrying her third litter. All descendants of Colwill's Choice, three-year champion at Toronto Industrial, and Imp. Cholderton Golden Secret, and bred to Bruisnon, No. 11975, bred by Sir Rodolph Forget. Several Shorthorn bulls ready for service, from deep-milking strains. A few young cows with calves at foot and bred again. Also a few young heifers. A. A. Colwill, R.R. No. 2, Newcastle. Long-distance phone.

**Berkshire Pigs**

Large size, choicely-bred sows in pig; boars and gilts. Can supply pairs not akin; also dual-purpose Shorthorn cattle. Young bulls for sale. send for our breeding list.  
**Credit Grange Farm, Meadowvale, Ont., - J. B. PEARSON, Mgr.**

**INVERGIE TAMWORTHS**  
Boars ready for service, heavy-boned, husky lads from Bacon Beauty 12056 sired by my 800 lb. stock boar; Gilts ready to breed; young boars from 100 to 150 lbs. typical bacon hogs fit to head any herd; little lads and lassies just weaned. Express prepaid.  
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**Champion Duroc Jerseys**—Herd headed by two champion boars: Campbell 46, 3941, Toronto and London champion, 1916, 1917; Brookwater Ontario Principal 9785 (imported), champion Toronto and London, 1918. Write, or come and see my herd. Satisfaction guaranteed.  
**CULBERT MALLOTT, R.R. 3, Wheatley, Ont.**

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—We have one of the strongest selections of young sows and boars we ever had in the herd. Write us also regarding your next herd sire. We have them from great milking dams—all good families.  
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Sows bred, others ready to breed. Six large litters ready to wean, also a good yearling boar. All choicely bred and excellent type.  
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**BERKSHIRE PIGS**

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Registered Sept. pigs, either sex not akin. Registered Dorset Horn rams and ewes. 10 reg. Southdown-bred ewes. All stock priced for immediate sale.  
**CECIL STOBBS, Leamington, Ont.**

**Poland China and Chester White**

A choice lot of swine, bred from winning stock. Pairs not akin. Prices easy. **Geo. G. Gould, R.R. 4, Essex, Ont.**

**Prospect Hill Berkshires**

—Young stock, either sex, far sale, from our imported sows and boars; also some from our own herd, headed by our stock boar, Ringleader. Terms and prices right.  
**JOHN WEIR & SON, Paris, Ont., R.R. 1**

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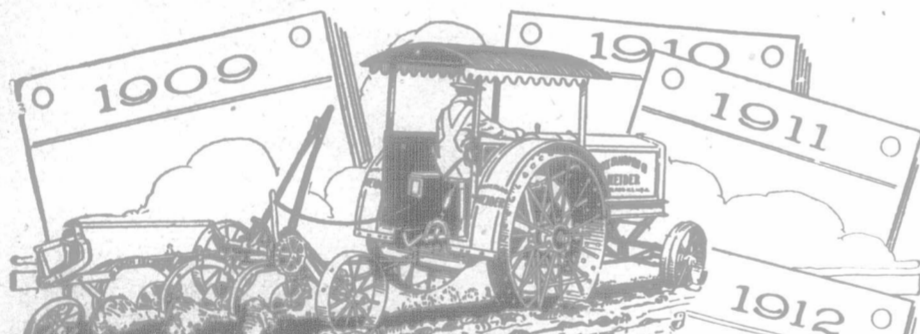
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Owing to the natural  
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teats all grades and breeds of cows can be milked with entire  
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YOU are not buying somebody's experiment when you get a Heider. Eleven years of actual farm experience has proved what it can do on your farm. The

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The Real All-Purpose Tractor

is the tractor with the famous friction drive—one of the greatest single features ever built into a tractor. You cannot strip gears, nor lose power turning needless parts. You get your engine's best all the time without strain, without wasting fuel. 7 Speeds Forward, 7 Reverse.

**Burns Kerosene or Gasoline**

Especially designed manifold. Switch from one fuel to the other without carburetor changes. Write for tractor catalog.



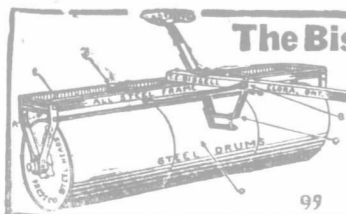
**Use Rock Island Tractor Plows**  
and get good plowing no matter what tractor you own, 2, 3 or 4 "CTX" bottoms. Front furrow wheel lift. Extra high clearance.

**Heider Model D, 9-16 h. p.**

The practical one unit plowing outfit. Sold with or without plow attached. Gets into fence corners and plows all the field.

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

See advertisement also on page 348

## Our School Department.

### A Rural Teacher Who Succeeded.

It was to Mendota community that the new teacher, Miss Grace Wyman, came to render her services. To the people of the community, she came merely as "the new teacher," in her own mind, however, she came with the determination of becoming the community leader in educational affairs.

### The Community and the Schoolhouse

Mendota was typical of thousands of other communities in the United States, particularly with reference to its attitude to the local school and education generally. A satisfied feeling that the school was good enough had become rooted in the hearts of many of the parents of the district. The schoolhouse was old, its walls dingy, an ugly stove disgraced one corner, and a cold, dark and damp cellar furnished disagreeable odors for the room above. No hall-way was provided for the hanging of wraps, and the lunches of the children were placed in various nooks about the schoolroom where a nail or other space afforded an emergency location.

The school, its buildings and grounds, its progress and achievement, are the mirror of any community, and the school situation at Mendota was no exception.

These appearances were anything but encouraging, and, to most young rural school teachers, the general outlook would have struck terror into their hearts. But not so with Miss Wyman. She quietly studied the life of the community and soon a light was discovered.

A social activity had been long engendered in the people here, and it was then actively engaged in many Sunday School gatherings that were held in the schoolhouse, where not only the usual exercises were held, but, also, questions of social and community interest were discussed by both persons of local importance and by special speakers from the leading educational institutions of the state.

### The Teacher's Opportunity.

Here was the teacher's opportunity and she recognized it. Yes, more important than that, she acted upon the recognition; she did something. Plainly, her big problem was to turn this social habit of the community into school channels.

The children were normal country boys and girls, willing to work, and always ready for something new. That something new, however, must be something which would be big enough to attract and enlist the interest of the parents too. It was finally decided that the new thing was to be a big school exhibition in which everybody in the community should have a part.

As the teacher outlined the plan from day to day, enthusiasm grew. Nearly every morning, a new plan was presented. In spite of a congested school program of over thirty recitations a day, the big undertaking went forward with a vim. The children talked it over at home, the older people soon began to talk exhibition too, and the idea was in the air everywhere.

The mysterious element was furnished by the "Original Corner" in which each pupil was asked to prepare and exhibit an original piece of work of his own choosing, but which he should keep secret till the day of exhibition. The preparation for the Original Corner brought forth the activity and work in the homes that it was planned for. Everybody was busy. The pupils brought in their own and parents' surprise boxes and exhibits.

One boy brought a hand-made Dutch wind-mill, standing in a box of earth—a suggestion which he had received from a picture. Another boy exhibited a ruler, properly marked to scale, which he had made with his new jack-knife. The girls brought various domestic articles. One brought a cake perfectly baked and frosted. Another brought a well-baked loaf of bread which she made and baked herself. Other girls exhibited needlework of various kinds and other household articles.

### Getting the Real Thing Done.

The exhibition was well attended. All preparations had been carefully

planned long beforehand. Programs were printed and hand decorated by the children, and were distributed in all the homes of the community. Everything in the program was so arranged as to contribute to the one big aim which the leader had set for accomplishment; namely, a new or a remodeled schoolhouse, wherein she might render a better educational and social service to the community.

One boy gave a parody on the "Old Oaken Bucket," using to clever advantage, the worn out old schoolhouse. One of the girls gave a prophecy of the schoolhouse ten years hence. The question of the schoolhouse was kept before the community audience in a very vivid fashion. The teacher, also, explained what was needed and presented carefully thought out plans and estimates.

A committee of three was appointed from among the leading patrons to investigate school conditions—and even this was planned for ahead by the teacher. The citizen committee was instructed to present a definite report at the next regular annual school meeting in July.

### The Community Discovers Its Leader.

The people began to realize the worth of this live teacher. Of course she was expected to stay another year; everybody wanted her back. When she was asked to stay, she announced that she had planned to do so, if the school committee, at the July meeting, should vote to remodel the schoolhouse, so that she might not be handicapped in the furtherance of the school work which she had planned for the next school year. The announcement went like an electric current through the community. Everyone was thoroughly aroused to the danger of losing the teacher.

### The Annual Meeting.

The annual meeting came; every voter in the community was there, because he had been impressed with its importance by the committee appointed at the exhibition. The schoolhouse was crowded to hear the report of the committee. Some exciting discussion was held on several of the committee's recommendations. However, in the end, the complete program, in all its essential features, was adopted, the vote to borrow money was cast, and improvements to the extent of nine hundred dollars were authorized. The teacher had won, and the community was safe.

GARLAND A. BICKER.

### To The Teacher.

This is only the third appearance of our "School Department," and perhaps our aims are not thoroughly understood. The primary purpose of devoting this section to the schools was not to give all the agricultural information a teacher might need in her work, but to provide a medium for the profession through which they might communicate with each other and exchange ideas. That is to say, if you have found one method of teaching a certain lesson particularly successful, we would be glad to publish your outline for the good of your contemporaries. More than that we shall endeavor, through conversation and correspondence with teachers, to get suggestions which we shall pass on. This Department's Editor is also ready and willing to answer any questions of an agricultural nature you care to ask, because we feel that problems must often arise for which a solution is not readily forthcoming. More than that, if you wish to ask other teachers a question, address it to us and have it asked through this Department. Tell us in what way we can be of most assistance and any suggestions will be greatly appreciated.—EDITOR.

Seed firms are now mailing their catalogues. If you are planning a school garden you could use a catalogue very well when deciding what to plant.

Are your school grounds well provided with flowering plants and shrubs? Don't allow the school grounds to resemble a pasture field—Beautify!



Department.

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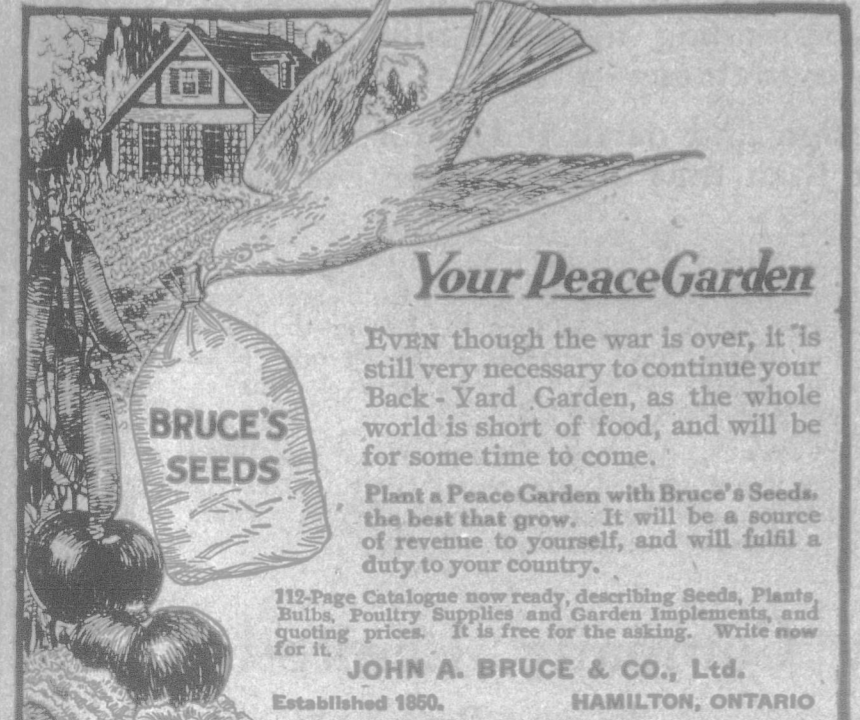
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Established 1850.    HAMILTON, ONTARIO

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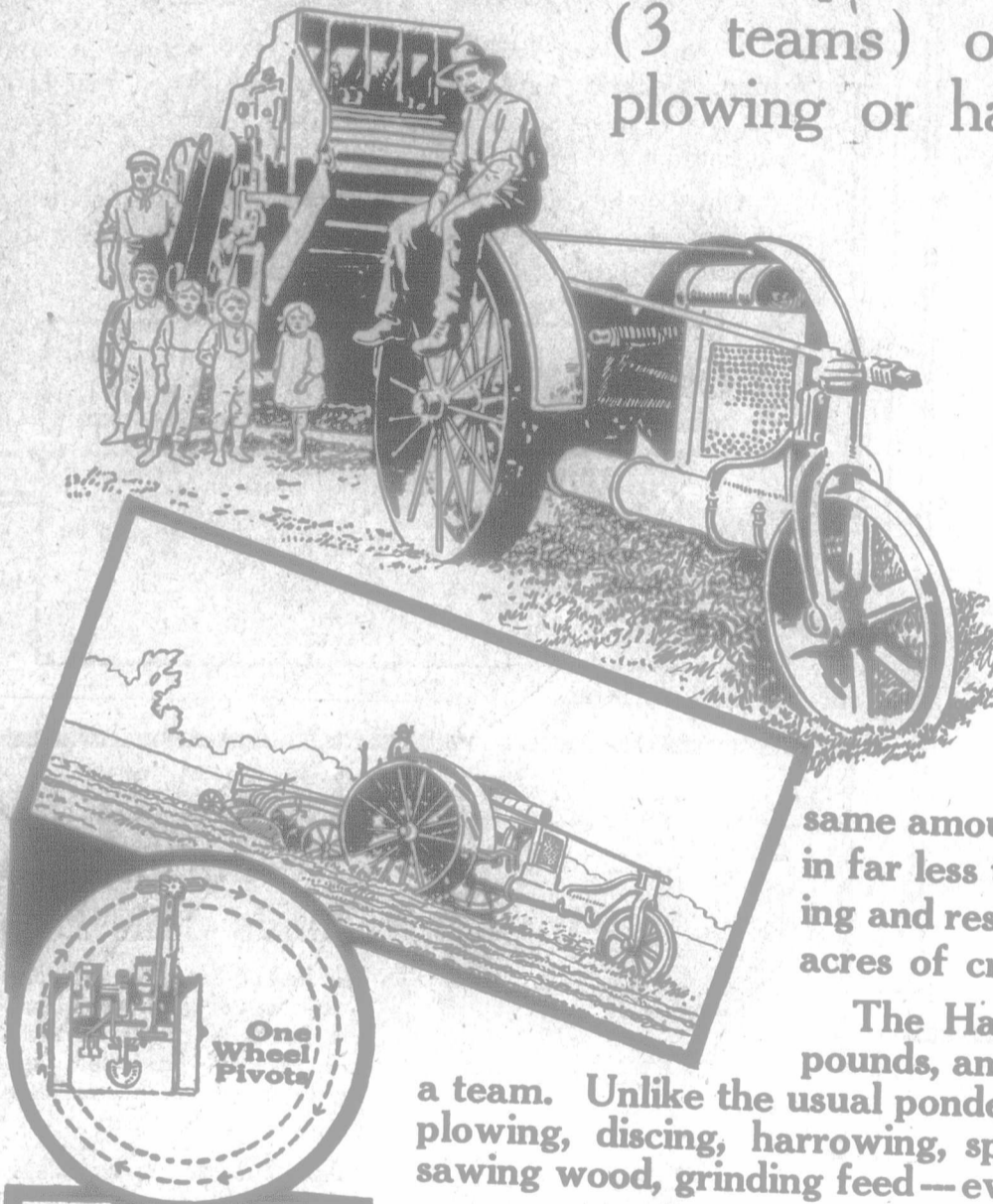
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Just as the early bird gets the worm so does the farmer quickest to market, get the high prices. And they get there by tractor power. Is it any wonder that farmers everywhere are buying Happy Farmer Tractors! As a business proposition would you rather put three men and nine horses (3 teams) on your overdue spring plowing or harvest or put on one man and a



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Means running furrows up to the fence, short turning with the fender, or heading around the yard. Self guiding in the furrow.

There are fewer parts to wear out and fewer to replace. Power is saved too in the specially designed transmission and in the oiling system. In short, you get more power for your money, both in first cost and in upkeep.

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Its light weight, simple design and perfected kerosene engine mean more power on the draw bar than that of any other tractor of similar size of engine.

competitors. Over and over again it has beaten them in results, and in saving of time and fuel. In plowing, the hardest of tests, it pulls three 14 inch bottoms at an average depth of eight inches. It gets the work done and saves time in awkward corners where others can't go.

Certainly you should investigate the Happy Farmer Tractor if you want to get more power for less money—and catch these early markets with earlier crops. "More Power to Ye." Write for free literature.

## Happy Farmer

12 h.p. at Draw Bar **Tractor** 24 h.p. on Belt Work  
Model F

The Happy Farmer Tractor—we emphasize Happy Farmer for a reason—will not only do the same amount of work as the horses, but will do it in far less time. There is no waste time for changing and resting horses, and you don't sacrifice five acres of crop per horse for their up-keep.

The Happy Farmer is light weight, only 3,700 pounds, and is as easy to move around the farm as

**The Renfrew Machinery Company, Limited**

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