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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

Director General Exp. Farm
Dec 31, 18

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

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Vol. LIII.

LONDON, ONTARIO, JUNE 27, 1918.

No. 1344

SAVE WHEAT FLOUR



Substitute

PURITY OATS

In All Your Baking

Send For Wheat-Saving Recipes

Western Canada Flour Mills Co., Limited

Head Office: - TORONTO

Canada Food Board License Nos.—Flour, 15, 16, 17, 18. Cereal, 2-009

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A bumper crop may mean a loss if your binder cannot handle it



At the same time your binder must be able to handle a light crop successfully—a thing some binders fail to do. The

FROST & WOOD BINDER

has practically grown up, in the last 80 years, with Canadian Agriculture and has been improved and tested until to-day it represents the ideal Binder for Canadian crops.

The crop won't wait—your binder must be ready

The Canadian farmer demands and must have a Binder that will cut any kind of crop—heavy, thin, tangled or straight—it must be light draft, easily handled and it must last for years with but little repair service. We have no hesitation in saying that the Frost & Wood Binder will live up to the highest expectations in all these respects. We use light, high carbon steel and put high-class roller bearings at every friction point so as to get light draft and strength. The reel can be moved by an

easy, convenient lever to bring any kind of grain, tangled or not, to the cutter bar and once there Frost & Wood force feed elevators can be absolutely relied upon to deliver it to the binder, and the sure tying knoter. By another easy adjustment you can tie any size sheaf you want—and even the sheaf carrier is well thought out—lowering the sheaves gently and regularly to the ground so no grain is shelled. A Frost & Wood Binder is a guarantee that you'll get your crop in. Many are in use up to 20 years old, giving fine service.

This Binder question is a mighty important one. Be sure to read our illustrated Binder folder—ask our nearest agent or write our nearest Branch to-day.

The Frost & Wood Co. LIMITED
Montreal, SMITH'S FALLS, St. John

Sold in Western Ontario
, and Western Canada
by

Cockshutt Plow Co. LIMITED
BRANTFORD, ONTARIO

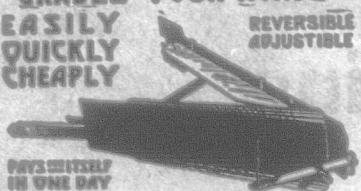


The little Gun that Kills Potato Bugs

With Poison Dust it will do 2 rows at a time as fast as a man can walk. Write for Agency contract. Sells on sight. Manfd. by

Illsley & Harvey Co., Ltd.
Port Williams, Nova Scotia

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



DOES THE WORK OF 50 MEN
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BISSELL SILOS ON THE BEST OF FARMS

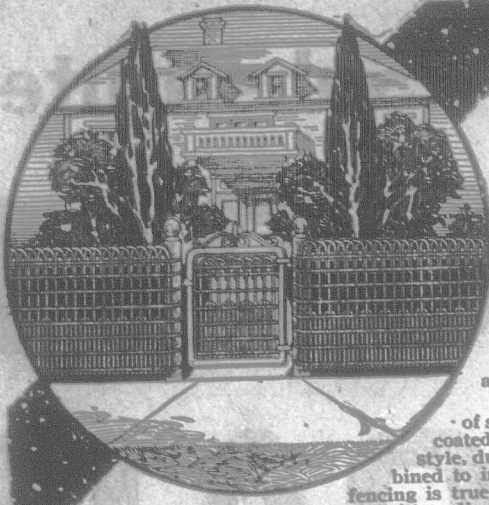
All farmers are unanimous in testifying as to its value. The handling of the Corn Crop is all done at one time. "You must make Hay while the Sun Shines," but you can store silage with unfavorable weather.

The BISSELL SILO is built of Selected Material, treated with wood preservative oils to prevent decay. The heavy steel hoops make it strong, rigid and air tight. Sizes to suit your requirements.

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You will say with a feeling of solid satisfaction—*all is now complete.*

Peerless Lawn Fencing

is the finish, the last word to beautify, protect and to enhance the value of your property. It safeguards your children, keeps out marauding dogs, animals and destructive chickens, protects the lawn, shrubs and flowers, and prevents trespassing.

Peerless Ornamental Fencing is built of strong, stiff wire, heavily galvanized and coated with zinc enamel to prevent rust. In style, durability, service and every feature combined to insure absolute satisfaction, the Peerless fencing is true to its name. It will not sag and cannot break down with ordinary use.

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

MILTON BRICK

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

MILTON PRESSED BRICK CO., LIMITED

Head Office: Milton, Ont. Toronto Office: 50 Adelaide St., West

"GOES LIKE SIXTY"

We Want to Demonstrate on Your Farm



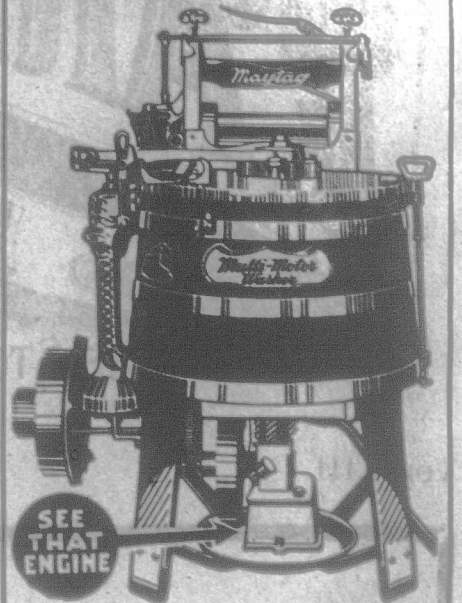
We will send a Gilson Engine, any size, without charge, to any responsible farmer in Canada to try out on his own farm, at his own work. Write for further particulars of free trial offer, catalogue, and special introductory prices.

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The old MONDAY with its washday worries becomes a NEW DAY of pleasant work for the woman who uses a

Maytag Washer



For particulars, drop a card to:

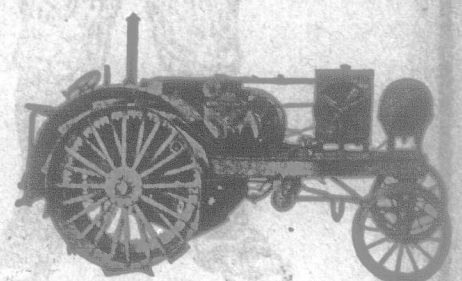
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Food Will Win the War

Serve your country and yourself by raising FOOD on the fertile plains of Western Canada. The Canadian Pacific Railway makes it easy for you to begin. Lands \$11 to \$30 an acre; irrigated land up to \$50; 20 years to pay. Loan to assist settlers on irrigated lands. Get full particulars and free illustrated literature from

G. A. Muddiman,
Land Agent, C.P.R.
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The Waterloo Boy



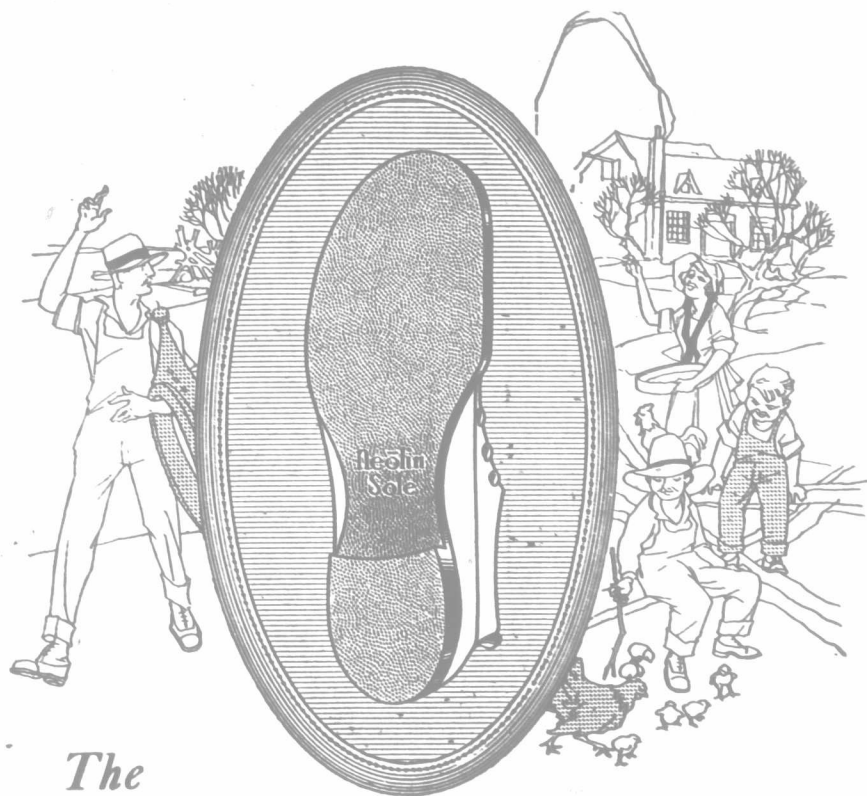
The Three-Plow Tractor for Ontario. The Tractor that makes good. The Tractor that has stood the test. The Tractor that is guaranteed under all conditions. Write for free catalogue, prices and any information wanted.

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Selling agents for Ontario. Seaforth, Ont.

Steel Rails

for Reinforcing Bridges and Barn Driveways.

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Whole Family on Neolin

As fast as Neolin can be made more people get the benefit of its extra comfort and double wear.

Fine shoes have had Neolin Soles for over two years.

They proved that Neolin outwears leather.

Now, almost all kinds of boots and shoes are made on Neolin Soles.

Women's fine shoes, and walking shoes.

Men's work boots.

Children's Sunday shoes and school boots.

All have Neolin Soles. There are several thicknesses of Neolin Soles. The whole family can go out in any weather—and keep their feet dry. The kids can play in the wet grass and reach school with dry feet. Everyone will have pliable, comfortable shoes.

And the year's shoe-bills will be less.

Think of boys' and girls' boots with hard-wearing Neolin Soles.

What a saving in that item alone!

Think of work-boots on pliable, tough Neolin Soles. What extra comfort for the farmer! What a saving in shoe-bills!

Think of the extra wear of Neolin Soles on women's shoes. For these soles frequently outwear the uppers.

Every member of the family should be shod with Neolin. Then the family shoe-bill will be as low as it can be.

Get Neolin-soled new shoes and Neolin half-soles for old shoes. Nail or sew.

When buying look closely for the name "Neolin." It is stamped on the genuine Neolin.

Beware of substitutes.

The Goodyear Tire & Rubber Company
of Canada, Limited

Neolin Soles



Guaranteed Furnace Results

- Heat—sufficient volume to warm the home,
- even distribution to all the rooms in the home,
- the right quality to keep the home healthy,
- at a reasonable cost for fuel,
- with minimum effort in management, and
- without dust, smoke, ash or gas escaping into the air of the home.

Those are the results you have a right to expect from your furnace. Those are what you should insist on getting from it.

The Sunshine Furnace, installed the McClary way, gives those results.

It has been getting those results in every kind of home and building throughout Canada for eighteen years.

The Sunshine Furnace when installed the McClary way is sold with the absolute guarantee that you will get those results.

Engineering Service Free.

McClary's own heating engineers are at your service when you buy a Sunshine Furnace, to give you free expert advice on your home-heating requirements. Write to the nearest McClary Branch, and ask for particulars about this service. A booklet, "Comfort in the Home," makes clear all the things you want to know about furnaces and it is sent free on request.

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—the safe, sure TRACTOR "buy"

Why take any chances 'n buying a tractor? Farmers' actual experience has proved certain tractor principles to be right. Turner's 17 years engine experience has taken those practical tested features and standardized them in a tractor that

meets the needs of every farm

12 draw bar h.p., pulls 3,12 inch plows under usual conditions. Over 20 belt h.p., ample for individual threshing, silo filling, etc., yet economical for small jobs. Quality built—great strength: light weight, Waukesha 4 cyl. motor, Hyatt roller bearings throughout, Perfex Radiator, Dixie Magneto, Foote-Strite transmission and other standard quality parts.

Free Folder

Illustrates and describes our Tractor fully. Write:

Maxwells, Ltd.
St. Mary's, Ont.

Uses
Kerosene



PUBLIC NOTICE

Military Service Act, 1917.

**Men 19 and 20 Years of Age.
Harvest Leave.**

**Leave of Absence on Ground of Extreme Hardship.
Procedure to obtain Leave of Absence.**

Men Nineteen and Twenty Years of Age.

It has come to the attention of the Government that there is a widespread impression that young men of nineteen years, and those who became twenty since October 13, 1917, as well as those who may become nineteen from time to time and who have been or will be called upon to register under the Military Service Act, are to be immediately called to the colours.

This impression is quite incorrect. No date has yet been fixed for calling upon such men to so report for duty, nor has the question been brought before the Cabinet for decision. In view of the need of labour on the farm, it is most unlikely that consideration will be given to the matter until after the harvest is over, although of course the Government's action must be determined primarily by the military situation.

There is no further obligation incumbent upon young men of the ages above mentioned who have registered or who do so hereafter, until they receive notice from the Registrars.

Harvest Leave.

Some enquiries have been received as to the possibility of granting harvest leave to such troops as may be in the country at that time. No definite assurance can be given on this point as advantage must be taken of ships as they become available. On the other hand, harvest leave will be given if at all possible.

Leave of Absence on Grounds of Extreme Hardship.

It is desired that the Regulations respecting leave of absence in cases of hardship should be widely known and fully understood. Such leave will be granted in two cases:— (a) where extreme hardship arises by reason of the fact that the man concerned is either the only son capable of earning a livelihood, of a father killed or disabled on service or presently in service overseas, or in training for such service, or under treatment after returning from overseas; or the only remaining of two or more brothers capable of earning a livelihood (the other brother or brothers having been killed or disabled on service, or being presently in service overseas, or in training for overseas or under treatment after his or their return from overseas); brothers married before 4th August, 1914, living in separate establishments and having a child or children not to be counted, in determining the fact that the man is the "only" remaining son or brother; (b) where extreme hardship arises by reason of exceptional circumstances such as the fact that the man concerned is the sole support of a widowed mother, an invalid father or other helpless dependents.

It is to be noted that in all these cases the governing factor is not hardship, loss or suffering to the individual concerned, but to others, that is, members of his family or those depending upon him.

Procedure to obtain leave of absence.

A simple system for dealing with these cases has been adopted. Forms of application have been supplied to every Depot Battalion and an officer of each battalion has been detailed whose duty it is to give them immediate attention. The man concerned should on reporting to his unit state that he desires to apply for leave of absence on one or more of the grounds mentioned and his application form will then be filled out and forwarded to Militia Headquarters, Ottawa. In the meantime, if the case appears meritorious, the man will be given provisional leave of absence for thirty days so that he may return home and continue his civil occupation while his case is being finally disposed of.

ISSUED BY DEPARTMENT OF MILITIA AND DEFENCE,
DEPARTMENT OF JUSTICE



Save Precious Moments

In Haying Time

by using a PETER HAMILTON MOWER. Its great strength, absence of side draft, clean cutting and ease of handling enables you to cut surely and quickly the heaviest crops you grow.

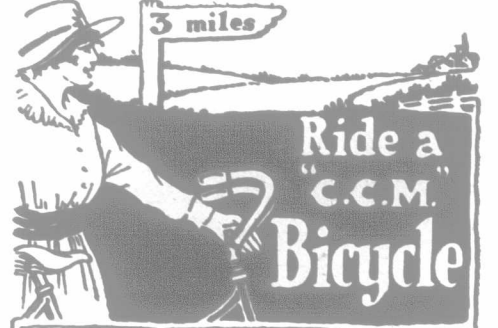
An extremely flexible cutter bar guarantees smooth and close cutting under all conditions.

The wheels are high and wide apart making the draft very light, the frame is strong and all bearings are in perfect alignment and fitted with renewable boxes or roller bearings.

Write now and save time and worry in getting your crops cut. (1)

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Ride a
"C.C.M."
Bicycle

For the Farmer's Daughter

A Bicycle brings the Grocer, the Druggist and the General Store within easy reach. You can go to town and do your shopping as often as you wish—no need to wait until a horse can be spared from work—no expense for gasoline. Useful in a thousand ways on the farm.

Write to-day for
Catalogue E



This Mark is Your Protection
Every "C.C.M." Bicycle bears
this design on the rear upright.

Look for These
Nameplates

All these well-
known
lines
are "C.C.M."
Bicycles.



Canada Cycle & Motor Co., Limited,
Weston, Ont.
Montreal Toronto Winnipeg Vancouver

Twice as easy as walking
Three times as fast



FOR SALE—ONE 8-16

AVERY TRACTOR

in good working condition. Apply—
C. A. Moffit, Bow Park Farm, Brantford, Ontario

Potato Growers!

KILL THE BUGS—STOP THE BLIGHT

JUST as surely as you've got your share of potatoes planted you're going to have your share of potato bugs this year. Just as soon as the tops show green you can expect these pests—lots of them.

Right now is the time to make plans for safeguarding your crop. Within the next few weeks the bugs will be on the job. Unless you protect your potatoes in time, unless you get rid of the bugs, you know you'll have no crop at all—your land, labor and time will count for nothing.

And if the season is either too wet or too dry, you can expect blight, too—whole rows of tops will be turned yellow.

With help scarce and costly this is no time for any old-fashioned, long and laborious methods. You need modern time-saving equipment. And, to prevent loss of your crop and profits you need it **now**.

Whatever the size of your potato acreage, we have in O. K. Canadian Potato Sprayers just the outfit you should have handy on your place. We can ship at once.

These machines are made specially for spraying potatoes. Just as spraying prevents blight in your orchard, so an O. K. Canadian Sprayer prevents blight among potatoes.

These outfits are real time-savers. At one shot they get rid of both blight and bugs. They do the job thoroughly. Take minutes where any old-style method takes hours. They enable you to do the spraying frequently—as it has to be done. And an O. K. Canadian Sprayer will do many other spraying jobs that make it doubly valuable around your place.

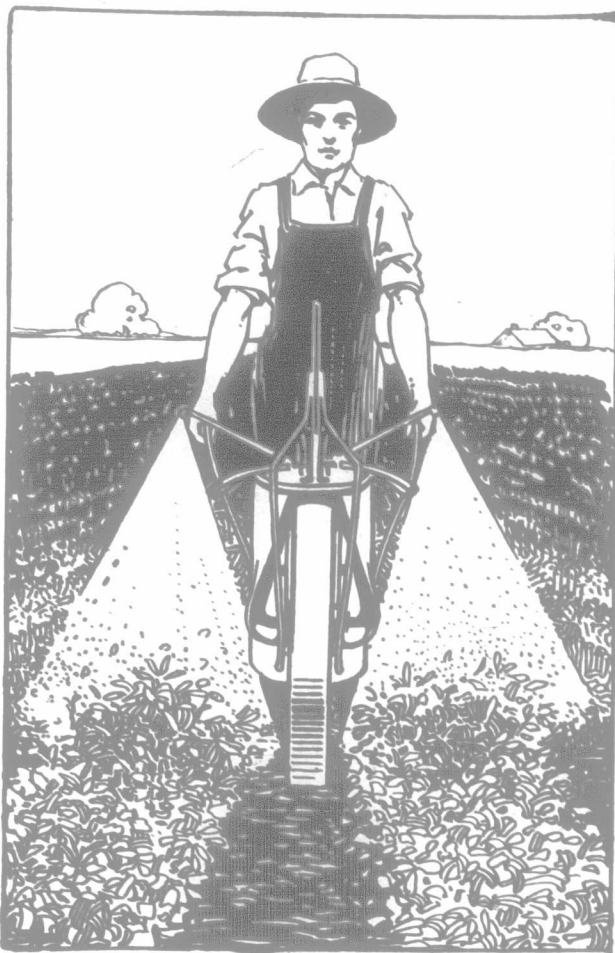
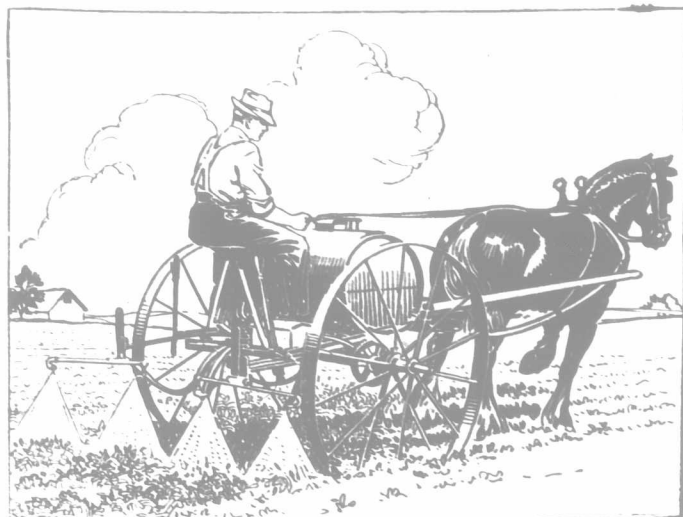
O. K. Canadian 2-Row Sprayers

For Small Acreage — Farmers, Truck Gardeners, and Local Production Committees Should Order at Once.

THE O. K. Canadian Two-Row Sprayer is one we designed for smaller acreages.

It is of the wheelbarrow type—easy to shove between the rows. Usually operated by one man alone, but where the going is particularly heavy and time is short a horse can be hitched to it.

Wheeling the sprayer operates a force pump and also an agitator which keeps the mixture thoroughly stirred. The spray comes out of nozzles in a fine, copious mist, deluging the plants—two rows at a time. The nozzles can be adjusted in a moment to suit either the width or the height of the rows.



Detach the nozzle and the outfit can be used to spray trees and bushes; to clean the buggy or motor car; to disinfect and whitewash the chicken pen, hog pen and stable; to put out a fire.

Sturdy construction throughout. Tank holds 10 gallons. Fine brass and iron non-corrosive pump.

Last year, the O. K. Canadian Two-Row Sprayer sold for \$30. Since then, material and labor costs have advanced. But by increasing production to meet the demands of the situation that exist this year and making some changes in construction, we have produced an improved sprayer at the same cost as last year—\$30.

The O. K. Canadian 4-Row Sprayer

HERE'S the O. K. Canadian outfit for farmers who have a big acreage under potatoes. This horse-drawn outfit does amazingly quick work—sprays 4 rows at a time—an acre of potatoes in twenty minutes. From the seat the driver can oversee the work, and shift the levers for adjusting the spray at either side. Top-notch construction throughout—booklet describes it fully.

Don't be Caught Without this Time-Saving and Necessary Protection

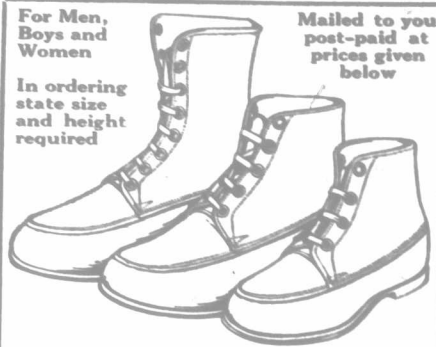
When every day's delay may mean loss of your whole crop, it would be poor economy to delay ordering your O. K. Canadian Sprayer. You need to have complete protection handy on your place right now. If you would like further information, booklets or pictures, write now.

And if you want to know more about potato spraying, about bug poisons and fungicides, about potato machinery of any kind, we are headquarters on such matters. You'll get a prompt answer if you write to-day.

Local Production Committees

There are hundreds of vacant lots in your district planted to potatoes. Many of these crops may suffer through neglect. By providing an O. K. Canadian Two-Row Sprayer you will make the fight against bugs and blight easy and inexpensive. But you will have to hurry!

Canadian Potato Machinery Co., Limited, Galt, Ont.



For Men, Boys and Women
In ordering state size and height required

Mailed to you post-paid at prices given below

Freedom From Sore Feet, Blisters, Corns

These come to you because you wear ordinary boots when working around the farm, in the soft earth and mud of field and barnyard. No man should be more careful about his footwear than the farmer. He must do his chores in all kinds of weather, and when working in the fields is on his feet, walking over uneven ground, from daylight almost till dark.

PALMER-McLELLAN CHROME-OIL FARM BOOTS

are made to give comfort and long wear—for rough or fine weather, and rough or fine usage. Cut in semi-moccasin style to insure greatest freedom. Built on right and left lasts with solid heels, soles and counters, they are neat and give greatest support. The leather is tanned by our famous Chrome-Oil Process, which makes it very soft, and so acts on the fibre that, regardless of wet, heat or cold, the leather will never dry up, shrivel or crack.

Made for women and boys as well as men.

Mailed postpaid at the following prices:

Men's 6-inch high, \$4.75. 8-inch high, \$5.25.

Boy's 6-inch high, \$3.75. 8-inch high, \$4.00.

Women's 6-inch high, \$4.25. 8-inch high, \$4.50.

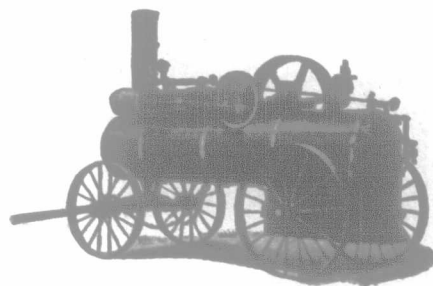
Fitted with top sole, men's 70c. extra, boy's 60c. extra, women's, 60c. extra.

Waterproof Paste per tin, 25c.

Address your order to Dept. 2.

PALMER McLELLAN SHOEPACK CO. Limited, Fredericton, N.B.

REBUILT PORTABLE AND TRACTION ENGINES



A number of good rebuilt engines from 14 H.P. up, suitable for Threshers' and Farmers' own use.

SEPARATORS



New and rebuilt Separators, all sizes from the individual Farmer's Thresher to the largest size.

WRITE FOR FURTHER PARTICULARS

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GRAND TRUNK RAILWAY SYSTEM

Highlands of Ontario

Offers you and all the family the outing of your life.

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LAKE OF BAYS
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ARE ALL FAMOUS PLAYGROUNDS

Modern hotels afford city comforts, but many prefer to live in tent or log cabin—your choice at reasonable cost.

Secure your Parlor or Sleeping car accommodation in advance.

Full information from any Grand Trunk Ticket Agent, or C. E. Horning, District Passenger Agent, Toronto, Ontario.



What Will You Do For Help?

FARM help is scarce, but this condition can be relieved to a marked degree by using machines that accomplish more work in a given time with less man power.

Why should the farmer cling to horses—a slow, expensive means of power—when every other business is adopting the truck and thereby reducing the cost of hauling, speeding up deliveries, and saving for human needs the food that the horses would otherwise consume?

The motor driven truck can work constantly at maximum load under the burning summer sun, or in the coldest weather. Unlike the horse it needs no rests while working, it eats only while in actual use, and when the day's work is done it requires very little attention, and leaves you free for other "Chores" about the place. Then, it can be housed in one-quarter the space of the horses, wagon and harness it replaces.

It is a mistaken idea that a truck is useful only for driving upon paved roads. The Ford can be driven all over the farm, and used for hauling grain, potatoes, fruit, roots, fertilizer, wood, stock, milk or any other product. The speed it travels, the time it saves, and its low upkeep cost appeal very strongly to all users of the Ford Truck. If you need help, order your Ford One Ton Truck today.

All prices subject to war tax charges, except trucks and chassis

THE UNIVERSAL CAR

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| One-Ton Truck | \$750 |
| Runabout | 575 |
| Touring | 595 |
| Coupe | 770 |
| Sedan | 970 |
| Chassis | 535 |

F. O. B. Ford, Ont.

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Cabbage Plants

of all leading early and late varieties, 45c. per hundred, mail prepaid; \$2.50 per thousand, express collect. Also Brussels Sprouts; Kale; Cauliflower; Snowball; Kohlrabi and onion plants (for large winter onions). Ask for price card. We are shipping successfully to all parts of Canada.

Herold's Farms, Fruitland, Ontario
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Write for our large, photo-illustrated Catalogue No. 7—it's free to you.
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ITS CAUSES AND TREATMENT
 Write for Free Booklet and particulars of the free trial offer of the Mears Ear Phone.
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Cash for Old False Teeth

Don't matter if broken. We pay up to \$15.00 per set; we also buy Crowns, Bridgework and Platinum. Will send cash by return mail and hold goods 10 days for sender's approval of our price. Mail to

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IF YOUR LABEL ON THIS PAPER does not show subscription paid in advance, PLEASE ATTEND TO IT NOW, as June 30th is the end of our financial year.

THE FARMER'S ADVOCATE AND HOME MAGAZINE, London, Ontario

Canadian National Exhibition

TORONTO
 AUGUST 26th—SEPTEMBER 7th

The Largest Prize List Ever Offered for Horses, Cattle, Sheep, Swine and Poultry.
 New and Better Classifications in all Departments.

A Win at Toronto Places You in the Front Rank of Breeders and Brings Many Buyers.
 Write Now for Prize List to:
 JOHN G. KENT, General Manager, 36 KING STREET EAST.

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Who runs the risk when the bread-winner neglects to secure the protection of Life Insurance for those dependent upon him?

Not himself, surely, but those for whom it is his duty to provide run the risk of his untimely death.

Whatever chances a man may rightly take for himself, there can be no excuse for subjecting others to a risk against which they cannot guard.

The Great-West Life Policies offer all that can be desired in Life Insurance; low rates, high profit returns, and the safeguard of careful, conservative management.

THE GREAT-WEST LIFE ASSURANCE COMPANY
 Dept. "Z" Head Office: WINNIPEG

NORTHERN ONTARIO

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

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you.

For full particulars as to terms, regulations and settlers' rates, write to:

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

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AND
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1866

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LIII.

LONDON, ONTARIO, JUNE 27, 1918.

1344

EDITORIAL.

Get rid of the rooster and break up broody hens immediately, both are non-producers of revenue.

Haying has commenced and farmers will have to depend on mechanical assistance more than ever before.

What about threshing gangs in your district? If conditions make the plan feasible it should be carried out.

Corn did not do any too well for a while, but with plenty of warm weather and ample cultivation it should fill the silos to the top.

The success of organization in Ontario should not be jeopardized through lack of leadership. We have the men—give them a chance.

A record crop is now looked for on the North American continent. This will be good news for Britain and our other Allies.

Registration and the questionnaire should reveal to many that they are not such important individuals after all. It is usefulness that counts.

It is now a time for the town and county to sink all differences of opinion and get together. It requires a long pull and a strong pull to win out.

An explanation of conditions created by the draft in Alberta was carried personally to Ottawa by the agricultural leader of the Province, H. W. Wood.

Cover crops prevent winter injury to fruit trees, and the experiences of the past winter advocate such protection. It is time cover crops were sown.

A successful farmer in Middlesex County, Ontario, informs us that he planted sorghum during the last week of June in 1917 and harvested a splendid crop.

Ferdinand of Bulgaria says: "We kings must stick together." Co-operation is becoming popular in high places, but the common people should not let the light go out.

Do not delay too long the plowing for fall wheat. A field plowed early, rolled, and cultivated to conserve the moisture will make a much better seed-bed than when the job is put off till late in August.

One department of the Ontario Government urges farmers to tile their land and spends a considerable sum of public money in inducing them to drain. At the same time another department refuses tile manufacturers, with a capacity for the annual production of 31,000,000 of tile, the use of natural gas, thus making it very difficult to secure the essential thing to carry on the work.

In this issue of "The Farmer's Advocate" will be found an index to all articles which have appeared since the beginning of the calendar year. Many of our subscribers have saved every issue for a long period and value their collection very highly. The last issue in June and the corresponding issue in December contain the index to all material appearing during the preceding six months, and by referring to that guide one can readily turn to articles discussing all phases of agriculture. No more complete and instructive volume of an agricultural nature can be obtained than the bound issues of "The Farmer's Advocate" covering a six or twelve months' period. Save your papers and use the index.

Mr. Parsons in the Open.

Those who busy themselves with the readjustment that must follow the war should remember that we are now fighting for the privilege of having a voice in this readjustment when the time comes, and all major efforts should be directed to the accomplishment of the one great purpose. If it is necessary to make tractors non-dutiable during war time in order to increase the production of foodstuffs, that should not be objected to on the grounds that it is contrary to the policy of those eminent and far-sighted men who have the readjustment in mind. It is well that we keep the future in view and prepare for post war days so long as the plans laid do not interfere with the present campaign for victory. The President of the Manufacturers' Association required little urging when at the annual convention of the Canadian Manufacturers' Association at Montreal, early in June, he projected the tariff question into the public affairs of Canada, simply because he had been challenged by some official organ "to come out into the open." It was not necessary for Mr. Parsons to come out into the open that we might know what his views were in regard to the tariff. His position as President of the Manufacturers' Association is sufficient guarantee that he is not obsessed with free trade ideas, or in any way a dangerous man so far as the manufacturers are concerned. The stand he took concerning protection was the stand we would expect him to take, and thus the outcome of more or less personal differences will soon be erased to make room for more vital questions and world events. If manufacturers had been surfeited with literature and exhorted to produce more and still more, as farmers have since the beginning of the war, and their trained help was continually leaving them for some occupation which, on account of the profits made, could afford to pay better wages, then our sympathy would be with them in their hour of trial. However, we learn from the report of the convention that the housing problem created through war contracts and influx of families and workers to the urban centres is a serious one, and immediate action is necessary to provide suitable and adequate living conditions. This contradicts the statements of Senator Nicholls, who in his address asserted that farmers of the West are making no less than 200 to 300 per cent. profits in producing wheat. If such were true the tide would turn and we would have such a back-to-the-land movement as the country never experienced in its history.

The Laborers Are Few.

Registration is now over and, no doubt, a great many not engaged in agriculture indicated that they had some knowledge regarding farm work and would be useful in the harvest. A great number, too, probably have expressed a willingness to assist in the fields if needed and do all they can to relieve the situation. It will require some time to compile the information and place each individual in his or her category as it relates to essential work. In the meantime the haying is on and the harvest will be at least commenced if not completed. These people should volunteer.

There are two classes of labor that could be used to advantage, one is the man who grew up on the farm and left it to learn some trade or take employment elsewhere. If engaged at manual labor he should be able to go out and assist very materially from the first, for he will not have forgotten what was instilled into him in his youth. Those with similar early training but now engaged in clerical or office work will not be so useful at first and will have to undergo the hardening process, but they should, nevertheless, be able to do their bit. Then there is the retired farmer who can, without exerting himself, accomplish three times as much as the uninitiated city or town man. The retired farmer, wherever he is, would be of great value in

that he does not have to be told how to do a thing and then shown afterwards. It would be well to get in touch with such people and endeavor to secure their aid, and they should avail themselves of this opportunity of rendering assistance in a trying time without being called upon by the authorities after weeks have elapsed in spotting them out through the registration system. There will be a difference in pay, of course, between what the farmer can afford and what one can now command in the city and this, at least, should be arranged for or adjusted at once by the authorities, as much labor can be given work at the crops before the registration information is collated. Farmers, however, are willing to pay a high wage by the day to good men, and those who go to the country by the week or month should consider their board and washing as well as the fact that their incidental expenses will be low.

Last season field after field of hay remained uncut in Ontario for the lack of hands to take it off. A whole year has elapsed and in the meantime more men have been taken from the farms, while nothing has been done to replace them for the haying except the articles which have been written arraigning farmers for not being satisfied with inexperienced help. With the exception of the lads out of high school very little of even the inexperienced help has come forward that has been so much discussed. The girls and women volunteers will do excellent service on fruit farms and in the berry fields, but the harvest requires men.

Farmers would be wise to get in touch with relatives or acquaintances who have had some experience, even if in years gone by, and induce them to lend a hand during the holidays or for a longer period, and thus make the best of a bad situation. Unless unfavorable weather conditions overtake us the crops will be abundant, and we need them all.

Ontario Agriculture in Need of a Leader.

The future of agricultural organization in Ontario depends more on leadership than any other one factor, and early in the development of such a movement we should pay particular attention to that factor which overshadows all others in importance. Ontario does not lend itself to organization, and it will be many years before we accomplish what has already been achieved in the West. The Prairie Provinces were new; they were almost wholly agricultural; they had one chief grievance, and they set about to remedy matters before conditions became intolerable. The growth of co-operation in Western Canada was contemporary with the development of Crerar, Wood, Maharg, Dunning and others as leaders in their respective localities and fields of endeavor. When Mr. Crerar entered the Cabinet as Minister of Agriculture others took command and the West still has strong men to whom Governments and corporations will turn a listening ear. Rural Ontario is older and until recently conditions in this Province were much more favorable for making a living and providing for the younger generation coming on. The West is a young man's country; in Ontario the percentage of older men who have clung to the ancestral home is much larger. Speaking broadly, the seeds of organization do not find as fertile soil in the Province of Ontario as they did and still do in the West. Nevertheless, we have many organizations in Ontario representing different branches of the industry, such as fruit growing, vegetable growing, live stock husbandry, dairying, etc., and connected with them are men in whom the people of this Province impose a great measure of trust. Before we can have an organization similar to the United Farmers of the West, all these forces must be consolidated and placed under one supreme command. This is the field that should be occupied by the United Farmers of Ontario, but up to the present they have not been able to enlist the support of forces which speak for

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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a very large proportion of Ontario agriculture. We have influential men who can outline a policy and gain its support; their counsel and advice are sought by authorities who have matters of state in hand, they are valuable men to the Province, but unfortunately too few of them have seen fit to identify themselves with the United Farmers of Ontario and make it what it should be, the one big organization through which the farmers of this Province could exert an influence. The reason for this is lack of leadership. Individuals with Dominion-wide reputations for wisdom and good judgment will not support an organization whose policy and actions they cannot endorse. For half a century "The Farmer's Advocate" has preached the gospel of united effort through co-operation, or whatever one wishes to call it; the name matters not so long as farmers get together and stand together. We are no less zealous in the cause than ever and for this reason we should not like to see progress in the Province of Ontario retarded for a quarter century, simply because we did not start aright and inaugurate something sufficiently attractive to draw to it the men and support necessary to make it serve the Province as such an institution should.

When the United Farmers of Ontario organized in March, 1914, we pointed out its weaknesses, many of which still exist, and made suggestions. One was that new blood be drawn from going concerns and that representatives from the various branches of the industry be included, in order to make it what the name implies, "The United Farmers of Ontario." This was never accomplished for reasons already explained, and until big men are singled out and put in command any progress made will be in spite of, rather than on account of, the present guidance this organization has. The present leaders are gentlemen and so far as we know they treat others as such, but that is not the point when the future of Ontario's agriculture is involved and at a time when farmers should be preparing to take a more active part in politics with a view to getting proper and adequate representation in Parliament.

The inestimable value of leadership is being exemplified throughout the world to-day as never before. Great accomplishments depend not so much on the numerical strength of the opposing forces as on the personal

magnetism, wisdom, judgment and determination of those in command, and in whom the peoples of the civilized world are imposing an unprecedented measure of confidence. Let us translate this principle and adapt it to the United Farmers of Ontario so it will deserve the support necessary to make it the farmers' parliament of this Province and enable it to grow up unwarped to maturity and to a position where it will merit the goodwill of all interested in agricultural advancement, and command the respect of those with whom it may hold differences of opinion.

What Sandy Views as Essential Work.

BY SANDY FRASER.

"I see," says I to the auld wumman the ither day, "that there is some talk in the papers o' the Government 'eliminating the non-essential industries.'" "What's that?" inquires Jean, looking up for a minute from the dishes she wis washin'. "Weel, frae what I mind o' the dictionary," I replied, "it means that the unnecessary jobs are to be cut out. In ither words all the people in this country that are daein' wark that isn't o' first-rate importance to the health an' welfare o' the world at large will be compelled to change their occupation an' go at some o' the jobs that have tae be done, if humanity is to continue to live on this auld earth. An' there's need for somethin' o' the kind, too." I went on, "for, gin I'm able to judge, a lot o' the folks that I see in the town an' elsewhere might be better employed than warkin' at the jobs they're at."

"Like the tramp that wis here the ither day, for instance," says Jean. "I asked him why he wasn't tryin' tae earn an honest living in some way, and he said that he used to be an agent for stove-pipe holes but since the war he hadn't been able tae mak' a livin' at it."

"Weel, that's just about the size o' the business that a lot mair o' the hangers-on in this country are engaged in," says I. "The only difference, they think they're daein' something, while your tramp knew that he wasn't."

"Na doot there's a guid mony men sellin' whiskey an' tobacco, doon in Quebec an' ither places, that might be better employed," agreed Jean, "I never could see the sense o' that in war-time, or any ither time." Jean wis brought up a pretty stiff Presbyterian, an' would hae become a crank on the question o' liquor an' tobacco if I hadn't taken her in hand when I did. She's no' inclined to mak' muckle allowance for the weaknesses o' humanity.

After a meenute she went on again. "I suppose, when you come tae think about it, there isn't mony o' the trades an' professions that we couldna' get along without. In the days o' oor feythers and grandfeythers things werena' sae complicated, and maistly ilka family did what wis needed for their ain support an' comfort. The man o' the hoose supplied the raw material for the clothing o' his family by raising sheep, and their food came by way o' the pigs an' cattle he kept an' the horses that helped him tae till the soil. It wis a sort o' self-contained institution where all the necessities o' existence were to be had right at hame. That wis the time when the farmer had some right tae be called independent. But noo-a-days everything we raise on the farm we sell, and everything we want we hae to buy. We sell oor wool to the mills, oor pigs an' fat cattle to the drovers, an' oor milk we send to the creamery or cheese-factory. Then when we want anything to eat or to wear we hae to gae oot an' hunt for it. When the butcher gives us the wee bit o' meat that we ask for he doesn't forget tae charge us for it and a little extra towards the support o' his wife an' family. An' when you want a suit o' clothes you gang tae the tailor for it and pay him, at the same time, for every operation in connection wi' it, frae the time the wool left yer hands till the finished suit wis handed tae ye, done up in a box. There wis a time when the women in the homes were the tailors."

"That's right," I interrupted, "women were the stuff in the auld days. It paid a mon in those times to get married. It wis a poor woman then that couldna' support one man. An' if he felt like daein' ony wark himsel', that wis sae muckle tae the guid. There's been a big change in a short time," says I.

"Hoot," returned Jean, "if the women hae changed the men havena' improved much. There'd be a lot o' loafers among them if they were permitted tae follow their inclinations. They're rounding them up now in the cities, I hear, an' makin' them work whether they want to or not. But I havena' seen that they had to dae onything o' the kind in the case o' the women."

"Weel, as I wis sayin'," I went on, "there's been a big change, and I wouldn't be surprised if the next ten years saw as muckle o' a change the ither way. About the only men we seem to be unable to get along wi'oot these times are oor soldiers an' those that are supplying them wi' food an' fightin' materials. So maybe the Government is on the right track when they're talkin' o' 'eliminating the non-essential industries, an' pittin' ilka man an' woman on the wark that is likely to be o' maist benefit tae the country."

"I dinna ken that that will wark," objected Jean. "For instance, how could we get along wi'oot doctors?" "Oh, all right, I guess," I replied, "A lot o' people must hae grown up before there were ony doctors, sae that's proof that we can get along in some kind o' a way yet, even if they're all sent to the war or put on farms. An' the dentists might gae along wi' them. That chap

that fixed yer teeth the ither day and that charges ye, as ye say, whatever he happens tae need at the time, might be earnin' an' honest livin' in some munition factory."

"But what about yer carpenters an' blacksmiths?" "There'll be na trouble about them," says I, wavin' my hand. "Farmers hae got tae be such jack-o'-all-trades these days that they can maistly do their ain carpenter wark, an' as for the blacksmith he can gae to the war too, an' we will let oor horses go barefoot the way they do oot West. And onything in the way o' repairs that we hae been in the habit o' takin' to a blacksmith we can fix up oorselves wi' a piece o' hay-wire an' a pair o' pliers. What can't be fixed wi' hay-wire is past help."

"Weel," says Jean, after a while, "if you men can dae that I guess we women can get along wi'oot oor dress-makers an' milliners an' sae on. Oor mithers used to mak' their ain dresses an' bonnets, an' it wouldn't hurt us to dae the same. We wouldn't be wantin' changes sae often, I'm thinkin'. It's gaein' back tae the 'simple life' sure enough, Sandy, but maybe it's the cure for what ailed us. There's anither mon ye didna' mention yet, but I'm sure ye willna' be for takin' his job away from him. Are ye minded tae let the preachers go on handin' us out a couple o' sermons a week as usual?" "I dinna ken as I am," I replied slowly; "it all depends on the quality o' the sermon an' the character o' the man that preaches it. The best kind o' preachin' is what is done by example, and for the mon that isn't sure o' his callin', or that doensna' mak' thers sure o' it, I wad say let him get tae producin' something o' some value, whether in a factory or on a farm, or else go across maybe, and shoot a few Germans. We'd trax off oor hats tae them if they did that, like we used to do to the ministers in Scotland lang ago."

"Weel," says Jean, "I've got tae be attendin' tae the rest o' my wark upstairs, but there's one profession yet that ye havena' mentioned. What about oor school-teachers?" "We'll leave them juist where they are," I replied. "They're warkin' wi' exactly the same object in view as the rest o' us, and that is the welfare an' happiness o' the future citizens o' this country. The school-teachers are developing the citizens and oor producers an' soldiers are tryin' tae provide them wi' a free land in which to live. Isn't that right?" says I. "Sure," said Jean. "I'm glad ye've said something sensible at last." And she took the broom and went off upstairs, leaving me to my reflections.

Nature's Diary.

A. B. KLUGH, M.A.

Among all our Canadian birds there are few which are more generally beloved than the Bobolink. It is one of the species which figures largely in the songs of the children, who carol joyously "Bobolink, Bobolink, Spink-spink-spink." It is the same in the northern States. The reason is not far to seek—the Bobolink is a bird of the meadows, he is out where we can see him as we work on the land or as we drive along the road, his song is most joyous, musical and distinctive, and his colors are attractive. So enshrined in song and story is the Bobolink that we are inclined to regard this as one of the aboriginal species of eastern Canada, and yet as a matter of fact it is only a comparatively recent "settler" in this region. The Bobolink is a bird of the open places, never found in woods or groves, avoiding in fact even well-grown orchards, and when eastern Canada was mainly forest this species was unknown here. It is indeed only in comparatively recent years that the Bobolink has made its way into the more northerly portions of Ontario, the first being seen in Parry Sound district in 1899, and is even now still extending its range to the north.

The Bobolink is beloved not only in Canada but in the northern States, but in the southern States it has quite a different reputation. There it is the Rice Bird—a veritable plague to the rice-growers.

This double role of the Bobolink is probably unique in the annals of bird life, and its explanation is as follows:

At the time when America was first settled the whole northeastern portion was forested and it presented but few localities, and those of limited area, suited to the Bobolink. When the great forests of New England, New York and eastern Canada were cleared away, and transformed into farms, with extensive areas of meadows, intersected with springs and brooks, the Bobolinks were not slow to avail themselves of these new opportunities, and soon colonized the whole. At the same time the southeastern coast region was also brought under cultivation, and the tidal and river lands were devoted to the growing of rice. Since the Bobolinks pass the winter in South America, the southern coast of Florida naturally presents to them the point of departure for the long sea flight to their winter homes. Before reaching this spot, however, they stop to rest and feed in the rice fields of the South, where they remain and recruit their exhausted energies preparatory to their final migration. When the birds arrive from the North they are in poor condition but they soon recuperate with the abundant food furnished by the rice, soon become very fat, and then resume their journey. On the return migration in the spring the conditions are very similar, the birds arrive from their winter homes tired with their long flight, and find the fields either newly sown with rice or else with the tender blade just appearing above ground, and they take advantage of this food-supply.

It is probable that long before America was discovered the Bobolinks gathered in the marshes on the southeastern coast and fed upon wild rice, and other wild plants.

So we see that in the case of the Bobolink the cultivation of the land in the South introduced a more abundant

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THE FARMER'S ADVOCATE

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Haying Time.

food-supply just at the same time as it afforded a great increase in nesting area in the North.

Some idea of what the Bobolinks do to the rice crop may be gathered from the report of Capt. Hazzard to the U. S. Biological Survey, in which he says "During the nights of August 21, 22, 23 and 24 millions of these birds make their appearance and settle on the rice fields. From August 21 to September 25 our every effort is to save the crop." And from the report of Mr. Lowndes, who says, "I think I am within bounds when I say that one-fourth, if not one-third, of the crop of rice on the Santee River is destroyed by these birds, from the time the crop is put in the ground till it is threshed out. We use about 100 kegs of powder and about fifty bags of shot every September. In the bird season it takes every man and boy on the plantation to mind these birds. The shooting has to go on from daylight to dark, and if this were not done the birds would utterly destroy a crop in two or three days."

Many methods of keeping the birds from the rice-fields have been tried, but unfortunately without success. As far as the Bobolink's food-habits in the North go it is highly beneficial, as it is almost entirely insectivorous and destroys many insect pests.

The range of the Bobolink in Canada is from Nova Scotia to eastern Saskatchewan.

In the early fall, before the birds leave for the south, the male takes on a sober brown streaked dress similar to that which is worn by his mate throughout the year.

THE HORSE.

Diarrhoea in Foals.

While young animals of all species are subject to diarrhoea from various causes, it is probable that none are so susceptible as foals. We do not refer to that form of diarrhoea that, in some cases, becomes epidemic in certain localities or premises, and is doubtless due to a specific virus, and from which calves chiefly suffer. We propose to discuss sporadic or accidental diarrhoea in foals.

This is a serious and often a fatal malady, and in some cases its appearance cannot readily be accounted for. The newly-born foal is very susceptible to the action of irritants of any nature in the intestines or stomach. Intestinal or stomachic irritation may be caused in many ways, and usually results in diarrhoea. In some cases it is evidently caused by some unfavorable condition of the dam's milk, and this is especially the case when the mare has been fed largely on food of a very laxative nature, in other cases it occurs without apparent cause. We must infer that in such cases there is some injurious ingredient, (the nature of which is not well understood,) in the milk under certain conditions. In other cases it is caused by the careless or ignorant administration of drastic purgatives to the nursing mare. Aloes especially, appears to have an affinity for the lacteal apparatus; at least it is largely excreted by these glands, as is demonstrated by the well marked odor of the drug that can be detected in the milk a few hours after its administration. In such cases the drug has not been deprived of its purgative properties, hence a foal partaking of milk thus contaminated is very liable to suffer from acute diarrhoea. This teaches us that we should not administer aloes to a nursing mare unless absolutely necessary. In most cases where purgation in the mare is demanded, it can be produced by the administration of raw linseed oil, which has not an injurious action upon the quality of the milk. Another common cause of diarrhoea in the young animal is exposure to cold and dampness, or confinement in damp, foul and ill-ventilated premises. One of the most frequent causes is allowing the foal to partake freely of milk from a mare when she is in a heated condition, especially when the dam has been at work, and the foal confined in the stable for a few hours, hence is hungry after its long fast. In such cases some of the milk should be extracted by hand and the mare allowed to stand for a few minutes to become somewhat cooled before the foal is allowed to nurse. Another, and not uncommon cause of the trouble, is the dangerous and uncalled-for habit many people have of administering a purgative or laxative to the foal shortly after birth. This, even though the dose be light, often causes serious and sometimes fatal diarrhoea. Under ordinary conditions nature should be allowed to have her course in these cases and we find that the first milk of the mare (the colostrum) has a sufficiently laxative action. In rare cases, when the mare has lost considerable milk for a few days before foaling, hence the colostrum has escaped, it may be necessary to give the foal a slight laxative, as about an ounce of castor oil, but in most cases it is wise to withhold purgatives until the symptoms shown indicate their use, and this is seldom the case especially when the removal of the meconium has been attended to, as advised in a former article. In colts that from any cause are reared by hand, we find that the partaking of cow's milk in its purity usually causes serious digestive derangement, which may be either diarrhoea or the reverse condition, constipation. In such cases one part of pure, warm water to two parts of cows' milk with a tablespoonful of sugar to each pint gives good results. When the foal becomes older, stronger and accustomed to the food, he can digest pure cow's milk.

Symptoms.—The symptoms of course are evident and unmistakable. The little patient frequently voids liquid, or semi-liquid, faeces. At first there is usually little distress noticed, but in a short time more or less violent straining occurs, indicating that the mucous membrane of the intestines has become irritated and inflamed. The patient becomes dull, lies a great part of the time, refuses to partake of his usual amount of nourishment, or possibly refuses to nurse at all. He

loses strength quickly, will not, or cannot stand for any considerable length of time, pants, looks towards his flanks, which are usually drawn up, strains violently, or in the later stages the liquid escapes without apparent effort on the part of the patient. His mouth becomes cool, the pulse very weak and frequent, and death soon occurs.

Treatment.—Preventive treatment should never be neglected. When we understand the causes we should endeavor to prevent them. When the disease occurs in a quite young animal, from a few hours to a few days old, we are forced to admit that the case is serious. If it occurs in a stronger and older colt it is not nearly so serious, but in all cases prompt and energetic treatment is necessary. The principle of treatment is to make the patient as comfortable as possible, allay pain, check the excessive secretions of the mucous and digestive glands of the intestines, and keep up the patient's strength. Many authorities claim that the trouble is always due to the presence of some irritant, and that this must be removed before a cure can be effected,



Turning Grass into Pork.

hence the administration of a purgative is the first essential. Theoretically this argument may have force, but the writer has noticed that in most cases it is unwise to treat this way. The administration of a laxative or purgative can do no good unless a reasonable length of time, at least twelve to fourteen hours, be allowed before means of checking the diarrhoea be resorted to. The disease causes weakness and loss of appetite very quickly, and if the necessary time be given, as stated, it is highly probable that the case will be beyond all hope of recovery. Hence, prompt methods of checking diarrhoea should be adopted. In quite young patients opium gives the best results, as it eases pain and checks secretions. It is generally given in the form of laudanum, in one to two-dram doses (according to size of the patient) in a little of the dam's milk every three or four hours until diarrhoea ceases. Care must be taken to not continue its administration after cessation of the diarrhoea, else constipation may be produced. In the meantime efforts should be made to get the foal to nurse. If he refuses to do so, he should be given small quantities



Milking Shorthorns Pasturing on Sweet Clover at Weldwood Farm, London.

of the dam's milk to which has been added one-third of its bulk of lime water every hour or two, in order to maintain strength, and if he be quite weak a teaspoonful of sweet spirits of nitre or aromatic spirits of ammonia should be added to the milk. In foals of a few weeks of age the dose should be greater in proportion to age and size and to it may be added one dram each of powdered catechu and prepared chalk. In most cases where treatment is prompt, two or three doses are sufficient to check the trouble. The patient must be kept in a comfortable place, protected from cold, drafts, dampness, and if in hot weather, in a cool, shady place.

WHIP.

The enemies whom the people of old were taught to love were so much superior to the common enemy of the civilized world to-day that we doubt the applicability of that doctrine to modern circumstances.

LIVE STOCK.

Sod plowed the last of June and sown to rape has given an excellent supply of fall feed for cattle, sheep and hogs.

Prices for brood sows have reached a high level in England. At a recent sale as high as 125 guineas were paid for a four-year-old sow.

The outbreak of anthrax in Peel County is claimed to be under control. Two farms on which the disease appeared have been quarantined.

Brood sows will keep in good condition on grass alone, but shoats should be fed a little grain to supplement the grass if most economical gains are to be made.

A large percentage of Canada's wool crop will be graded and marketed through a central organization. This should result in the producer getting all that the market will pay.

Take a look at the bull's feet. They sometimes require trimming this time of year. To neglect this little job may result in the bull going lame or else being thrown back on his hocks.

When on a recent trip we noticed that with several herds of cows bulls were at large. This practice of allowing bulls to run at large is against the law, and the owners are leaving themselves liable for damages.

Prices of finished cattle are soaring, and fortunate is the stock man who has his animals ready for the block. Prices will undoubtedly remain high for some time, as the demand for meat is evidently greater than the supply.

The increased acreage in grain and the present favorable prospects for hay, grain and corn should warrant the increasing of many herds. There is no better way of marketing the roughages grown on the farm than through live stock.

Some who did not market their wool through the association last year boast that they secured as much for their wool as did their neighbors who sold on the graded basis, but they fail to mention the fact that were it not for the association the price they secured might not have been so high.

The high prices prevailing for breeding stock of all breeds tempts many breeders to part with their best animals. To the man remaining in the business the pioneer breeding females are usually worth as much to him as to the other fellow. The renowned herds have been built up by retaining the choicest females.

The "keep an extra sow" campaign of last fall is estimated to have resulted in thirty per cent. more sows being kept than would otherwise have been. An average of eight pigs to a litter makes a heavy drain on the feed bin, but will result in a big increase in the amount of pork to be marketed this

fall. May the price be commensurate with the price of labor and feed.

Representatives of the different breed associations have appointed a working committee to consider the question of place and accommodation for the proposed new live stock show. In whatever place this show is located it should be managed by the live stock men. City directors and officers of an agricultural show do not always get the agriculturist's viewpoint.

Live stock men who follow the big shows have been fitting and training their animals for some time. The amateur who expects to enter his stock at the local fair should not leave the fitting for the last week. Poor fitting and lack of training have deprived many an animal of the red ribbon. Because you do not anticipate keen competition is no excuse for failing to have your entries appear in the best possible form.

The Future of Canadian Wool.

BY PROF. TISDALE, UNIVERSITY OF SASKATCHEWAN.

Perhaps there never was a time in our history when the sheep occupied the same prominence that it does to-day. Prices for wool were never better, and the rapid trend upward in this connection during the four years of war has added an impetus to an industry, that from various causes was on the decline the world over. This very remunerative phase of the business has made every farmer more or less envious of the man who is lucky enough to own a small flock, and all over the country we find men rapidly fencing their land and making other improvements that will enable them to start along similar lines. Still we find those who are pessimistic and say the present prices are only war-time prices, and that immediately upon the declaration of peace a slump to pre-war prices will occur. Others, again, maintain that the dog and coyote, coupled with various diseases, will never permit of any very great expansion in the industry. Let us leave the dogs and coyotes to their fate, which has already been a very sudden one in many districts, where the farmers, uniting in their attack, have soon put an end to any menace in that direction. Disease, too, is readily controlled if care is exercised. There is little cause to worry over these three enemies. They are all side issues.

Then as to the market. The forecasting of any market is always more or less a matter of prophecy, but there is something about the present situation of the woolen trade that seems to do away with any misgivings as to the future. One feels perfectly safe in estimating that no industry will yield quite as much profit for fifteen or twenty years to come, as will the production of wool, and likewise mutton in conjunction with it. The future of wool undoubtedly means the future of sheep and the prospects of both in Canada are linked up very closely with the sheep and wool situation throughout the whole world.

In 1914, the year war was declared, the total number of wool-bearing sheep in the world was slightly over six hundred million, yielding a total raw product of practically two billion eight hundred million pounds in the grease, or an average of less than five pounds per sheep. This meant roughly about five pounds of raw wool for every white human being in the world. Raw wool shrinks on the average about fifty per cent., meaning that each white person had only two and a half pounds of clean wool per year. This includes, of course, all uses to which it is put—clothing, blankets, carpets, rugs, etc.—and if we add the wool-using portion of the colored races, the amount of clean available wool per capita is considerably less than two pounds per year. It is estimated on good authority that it takes at least three times this amount to clothe the average civilian in peace times, hence it is readily seen that the shortage of wool was acute long before war broke out.

Abnormal demands for purposes of war have surely and certainly aggravated any such shortage during the past four years, as it is now an established fact that 2,500,000,000 pounds of the 2,800,000,000 pounds grown in the whole world in one year are used to clothe the fighting armies of Europe and America. This leaves a scant 300,000,000 pounds to clothe millions of civilians. The civilian requiring anywhere from 6 to 15 pounds of raw wool in times of peace, needs as a soldier from 50 to 70 pounds per year. Most of this wool required at the present time comes from cross-bred sheep or is, in other words, medium wool as compared with the finer wools used in the making of civilian clothes. Herein lies the reason for the increased demand on the part of the mills and the increased prices for medium and low-grade wools. Easily 75 per cent. of our fighting men, one time wearers of fine wool, now wear nothing but the coarser wools. With no material surplus in 1914 of these medium grades, their increased use is the cause of the present shortage.

So much for the past and present—how about the future? Should the war cease within a year's time, what will be the effect upon the woolen industry? There is only one conceivable answer to such a question, and that is "appreciably no effect whatever." The slaughter of over sixty million head of sheep in Europe during four years of war has lessened the world's wool supply over 400,000,000 pounds; the Argentine clip has decreased during the same period, and there is no show whatever of any increase in Australian and New Zealand; Uncle Sam has 10 per cent. less sheep to-day than he had in 1910, and his wool clip this year will fall ten or twelve million pounds short of 1917; the South American and South African clips show no material increase added to the world's supply, and Germany and Austria-Hungary must have their supplies practically depleted. Added to this we have the problem of re-clothing all the liberated soldiers in civilian clothes once more. An endless task that hardly makes it possible for wool to drop much below 50 cents for the next ten years at least. Future prospects are briefly and ably summed up in a recent report submitted by a committee appointed by the British Government to investigate the whole subject of wool production. The report reads in part as follows: "There is a world-wide depletion of wool stocks and likely to be an increased demand after the war owing to the postponed demands of the civilian population, the requirements of civilian clothes for the troops as demobilized, the needs of the Allies to make good their stocks, the probable continuation of the enhanced demand from the United States and the urgent needs of Germany and Austria-Hungary, which will presumably be almost depleted of supplies." In connection with the above it is interesting to note that fully two-thirds of the sheep in

the world are in the belligerent countries of Europe and their various colonies, and that the various governments in these countries have practically taken full control of the raw clip during the war period. The latest movement in this direction has been made by the United States Government in setting a scale of prices based upon the prices prevailing July 30, 1917. World-wide government control of such a large portion of the wool supplies for army purposes has resulted in a gradual suspension of large open wool sales throughout the world, and at the same time undue speculation is shackled for the time being at least, and the farmer is assured a good paying price for his annual wool clip. This is the strongest kind of an argument for the utmost conservation, and the inclusion by every farmer of a flock of sheep in his scheme of farming.

What part has Canada played up to the present, and to what extent can she increase her efforts to develop this remunerative industry and supply the world, our fighting men particularly, with wool? Table No. 1, next page, shows very clearly that her progress during the past six years has certainly not been very rapid. It is not a record that we have reason to feel proud of.

The one encouraging feature noted in the tabulated figures is that, while there has been a slight decrease until last year in numbers of sheep kept throughout the Dominion, the three Prairie Provinces have shown a slight increase since 1912. Quebec, too, made a rapid stride last year. But how much room there is left yet for rapid and substantial increase in every province. Instead of supplying a paltry 12,000,000 pounds of the world's 2,800,000,000 pounds, we could easily supply ten, yes, twenty times that amount. Moreover, we are going to do it, as we have the climate that will make Canada one of the greatest sheep countries in the world. The farmers see the necessity and opportunity confronting them.

he could utilize on his machines. So much satisfaction resulted from this new scheme, fostered by the Federal Department of Agriculture, and assisted materially by the various provincial departments, that it was decided to continue its development along co-operative lines. Many small co-operative associations were organized during 1914, 1915 and 1916, while in some provinces the Department of Agriculture acted as the co-operative unit—collecting, grading, selling and shipping the wool with a deduction for all expenses incurred. Table No. 2, next page, shows plainly that at least ninety per cent. of the men raising sheep throughout Canada have responded to this new idea, realizing that their wool, sold in such a manner, would net every cent that it was worth.

Some of the provincial figures for 1917 are simply approximate, as it was impossible to obtain the exact official statement in each case, but all such approximations are very low. The main fact evidenced in the table is the wonderful increase in volume of co-operative business from 1914 to 1917. From a total membership of 542 sheepmen consigning 275,632 pounds of wool in 1914, the idea spread so rapidly that upwards of 5,000 marketed over three million pounds during the past year. Furthermore, from a small start in two or three provinces of the Dominion, the movement spread like wildfire until every one of the nine provinces possessed some piece of machinery working toward a more systematic attempt to dispose of Canadian wool to the very best advantage.

Along with this growth it is most gratifying to note that the price secured by those marketing through the various associations has always been decidedly in excess of that offered at local country points by the storekeepers and dealers who had been in the habit of collecting this wool and making a tidy little profit in the reselling. It has been quite accurately estimated that the average price of all graded wool has been from three to five cents per pound higher than the average price of

other wool sold in the country. Any number of instances are on record of it having been sold at an advance of from eight to ten cents over local prices, almost as much as we received for wool six or seven years ago. The reason for this increased price is evident. Carefully graded wool is always cheaper to the manufacturer than ungraded wool, no matter if he has to pay five cents a pound more for it. He is tickled to death to pay a premium for what suits him and saves time and labor in his mill. In 1914, the average price throughout the Dominion for graded wool was 20.7 cents; in 1915, 27.2 cents; in 1916, 32.83 cents; and in 1917, slightly over 60 cents. It is expected that prices this year will range equally as high as last, and it is also expected that business will be added to, by at least two million pounds more of the raw product. Co-operation has taken a firm grip upon the farmers of Canada, and they are rapidly learning that it is a very potent element in the protection of their interests.

During the early part of the current year, still another step was taken by the wool-growers of Canada, when delegates from every province met in convention at Toronto. After much discussion a company known as the Canadian Co-operative Wool Growers, Limited, was organized with the idea of uniting all small associations under one governing body, and at the same time establishing a clearing-house for all problems relative to sheep-raising in this country. The new company is capitalized at \$200,000 and upon the \$10 share plan is owned and controlled by the sheep-raisers themselves. Its business, of course, will grow with its increasing popularity and success, and it will more than likely handle (grade and sell) several million pounds of wool this year. A new idea in the wool business, it certainly bids fair, under good management, to eclipse anything yet put forward to advance the interests of the sheep industry. May it boom the same until we have in Canada several hundred millions of the ovine creatures. There is room and to spare for them all.

This brief resume of the wool business would not be complete without a word or two concerning the one great lesson that co-operative selling has taught us. Many valuable pointers have been given out in the past four years by these local organizations, but none so valuable, perhaps, as the one, "Condition makes and sells your clip." And condition comes from care and



Baling Wool at a Grading Station.

One factor that has already played a very important part, and gives evidence of being still more active in Canadian development, is the federal and provincial governmental assistance accorded sheepmen throughout the Dominion. This assistance has taken various forms, but the main line of endeavor has been in placing the wool on the market in a condition that would appeal to the average buyer. Back in 1911 and 1912 the payment locally of a few cents per pound for wool proved no incentive whatever to the farmer, and a thorough investigation brought to light the fact that the sheep business in Canada would soon become a minus quantity unless some action were taken immediately. First of all, it was felt that the methods of shearing and handling the wool could be improved upon to advantage, and with this object in view a vigorous educational campaign was instituted all over the Dominion by the Department of Agriculture. Then, following that old trade law, "a neat, attractive package always brings the price," a better and more up-to-date system of marketing was adopted. A start was made in one or two of the provinces in 1913 at collecting the small farm clips at some central point, where they were graded according to fineness, length, density, soundness and cleanness of fibre. It was found at once that such wool properly graded was very easily sold to the manufacturer, as he was able to select just exactly the grades of wool that

pride in your flock as well as pride in having a neat, clean, sound clip of wool returned from the back of each sheep. Grading has served to emphasize the importance of quality, quantity and condition in the fleece, but I would prefer to leave the discussion of it until some other time. It is beyond all doubt a practice that has come to stay.

Surely I may say again in closing that the prospects of the wool business were never brighter. Great Britain is going to look more and more to her colonies for her supplies of food and clothing when this war is over

Let our Canadian woolen mills see to it that they install all machinery necessary to handle every grade of wool produced in Canada, and they will find that the producer is willing to supply them with a satisfactory raw product, provided, of course, he receives a price within reasonable hailing distance of prices the world over. Let us, then, if the manufacturer "comes across," put out a product unexcelled for its excellence, unequalled for its cleanness, and incomparably put up. Much has been accomplished but still more remains to be accomplished. The future of Canadian wool is just as bright as we, unitedly, care to make it.

THE FARM.

Come to the Farm and Learn.

EDITOR "THE FARMER'S ADVOCATE":

I was greatly interested to read in your paper "How the Farmer Loafs," by Allan McDiarmid. I felt I would like to say a few words on the subject. Whoever the critic is, I realize from a life's experience that he knows very little about the life and work of our farmers. I class him with the city man who, when out on the farm for a holiday saw the farmer bringing in a cow that had given birth to a calf in the field, and when he saw the calf walking he said: "That calf never can walk already! I thought it took a year to walk." This in itself gives us an idea of what some of our city people know about our farms. Our critic is in the same class. God help our country if it depended on such men. The farmer is the backbone of our country and we can be proud of that. If such people want to find out what work there is on the farm, let them come and try it, instead of criticizing, and they would have a different story. There is no place for the lazy man on the farm; in fact, he would be out of place. To the man who wants a lazy life I would say don't come to work on the farm. May this great war open the eyes of the city people and show them that it is not picture shows and other amusements that will feed our soldiers and bring this war to a great victory for us, but the farmer is doing that every day.

Terrebonne Co., Que.

R. H.

Sheep in Canada, 1912-1917—No. 1.

| | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pr. Edward Island | 87,793 | 85,560 | 85,351 | 86,640 | 88,797 | 90,573 |
| Nova Scotia | 216,135 | 217,734 | 211,921 | 205,542 | 200,979 | 200,979 |
| New Brunswick | 148,723 | 135,115 | 211,739 | 111,026 | 105,997 | 103,877 |
| Quebec | 620,881 | 602,751 | 571,287 | 554,491 | 497,711 | 849,148 |
| Ontario | 677,462 | 705,848 | 640,416 | 611,789 | 589,581 | 595,477 |
| Manitoba | 40,800 | 42,840 | 45,303 | 50,880 | 76,750 | 80,588 |
| Saskatchewan | 114,810 | 115,568 | 126,027 | 133,311 | 124,237 | 127,892 |
| Alberta | 135,075 | 178,015 | 211,001 | 238,579 | 292,620 | 276,966 |
| British Columbia | 40,702 | 45,000 | 45,000 | 46,404 | 46,269 | 43,858 |
| Totals | 2,082,381 | 2,128,531 | 2,058,045 | 2,038,662 | 2,022,941 | 2,369,358 |

Graded Wool Offered by Provinces for Co-operative Sale—No. 2.

| Province | 1914 | | 1915 | | 1916 | | 1917 | |
|----------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|
| | No. of Members | Amt. of Wool lbs. | No. of Members | Amt. of Wool lbs. | No. of Members | Amt. of Wool lbs. | No. of Members | Amt. of Wool lbs. |
| Prince Edward Island | ..... | ..... | 58 | 5,496 | 382 | 28,176 | ..... | 24,000 |
| Nova Scotia | ..... | ..... | 163 | 12,271 | 224 | 18,441 | ..... | 37,804 |
| New Brunswick | ..... | ..... | 9 | 1,103 | 39 | 5,130 | ..... | 6,558 |
| Quebec | 93 | 12,000 | 975 | 104,192 | 1616 | 168,701 | 1876 | 218,658 |
| Ontario | 69 | 15,742 | 81 | 20,295 | 69 | 17,989 | ..... | 298,790 |
| Manitoba | 138 | 44,059 | 193 | 75,425 | 440 | 150,939 | ..... | 170,000 |
| Saskatchewan | 179 | 69,404 | 318 | 150,328 | 487 | 179,890 | 660 | 388,888 |
| Alberta | 63 | 134,427 | 199 | 208,368 | 609 | 1,138,470 | 750 | 1,850,000 |
| British Columbia | ..... | ..... | ..... | ..... | 62 | 15,751 | 60 | 10,200 |
| Totals | 542 | 275,632 | 1996 | 577,478 | 3928 | 1,723,487 | 3346 | 3,104,808 |

Anthrax—Its Symptoms and Prevention.

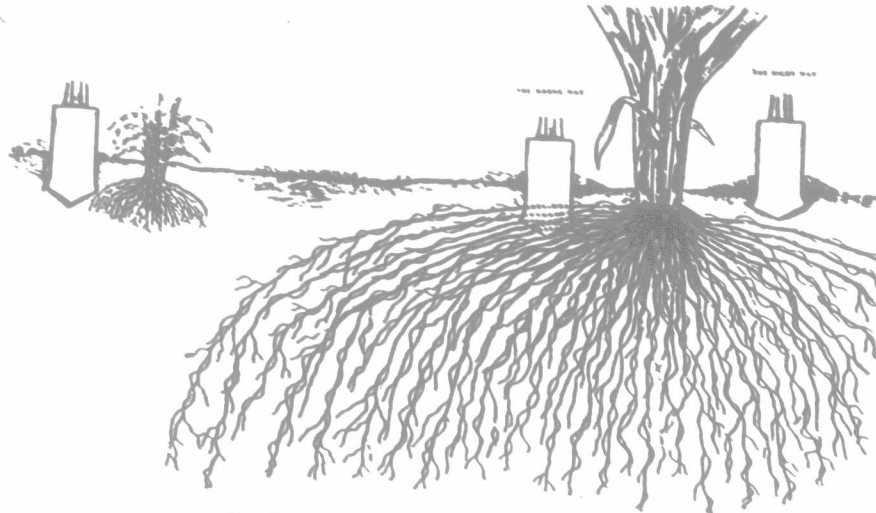
An outbreak of the disease known as Anthrax is reported to have occurred in Peel County. Not only was there loss of stock but one of the attendants of the herd contracted the disease and succumbed to the infection, thus showing how careful one should be if there is any possibility of animals being affected. This disease has been known from time immemorial and exists in all latitudes and in all countries. It occurs among sheep, horses, cattle and other grain-eating animals. Man becomes infected through the handling of infected animals, their hides, hair or wool. The cause of anthrax as given in Bulletin No. 23, by Charles H. Higgins, of the Health of Animals Branch, Department of Agriculture, Ottawa, is to the effect that it is due to an organism or germ which grows very readily under artificial conditions upon suitable material. The disease may occur at any season of the year and in any species of animal. Usually, however, it is seen when animals are on pasture, which at some time has been infected with the disease. Infection may be brought to the farm in a variety of ways, as infected hides, wool, etc.; by dogs that have had access to anthrax carcasses, by means of earth adhering to the wheels of vehicles, hoofs of stock, etc. One of the most commonly reported sources is the infection by water or other wastes coming from tanneries. It is believed that the infection on the farm in Peel is due to germs being washed down from an old tannery during the spring freshet. Infection is through the entry of the organisms directly into the system, which may be by the germs passing through an abrasion of the skin, or the entrance of the germs to the system on feeding stuffs.

So rapidly does anthrax run its course that death occurs very suddenly. The animal may appear perfectly healthy a few hours previous to death. However, infection as a rule takes place about three days before death occurs. One of the symptoms is high temperature, and in some instances as high as 108 degrees Fahrenheit has occurred in cattle. According to the Bulletin, bloody discharges may be seen coming from the normal openings of the body after death or just immediately before. Such discharges should make one very careful as they may teem with the germs which may disseminate the disease over the ground and to other animals. If there is any idea that an animal is infected by this disease, or that death has occurred through infection, great care should be exercised in the handling of the carcass and in preventing the spread of infection.

The carcass of an animal that has died from anthrax should be destroyed by fire, care being taken that all discharges and litter about the animal be burned with it. Skinning the animal is a dangerous procedure. The carcass should not be dragged over the farm for this is a means of spreading infection. Deep burial is sometimes resorted to, but, it is not as safe or satisfactory as burning.

Owing to the very short course which the disease runs, treatment for anthrax is rendered almost impossible. While medicinal treatment has not resulted satisfactorily, anthrax may be prevented by the use of

anthrax vaccines. These vaccines are prepared at the biological laboratory and are supplied through the office of the Veterinary Director General to qualified veterinarians. To protect or immunize the animal to anthrax two vaccines are required, and protection or immunity is the result of the animal passing through two mild, properly graded attacks of the disease, which as a rule cause no inconvenience to the patient save a slight rise in temperature. While this treatment is being administered the animal should be protected from in-



The Root System of the Corn Plant.

This shows what happens when deep cultivation follows shallow.—From I. H. C. Bulletin.

tection or immunity against anthrax is established in from twelve to twenty days after the administration of the second vaccine. During the interval from the administration of the first vaccine until immunity is established in the vaccinated animal, they should be kept from grazing on infected pastures, and no hay from infected land should be used for feeding. Dr. Higgins further states in the pamphlet that vaccine used on an animal already affected with anthrax will not protect such an animal, nor will it prevent its death. The use of anthrax vaccine during or immediately after the occurrence of an outbreak of anthrax may be followed by death.

Owing to the great increase in the manufacture of human food from corn, the by-product known as hominy meal is made available for stock feeding. This feed is valuable for both cattle and hogs. According to an analysis given in "Feeds and Feeding," by Henry, high-grade hominy feed contains 2.6 per cent. ash, 10.6 per cent. crude protein, 4.4 per cent. fibre, 64.3 per cent. carbohydrates and 8 per cent. fat. This feed should prove valuable to mix with some of our home-grown grains for the finishing of hogs.

Give the Corn Plenty of Cultivation

Cultivation and warm weather are essential for a good crop of corn. Possibly no crop grown responds to cultivation to a similar extent as does corn. If the field can be gone through every week, so much the better. Not only does this destroy weeds but it tends to conserve moisture and loosens the soil so that the roots may obtain the necessary air. Plants cannot live if their roots are in a compact soil that is impervious to air any more than human beings can live in a closed building and remain healthy. The loosening of the soil also gives the roots a chance to spread out through the surface, thus extending the feeding ground. The two-horse cultivator makes it possible to give the corn more cultivation than if the single-horse cultivator is resorted to, where a large acreage is grown. The depth of cultivation is also more easily controlled by a large cultivator than by a small one. With rows forty-two inches apart a man will cultivate from ten to twelve acres a day, if he has a good walking team.

There is a right and a wrong way of cultivating corn. Some people do not pay sufficient attention to the way they set their cultivator; for instance, we have known of a field to be cultivated deeply one time, shallow the next, and possibly the next time it would be cultivated deeply again. Now, what is the result of this method?

We know of one field where the crop was practically ruined. The theory is this, that the roots will spread out close to the surface if there is continued shallow cultivation. If, however, deep cultivation is resorted to after shallow cultivation these fibrous rootlets which are feeders of the plant are severed from the main root and the plant suffers from the effect. The accompanying illustration shows this very clearly. On the left side of the corn plant will be noticed what will happen with deep cultivation, after the rootlets have spread out.

It is advisable to follow fairly deep cultivation at first, as this aids in saving the moisture and loosens up the soil, but as the season advances cultivation might advantageously be made more shallow and under no consideration should deep cultivation follow shallow cultivation as little as possible.

Some teamsters are able to do a much better work with the cultivator than are others, largely on account of being better with horses and more observant of their work. For instance, we saw a field recently where the cultivator teeth were not set to very close to the corn, but yet owing to careless driving considerable of the corn was being cultivated out. In another field the cultivator teeth were running close to the corn and much better work was being done with practically no loss of corn. Where there is not too heavy a stand every plant removed lessens the yield by that much, and this year of all years a maximum yield is desirable. Give the corn plenty of cultivation.

In many sections scarcity of feed to finish hogs is reported. The standard feed which is being compounded should tend to relieve matters. The ingredients are generally recognized as making good pig feed, and they are mixed in the proportion to give a ration on which hogs should do well. The efficiency and practicability of the feed will be determined by hog feeders as soon as it can be placed on the market.

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Harvest Prospects in Canada and the United States.

BY ERNEST H. GODFREY, F. S. S.

More than ordinary interest is aroused by the first report this season of the Dominion Bureau of Statistics relating to the acreage under field crops and the condition of these crops at the end of May. This report was published on June 12, and a similar report for the United States, issued from Washington on June 7, enables us to collate the efforts made by both countries to increase the acreage of grain and especially of wheat.

Field Crops of Canada.

Dealing first with our Dominion we shall find in the following statement the areas sown to grain and hay for 1918, as compared with 1917, with the increases or decreases both in absolute figures and by percentages:

| Crops | 1917 | 1918 | Increase (+) or decrease (-) | Increase (+) or decrease (-) p. c. |
|---------------------|------------|------------|------------------------------|------------------------------------|
| | acres | acres | acres | per cent. |
| Fall wheat..... | 725,300 | 338,000 | -387,300 | -55.0 |
| Spring wheat..... | 14,030,550 | 15,742,800 | +1,712,250 | +12.0 |
| All wheat..... | 14,755,850 | 16,080,800 | +1,324,950 | +9.0 |
| Oats..... | 13,313,400 | 13,739,000 | +425,600 | +3.0 |
| Barley..... | 2,392,200 | 2,395,800 | +3,600 | +0.1 |
| Rye..... | 211,880 | 234,530 | +22,650 | +10.6 |
| Peas..... | 198,881 | 200,430 | +1,549 | +0.7 |
| Mixed grains..... | 497,236 | 506,530 | +9,294 | +1.9 |
| Hay and clover..... | 8,225,034 | 8,200,300 | -24,734 | -0.3 |
| Alfalfa..... | 109,825 | 103,800 | -6,025 | -5.5 |

Combined Production of Canada and the United States.

It will be interesting now to collate the indicate-

tion, and not from a flood of "hot air" and advice that we have to submit to of late.

I cannot agree with you, however, when you say that the farmer has not as much confidence as he should have in state-controlled institutions. Has he not good reason to be suspicious? Has it never been shown that the man giving the advice had an axe of his own to grind? I will only refer to one case—The Experimental Union—where the representative of the American Fertilizer interests was given the chief place on the program, and also fifteen pages of publicity in the Government report of the meeting. Have we not, as farmers, a right to ask why the representative of hundreds of millions of dollars of investment was given so much publicity by the Department of Agriculture, through the Experimental Union?

Yes, the farmer wants to be shown. So give us demonstration farms which pay their way, where we can learn how we can improve our methods. Give the management to the District Representative—if he can manage it—but it takes a big man to manage two businesses at once and few are able to do it.

I agree with you that it would be better to have them separate. Then the District Representative can use the information obtained in travelling over the county among the farmers. Some would say increase the Farm Survey work, but the weakness in it is that the information is given in confidence while the farmer wants a farm that he can go and see and ask questions about, with the right to have them answered. Yes, by all means give us demonstration farms.

Grey Co., Ontario. G. T. MARSH.

Canada's Increased Grain Acreage.

The Dominion Bureau of Statistics has issued its first or preliminary estimates of the areas sown to grain and hay crops in Canada this spring, with a report on their condition on May 31. The returns are compiled from the reports of crop correspondents and they show a considerable increase in acreage.

Areas Sown to Grain and Hay.

The total area sown to wheat for the whole of Canada for 1918 is estimated at 16,080,800 acres, as compared with 14,755,850 acres, the finally established figure for 1917, representing an increase of 1,324,950 acres, or 9 per cent. The area to be harvested of fall wheat is 338,000 acres, and the area sown to spring wheat is 15,742,800 acres; so that the increase of the latter as compared with 1917 is 1,712,250 or 12 per cent. The area sown to oats is placed at 13,739,000 acres, as compared with 13,313,400 acres last year, an increase of 425,600 acres or 3.2 per cent. The acreage of barley is 2,395,800, as compared with 2,392,200 in 1917, of rye 234,530 as against 211,880, of peas 200,430 as against 198,881, of mixed grains 506,530 as against 497,236, of hay and clover 8,200,300 as against 8,225,034 and of alfalfa 103,800 as against 109,825. The areas sown this year to wheat, oats, barley and rye are the highest on record for Canada. The acreage sown to wheat in the Prairie Provinces totals 15,196,300 acres as against 13,619,410 acres last year, to oats 8,767,000 acres as against 8,559,500 acres, and to barley 1,845,500 acres, as against 1,850,000 acres. To wheat Manitoba has sown 2,618,000, Saskatchewan 9,222,000, and Alberta 3,356,300 acres. Under oats the acreages are for Manitoba 1,500,000, for Saskatchewan 4,602,000 and for Alberta 2,665,000, whilst for barley Manitoba has 715,000 acres, Saskatchewan 663,500 acres and Alberta 467,000 acres. Nearly all the provinces have considerably increased their acreage under spring wheat, Nova Scotia by 11, New Brunswick by 44, Quebec by 24, Ontario by 45, Manitoba by 7, Saskatchewan by 11½, Alberta by 16, and British Columbia by 6 per cent. The acreage under oats is also increased by percentages ranging from 1 per cent. in Saskatchewan to 13 per cent. in British Columbia; Manitoba showing no change.

Condition of Crops on May 31.

Throughout the West the month of May was exceptionally cold, with heavy frosts and consequent retarding of growth. According to the reports of crop correspondents, expressed numerically in percentage of the average yield of the past ten years, the condition of the principal grain crops was on May 31 as follows: Fall wheat 80, as against 85 last year; spring wheat 101, as against 93; all wheat 100.5 as against 92; rye 95, as against 97. For other crops the condition on May 31 this year, expressed in percentage of the decennial average, was: peas and mixed grains 103, hay and clover 101, alfalfa 97 and pastures 100.

During the fiscal year 1916-17 the farmers of Canada paid \$2,117,267 in customs duties on agricultural machinery. This was divided as follows: Threshing machinery, \$477,895; tractors, portable engines, etc., for farm purposes, \$896,356; harvesters, reapers, etc., \$89,257; plows and parts, \$373,504; other farm machinery, \$280,255. Of the total amount, \$1,842,608 was on machinery entering custom ports west of the Great Lakes. To say the least, this is no great encouragement for the production of wheat.

The new amendments to the Inspection and Sale Act should prove of great assistance to fruit growers. Standardization for the fruit put in the packages is more essential than standardization of packages, however.

yields of both countries, as is done in the following statement:

| Crops | Canada | United States | Totals Combined |
|-------------|-------------|---------------|-----------------|
| | bushels | bushels | bushels |
| Wheat..... | 309,302,000 | 931,000,000 | 1,240,302,000 |
| Oats..... | 494,604,000 | 1,500,000,000 | 1,994,604,000 |
| Barley..... | 65,285,000 | 235,000,000 | 300,285,000 |
| Rye..... | 4,104,000 | 81,000,000 | 85,104,000 |
| | tons | tons | tons |
| Hay..... | 12,300,000 | 107,000,000 | 119,300,000 |

Thus we have for the two principal crops, viz., wheat and oats, a total production, if the anticipations should be realized, of 1,240,302,000 bushels of wheat and 1,994,604,000 bushels of oats. Placing the home requirements of wheat at 700 million bushels (United States 600 and Canada 100) we have a possible exportable surplus from the crops of 1918 of 540,302,000 bushels, a quantity sufficient to satisfy the normal deficit of the United Kingdom (about 220 million bushels) and to leave something like 320 million bushels for export to France and Italy, with probably also a substantial margin for further contingencies.

These are excellent prospects, and since the beginning of June, they have for the Canadian West improved; but it is necessary to bear in mind that the estimates based upon them are early prognostications and may have to be very materially reduced. Indeed, judging from general previous experience, it is only in rare seasons like that of 1915 that favorable conditions continue to prevail throughout the whole of the growing season and result in harvests equal to the fair promise of the spring and early summer.

Would Like to See Demonstration Farmers.

EDITOR "THE FARMER'S ADVOCATE":

Your editorial in a recent issue entitled "Why Not a Demonstration Farmer?" is especially good, and I for one do not see why we should not have a number of them in Ontario. The amount of money necessary for payment for extra services, bookkeeping, etc., should not be large, and the results would be valuable. As you state, they would not interfere with the work of the Dominion or Ontario Experimental Farms, as these should be confined to experimental work and demonstrations, while the demonstration farms should take the farm as a unit and by using the knowledge obtained from the experiments and demonstrations would show how the farmer could manage his farm more efficiently.

The excessive profits obtained from small demonstrations, and the unfair use made of their results have had much to do with the present strained relations between the city and country man, at a time when we should all work together for our country's good. This is one reason why I favor a tax on profits as it would show whether the farmer is a profiteer, as many of our city cousins think. If the farmer is making an undue profit, cut it down. Personally, I doubt whether the revenue of the country would be increased very largely by taking all the farmers' profits above the interest rate paid by the Victory Bonds.

We should have at least four or five of the farms you describe in each county. We would all be glad to learn how we can produce more food from actual demonstra-

From this statement it will be noticed that Canada has increased its total wheat acreage by 9 per cent. as compared with 1917, the increase representing 1,324,950 acres and bringing the total area under this crop to 16,080,800 acres, which is the largest acreage yet sown to wheat in Canada for any single year, the previous highest record being in 1916 when the area sown was 15,369,709 acres. The areas sown this year to oats, 13,739,000 acres, to barley, 2,395,800 acres, and to rye, 234,530 acres, are also the highest on record for Canada. As compared with last year, nearly every province has increased its acreage under spring wheat this year, Nova Scotia by 11 per cent., New Brunswick by 44 per cent., Quebec by 24 per cent., Ontario by 45 per cent., Manitoba by 7 per cent., Saskatchewan by 11½ per cent. Alberta by 16 per cent., and British Columbia by 6 per cent. In Ontario, the exceptionally severe winter had an unprecedentedly serious effect upon the fall wheat crop, the area not winter-killed amounting only to 277,200 acres as compared with 656,500 acres in 1917. Spring wheat is comparatively a small crop in Ontario, but was increased this year from 113,000 to 164,000 acres, or by 45 per cent. The result is a total wheat acreage in Ontario of 441,200, as compared with 769,500 acres in 1917.

As described in a previous article on May 9, the Crop Correspondents of the Dominion Bureau of Statistics were requested this year to adopt a new method of numerically expressing the condition of crops, viz., by measuring them against an average yield instead of against a standard or full crop. The result is that for fall wheat the condition on May 31 indicated a yield of 80 per cent. of the average, that is 20 per cent. below the decennial average, spring wheat 101 or 1 per cent. above, oats 102, or 2 per cent. above, barley 101 or 1 per cent. above, and rye 95 or 5 per cent. below the average. If following the practice of the United States Department of Agriculture, we translate these percentages into bushels on the basis of the estimated acreage, we have an indicated yield of 309,302,000 bushels of wheat, 494,604,000 bushels of oats, 65,285,000 bushels of barley, and 4,104,000 bushels of rye. Of hay the estimated yield is 12,300,000 tons. These indicated yields are, of course, subject to monthly revision until after the harvest, being affected by in the first place correction in the estimates of areas sown and in the second by seasonal vicissitudes as the crops advance towards maturity.

Field Crops of the United States.

Let us now glance at the efforts put forth by our neighbors over the border to increase their crop acreage this year—efforts which applied in even greater ratio than those of Canada have resulted in vastly superior results owing to the size of the population and the already large dimensions of the crops increased. From the report issued by the United States Department on June 7, we find that the American farmers have, as compared with last year, increased their acreage under fall wheat by 32.7 per cent., this crop occupying nearly two-thirds of the total—spring wheat by 21½ per cent., fall wheat by 28.2 per cent., oats by 2.1 per cent. barley by 3.1 per cent. and rye by 32½ per cent. These are remarkable figures, representing, as in the case of Canada, efforts almost entirely concentrated upon the production of more wheat, and favored by the earlier spring and consequent prolonged seeding season. From the figures of condition on June 1, expressed in percentage of a normal crop, the United States Department of Agriculture deduces the following indicated yields in millions of bushels; winter wheat 587, spring wheat 344, all wheat 931, oats 1,500, barley 235, and rye 81. Hay is expected to yield 107 million tons. For corn, a

Canada's Young Farmers and Future Leaders.

Education For Agriculture.

Why is an agricultural college? It was characteristic of Bismarck, that iron man of Germany, from whom the present ruler secured many of his ideas, when he said of the German university students; "one-third die out, one-third rot out, the other third rule Germany." While the influence of agricultural colleges, or, more broadly speaking, the influence of education in agriculture has not been exerted with such direct effect as has the influence of vocational training in other lines of endeavor, we believe it true nevertheless that the influence of education will show just as marked an effect upon the farming of a country, as will education for business or any of the professions.

Prof. Warren in his most excellent book on "Farm Management," says that the young man who proposes to start farming should first get an education. He further emphasizes the fact that education is to-day much more essential in farming than it was twenty-five years ago and makes the prophecy that it will be much more essential in the future than it is to-day. It seems reasonable to suppose that this is true, for the simple reason, if for no other that farming is becoming more and more a straight business proposition and the farmer himself is developing and will continue to develop into a more successful business man. It is always rather difficult to put a cash value upon education of any kind. The lawyer, or the doctor, may perhaps do so with little trouble, because theirs are professions requiring long study and thorough education in order to put them in a position to practice. Without education they cannot qualify as lawyers or doctors. The same holds true with teachers, ministers, dentists, and any other of the professions in a like category. With farming and business in general, in which success depends upon shrewdness and the proper use of capital and labor, no less than upon the amount of technical knowledge possessed, it is much more difficult to estimate the cash value of education. Nevertheless, it is an indisputable fact that men who possess education would not be without it, and men who do not possess it regret the force of circumstances which made it impossible for them to obtain it.

Some investigations have been made with the idea of determining as far as possible just whether or not it is possible for an educated man to make more money than one who is uneducated, and Prof. Warren in this connection says that in one country where a farm survey has been conducted, the farmers who had attended High School made almost twice as much money as those who had never been beyond the public school. The actual

figures show that 398 farmers who had attended public school only made an average labor income of \$318; 165 farmers who had attended High School made an average labor income of \$622, while ten farmers in the same county who had procured a greater education than was possible from the public and High Schools secured a labor income of \$847. Prof. Warren further says that a High School course is worth more than the investment of \$6,000 in five per cent. bonds, and a college course seems to be worth as much more, although figures are not available. Putting it another way around, figures would show that time spent in High School seems to be worth about \$7 per day to anyone who is to be a farmer.

Education, of course, does not insure success. Bismarck's statement that one-third of the students of German universities rot out would indicate this very clearly. The value of education to the individual and the use to which education is put by the individual depends altogether upon the person himself. There is very common criticism of the students of agricultural colleges to the effect that these graduates are very often unable to become successful farmers. Often these critics overlook the increasing number of successful farmers who are graduates or who have been students at agricultural colleges. Many persons are much inclined to ascribe false value to college courses, and misunderstand entirely the function of an agricultural college or education in general. To be of any value education must develop the mind. All education is designed to bring out latent mental forces in the individual and develop a fairness of viewpoint, breadth of vision, and a generally broad conception of human affairs which tend to make toward good citizenship. This is the true purpose of education, whether it is obtained at an agricultural college, or a school for dentistry. The technical information having to do with the growing of crops and live stock, or the proper care and treatment of the teeth is a mere incidental, so far as the true value is of the education is concerned. These various technical schools and institutions are designed to assist young men and women to a more successful pursuit of the vocation which they may choose. The assistance given, however, in this direction must not be confused with the real purpose of a college course. College graduates will say that although the training in agriculture received has proven of very great value, the greatest good from the college course was obtained from the opportunity to mix with other fellows and to develop a broader and better mentality.

It would be exceedingly difficult to design any course at an agricultural college which could possibly teach any young man how to farm successfully. It is a fact well known to all who have observed graduates of colleges and who have given thought to the courses of study that the agricultural college does not teach young men how

to farm. It may, however, make it possible for any person who has a liking for agriculture to obtain a grasp of the fundamental principles underlying the successful growth of crops and animals and thereby put himself in shape to pick up the technical information from actual work on the farm, and to apply it intelligently.

It is certainly unfortunate that a larger proportion of the graduates from agricultural colleges do not return to the farm. It is only true in a very indirect manner, however, that the agricultural college as we know it in this country educates young farmers away from the farm. A great many of the graduates would like to return to the farm and do not do so solely because they lack the required amount of capital. No one is to be blamed who has spent considerable money in securing an education, if he hesitates before venturing into a small farming proposition where the capital involved would not be sufficient to utilize his time and knowledge to advantage. In cases where young men whose fathers are still farming, leave the farm for the college and fail to return, the reason for this failure often lies in the fact that they can make more money elsewhere. And this is partly due to the fact that farmers in general do not make sufficient money, and partly to the fact that the father is either not willing to retire from hard work or will not make satisfactory arrangements to induce the graduate to come home. The organization of agriculture upon a sound and substantial basis would do a great deal to assist in making available for actual farming the knowledge gained in college by students from rural districts. Rural communities need the brightening influence of the college graduate and opportunity is knocking strongly at the door for every young farmer in the Province of Ontario. It is difficult to believe, sometimes, the wonderful difference wrought by a college course in the personality and potential usefulness of some of the students who have attended an agricultural college. Those who believe that a college course is not of sufficient worth to warrant the expenditure of time and money, fail entirely to take account of this most important factor. They are apt to consider only the behavior of those individuals who gain no immediate benefit from a college course and often are to a certain extent injured. These persons are for the most part those who lack force of character and fail entirely to grasp the possibilities of a college course so far as it is concerned with their future condition. Education never in a wide world has, and never will do harm to anyone who really is looking for what education will bring him, and who maintains throughout his course sufficient strength of character and singleness of purpose to pick out the essential things. Need it be added that the "plugger" rarely gets the best from his college course, although he may, and does frequently head the list at examination time.

Automobiles, Farm Machinery and Farm Motors.

Something About Springs.

The farmer has always been accustomed to give daily care and attention to the horse that is performing any kind of work. If he would give fifty per cent. as much to his automobile when it is in use, he would not find any trouble in avoiding garage bills. Many agriculturists, however, believe that an automobile can be neglected, but they never cherish the same thought regarding a farm animal. A car will give service in direct ratio to the amount of care placed upon it. Neglect is not only false economy but positively dangerous.

All this applies to springs as much as to any other part of your machine. Perhaps when you were taught to drive a horse, you were cautioned against forcing it over the brow of the hill. You were also urged not to race it at an excessive speed, or to go too quickly around corners. Furthermore you must have been warned about putting the animal to unusual efforts over bumpy pieces of road. Handle your automobile just the same way as you treat your horse and you will save a large part of spring trouble. Springs are made in a number of different shapes, and most of them run parallel to the wheels, but certain rear springs have been made parallel to the rear axle. The names applied to the elliptic, semi-elliptic and three-quarter elliptic springs indicate their shape. Cantilever springs do not extend under the back of the body, but run from the rear axle to some forward point. The average spring consists of a number of thin leaves of steel of different lengths. They are laid one on top of the other. At the end of the longest ones shackle bolts are used for attachment purposes. Before we go further let us make it plain that the springs are mounted between the axles and the frame in order that they may take up road shocks, and so save the life of the power plant, as well as contribute to the comfort of the passengers. Each spring is carefully constructed by the manufacturers, but no spring can be built to give comfort and at the same time refrain from breaking if pushed over rough, uneven spaces at a tremendous speed. In order that the leaves of the springs will not separate they are held together by heavy clips and also by means of a bolt. It is well to see that these clips are tight, at all times, because when loose they do not serve the purpose for which they are intended. When your car has run a few hundred miles you may find it developing a number of harsh rattles. Frequently these sounds come from the shackles, so it is well to remember that

the shackles have screws or oil cups, and that they should be lubricated at regular intervals. It is not a difficult matter to determine shackle squeaks. If your car is jarred from side to side the location of the sounds can be readily determined. We thoroughly recommend the use of graphite and oil between the leaves of springs. If you are willing to follow our advice, just jack up the frame of the car and pry the leaves apart with any sharp instrument like a screw-driver. Of course it is first necessary to remove the clips, so that the lubricant can be pushed into the spaces between the leaves with any small piece of metal that may be available. An old tableknife serves the purpose excellently. Nothing is so annoying as a spring squeak, and nothing is any easier in its prevention. Many and many a time we have thought it strange that motorists should have a smooth running power plant, and an engine hitting with persistent regularity, but underneath a set of springs that were groaning all the while.

Should you be unfortunate enough to break a spring, you will find it necessary to jack up the frame of the car, and so remove weight from the affected part. Take off the shackle bolts and clips, and you will now be able to get at the fracture. When you have put in a new leaf or a new spring make certain that the clips are thoroughly tightened. Do not think that it is always necessary to buy a new spring when you have broken a single leaf. Any blacksmith can do a fairly good welding job on a leaf, but make sure that the repaired part is the same length as the original one. Some manufacturers do not sell leaves any more, and it is not good policy to throw away a complete spring because one part has been smashed. There is another very interesting thing about springs, and that is the fact that occasionally they "let down" on a very smooth piece of road. If you should examine such a spring you will find that one part of the break is dark and discolored, and the rest very bright. This means that at a rough spot on the road you broke part of the spring sometime previous to when the remaining section snapped on a smooth road, and the entire spring collapsed. It is therefore well to look at the springs at odd intervals in order to locate any small breaks that may eventually become serious.

On certain occasions springs have been known to flatten out. This is in the majority of cases due to the fact that the weight upon them is greater than the manufacturers calculated. Do not allow any such condition to continue, but rather have someone install

an extra leaf or two. We know a very heavy man who kept constantly putting new springs in his coupelet, but never successfully stopped the flattening. This continued until he added an extra leaf. This advice also applies to any truck you may have on your farm. If the machine seems enough to carry a heavier load than the springs can stand, get a blacksmith to make an extra leaf or two. Remember that the stronger the springs the more they will carry, but the softer the springs the easier they will ride under smooth road conditions.

AUTO.

Knocking in Muffler.

What is the cause of a sort of clanging knock in the muffler as the engine is running slowly or when it is going down a hill? Retarding the spark doesn't always stop it. What is the cause of surplus oil on the brake? The surplus delivery tube is clean. At least I have tried to keep it clean when the car is running on the road for quite a distance and when stopped the oil will spurt out on the tires as the brake is put on. W. S.

Ans.—If you have correctly diagnosed the trouble, and the knock is really in the muffler, you will likely find that the baffling plates are loose. Have these tightened and your difficulty should disappear.

If you install a new felt in your rear wheel, oiling trouble will in all probability be cured. You must remember that oil is heavy and slow moving in the winter time, but quick and free running in the summer. Sometimes too much oil is put in the rear axle during the cold months, and when the heat comes the natural tendency is for it to run out.

AUTO.

Do not take an implement to the field without a wrench that will fit all nuts. A few extra bolts and perhaps a piece of wire in the tool box will save many a trip to the buildings and much valuable time.

Keep all wearing parts well oiled. Lubricants, while high in price, are still cheaper than steel.

THE DAIRY.

Season and stage of lactation both influence the butter-fat percentage of milk.

In 1910-11 the average New Zealand dairy cow accounted for a production of 142.1 lbs. butter-fat as against 161.8 lbs. for the season of 1916-17.

A Government scheme for herd testing of dairy cattle was first inaugurated in Victoria, Australia, in 1911. The first test was conducted during 1912-13 and during 1917, twenty herds were tested by government officials.

Feeding grain on pasture will doubtless pay with high producing cows, but unless an animal is an outstanding producer her work on pasture will be more profitable without it, at least until the pastures get short.

Dairying in Prince Edward Island.

The dairy industry of Prince Edward Island is recognized there as one of the pillars of agriculture in that Province. We learn from the annual report of the Department of Agriculture for 1917 that a marked improvement in dairy cows is being shown by a proper regard for the important factors in dairying. The industry is increasing in small but reliable proportions, and the year 1917 once more established a record for the owners of dairy herds, which was due largely to the satisfactory prices received for butter and cheese. Breeders of dairy cattle in Prince Edward Island are showing a keener desire for high-producing cows, and the annual culling of the herds has been encouraged by the high prices paid for beef animals. The demand for pure-bred breeding stock has really been far in advance of any previous year. This has been encouraged to a considerable extent by the establishment of community breeding centres and the holding of sales as an annual event designed to distribute throughout the district, dairy cattle of first quality.

The production of milk and the manufacture of dairy products have long been recognized as the most prominent part of agricultural production on the Island. During late years the value of dairy products has practically doubled, and it is believed that the demand for milk and its products will continue to increase. Courses for instruction in cheese and butter making were conducted for the first time during March and April of 1917, at Truro, N. S., at which place the Departments of Agriculture for the three Maritime Provinces had agreed to co-operate in this work.

It is reported that fewer second grade cheese were found during 1917 than had been expected, an indication of the fact that the quality of cheese on the Island is improving. Similar improvement was noted in a great deal of the butter produced, particularly in those cases where the grading of cream was practiced. Both cheese factories and creameries are being gradually equipped with more modern appliances, and it is expected that by the end of the present season all of the factories on the Island, forty-one in number, will have been granted licenses by the Department. Of the forty-one creameries and cheese factories, twenty-eight manufacture cheese and fifteen manufacture butter. Of the twenty-eight cheese factories, seven of them used more than fifty per cent., or over 12,000,000 pounds of the milk which went to the manufacture of cheese. The largest factory is situated at Kensington and utilized 3,419,704 pounds, turning out nearly 65,000 pounds of cheese in the season. The price paid for milk at these factories during 1917 varied from \$1.52 per hundred pounds to \$1.76, an average of \$1.66. The total number of patrons supplying cheese factories was 2,257.

Of the fifteen creameries using more than 12,500,000 pound of milk, over 10,000,000 pounds were used by the five largest. Dunstaffnage is the largest creamery, using 3,538,849 pounds of milk and manufacturing 150,403 pounds of butter with a net value of \$52,205.81. The net value per hundred pounds of milk at the creameries varied from \$1.20 to \$1.88, averaging \$1.58. There were 1,191 patrons divided among the fifteen factories. The accompanying table gives some very interesting figures relative to the cheese and butter industry on the Island since 1900, with an added column for the year 1917:

Jerseys in the United States.

From the American Jersey Cattle Club we learn that 20 Jersey cows have established new State records within the past few weeks, making it possible to issue the largest list of records ever issued by the Club at one time. Of interest in this list is the fact that Gipsy Graconis, milk 10,162.7 lbs.; fat, 498.77 lbs., at six years and three months of age is the first cow to enter the Register of Merit from the State of Arizona. Montana, New Jersey, Minnesota, Rhode Island, and Washington are each represented by two or more cows; the latter State having five cows registered, all of which are exceptionally good, two of them having broken the class record since the last list was published. Prominent among these cows is The Owl's Golden Queen, owned by E. L. Brewer, milk 14,226.8 lbs., fat 918.41 lbs., at the age of six years. This cow leads the list in fat production for all the States, although she is surpassed in milk production by two cows from her own State. These are Meysie's Fern Lassie, milk 15,606.3 lbs., fat 803.06 lbs., and Genesta's Duchess, milk, 15,293.9 lbs., fat 901.79 lbs. The State of Washington can be proud of three new records, one of which was broken twice within two months. The five cows entered from this State produced a total of 4,154 lbs. fat for the five yearly records, or an average of 832 lbs. each. This average for five cows exceeds anything that has ever been recorded from one State within a similar period of time.

two-year-olds, Belle De Kol Pontiac 2nd leading with 25.51 lbs. of butter.

In the semi-official records the mature class is led by Posch Queen Wayne, seven years old; milk 25,085 lbs., butter 1,121.25 lbs. Her home is at Alix, Alta. In this class the Dominion Experimental Farm, Agassiz, B. C., entered Aurora Mechthilde, who stands second with 18,195 lbs. of milk and 792.5 lbs. of butter. The Ontario Agricultural College entered two cows which stand ninth and twelfth respectively, neither one making 12,000 lbs. of milk or 600 lbs. butter. The four-year-old class is headed by Sarcastic Minnie, milk 12,986 lbs., butter 545 lbs. She also is owned at Alix, Alta. Hejelkje Rose leads the three-year-olds with 13,972 lbs. milk and 591.35 lbs. butter, while the two-year-old class is headed by Lily Pamela Butter Girl, milk 15,051 lbs., butter 593.75 lbs.

Quality Counts.

The State of Iowa has long been noted as a butter-producing State and for the quality of the butter manufactured. Very little of Iowa's butter is sold in that State, most of it being marketed in New York City to the fancy trade that is willing to pay a premium for butter of superior quality. The reputation of Iowa for good butter recently came to the ears of representatives of the U. S. Government, who immediately took steps to secure large quantities of this product for the use of the United States army.

We understand that at present negotiations are being made with about one hundred Iowa creameries, looking forward to the purchase of between three and four million pounds of butter for the army. The price to be paid for this butter will be something like three cents per pound above New York quotations, the idea being to get butter of a superior quality, put up with great care and packed in such a manner that it can be kept in perfect condition for perhaps two or three years.

Government regulations for the manufacture of this butter are very strict. It is to be taken to New York and packed in air-tight containers. Both Federal and State inspectors will supervise the making of it, in order to ensure that the creameries will follow minutely the regulations for making butter that will keep a long time. The quality of the cream as it is delivered at the factories will be carefully watched, and each step in the process will be taken under strict supervision. The fact that one State has been able to build up a reputation for butter of a superior quality, and that this quality has so attracted the war-purchasing agents as to command an advance of three cents over the market price, and for such large quantities, shows in an undoubted manner the advantage of manufacturing a first-class product and the use of the very best material.



Aaggie Pontiac Walker.

Daughter of a 30-lb. cow; 402.4 lbs. milk and 20.76 lbs. butter in 7 days as a junior two-year-old. Owned by Gordon S. Gooderham, Clarkson.

Holsteins in May.

The official records of Holstein-Friesian cows from May 1 to May 31, 1918, and the semi-official records for the two months ending May 31, 1918, are now to hand. Official tests for the month of May from 69 cows and heifers were accepted for entry in the Record of Merit. Four 30-lb. cows appear in the mature class, the highest of which is Pontiac Jessie with 34.46 lbs. of butter. At her previous calving this cow made a record of 37.62 lbs. Her home is in Oxford County. The senior four-year-old class was headed by Princess Segis Posch, milk 554.3 lbs., butter 32.61 lbs. She gave 61.06 lbs. of butter in fourteen days. The junior four-year-old class has twelve entries, the leader in which is Avondale Pontiac Pauline, milk, 454.7 lbs., butter 28.81 lbs. Three of the junior four-year-olds made over 28 lbs. each. Johanna Pontiac Segis leads the senior three-year-old class with 25.64 lbs. of butter, and a thirty-day record of 103.35 lbs. Low Banks Prilly Korndyke made a capital showing in the junior three-year-old class, producing 715 lbs. of milk and making 31.85 lbs. of butter. The senior two-year-old class had only four entries; three of them making slightly over 21 lbs. of butter, and the leader being Low Banks Korndyke Clothilde. Fifteen entries were received for the junior

eries will follow minutely the regulations for making butter that will keep a long time. The quality of the cream as it is delivered at the factories will be carefully watched, and each step in the process will be taken under strict supervision. The fact that one State has been able to build up a reputation for butter of a superior quality, and that this quality has so attracted the war-purchasing agents as to command an advance of three cents over the market price, and for such large quantities, shows in an undoubted manner the advantage of manufacturing a first-class product and the use of the very best material.

Dairy Industry in England.

It is most unfortunate that the commercial dairy cattle of the country should be so reduced in number by slaughtering for beef. It is quite unlikely that the price of milk after the war will go back to the old level. That is impossible, for the number of cows is inadequate to supply the population, while the value of cakes and meals will remain high for years, whether we continue to act upon the principles of Free Trade or not. In the past we have paid insufficient regard to the dairy industry, as we have done to other branches of agriculture in our reliance upon foreign supplies. There is no

Cheese and Butter Industry in P. E. Island.

| | 1900 | | 1905 | | 1910 | | 1915 | | 1917 | |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Cheese | Butter | Cheese | Butter | Cheese | Butter | Cheese | Butter | Cheese | Butter |
| Pounds milk | 59,901,455 | | 17,035,417 | 11,161,303 | 34,818,286 | 14,920,624 | 24,037,971 | 12,082,835 | 24,060,686 | 12,627,080 |
| Pounds butter or cheese | 4,431,739 | 572,726 | 1,641,780 | 481,699 | 3,346,428 | 638,137 | 2,289,232 | 522,080 | 2,241,878 | 537,996 |
| Average price received | | | 10.08c. | | 10.68c. | 24.48c. | 13.80c. | 28.62c. | 20.79c. | 40.25c. |
| Gross value | \$446,054.43 | \$123,052.32 | \$177,291.09 | \$104,633.24 | \$361,452.59 | \$152,949.10 | \$309,865.37 | \$151,064.49 | \$466,635.98 | \$218,358.45 |
| Net value | \$362,233.95 | \$96,191.13 | \$137,396.93 | \$78,464.37 | \$284,018.03 | \$121,327.33 | \$257,765.23 | \$129,510.52 | \$403,092.81 | \$164,791.02 |
| Net value of milk per 100 pounds | | | 80.6c. | 70.5c. | 79.61c. | 85.87c. | \$1.05.1 | \$1.03.1 | \$1.66 | \$1.58 |
| Cost of drawing milk | | | | | 91.7c. | 7.41c. | 96.1c. | 10.2c. | 11.46c. | |
| Number patrons | | | 2,631 | 1,779 | 3,367 | 1,039 | 2,488 | 1,511 | 2,257 | 1,191 |

advanced country in Europe in which the number of cows kept is not larger, usually very much larger, in proportion to the population, than in ours. While we import butter and cheese in enormous quantities, we are content to maintain the number of cows at almost the old figure.

The Swiss farmers, who supply us with a large quantity of condensed milk and Gruyere cheese, maintain two varieties of dairy cattle, which are in part fed in their stalls upon the fodder that grows in the valleys and in part upon the high mountains. If cows are able to thrive at an altitude of 5,000 feet, and on mountain pastures, they should be able to get along equally well upon the hills and downs of this country, which are of a much lower altitude. The attempt has been made, and is fully successful, and if it became general, more especially if the land were manured with artificials, there would be no doubt about the future. On one farm we know of in the South the tenant has manured a big strip of a down, about 100 acres, with a phosphatic manure (which can now be recognized for miles), but he feared to do more, in the belief that this improvement to the farm would lead to its sale.

There is no doubt about it, in the near future the milk-raising and dairy business of the country will have to be rehabilitated. It must become a gigantic industry, and it must supply us with homemade butter and cheese to an extent not hitherto known. The reason is obvious. Margarine has become recognized in a way in which those who fought it in the early days of its introduction never dreamed of, when it was so frequently sold as butter. Wages will fall among the workers of the towns, with the result that this fat will maintain its position, while butter will be imported to a smaller extent than before, owing to its high price. This will induce many farmers to make it, and to supply the separated milk to their young farm stock or to the public at large. No longer shall we hear of this useful food being given to pigs and valued at 1 1/2d. a gallon, or being "poured down the drains" in big cities, as in the past.

For some years the practice of testing the value of cows by their milking performances has been conducted in Scotland, and later in some parts of England, in imitation of the work of the Danes and the Swedes. If that practice is discontinued—and it has lost some of its vogue owing to the scarcity of labor during the war—it must be some setback to a sure system of "selection." What has been accomplished by Dr. Herbert Watney, by Mr. Haldeman, by Mr. Jos. Carson, by Mr. Hildebrand Harmsworth, by Messrs. A. F. & J. C. Robinson, by Sir Gilbert Greenall, by Mrs. Putman, by Mr. J. B. Chevallier, by Mr. F. B. May and others might be accomplished by countless hundreds of others, and the British average yield per milch cow brought up by hundreds of gallons. The whole question of milk recording is so obvious to a business man entering the cattle-breeding industry that it is one of the first things he attempts. It is impossible to make a success of a dairy farm unless every cow returns a substantial net profit. Cows are better than they were, but it is still remarkable that town dairymen should be able to buy the very best class of commercial dairy cattle, and that so many of the smaller dairy farmers should be content with any old kind of cow that comes along, so long as she costs but little money. But, thank goodness, skill, knowledge and experience on the part of so many men who have realized the future of the dairy industry have maintained it in a time of stress, and at a better level than would otherwise have been possible, had they not felt some enthusiasm and not a few sparks of patriotism in their work.—Live Stock Journal.

"The Neighborhoods Greatest Cow" is reported from Georgia. She was a Jersey that milked continuously for 20 years and 5 months, never going dry and giving a daily average of 3 gallons of rich milk. She raised 15 calves, nearly all heifers. Some cow.

POULTRY.

Swat the rooster.

Practice early selection of laying stock.

Provide shade and pure water for the growing stock.

Have your chicks shown evidence of head lice? Olive oil or ointment rubbed in well and repeated in a week will prevent the death of the chicks, which may occur in a few days.

The average number of eggs laid in the Hawkesbury egg laying contest was 241 for the first year light breed hens, and 164 for the second year. The first year heavy breed hens laid 210 eggs and the second year hens 131.

Eggs reaching the market are already showing the effect of the warm weather. The U. S. Food Administration says that 25 per cent. of the eggs reaching the market are bad in warm weather and 40 per cent. show the effects of improper handling.

The egg laying competitions concluded at Hawkesbury Agricultural College, New South Wales, Australia, showed that the average return per hen for 540 birds, including first and second year hens from both light and heavy breeds, was \$3.00 over and above the cost of feed.

The Poultry Situation.

During the last five or six weeks the turning point in summer egg production and egg prices has been reached and passed. About the middle of May the levels of cost to the buyers for eggs for storing were very high, running at about forty cents f. o. b. shipping point, cases free. At this time some of the buyers became much concerned at these high prices and stated that they would cease storing if they could not buy at about thirty-six cents f. o. b.; other buyers believed that prices would not go lower until hotter weather came and believed that eggs were cheap even at that price in comparison with other meat products. These prices were made in spite of the fact that production was still on the increase, although consumption was very heavy. Large quantities of eggs were moving from province to province, and the Western Provinces were handling large quantities of eggs. The season had been backward in Prince Edward Island and a heavy increase in receipts was reported at that time. Moreover, it is interesting to note that it was about the middle of May last year when prices commenced to climb, and by the end of May, 1917, they had reached such a point as to cause quite a serious reaction early in June.

By the 20th of May, 1918, this decision on the part of the large operators caused market conditions to become somewhat perplexing, but although some dealers claimed that this was having a bearing on prices in the country, country shippers were able to dispose of all their receipts at from thirty-eight to thirty-nine cents, f. o. b., cases returnable. At this time the quality of eggs began to fall off slightly. By the next week prices had dropped from one to two cents per dozen. Egg circles, which always obtain the highest prices, received from thirty-seven and a half to thirty-nine cents per dozen. Store keepers were offered thirty-four to thirty-five cents, and production began to fall off to a greater or less extent. This was true in the West in some parts, but prices in this part of Canada remained practically unchanged. Dealers who were unwilling to put eggs in storage at higher prices now began to buy aggressively, believing that the market would hardly work still lower in view of the fact that the flush of production had been passed. By the following week a further decline in prices had taken place and storage became more active. With the limitation of prices on eggs the trade generally took no chance, and this led to an easier condition and lower prices on all grades. Consumption, however, continued heavy. By the 10th of June production had fallen off still further and much of the receipts showed the effects of heat. This deterioration tended, of course, to put the best quality at a higher premium, and may of itself have been partly due to the recent strike of freight handlers in the West. This higher premium for quality in eggs would mean, of course, that from now on fine quality eggs will be a much smaller proportion of the receipts, and there will be a wider spread in prices according to quality. Up till a week ago storage was still in progress, and all the surplus stock is being absorbed in that way.

All the reports to hand show that an early start has been made this spring in laying operations, and prospects are bright for early laying next fall and winter. Reports on fertility are good for Ontario and the West, and in British Columbia the chicks are reported to be thriving on smaller grain and heavier clover rations. Some fear has been expressed that there may not be sufficient feed available this year. This would seem to be of particular interest to British Columbia, for it has been reported that twenty-five per cent. more chicks have been hatched this year than last. While it is difficult to get accurate reports from Eastern Canada, the consensus of opinion is that the hatch is smaller in Ontario, particularly in the Western portion of the Province.

No eggs have been exported to Great Britain. About four weeks ago prices for eggs in Great Britain reached a level which would have made it profitable to export American eggs, but ocean shipping has not been available, and in spite of the fact that exporters continued to receive tables from Great Britain quoting favorable prices for export eggs, no business has resulted thus far.

In the poultry market there has been a gradual progress in the direction of cleaning up stocks of storage poultry. Receipts at the middle of May were very light, arrivals consisting mostly of live hens and roosters. The receipt of hens increased very remarkably within the last week or so, and as a result the Toronto market dropped about two cents per pound. Frozen stocks continued to move into consumption at full quotations. The United States markets were supplied with an excess of live birds, and the food administration appointed inspectors to delay delivery of cars of live birds showing evidence of over-feeding. A little later the United States food administration issued a circular letter with regard to eggs, stating that "Careful and conservative estimates show that for the past five years, during the period from June 1 to October 1, twenty-five per cent. of all eggs were a total loss, and forty per cent. materially depreciated in food value." The food administration appealed to all handlers of eggs to place a candling certificate on the top of each case, on the reverse side of which the following appeared: "In order that the eggs in this case serve the purpose of food for our people and our Allies to the fullest extent, and help to win the war, it is necessary that they be chilled to a temperature of 60 degrees, or below, whenever at all possible and be moved into cold storage or consumption." About May 25 a few broilers of fair quality began to reach the market. Storage poultry moved freely into consumption and the demand for poultry was unprecedented. Dealers on June 1 reported that they expect

all storage stocks to be cleaned up by August 1. Fowl and cocks formed the bulk of receipts, notwithstanding the fact that a few broilers and spring ducks were arriving. This condition has continued to the time of writing, except that the quantity of broilers shows a gradual increase.

HORTICULTURE.

Winter Killing and Injury.

W. T. Macoun, Dominion Horticulturist, Ottawa, than whom no man knows more about the apple and its culture in Canada, is responsible for the statement that the terrible destruction of fruit trees from winter injury, has been one of the chief causes of the slow development of the fruit industry in the colder parts of Canada. While winter killing of fruit trees and injury due to the rigors of winter are, of course, more common with colder and more northerly parts of the Dominion, there are thousands of fruit trees which succumb to the combined effects of cold weather and improper treatment, even in the southerly portions of the Province of Ontario. It is at this time of year, or a little earlier, when the trees should be leafing or blossoming out, that the effects of a cold winter are most noticeable. Some trees die every year, some fruit buds are killed every year and some cases of sunscald, blackheart or bark splitting are noticeable as each growing season opens up.

Various reasons may be assigned for the fact that the losses to fruit-growers are, in the aggregate, so large. While the real cause is the severity of the winter either in degrees of cold, dryness of the atmosphere, or lack of snow to act as a covering for the roots of the trees, hundreds, or even thousands of trees are lost in some years, for which loss the owner is to blame. There is, of course, some excuse for the man whose fruit plantation is not the most important part of the farm and who may not be in a position to apply the best recommended practices to his orchard or even to keep himself fully informed as to what the best methods of culture consist of. In the past, unscrupulous tree agents and, to some extent, misleading information in nursery catalogues, have been the reason that many varieties, too tender to stand the severities of our winters, have been planted and ultimately killed.

Winter injury has been very common during past years in the Province of Ontario, but a large share of this injury is traceable to improper methods of culture which resulted in the trees going into winter condition in an immature state, the wood being soft and unable to stand the cold dry air because growth had been encouraged too late in the fall. Perhaps late cultivation is not responsible for the loss, it may result from having planted the orchard on windswept positions and a subsequent failure to grow a cover crop under the trees to hold the snow during winter and protect the roots of the trees from freezing. Dry, light soils, which allow the cold air to penetrate deeply and where there is very little moisture to counteract the evaporation caused by the cold air, are more likely to be the scene of winter killing than heavy and somewhat moist soils. Certain stocks used for the various classes of tree fruits are harder than others and the use of these harder stocks, together with a cover crop with which to provide a blanket for the roots in winter will do a very great deal to guard against loss from root killing. It is very disappointing to any farmer or fruit-grower to see his trees come bravely out in leaf and blossom and then suddenly fade and wilt. When the tree is dying is the first warning the owner has of its loss and curative measures are rarely of any avail. Nevertheless, there are occasions when immediate steps taken, will be effective enough to avert the total loss of whole orchards. We are reminded of one such case which occurred during the spring of 1915 in one of the counties of Eastern Ontario. The orchard was a splendid one of such apple varieties as Greening, Snow, Baldwin, etc., and was in splendid health and in its prime. The owner had recently purchased it and was not an experienced apple-grower, being a truck gardener, in the habit of fertilizing very heavily. He was, however, taking excellent care of his orchard, spraying, pruning, scraping, cultivating and manuring with the best of intentions. Nevertheless, a wet season, very favorable for wood and leaf growth, following a previous and rather heavy application of artificial fertilizer, resulted in an unfortunate combination of circumstances so far as the orchard was concerned. About the first of April, the following spring when the owner started to prune, he noticed that on one half of the orchard manured at a different period from the other half, the bark was beginning to separate from the trunk in large strips. A hurried call to the college at Guelph brought a visit which was something like a call to a funeral, since there appeared to be nothing which could save the trees. As the sun got hotter the separation of the bark from the trunk increased and the bark split and began to warp. However, the owner had thought of tacking down the loose bark and he was advised to get at it immediately in a vain hope of saving at least some trees. This he did after trimming the edges of the split bark back to where the cambium was separated but uninjured. Tacks were driven in not more than half an inch apart in all such places, however small, and the exposed wood afterwards painted. It was, seemingly, a hopeless effort, but it was rewarded and not a single tree died, except one from which the owner had previously torn most of the loose bark in order to discover the extent of the injury.

Often where the ends of the branches are severely killed back, the tree can be revived by severe pruning. Even severe cases of sunscald and bark splitting can be

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prevented from resulting fatally by using a knife and prompt painting of the wounds. Where conditions for growth are good and where rain and rot and the heat of the sun are prevented from counterbalancing the healing tendency, trees have wonderful powers of recuperation.

There are many forms of winter injury, some of the commonest of which are: frost killing, bark splitting, crotch injury, die bark, sunscald, bud injury, blackheart and collar rot. These are all more or less related in so far as two or three good orchard practices such as the planting of hardy stock, the use of cover crops and early stopping of cultivation, will control or prevent nearly all of them. Ordinarily it is advisable to begin cultivating an apple orchard as early in spring as possible, but on no account to continue cultivation of mature trees longer than July 1 in any part of Ontario and June 15 in the colder parts. Young trees may be cultivated from one to three weeks longer and peaches longer still in districts suitable for their culture. Drainage is an essential since "wet feet" are injurious and often kill large trees. Cover crops should be planted as soon as cultivation ceases in the orchard.

The past winter has been a very severe one and many fruit plantations have suffered severely. Injury has not been confined to apples, but pears, cherries, strawberries, raspberries, blackberries and peaches have all been seriously damaged. Injury to apples has been most common to such varieties as Baldwin and Ben Davis the latter being a tender variety and a very rapid grower while the former is quite tender and usually suffers even in parts of Ontario which are only moderately cold. Injury is, however, much more common where cultivation was continued too late or where cover was not provided.

Injury to strawberry plants is almost without exception due to a failure to provide cover during the winter. Strawberry growers are, as a rule, careless on this point, but it is equally true that where straw must be bought or where well rotted manure cannot be applied as a mulch, the weeds often get a splendid start and increase the cost of growing the crop. The same principles of care and proper length of cultivation apply to the injury of raspberries and blackberries.

Peaches this year are badly winter killed, but just how injury could be prevented is not very clear. The injury this year is not root killing as is usually the case when severe injury occurs. In such cases of root injury a cover crop would be of material assistance. Doubtless a modification of peach orchard practice to include some kind of cover crop would be of some assistance, but the injury is mostly to the tops this year. For three or four days during the past winter the temperature was as low as 18 degrees below zero, which has evidently been too much for the trees. Moreover, the peach crop in 1917 was very heavy for the most part and this may have had some tendency to sap the vitality of the trees. One thing is sure, the planting of peaches in parts of the country liable to spells of weather as cold as 18 to 20 degrees below zero is not to be recommended.

Orchard Cover Crops

The main uses of the cover crop in the orchard are: to hold the snow in winter, and thus afford greater protection to the roots of trees; to prevent the thawing and freezing of the ground; to lessen the depth to which the frost will go in the soil; to furnish vegetable matter in the spring for the purpose of obtaining humus and nitrogen; and to act as a catch-crop in summer to prevent the leaching of plant food made available during the summer. The cover crop is also a means of reducing the moisture in the soil by transpiration, and thus aids in ripening the wood of fruit trees liable to be injured. Where the soil has been long cultivated, and needs additional plant food, especially nitrogen, leguminous plants, such as clovers and vetches which will take free nitrogen from the air, and thus add a large quantity of this useful and expensive fertilizer to the soil at slight cost, are usually best; while where the soil has not been long under cultivation and is well supplied with humus and nitrogen, non-leguminous plants such as rape or buckwheat may be better, as the holding of snow and the protection of the roots of the trees are then more important than adding fertility to the soil, especially where the snowfall is light.

In the colder parts of Canada, where there is usually plenty of moisture in summer, it is better to sow seed for the cover crop not later than the first half of July or even in late June, rather than in the second half of July, as it is important to have the wood of trees thoroughly ripened before winter sets in; and by sowing the seed early the growth of the tree should be aided in ripening by the drying of the soil caused by the transpiration of moisture from the growing cover crop. In the drier and milder parts of Canada it is not necessary to sow seed for the cover crop until about the middle of July, as the early ripening of the wood is not so important as the conserving of moisture in the soil by cultivation through the early part of the summer. No nurse crop is, as a rule, necessary.

Some of the desirable characteristics of a good plant for cover crops are, first that it will germinate quickly and grow rapidly, so that weeds will be checked. It should be a strong grower, as there should be a dense cover to prevent the frost from penetrating deeply into the ground. It should stand fairly erect, so that it will hold the snow well in winter. It should also be a plant which can be easily handled in the orchard. In districts where there is danger of making the soil too dry by late growth, a cover crop should be chosen which will be killed by early frost, such as buckwheat. Some of the

best plants for cover crops are. Mammoth Red Clover, Common Red Clover, Crimson Clover, Hairy Vetch, Summer Vetch, Buckwheat and Rape. The last has been found very useful on the Prairies for holding snow. Where weeds are not liable to spread into adjacent areas and cause extra labor they make a fair cover crop if allowed to grow up after the end of June.—Experimental Farms Note.

Strawberry Diseases.

EDITOR "THE FARMER'S ADVOCATE":

The following notes deal with the five most prominent strawberry diseases in Ontario and it is hoped that the hints for control given may prove helpful to many whose plants are affected by one or more of these diseases.

MILDEW.—Strawberry Mildew appears during June and early July. It is due to a fungus which grows mainly on the under sides of the leaves, and may be seen there as a white, webby or frost-like coating, usually rather scanty in amount. It causes the leaves to curl upwards and a field which is badly affected has a peculiar whitish cast due to this curling. Later on the lower surface of these curled up leaves which are exposed to the sun are likely to turn purple or die at the edges, and when the leaves are badly attacked they may be totally destroyed. Besides reducing the feeding power of the leaves, a very serious effect of the Mildew is to allow the hot sun to penetrate through the leaves so that the fruit which ought to develop in a comparatively, cool shaded position is exposed to dry, hot air which shrivels the fruit and prevents it from reaching normal size. The fungus also attacks and rots the fruit.

The Mildew is rather erratic in its occurrence. In some years it is almost absent and other years very prevalent over large areas. It develops most rapidly in warm and moist weather and will hardly spread at all when the weather is dry and hot.

The most useful means of combatting Strawberry Mildew is in the use of ordinary sulphur which should be applied to the rows when the first symptoms of Mildew are noted. The sulphur may be applied either by using a dusting apparatus, by shaking through a fine sieve, or by putting it in a coarse cotton bag and pounding the bag as it is carried over the rows. Since it is the fumes of the sulphur, which are produced in the hot sun, that are effective against the disease it is not necessary to cover every leaf with the dust as has to be done in spraying. One feature of this treatment should be noted: If the sulphur is applied too close to picking time the fumes are apt to be rather irritating to the pickers on a hot day.

LEAF SPOT.—The Leaf Spot disease is often very damaging to strawberry plantations where it is allowed to become prevalent. As the name indicates, spots occur in the leaf which are purple in color at first or with gray or white colored center and a purple border as the spots get older.

Measures of control should begin when setting out the plants. Select healthy young plants and remove any spotted leaves from them. They should be sprayed with Bordeaux mixture (4-4-40) shortly after they are set out, and the leaves should be kept covered with the same mixture by two or more sprayings as needed throughout the growing season. In the second year they should be sprayed before the blossoms are out with the same material. After the fruit is picked another spraying of Bordeaux mixture may be given, or else the leaves should all be mowed after picking, and when dry, burned as they lie.

ROOT ROT.—During the last few years a great many strawberry plants have been lost and many plantations badly damaged by a peculiar "rot" of the roots which is noticed during the spring and summer months. The plants which are worst affected die early in spring and others survive only till blossoming time or until the fruit is being formed when they gradually shrivel up and die. It is suspected that the injury is mainly due to winter although there is some evidence for believing that soil fungi may also play a part in aggravating this trouble.

It has been found that when young transplants are taken from a badly affected field early in spring they are likely to die and result in a poor stand. It is therefore advisable when setting out a new plantation to examine the roots carefully. The roots may be browned on the outside but if the small cord-like centre is still white and moist they are still uninjured, but if the central cord-like part is also browned then these roots are dead.

It is encouraging to note that several cases have been observed where plantations which were rather seriously affected one year recovered and did well during the following year.

The only control measure that seems necessary in this case is the protection of the plants from winter conditions. It is probable that the damage is done by late spring frosts after an early start of growth processes, rather than by hard or severe winter conditions. In either case, however, the remedy is a mulch of strawy manure, or leaves applied in late fall.

Fruit Rots.

The two most important rots of strawberry fruits which have been noted are the Dry Rot and Leak. Both of these occur in the strawberry regions of Ontario, in some cases to a considerable extent. The symptoms and methods of control for both are clearly given in a recent article by Dr. C. L. Shear of the Fruit Disease Investigations Branch at Washington. His statement is quoted as follows:

"The importance of the diseases of strawberry fruits is not generally recognized by growers because they

rarely see the fruit at the market. These diseases, are however, of great importance since they injure the keeping quality of the fruit and thus reduce the returns to grower, shipper and merchant, and also increase the cost of the berries to the consumer. No plant disease causes more serious losses than these which decay the ripe fruits and thus destroy food which has been produced at great expense and labor. A careful study of the disease of strawberry fruits carried on by the Office of Fruit Disease Investigations during the past three years has shown that the two most important diseases may be very largely reduced by means which are within the reach of every grower."

DRY ROT.—Dry Rot caused by a gray mold (Betrytis sp.) is a field trouble and is particularly common and destructive on fields which are unusually wet either from excessive rains or because of poor drainage. This disease is readily recognized by the fact that the berries become rather firm and somewhat discolored. Berries of any age whether green or ripe may be attacked on the vines, and frequently the gray, powdery mold is seen growing on the outside of the berry. Not only berries, but at times leaf stems and blossoms are attacked by this fungus.

While the gray mold fungus grows rather slowly on ripe berries and so is not of great importance, after picking it may become very conspicuous due to its ability to grow at the temperature of a refrigerator car. This characteristic enables it to develop on the top of the load so that it is very noticeable when the car reaches the market and is being examined by buyers, a fact which frequently results in serious reduction in price.

The only effective method of reducing the spread of this disease in the field is by proper drainage. Dry Rot can be and should be largely eliminated as a cause of loss after picking by proper sorting. Diseased berries should be thrown out by the pickers or packers.

LEAK.—Leak caused by the common black mold (Rhizopus nigricans) is by far the most common and most destructive disease of ripe strawberry fruits. It is characterized by a rapid softening of the berry and the escape of much juice. This characteristic makes it particularly conspicuous on the market where boxes and even crates are badly stained giving them a most unattractive appearance. Moreover, the fruit soon settles in the basket or box and is unsalable except at a great reduction.

Study of this disease has shown that black mold can enter strawberries only when they are injured; thus one sure method of reducing loss is to handle berries carefully so that they may be injured as little as possible. Black mold grows very slowly if at all below 50 degrees Fahrenheit, but very rapidly as the temperature rises above this point. Strawberries should therefore be kept as cool as possible.

One simple method of keeping down the temperature of strawberries and one which is available to every grower is to pick the berries as early as possible in the day, before they have been warmed up by the sun's heat. This should be done even if the berries are wet as experiments have shown that it is much better to pick berries cool and wet than to wait until they are dry and warm. In any case strawberries should be placed in the shade as soon as picked, and protected from the sun by a light cloth while being hauled to the station. Dark heavy canvas or oil cloth retains the heat and hastens the decay of the fruit.

In some sections of Florida certain growers regularly practice washing the strawberries before they are picked. In case this method is followed strawberries should be packed wet rather than allowed to dry, even in the shade, as experiments have shown conclusively that this drying greatly increases the amount of rot.

Dominion Pathological Laboratory,
St. Catharines, Ont. W. A. McCUBBIN.

Fruit Outlook in Quebec and New Brunswick.

We are in a position now to supplement last week's report on fruit conditions in Ontario by a further report from the Provinces of Quebec and New Brunswick. The Fruit Commissioner's report for the month of June indicates an unfavorable outlook for the Fameuse apple, stating that in the Chateauguay district Fameuse and St. Lawrence did not bloom any heavier than about five per cent. The only trees which promise a heavy crop are those of the hardy kinds, including such early varieties as Duchess, Wealthy, and McIntosh. Prof. T. G. Bunting, of the Department of Horticulture, Macdonald College, Quebec, writes us as follows:

"The winter of 1917-18 has been the most severe in the history of Macdonald College and has caused considerable winter injury in the apple trees, and pear trees (Flemish Beauty and Clapp's Favorite) have been almost entirely killed out. Cherry trees of the sour varieties have been seriously injured, and all the fruit buds were destroyed. Among plum trees the hardier European varieties which are grown here have been badly winter-killed, and they will produce very little fruit. The varieties of the Americana type have not been injured and give promise of a full crop.

"Of the more important varieties of apples the Fameuse and winter St. Lawrence have shown most injury, but these trees will recover except in a few cases. Many fruit spurs on these two have been killed and also some quite large limbs with the result that the show of bloom was light and developed very irregularly, much of it being weak and will probably not set. Even among the McIntosh trees some injury is noted, in some districts more than others. A few weak trees have probably been killed outright and others have been badly injured, but in general they give promise of

a medium crop. Ben Davis and some other varieties have been badly killed.

The small fruit plantations have wintered well and give promise of good crops. Strawberries on the higher land where the snow disappeared early show some winter killing. Among the ornamental trees and shrubs the following show more or less injury, and in some cases the plants are killed right to the ground: Weigelia, Deutzia, Philadelphus, Forsythia, Sambucus, Ligustrum, Rhus, Berberis, Thunbergii, Spiraea, Euonymus, and among trees, Crataegus, Morus, Catalpa and also the evergreens have suffered, particularly the Austrian Pine.

Our weather records for the three months of December, January and February, show an extremely long period of cold, dry weather with practically not a thaw during the period, and the injury in all probability is due to a gradual drying out of the wood. The accompanying table gives a partial record.

| No. days | Days below 0° F. | | No. days above 32° F. | Mean temp. | |
|----------|------------------|------------|-----------------------|------------|---------|
| | Max. temp. | Min. temp. | | Maximum | Minimum |
| Dec. 31 | 8 | 17 | 5 | 14.58 | -0.33 |
| Jan. 30 | 4 | 14 | 1 | 13.53 | -0.75 |
| Feb. 28 | 1 | 12 | 6 | 19.5 | +1.73 |
| Total 89 | 13 | 43 | 12 | | |

A. G. Turney, Provincial Horticulturist for the Province of New Brunswick, has sent us the following brief account of fruit prospects in that Province, from which it is seen that the winter injury so common in Ontario and Quebec as a result of the past winter has not been confined to these two Provinces:

"In the Gagetown section there has been considerable winter killing on Peewaukee, Northern Spy, Golden Russet, Ben Davis and Fameuse. On Fameuse the injury has been very variable, some orchards escaping almost altogether, while others have been quite severely affected. There is also some winter killing in this section but decidedly less marked than in the Gagetown district. The weather has been especially favorable throughout the blooming season and there has been no frost injury.

"Duchess promises about 75% of the full crop, all trees that blossomed being very heavy; Wealthy, Dudley and Alexander, 40 to 50%, full crop; Wolfe River will be lighter; Fameuse will be very light; this is a McIntosh year and there will be 75% of a crop for the comparatively few trees that we have of bearing age of this variety. The Bishop Pippin promises a very fair crop and Bethel about one-half a crop. Other winter varieties will probably be very light.

"Strawberries appear to have wintered well but in many cases the prolonged wet season of 1917 was unfavorable to obtaining a good growth and the crop will be on the light side."

FARM BULLETIN.

Less Gas—Fewer Tile—And Decreased Production.

A matter which vitally concerns increased production is receiving a great deal of consideration in Southwestern Ontario and giving rise to no small amount of discussion. In that district tile draining is essential to good farming and in many cases absolutely necessary before any kind of a crop at all can be produced. A majority of the tile-making plants in that section of the Province burn with natural gas, but after July 1 the supply is to be cut off and many of the plants will be obliged to remodel and consequently suspend operations. The supply of tile even now is limited and the new ruling will retard operations to a very serious extent. The authorities apparently have not considered production to the extent which existing conditions demand, and the feeling exists that they have acceded to the wishes of the Gas Company who seemingly prefer domestic to industrial business, since it returns a higher revenue per cubic foot of gas. The manufacturers are willing to pay a reasonable price for gas and desire a reconsideration of the ruling on the merits of the argument set forth in the following paragraphs:

"The returns made to the Western Ontario Clay Workers' Association by tile plants in Western Ontario using natural gas show that these plants have a capacity of a total annual production of 31,000,000 feet of tile, and they require 365,000,000 feet of gas, or approximately 1,000,000 feet of gas per day would be required to burn the above amount of tile, which is approximately 11,500 cubic feet of gas per 1,000 feet of four-inch tile, weighing two and three-quarter tons per thousand. According to the best practice, as recommended by the Ontario Department of Agriculture, 31,000,000 feet of tile will underdrain 50,000 acres of land, and according to Bulletin No. 174, on "Farm Underdrainage", page 24, there are 4,816,000 acres of cleared land in the Province of Ontario in urgent need of underdrainage, and in addition to this there are 5,000,000 acres of slash and marshlands which are now absolutely unproductive but which could be reclaimed by underdrainage. So that it will be seen that it will take the output of the tile plants using gas for approximately two hundred years to properly tile the land in Ontario, which is in need of proper underdrainage, and seventy-six per cent. of all the tile produced in Ontario are manufactured in plants using natural gas as fuel. The output of drain tile must be greatly increased in order to underdrain the land.

"According to the same Bulletin, on page 11, the

value of increased crops at 1909 prices from land properly tiled was \$21.65 per acre more than if the land had not been drained. Upon this basis the value in increased production from the 50,000 acres which could be tiled with the 31,000,000 feet of tile produced in the plants using natural gas, would amount to over \$1,000,000 per annum, and, assuming that there is no increase in the production of drain tile from these plants over their present capacity of 31,000,000 feet, the increase in production of farm products would amount to \$15,000,000, and in twenty years \$200,000,000. These calculations are made on the basis of 1909 prices, and when compared with present market prices the increase amounts to 90½ per cent., which in other words means that an acre of tiled land will produce at current prices \$41.13 more than untiled land."

The arguments goes on to compare the prices for farm products in the year 1909 with those existing in 1918, and arrive at the average increase of 90½ per cent. used in the preceding paragraph. The argument continues to show that if the output of the tile plants now using natural gas as fuel is maintained for the next twenty years the increased production from the land tiled with these tile will amount to many millions of dollars. Using \$41.13 as the value of the increased crop per acre resulting from underdrainage, the total amount of increased production from the 50,000 acres of land drained in one year by the 31,000,000 feet of tile manufactured with the use of natural gas would amount to \$2,056,500, basing the calculation on 1918 prices. At the end of twenty years, 1,000,000 acres of land would be drained, if the present output of tile continued from the gas-using plants, and the increased production resulting therefrom would have a value of \$21,650,000, at 1909 prices for farm products, or \$41,130,000 basing the value of farm crops on 1918 prices. We now continue to quote from the information gathered by the President of the Western Ontario Clay Workers' Association:

"While these prices seem almost beyond belief, they are based on statistics produced by the Department of Agriculture and even on this basis at the end of twenty years only one-tenth of the land in the Province of Ontario, which now requires underdrainage, will then be drained. From a perusal of Bulletin No. 174 and No. 175 of the Ontario Department of Agriculture, it will be seen that land properly underdrained does not require the same amount of labor to produce even the increased crop as untiled land. What easier way is there to pay off national debt than by insisting upon proper underdrainage?"

"In regard to the proposed order of the Ontario Railway and Municipal Board, issued under date of April 6, 1918, on which warning was given to commercial users of natural gas through the various distributing companies that natural gas would not be available for other than domestic use on and after July 1 next, and that all commercial users should be prepared to use some other fuel, it would not seem in the best interests of the country, the greater-production propaganda, and the win-the-war policy, to shut off the supply of natural gas to the tile plants.

"According to the Bulletin on the natural gas situation, in the Counties of Essex, Kent and Lambton, by G. R. Mickle, pages 5 and 6, the present yield of natural gas is 15,000 million feet per annum; 4,500 million cubic feet, or 30 per cent. of the total used for domestic consumption and 10,500 million cubic feet, or 70 per cent. of the total are used for industrial purposes.

"The amount of gas required to operate all the tile plants to capacity, that is to produce sufficient tile to tile 50,000 acres of land per year, is but 8.11 per cent. of the domestic consumption; 3.47 per cent. of the commercial consumption, or 2.43 per cent. of the present total consumption of 15,000 million cubic feet.

"The 2.43 per cent. of the present total consumption of natural gas, when laid in the ground, will show an increased annual production, according to present market prices, of over \$2,000,000 and each 50,000 acres tiled will continue to yield each year this amount. The average will rise or fall with the market.

"The amount of gas required to operate all of the present tile plants namely, 365,000,000 feet per annum, is the amount of gas required per annum by 15,000 domestic consumers, and according to the report of G. R. Mickle, page 4, these 15,000 domestic consumers would require per annum 20,000 tons of coal, and it would seem to be good business on the part of the Government to reserve for the tile manufacturers the amount of gas required to operate their plants, and replace this fuel to the domestic consumers, namely, 20,000 tons, which at \$10 per ton would amount to only \$200,000. The domestic consumer would spend for coal \$200,000, and farmers could take the increased production from their drained land to the United States and sell it at current market prices for \$2,056,500 and there would still be a trade balance in Canada's favor, on this one transaction alone, of \$1,856,500 the first year, \$3,913,000 the second year, and \$10,082,500 the fifth year. These calculations are based on the present market value of farm products.

"That the tile manufacturer is entitled to a preferred classification as to fuel is substantiated by the action of the Federal Fuel Administrator of the United States in issuing permits to tile manufacturers to burn fuel in excess of the amount specified in the order.

"If natural gas is not available for the tile manufacturers now equipped to use this fuel and the majority of whom are not equipped without the expenditure of large sums of money to burn any other fuel, excepting possibly fuel oil, the production of drain tile will be greatly curtailed, and from reliable data carefully prepared the production will not be more than 40 per cent. of the present capacity of the plants now equipped to burn natural gas."

Look At Your Label

If the address label on the cover of this paper does not show your subscription paid to December 31, 1918, please remit at once, as June 30 is the end of our financial year, and it is necessary to have your subscription paid up by that date.

Wentworth County Annual Tour.

A representative of the "Advocate" accompanied the annual tour of the Boards of Agriculture in North and South Wentworth, on Wednesday and Thursday, June 19 and 20. About one hundred farmers from Wentworth County spent the two days very profitably in visiting well known farmers and stock breeders in the Counties of Wentworth, Waterloo, Oxford, Brant, and Haldimand. The tour was made under the direction of W. G. Marritt, District Representative for Wentworth County, who was assisted by Messrs. J. S. Knapp, G. R. Green, and R. Schuyler, Representatives for the Counties of Waterloo, Oxford and Brant, respectively. These latter gentlemen accompanied the party to points of interest in their respective Counties, aiding very materially in enabling the twenty-five cars, full of interested farmers, to cover a large territory, besides adding considerably to the comfort of the trip by making arrangements for the accommodation of the party at Kitchener, Woodstock and Brantford, where stops were made either for meals or over night. Many places of interest were visited, including representative dairy farms and herds of beef cattle. A detailed account of the trip will appear in the next issue of the Advocate.

During the two days occupied by the tour, opportunities were afforded those present to take in the situation in regard to crops very clearly. Hay, for the most part, appeared to be less heavy than there was reason to expect some time ago. The dry weather during part of May apparently prevented the hay from becoming as tall as was expected, although splendid fields of clover were seen in Waterloo and Oxford Counties. Occasional fields of sweet clover were noticeable and these were being cut, although some of them were a little past the most desirable stage. As the party progressed through Brant and into Haldimand County, alfalfa was, of course, noticeable in much larger acreage, and an increasing amount of this crop was being cut.

Spring grain for the most part was looking excellent, although in some parts of Wentworth and Waterloo some fields were observed where some yellowing was observable and the party found out that the ends of the leaves have started to turn brown as in some other districts. Fall wheat, of course, was very scarce; only two or three fair to good fields being noticeable on the whole trip. Much of the fall wheat has been re-seeded to barley, or has been replanted altogether. Corn was looking fair although some fields were quite thin, and generally speaking the crops showed the need of hot weather. The root crops through the district visited have been kept in pretty fair condition considering the present labor situation, and were looking fairly clean although it was not difficult to see that farmers were having difficulty in coping with the weeds.

The trip was certainly taken at an opportune time, and the country appears to be in splendid condition.

Veteran Ayrshire Breeder Dies.

Ayrshire breeders in Canada will regret the death of Charles M. Winslow, Secretary of the American Ayrshire Breeders' Association. Mr. Winslow succumbed to an attack of acute indigestion Saturday, June 8, at Brandon, Vt. Born in 1841, and having lived his life for a great number of years among dairy circles, he has become known among Ayrshire breeders all over North America. He was one of two remaining charter members of the Ayrshire Breeders' Association of the United States, organized in 1875. He was responsible for the incorporation of the Association in 1883, and has been re-elected annually for the last thirty-five years. Mr. Winslow was a successful breeder of Ayrshires, and his exhibits at St. Louis and other national expositions were worthy of note. For many years he was President of the New England Agricultural Society, and has been, in addition, member of the Vermont legislation 1894-5, Secretary of the State Board of Agriculture, President of the New England Ayrshire Club, and the Vermont State Ayrshire Club. His was indeed a life of service and Ayrshire cattle breeders will miss him and his long experience with the breed.

The Government is endeavoring to correct an impression which has become quite widespread that young men of nineteen years and those who became twenty since October 13, 1917, will be called to the colors. They state that no date has yet been fixed for calling upon such men to report for duty, and they also intimate that no such call will be made until after the harvest is over. These men are to rest at ease until they receive notice from the Registrars. No definite assurance is given in regard to harvest leave, for men already called yet the matter will be given consideration. Announcement is also made regarding cases of extreme hardship and how to proceed to obtain leave of absence. Watch all official announcements in this regard.

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Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending June 20.

Receipts and Market Tops.

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

| | Receipts | | | Top Price Good Steers (1,000-1,200) | | | CALVES | | | | | |
|-----------------------------|---------------------|----------------|---------------------|-------------------------------------|----------------|---------------------|---------------------|----------------|---------------------|---------|---------|---------|
| | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | | | |
| Toronto (Union Stock Yards) | 5,902 | 3,853 | 4,112 | \$16.00 | \$11.95 | \$16.50 | 1,568 | 748 | 1,530 | \$16.50 | \$15.50 | \$16.50 |
| Montreal (Pt. St. Charles) | 993 | 449 | 565 | 17.10 | 11.15 | 16.00 | 2,278 | 1,430 | 2,262 | 16.00 | 13.00 | 16.00 |
| Montreal (East End) | 1,018 | 253 | 502 | 17.10 | 11.15 | 16.00 | 1,517 | 994 | 1,626 | 16.00 | 13.00 | 16.00 |
| Winnipeg | 3,084 | 2,566 | 2,723 | 15.25 | 11.60 | 13.50 | 261 | 179 | 257 | 16.00 | 13.00 | 15.75 |
| Calgary | 1,161 | 794 | 891 | 13.75 | 9.75 | 14.00 | | | | | | |
| Edmonton | 350 | 581 | 423 | 13.00 | 9.50 | | 91 | | 51 | 14.00 | | 15.00 |

| | Receipts | | | Top Price Selects | | | SHEEP | | | | | |
|-----------------------------|---------------------|----------------|---------------------|---------------------|----------------|---------------------|---------------------|----------------|---------------------|---------|---------|---------|
| | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | Week Ending June 20 | Same Week 1917 | Week Ending June 13 | | | |
| Toronto (Union Stock Yards) | 5,048 | 7,352 | 5,302 | \$18.00 | \$15.50 | \$18.50 | 1,913 | 558 | 1,404 | \$21.00 | \$18.00 | \$21.00 |
| Montreal (Pt. St. Charles) | 903 | 935 | 848 | 19.25 | 16.00 | 19.50 | 401 | 130 | 363 | 22.00 | 9.00 | 22.00 |
| Montreal (East End) | 915 | 514 | 882 | 19.25 | 16.00 | 19.50 | 495 | 188 | 374 | 22.00 | 9.00 | 22.00 |
| Winnipeg | 5,122 | 5,451 | 4,248 | 18.00 | 15.00 | 18.00 | 195 | 46 | 252 | 18.00 | 13.00 | 18.00 |
| Calgary | 2,768 | 2,923 | 1,938 | 17.25 | 13.65 | 17.35 | 325 | 376 | 511 | 13.50 | | |
| Edmonton | 240 | 216 | 525 | 17.00 | 13.25 | 17.50 | 45 | | 17 | | | |

Market Comment.

Toronto (Union Stock Yards).

The largest percentage of the cattle received during the week was off the grass, and fully one-third of the offering consisted of cows. Except in the case of a few loads of stall-fed cattle, the quality of the stock was not as good as that offered during the previous few weeks. Prices were lower throughout the week by fully 25 cents per hundred on stall-fed cattle, and about 75 cents per hundred on grass cattle. The latter do not show as good killing qualities or dressing percentages as the former; hence the greater decline in price. Only a limited number of stall-fed cattle remain to be marketed. With four thousand and cattle on sale on Monday, trading was very inactive all morning, buyers endeavoring to purchase at the lower prices. During the afternoon, stock moved more freely although seven hundred head were left unsold at the close of the market. On Tuesday, the market was steady, and during the remainder of the week, trading was active with prices ruling a shade higher than those paid on Monday. A few loads of heavy cattle were offered for sale. One extra good load of twenty-six head averaging thirteen hundred and fifty pounds, from the barn of J. B. Shields, Mouny Albert, Ontario, realized \$17.50 per hundred, the highest price paid for a straight load on the market this year. A few other good heavy cattle sold at \$16 to \$16.50 and those of medium quality realized from \$15.25 to \$16. Of steers between the weights of ten hundred to twelve hundred pounds, three head averaging eleven hundred and eighty topped the market at \$18; two or three head sold at \$16.40; one or two loads at \$15.75, and \$15.80, while most of the sales were made from \$14.50 to \$15.50 per hundred. Of the steers and heifers of lighter weights, one load averaging nine hundred and eighty pounds per animal at \$15.25; two or three loads at \$15.15, while the greater proportion of the sales were made from \$13.75 to \$14.50 per hundred. Medium quality steers sold from \$12 to \$13. Due to the large offering, the cow trade was inclined to be slow even at the lower prices. One or two cows were sold at \$13, several at \$12.50, and most of the good animals from \$11 to \$12. Bulls were weaker in sympathy with the general decline; a few extra choice animals sold at \$13; good bulls from \$11.50 to \$12.50, and those of bologna grading, from \$9.50 to \$10.50. Stockers and feeders moved more freely; good quality feeders realized from \$12 to \$12.75 per hundred, and good stockers from \$10.75 to \$11.50. Calves were about steady with last week's close. Choice veal calves sold from \$15 to \$16.50; those of good quality from \$13 to \$14, and common and grass calves from \$9 to \$11.

Sheep and lambs are moving more freely now, nineteen hundred being on sale during the week. As a result, prices dropped off rather sharply and are now two to three dollars per hundred lower than the prices of the previous few weeks. Choice yearlings are selling from \$17 to \$19, choice light sheep from \$14 to \$16.50, and heavy sheep and bucks

| CLASSIFICATION | No. | TORONTO (Union Stock Yards) | | Top Price | MONTREAL (Pt. St. Charles) | | Top Price | |
|------------------------|-------|-----------------------------|------------------------|-----------|----------------------------|------------------------|-----------------|---------|
| | | Avg. Price | Price Range Bulk Sales | | Avg. Price | Price Range Bulk Sales | | |
| STEERS | | | | | | | | |
| heavy finished | 201 | \$16.25 | \$15.75-\$16.75 | \$17.50 | | | | |
| STEERS | | | | | | | | |
| good | 360 | 15.10 | 14.00-15.25 | 16.00 | 97 | \$16.35 | \$16.25-\$17.10 | \$17.10 |
| 1,000-1,200 common | 20 | 13.53 | 12.50-14.00 | 14.25 | | | | |
| STEERS | | | | | | | | |
| good | 694 | 14.25 | 13.50-15.00 | 15.25 | 74 | 14.00 | 13.50-15.00 | 15.50 |
| 700-1,000 common | 298 | 12.47 | 11.75-13.25 | 13.50 | 160 | 12.75 | 12.50-13.00 | 13.00 |
| HEIFERS | | | | | | | | |
| good | 406 | 14.47 | 13.75-15.00 | 16.00 | 9 | 15.50 | 14.00-17.00 | 17.00 |
| fair | 316 | 12.61 | 12.00-13.25 | 13.25 | 49 | 12.00 | 11.00-13.50 | 13.50 |
| common | 96 | 11.00 | 10.50-11.50 | 11.50 | 65 | 10.50 | 10.00-10.75 | 10.75 |
| COWS | | | | | | | | |
| good | 1,026 | 11.23 | 10.50-11.75 | 12.50 | 80 | 12.00 | 11.50-12.50 | 13.50 |
| common | 1,092 | 9.66 | 9.00-10.00 | 10.25 | 307 | 9.75 | 9.00-10.75 | 11.00 |
| BULLS | | | | | | | | |
| good | 173 | 11.25 | 10.75-12.00 | 12.50 | 23 | 12.00 | 11.50-13.00 | 14.00 |
| common | 101 | 9.89 | 9.00-10.50 | 11.00 | 64 | 10.00 | 9.50-10.50 | 10.50 |
| CANNERS & CUTTERS | 229 | 7.00 | 6.75-7.25 | 7.50 | 46 | 7.00 | 6.00-7.50 | 7.50 |
| OXEN | | | | | 2 | | | |
| CALVES | | | | | | | | |
| veal | 1,558 | 14.00 | 13.00-15.00 | 16.50 | 2,262 | 12.75 | 10.50-13.50 | 16.00 |
| grass | 10 | 8.00 | 7.00-9.00 | 9.00 | 16 | | | |
| STOCKERS | | | | | | | | |
| good | 287 | 11.31 | 10.50-11.75 | 11.75 | | | | |
| 450-800 fair | 211 | 9.82 | 9.00-10.50 | 11.00 | | | | |
| FEEDERS | | | | | | | | |
| good | 224 | 12.57 | 12.00-13.00 | 13.00 | | | | |
| 800-1,000 fair | 158 | 11.97 | 11.50-12.25 | 12.25 | | | | |
| Hogs | | | | | | | | |
| selects | 4,732 | 18.00 | 18.00- | 18.00 | 773 | 19.20 | 19.25- | 19.25 |
| heavies | 44 | 18.00 | 18.00- | 18.00 | | | | |
| lights | 73 | 16.50 | 16.00-17.00 | 17.00 | 46 | 18.70 | 18.50-18.75 | 18.75 |
| (fed and watered) sows | 191 | 16.50 | 16.00-17.00 | 17.00 | 80 | 16.20 | 16.25- | 16.50 |
| stags | 5 | 14.00 | 14.00- | 14.00 | 4 | | | |
| LAMBS | | | | | | | | |
| good | 250 | 18.94 | 16.00-21.00 | 21.00 | 62 | 20.50 | 20.00- | 22.00 |
| common | 15 | 16.00 | 13.00-18.00 | 18.00 | | | | |
| SHEEP | | | | | | | | |
| heavy | 746 | 13.83 | 12.00-15.00 | 15.00 | 234 | 14.50 | 14.00-15.00 | 16.00 |
| light | 527 | 16.06 | 14.00-18.00 | 18.00 | 105 | 13.25 | 13.00-13.50 | 13.50 |
| common | 375 | 8.00 | 7.00-9.00 | 10.00 | | | | |

from \$10 to \$13. Spring lambs are realizing \$23 per hundred.

There was no change in hog prices during the week, selects selling at \$18 per hundred, fed and watered. Packers expect lower prices for next week, but with very limited supplies available, it is doubtful if any reduction will be effected.

Of the disposition from the yards for the week ending June 13, Canadian packing houses bought 884 calves, 104 bulls, 110 heavy steers, 2,878 butcher cattle, 5,326 hogs and 1,392 sheep. Local butchers purchased 567 calves, 323 butcher cattle, 443 hogs and 125 sheep. Canadian shipments consisted of 66 calves, 33 milch cows, 267 stockers and 22 feeders. Shipments to United States' points consisted of 33 stockers and 69 feeders.

The total receipts from January 1 to June 13, inclusive, were: 111,327 cattle; 29,979 calves, 171,258 hogs and 12,982 sheep; compared to 103,683 cattle, 26,069 calves, 234,812 hogs and 13,588 sheep, received during the corresponding period of 1917.

Montreal.

While the prices paid at these Yards were not considered any higher than those of the previous week, or in some cases not so high, there were many incidents to prove that care and forethought in pre-

paring animals for market is being justified at present. One lot of steers that were put in the stable last fall at \$8 per hundred, sold on Monday's market for \$17 per hundred; they had been well wintered and had run a month on grass. Cows that were worth around \$8 to \$8.50 when they went on grass this spring, sold as high as \$12. Three calves of six months old that were from selected stock and well prepared, sold at an average of \$98 each, and one four months of age sold for \$72. On Monday the best load of steers averaged eleven hundred and fifty pounds and sold for \$17.10 per hundred. They were well finished and had not been on grass. One heifer and one steer averaging ten hundred and eighty pounds were sold together to a local butcher for \$17.50; the balance of this car sold at \$17. The next highest sale was \$16.25 for thirty-two head weighing from eleven hundred to eleven hundred and twenty pounds; prices ranged down to \$12.50, for a car of very light poor steers. The majority of light steers off grass sold around \$14 but were not fat. Most of the week's offerings were made up of dry cows, and any of these that were fat enough to make a good appearance when dressed, sold for \$12 or over on Monday, with medium grades selling from \$10 to \$11.50. On Wednesday

the latter grade fell off about \$1 per hundred and sold from \$9.25 to \$10.50. Some drovers were not willing to accept these prices and a number of cattle remained unsold. Good calves are selling at \$14 to \$15 for the best, but the quality is rapidly decreasing and many sales of pail-fed calves are being made from \$10.50 to \$12.50 per hundred.

Sheep are in good demand selling up to \$16 per hundred, while lambs, increasing in numbers and weight, sell from \$20 to \$22 per hundred.

Prices for hogs have not shown any further decline and a little more firmness is indicated. It is probable that the price will be established around \$19 to \$19.50 per hundred off cars. Receipts are being supplemented by car lots from Western Canada.

Pt. St. Charles.—Of the disposition from the Yards for the week ending June 13, Canadian packing houses and local butchers purchased 2,190 calves, 23 canners and cutters, 55 bulls, 417 butcher cattle, 848 hogs, 348 lambs and 48 milkers. There were no shipments made to United States during the week.

The total receipts from January 1 to June 13, inclusive, were: 14,657 cattle, 31,404 calves, 28,479 hogs and 5,985 sheep; compared to 16,371 cattle, 33,668 calves, 41,643 hogs, and 5,895

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sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending June 13, Canadian packing houses and local butchers purchased 1,283 calves, 474 butcher cattle, 882 hogs and 272 lambs. Canadian shipments consisted of 218 calves, 28 butcher cattle and 102 lambs. Shipments to United States' points consisted of 125 calves.

The total receipts from January 1 to June 13, inclusive, were: 12,977 cattle, 28,734 calves, 17,466 hogs and 5,961 sheep; compared to 17,565 cattle, 27,949 calves, 22,412 hogs, and 7,292 sheep, received during the corresponding period of 1917.

Buffalo.

Cattle.—Prices of strictly prime dry-fed steers reached the highest point within the history of the trade at Buffalo last week—extreme top reaching \$18.35, with quite a string of shipping steers ranging from \$18 to \$18.25. Sellers generally conceded that all classes of shipping steers never sold higher nor in fact as high. There were some good weight Canadian shipping steers offered but not on the extra prime order, best ranging up to \$17.25. Choice dry-fed butchering steers and heifers sold strong, a fairish kind of stuff about steady, but on the medium, grassy grades the heaviest decline of the year was noted. These were in liberal numbers and sold from a dollar to a dollar and a half a hundred lower than for the preceding week, with canner and cutter stuff about steady. Bulls of all classes sold a half dollar lower; milk cows of all kinds ten dollars per head lower, while forward springers brought about steady prices, preference at this time being shown for springers. Stockers and feeders generally brought lower prices. There have been quite a few grass cattle held over from day to day and indications are that the trade on these will rule still lower, especially in view of the recent government order cutting down the number of days on which beef can be eaten, restricting consumption to about half, and with an

FARMERS' BUSINESS



15

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increased supply of grass cattle, sellers can see no other result except for a lower level. Offerings the past week totaled 6,375 head, as against 5,600 for the preceding week and as compared with 5,675 head for the corresponding week a year ago. Quotations:

Shipping Steers—Native—Choice to prime, \$17.75 to \$18.35; fair to good, \$17 to \$17.50; plain and medium, \$15.50 to \$16.50; coarse and common, \$14.50 to \$15.25.

Shipping Steers—Canadians—Best, \$16.50 to \$17.25; fair to good, \$15.75 to \$16; common and plain, \$14 to \$14.75.

Butchering Steers—Choice heavy, \$17 to \$17.50; fair to good, \$16 to \$16.50; best handy, \$15.50 to \$16; fair to good, \$14.50 to \$15; light and common, \$10 to \$11; yearlings, choice to prime, \$16.50 to \$17; fair to good, \$13.50 to \$14.75.

Cows and Heifers—Best heavy heifers, \$14 to \$14.50; fair to good, \$14.50 to \$15.75; good butchering heifers, \$13 to \$13.50; fair butchering heifers, \$10 to \$11; common, \$8 to \$9; very fancy fat cows, \$11 to \$12; best heavy fat cows, \$9.50 to \$10.50; good butchering cows, \$9 to \$9.25; medium to fair, \$8.50 to \$8.75; cutters, \$7.25 to \$8; canners, \$6.50 to \$7.25.

Bulls.—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11; sausage, \$9.50 to \$10.50; light bulls, \$7.50 to \$8.50; oxen, \$10 to \$12.

Stockers and Feeders—Best feeders, \$10 to \$10.50; common to fair, \$9 to \$9.75; best stockers, \$9.50 to \$10; fair to good, \$8.75 to \$9.25; common, \$7.50 to \$8.

Milchers and Springers—Good to best (small lots) \$100 to \$140; in carloads, \$80 to \$100; medium to fair, (small lots), \$75 to \$85; in carloads, \$65 to \$80; common, \$45 to \$50.

Hogs.—Market occupied a very favorable position the first half of last week but after Wednesday the trade was considerably lower. Monday the better weight grades landed generally at \$17.60; with pigs selling up to \$18, Tuesday, pigs were steady and good hogs brought from \$17.65 to \$17.75, bulk \$17.70, and Wednesday the general market for mixed grades, yorkes and pigs was \$17.90 and \$18. Thursday values were off a big quarter and Friday prices showed a further decline of 25 to 35 cents. The fifth day of the week showed lights and pigs selling at \$17.50 and the better grades ranged from \$17.25 to \$17.40, bulk, \$17.40. Roughs \$15 to \$15.25 and stags \$12.50 down. Receipts for the past week were 16,600 head, as compared with 23,705 head for the week before and 19,700 head for the same week a year ago.

Sheep and Lambs.—Receipts were very light last week, grand total being 3,800 head. Offerings were against 4,831 head for the week previous and 1,900 head for the same week a year ago. Spring lambs on the opening day sold up to \$23 and Friday the best could not be placed above \$22. A load of fancy dry-fed yearling lambs sold Monday up to \$19 and the balance of the offerings, which showed more or less grass, ranged from \$18 down. After Monday dry-fed kinds could not be quoted above \$18 to \$18.50, and Friday anything that showed the least bit of grass had to sell from \$17.50 down. Sheep were held steady all week. Wethers brought up to \$15 and ewes went from \$13.50 down.

Calves.—Market was active last week and a good clearance was had from day to day. The first four days of the week choice lots sold at \$18.25 and \$18.50,

with culls \$17 down and Friday the best lots moved to \$18.50 and \$18.75, with culls selling up to \$17.50. The past week's receipts totaled 4,100 head, as against 4,734 head for the week before, and 3,200 head for the same week a year ago.

Toronto Produce.

Live stock receipts at the Union Stock Yards, West Toronto, on Monday, June 24, consisted of 191 cars, 3,537 cattle, 356 calves, 1,806 hogs, 562 sheep and lambs. Slow market. Choice butchers' steers and heifers steady; others 25 cents lower. Choice cows and bulls steady, others 25 cents to 40 cents lower. Stockers, feeders, milkers and springers without change. Sheep slow at last week's closing prices. Calves strong. Hogs, \$18, fed and watered.

Breadstuffs.

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

Oats.—Manitoba (in store, Fort William) No. 2 C. W., 86½c.; No. 3 C. W., 83½c.; extra No. 1 feed, 83½c.; No. 1 feed 80½c.

Oats.—Ontario, No. 2 white, 79c. to 80c., nominal; No. 3 white, 78c. to 79c., nominal (according to freights outside).

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

American corn (track, Toronto)—No. 3 yellow, kiln dried, nominal; No. 4 yellow, kiln dried, nominal.

Peas (according to freights outside)—No. 2, nominal.

Barley (according to freights outside)—malting, \$1.18 to \$1.20.

Barley (according to freights outside)—Buckwheat (according to freights outside)—\$1.80.

Flour.—Ontario (prompt shipment). War quality, \$10.65, Montreal; \$10.65, Toronto. Manitoba flour, (Toronto, new bags) war quality, \$10.95.

Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$13.50 to \$14.50; mixed \$12 to \$13.

Straw.—Car lots, per ton, \$8 to \$8.50. Bran.—Per ton, \$35; shorts, per ton, \$40.

Hides and Wool.

Prices delivered, Toronto:
City Hides.—City butcher hides, green, flat, 13½c.; calf skins, green, flat, 30c.; veal kip, 22c.; horse hides, city take off, \$6 to \$7; sheep \$3.50 to \$5.50.

Country Markets.—Beef hides, flat, cured, 15c. to 17c.; green, 12c. to 13c.; deacon or bob calf, \$2.25 to \$2.75; horse hides, country take-off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$5. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 16c. to 17c.; country solid, in barrels, No. 1, 15c. to 16c.; cakes, No. 1, 18c. to 19c.

Wool.—Unwashed fleece wool, as to quality, fine, 60c. to 65c.; washed wool, fine, 80c. to 90c.

Country Produce.

Butter.—The butter market kept practically stationary in price, selling as follows on the wholesales: Creamery, fresh-made pound squares, 46c. to 47c. per lb.; creamery solids, 44c. to 45c. per lb.; dairy, 35c. to 40c. per lb.

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State your requirements to our local manager and he will be glad to advise and assist you.

Oleomargaine, 32c. to 33c. per lb. Eggs.—New laid eggs firmed slightly, selling as follows, wholesale: New laid No. 1 42c. to 43c. per dozen; select 44c. to 45c. per dozen.

Cheese.—Old, 24c. to 25c. per lb.; new, 24c. to 25c. per lb.

Poultry.—Spring chickens are beginning to come in, but receipts are quite light as are also all other lines excepting roosters. Spring chickens, 50c. per lb.; roosters 25c. per lb.; fowl, 3½ lbs. and under, 25c. per lb.; fowl 3½ lbs. to 5 lbs., 30c. per lb.; fowl, 5 lbs. and over, 30c. per lb.; ducklings, 30c. per lb.; turkeys, young, 30c. per lb.; turkeys, old, 25c. per lb. These quotations are for live weight and are now being paid to the producer.

Potatoes.—Old potatoes again showed a firming tendency: Ontarios selling at \$1.85 per bag; New Brunswick Delawares (none offered); new potatoes came in more freely but kept firm in price at \$5 to \$6.75 per bbl, wholesale.

Strawberries.—Shipments are gradually increasing the prices received on the wholesales during the past week being the highest recorded—namely 40c. per lb. they weakened slightly towards the close of the week, however, ranging from 20c. to 30c. per box.

Cherries.—Shipments have been quite light so far and the quality not very choice, ranging from \$1.25 to \$1.75 per 6-qt. basket.

Gooseberries.—The fruit is mostly very small as yet; the 6-qt baskets selling at 75c. to \$1.25 each.

Montreal.

Horses.—Almost no interest has been displayed in horses during the past few weeks. Supplies continued light, and there was no demand from anywhere. Heavy draft horses, weighing 1,500 to 1,700 lbs. continued to sell at around \$250 to \$300 each; light draft, weighing 1,400 to 1,500 lbs., \$200 to \$250 each; light horses \$125 to \$175 each; culls, \$50 to \$75 each; fine saddle and carriage horses, \$175 to \$250 each.

Dressed Hogs.—Dressed hogs last week showed a decline of about ½c., this being in sympathy with the easiness in the price of live, and sales were taking place at 28½c. to 29c. per lb. for abattoir fresh-killed hogs.

Maple Syrup.—The market for syrup was very steady, at \$1.80 per gallon for barrels of 12 to 20 gallons; \$1.85 per gallon for 5-gallon tins; and \$2 to \$2.15 for gallons. Sugar was 23c. to 23½c.

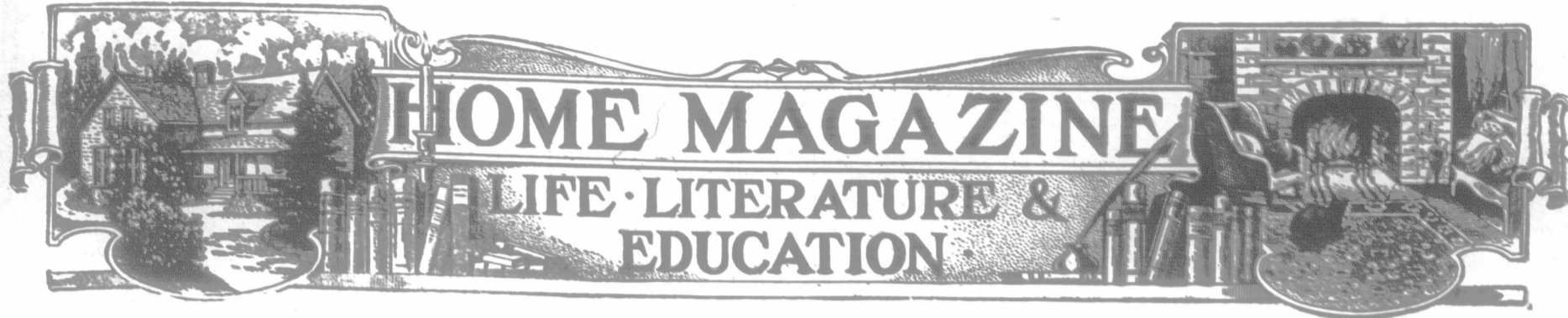
Potatoes.—Offerings of Green Mountains were being taken at \$1.55 to \$1.60, and of reds at \$1.40 to \$1.45; and of McIntyres at \$1.15 to \$1.20 per bag of 90 lbs., ex-track. About 25c. was added to these prices in smaller lots, ex-store.

Eggs.—The recent cool weather has been an important factor in preserving the quality of the eggs being offered. Selected, new-laid stock was quoted unchanged at 44c. to 45c. per doz.; No. 1 stock, 43c.; and No. 2 stock 38c. per doz. Consumption was large.

Butter.—The quality of the make is splendid, and the offerings are fairly large. The weather has been cool, and in every way favorable. Finest creamery was quoted at 43½c. to 44c. per lb., while fine was 43c. to 43½c. Dairies ranged from 36½c. to 38½c. per lb.

Cheese.—The Dairy Produce Commission prices were unchanged at 23c. for No. 1; 22½c. for No. 2; and 22c. per lb.

Continued on page 1110.



An Ode For the Canadian Confederacy.

By CHAS. G. D. ROBERTS.

(This poem is surely more appropriate to-day than when it was written some years ago.)

Awake, my country, the hour is great
with change!
Under this gloom which yet obscures
the land,
From ice-blue strait and stern Laurentian
range
To where giant peaks our western
bounds command,
A deep voice stirs, vibrating in men's ears
As if their own hearts throbbed that
thunder forth,
A sound wherein who hearkens wisely
hears
The voice of the desire of this strong
North—
This North whose heart of fire
Yet knows not its desire
Clearly, but dreams, and murmurs in
the dream.
The hour of dreams is done. Lo, on the
hills the gleam!

Through the Eyes of a Canadian Woman in England.

Whitsuntide, May 20.

THIS is England's greatest holiday, much looked forward to by everyone; the weather-god is in his most amiable mood, and all outdoors seems to be rejoicing, for the air is heavy with the sweet scent of May-blossom, and butterflies are gaily dancing in the sun. This holiday is spent in a different way to most of its predecessors, for instead of fishing trips and jolly parties at the seaside, people are working in gardens and allotments. We are not able for a moment to get away from the atmosphere of war, for the sky above us, in this particular locality, is full of aeroplanes practising, learning to dive, performing somersaults, and many wonderful stunts. So there is constant sound of action in the air above while all below is so peaceful. The inhabitants have become so accustomed to the whirring of air-craft that they seldom look up from their work no matter what is happening directly above them. This dignified and quiet village of former days is growing by leaps and bounds into a town of huts and factories for it is an aeroplane manufacturing centre. Here and there one sees a stately home in the midst of hundreds of portable huts, and everywhere is the sound of machinery and the hurry and bustle of girls and men going to and from their work.

When I spoke in my last letter of engaging in a new form of war work I had in view the superintending of a hostel for these aeroplane girls, for I felt that if one had time to devote to it there were many ways in which the conditions could be improved. These girls work cheerfully from early morning till night doing their bit to help in the great cause, in most cases under very unattractive conditions. Our hostel—or hostels—for there are two of them, shelter over thirty girls. The rest live in huts. These are all working on aeroplanes except four or five carpenters who are busy building more huts and work-sheds. When one looks out of the windows it is to look upon women on top of buildings hammering away—there is not a man carpenter in sight—of course, most of the foremen are men, but old ones past military age. They are very patient and kind with the girls who in spite of their work are still only girls, for they sometimes look very nervous and frightened as they climb ladders and perch astride of roofs. Their breakfast is at

seven and at ten they have seven minutes off to run in for a cup of cocoa. Dinner is at one, tea at six and supper at nine. They have their rest room in one house and the recreation hut is alongside, where they have a piano and—of course—a gramophone. There they enjoy occasional little dances and concerts, when they are not too tired. The evenings, after work is over, are very short, for all lights must be out at ten. It takes some thinking and conniving to purchase food and plan meals in these days of rations, which will be both nourishing and inexpensive, and one is sometimes at one's wit's end to invent a variety of appetizing dishes out of the materials at hand. The girls are always so hungry that quantity is the chief consideration. My assistant also is a Canadian and we have already had our reward in the appreciation by our girls of the Canadian dishes provided for them. There had been under past management a long period of stews and stodgy boiled suet puddings, which we have decided to entirely eliminate from

my room when night comes aching in every limb—it is even more strenuous than the hospital wards, but spirits are kept up by the vision ahead of cleanliness and daintiness—fresh rugs on the bare floors, cheap white curtains at the windows, and an atmosphere of home throughout. To be sure the mess-room tables are only covered with white oilcloth (always termed "American cloth" here) but large vases of green pottery filled with spring flowers will go far towards beautifying them. Then some pictures must be found for the walls, and shelves for books added. In a few weeks we expect that this house will be a real home for these hard-working and deserving girls; many of whom have never known anything but sordidness in their lives.

I had a few moments to go through the workshops a day or two ago, and saw heaps of well finished little white tables that the girls had made for the sleeping huts where some of them live, and rather envied them their knowledge

machinery. The chief impression one gets on a visit to the works is of rush and hurry everywhere to produce something that will do its part in bringing war to an end.

We have very little time at present to think of anything which belongs to the outside world: We live in a little world of our own in which every moment of every day is filled to the utmost. Customs differ so from our Canadian ones that one is continually called upon to face problems that seem unsurmountable. However, it all adds to one's knowledge of life. Although one never forgets for a moment the dear ones fighting for us in France, there is no time to sit down to ponder over our anxieties and loneliness—if you try that there is immediately a knock at the door of your sanctum, and someone says "a new worker has come and wants to know if there is room for her", or "Ivy has torn her finger on a nail" or "some one else has a sore throat, etc."—for the matron is supposed to be doctor, nurse and encyclopaedia all in one. There is an interesting variety among our girls. Most of them are young, some have husbands in France and live in constant fear of bad news. Others are happy and care-free and reckless—and all are deeply interested in their work and willing to put up with numerous inconveniences in order to get on with the war. Now that aeroplanes are playing such a prominent part at the front, our girls are keener than ever. A large number of the girls have gone from time to time to do work in France after a course of training in carpentry here. Last night one arrived at our hostel who had been sent back to us for a rest as she was broken down in health. She received a hearty welcome from her old associates here. She told of some of the girls who went over with her who had given up carpenter work to go into poison gas factories, where the deadly stuff is manufactured which goes out to greet the Hun when he comes too close. It was most pathetic to hear this returned girl relate the accidents which had happened to their former comrades in connection with the making of this gas. The poisonous fumes affect their heads and they lose their reason, rarely recovering. Can anyone conceive of greater love of country than is shown by these girls in their willingness to engage in this perilous work?



The Pick of the Lot.

Photo by Sallows.

menus in the future. A breakfast of baked beans, and a lemon pie at dinner are eaten with all the enjoyment of a native of the State of Maine—We almost trembled at our first trial of these dishes, but they disappeared with great rapidity and none of the girls had ever seen either of them before. Twice a week we have a little meat for dinner, largely supplemented by vegetables, and the rest of the days have to use our ingenuity in concocting vegetable pies, and other savory dishes. We are just emerging from the throes of spring cleaning. I retire to

as they worked deftly with their tools. Each girl has her own kit of tools and she handles them with as loving care as her more fortunate sister lavishes on her golf clubs or tennis rackets. They sleep in large dormitories, and by each one's bedside is a complete little locker of her own manufacture where she keeps all her possessions. Two or three books on the wall suffice for her whole wardrobe because she spends most of her life in uniform—neat khaki overalls and cap for aeroplane workers, and smart breeches and tunics for those working among

SATURDAY afternoon is a holiday here, and by three o'clock all the girls appear in a different guise—their best apparel—and start for little outings. On Sunday they have a good rest in the morning and in the afternoon go for walks, or have music in the recreation hut. I always spare an hour to play their accompaniments on this occasion, and we have some fine choruses. All this may sound very monotonous. Hard work and very little play may have made Jack a dull boy, but our girls are not by any means dull. To be sure there is no time to discuss the Irish trouble, or to worry about conscription, or any such excitements in the big world, but the work goes on from month to month, bearing results which we read of with great joy in the war news from France.

How weary we are all growing of this war, those in the fighting forces, who by this time have become completely disillusioned of the romance of a soldier's life and the waiting women at home. It is so hard to go back again after a few days leave or a Blighty, and it is sadder each time to see them go. No one complains—no matter how discouraged at heart, but everyone "plays the game" in spite of it all. We are not yet as badly in need of pity as poor devastated France—now a land of shell holes and destroyed homes—for England is beautiful old England still.

SIBYL.

Hope's Quiet Hour.

Our Great Leader.

The Lord's portion is His people, Jacob is the lot of His inheritance. He found him in a desert land, he led him about, he instructed him, he kept him as the apple of his eye. As an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings: So the Lord alone did lead him, and there was no strange god with him.—Deut. 32:9-12.

The heading to this chapter speaks of it as "Moses' song." The words carry us forward to the great vision of St. John. He saw a great multitude of victorious saints, standing on the crystal sea and singing the song of Moses and the song of the Lamb. This song is a great anthem of praise to their Divine Leader, declaring that all nations shall worship Him and acknowledge the wisdom and righteousness of His judgments.

The victorious warriors are looking back as they sing, and Moses was also looking back as he sang, looking at the

We are looking forward and longing for victory and peace, forgetting that our Leader knows best. Are we sufficiently chastened and strengthened to take up the arduous task of victors? Upon the victorious nations will rest the tremendous responsibility of building up again the civilization which is now all draggled and crushed. Only the spirit of righteousness and brotherhood can restore confidence among the nations. If we can't trust the solemn pledges of other nations, if we are to live with all the terrific modern engines of destruction pointed at us—and pointed by us at our fellowmen—then the Great War will not be over but only begun. If we are nourishing in our hearts the seeds of hate against our enemies we are only preparing for the next war.

Instead of blaming God for not interfering to end this war, let us trust Him and try to grow like Him. Those who fall in love with the beauty of Divine Love, as it is plainly set before us in the selfless life and death of our Lord, will try to walk in His steps. He trusted the Father, and took the bitter cup of pain, shame and cruel injustice as from His Father's hand. Looking back, at the end of the way He calmly said: "It is finished," and rested His weary head on the Father's heart in perfect peace.

who has lost the power of speech and who says: "While I have been moved from Hospital to Hospital in the settling down into my little niche in the Great Plan of the Universe, God has not deserted me. Happiness has been mine in generous measure because He has been faithful". He goes on to say that the living love of God, as revealed in the life of Christ on earth, has a wonderful power of educating us. It is "the cup of wonder wonderful."

Let us trust our Guide to find for us bread from heaven and water from the Rock (that Rock is Christ) no matter how unpromising the way ahead may appear. Then we also shall be able to look back and say thankfully: "Happiness has been mine in generous measure. Whether we look back, or look forward, or look out on the wild chaos of the world's present condition, we can climb to the heights in the strong wings of faith, and sing:

"There is light for me on the trackless wild,

As the wonders of old I trace,

When the God of the whole earth went before

To search me a resting place.

Has He changed for me? Nay! He changes not.

This is God's world. He made men and He loves each child with a never-failing love. The great Sacrifice was not made in vain, and our Redeemer was a Victor, not a Loser, when He went out to battle against evil. The soldier at the front had his eyes on his Great Captain when he wrote home: "We don't need any pity—we manage our good times, and are sorry for the men who aren't here, for it's a wonderful thing to have been chosen to sacrifice and perhaps to die that the world of the future may be happier and kinder."

Where the Great Leader has gone many are following. Think of that little band of French prisoners who were marched out, with hands tied behind them, in front of the German lines. As the French army advanced the Germans shouted: "Don't fire; you'll kill your own men!" But those victorious captives—victorious over death—called out: "Fire! It is for the country!" And their comrades accepted the sacrifice so grandly offered, and fired as they were bidden.

Let us commit our lives unreservedly into the keeping of our Leader. Even if He sees fit to lead us straight to a cross we can still trust His guidance. There is a new life awaiting those who are crucified with and for Christ.

"Never a watch on the dreariest halt
But some promise of love endears;
I read from the past that my future shall be
Far better than all my fears."

For The Needy.

I wish to thank those who have sent S. S. papers and "The Northern Messenger" for the "shut-in", also the reader who sent copies of "The Daily Mirror." My mail is a constant surprise to the postman on West Ave. He has not got used to me yet. Two dollars, from M. G. R., Pickering, Ont., and two dollars from a Ravenna "Reader" passed swiftly through the Q. H. P. last week.

I am constantly asked to give you messages of thanks, but my space is limited so you must try to imagine them.
DORA FARNCOMB,
6 West Ave., Toronto.

The Windrow.

The "Jack London Club" formed to put a stop to the cruelties involved in training animals for the stage, now reaches from Alabama to Newfoundland and from Washington to Maine and on to England, numbering over 3,000 members. If people knew the tortures inflicted upon dogs, horses and other animals in teaching them to do stage tricks, they would refuse to go to any performance offering such "attractions," or would leave as soon as they begin, and that would soon put a stop to such attractions being prepared.

Messrs. Cassell, London, Eng., have published Prince Lichnowsky's revelations in pamphlet form, with a preface by Prof. Gilbert Murray. In commenting on the pamphlet, G. K. Chesterton says, in *Illustrated London News*: "When first even a few lines of it were quoted, the whole world knew finally and forever, who really began the Great War. . . . As finally as Harvey proved that blood circulates it has now been proved that Prussia commanded human blood to flow."

Smiles.

A Frenchman learning English said once to his tutor, "English is a queer language. What does this sentence mean? 'Should Mr. Noble, who sits for the constituency, consent to stand again and be run, he, in all probability, will have a walk over.'"—Selected.

He met her in the meadow,
As the sun was sinking low;
They strolled along together
In the twilight after-glow.
Patiently she waited
As he lowered all the bars;
Her soft eyes beamed upon him,
As radiant as the stars;
She neither smiled nor thanked him,
Because she knew not how, for
He was but a Farmer's boy—
And she a Guernsey Cow.
—SHARLES SALESMAN.



Women's Forestry Section in a Procession of Land Workers Recently to Hyde Park, London, Eng.

painful journey through the wilderness which had seemed so puzzling and meaningless at the time. For forty years they had been "led about", instead of being allowed to pass swiftly from Egypt's miseries into the Promised Land. Looking over the road which had been so long and toilsome Moses discovered that the Leader of Israel had a good reason for lengthening out the time of probation. The Lord was not only leading His people, he was also instructing them. The ignorant multitude of freed slaves became transformed into a strong nation, fit to take its place as the head of the nations in spiritual matters. They were not led forward to victory until they were prepared for victory.

Looking back, Moses could see plainly that God dealt with them tenderly and wisely. He spoke of the old story of a mother-eagle's way of educating her fledglings. She fluttered over her helpless young, showing them how wings should be used. Then she stirred up the nest, turning them out of their comfortable refuge with what seemed like needless cruelty. Then, as they fluttered, in fear and distress over the abyss which seemed certain to be their destruction, the watching mother flew swiftly beneath them and spread out her broad wings. She caught the frightened birds and bore them on her wings in safety, until they learned the value of their own wings, and discovered that they could mount above threatening danger.

Some day we shall be ashamed of our anxious fears and faithless doubts. Then we shall look back, as Moses did, and discover that in all the tangled maze of our journey through the wilderness of this life, the Lord alone did lead us, that He kept us "as the apple of His eye", that He forced us out of our comfortable security in order to teach us how to use the wings of trust and hope.

As no one can really tell how the battle is going while he is in the midst of it, so no one can rightly judge God's dealings with him until the lesson is finished.

One day we shall look back in glad surprise, and exclaim humbly and thankfully:

"He was better to me than all my hopes,
He was better than all my fears;
He made a bridge of my broken works,
And a rainbow of my tears.

The billows that guarded my sea-girt path
But carried my Lord on their crest;
When I dwell on the days of my wilderness march
I can lean on His love for the rest."

In the midst of the storm we discover that the light of His Love can transfigure the rain and change it into a glorious rainbow. Even if we only catch a glimpse of the lower edge of the great bow, we know that the full arch is there and is spanning the whole of life—here and hereafter.

Yesterday I received a letter from one

He will bring me by some new way,
Through fire and flood and each crafty foe,
As safely as yesterday."

When men madly rush into war with their fellows God is in the midst of the fire. Though He may not interfere to quench it He makes it work for good to those who love and trust Him. How many have been shaken out of selfishness, vice and worldliness by this war! Does any man on earth know how many have found Christ at the front? I heard yesterday about one man who had been living in reckless and wilful sin for years. A few weeks ago a letter arrived from him saying that he could not begin to tell all the horrors he had been through, but—he said—"I am a changed man. I never can go back to the old way of living."

God is a tireless seeker of souls; and sometimes a man is condemned to be crucified and uplifted in a cross of agony only to find that the Great Leader is beside him, as He was beside the thief on Calvary. The way of pain may lead into the Paradise of joy. The thief was not alone on the cross, and he went out through the gate of death to be with the King.

"And if to warfare He calls me forth,
He buckles my armor on;
He greets me with smiles, and a word of cheer
For battles His sword hath won."

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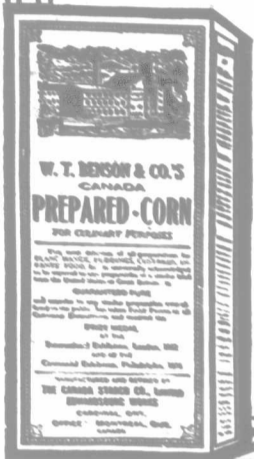
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The Scrap Bag. Grinder for the Kitchen.

A small coffee-grinder (Eaton's carry it at a price of about \$3.50) is said to be excellent for grinding wheat into meal that can be used for brown bread, muffins nut-cake, etc. Rolled oats put through an ordinary food-chopper, with the finest cutter attached, may be used for any bread or cake calling for oat flour.

A Midsummer Hint.

During the summer anyone who lives in the country can prepare, with very little expense, very dainty cards and gifts that may be sent to friends at Christmas. Among the very nicest of these are little china or tin caddies filled with dried herbs—sage, thyme and sweet marjoram—and little linen bags filled with dried lavender and tied with lavender baby ribbon. Very pretty cards may be made with seaweed by anyone who lives near the seashore. To make them, get pretty pink or white water-color paper and cut into cards that may be folded double, folder-fashion. Float some pretty bits of seaweed on to the lower half, on the inside and let dry; no mucilage is required, as the seaweed itself is sticky enough to adhere. At Christmas time all that remains to be done is to write a message on the opposite leaf and tie a bit of mauve red or green baby ribbon about so that a little bow comes at the back.

Cleaning White Shoes.

To keep white shoes in splendid order rub them whenever they are much soiled with a rag dipped in water and then rubbed on a cake of Bon Ami. When but slightly soiled rub with a cleaning ball that can be bought at any store where white shoes are sold.

Cleaning Good Lace.

Never starch good lace articles. Instead dip them in water in which 2 or 3 lumps of loaf sugar are dissolved, then stretch the lace well on a towel and let dry. With care one or two cleanings in a season should be sufficient.

Making Clothes White.

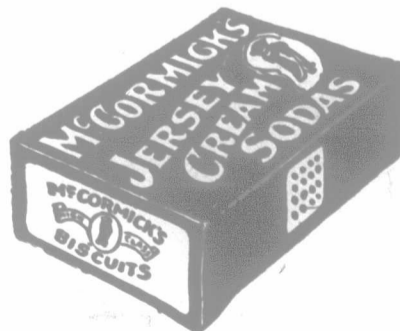
Always soak white clothes for a few hours in cold water, then rub with white soap and let stand an hour, without more water than just enough to keep them wet. Next pour on boiling water and cover for 20 or 30 minutes, then add cold

McCormick's Jersey Cream Sodas

are made from Government Standard Flour and in accordance with the regulations of the Canada Food Board.



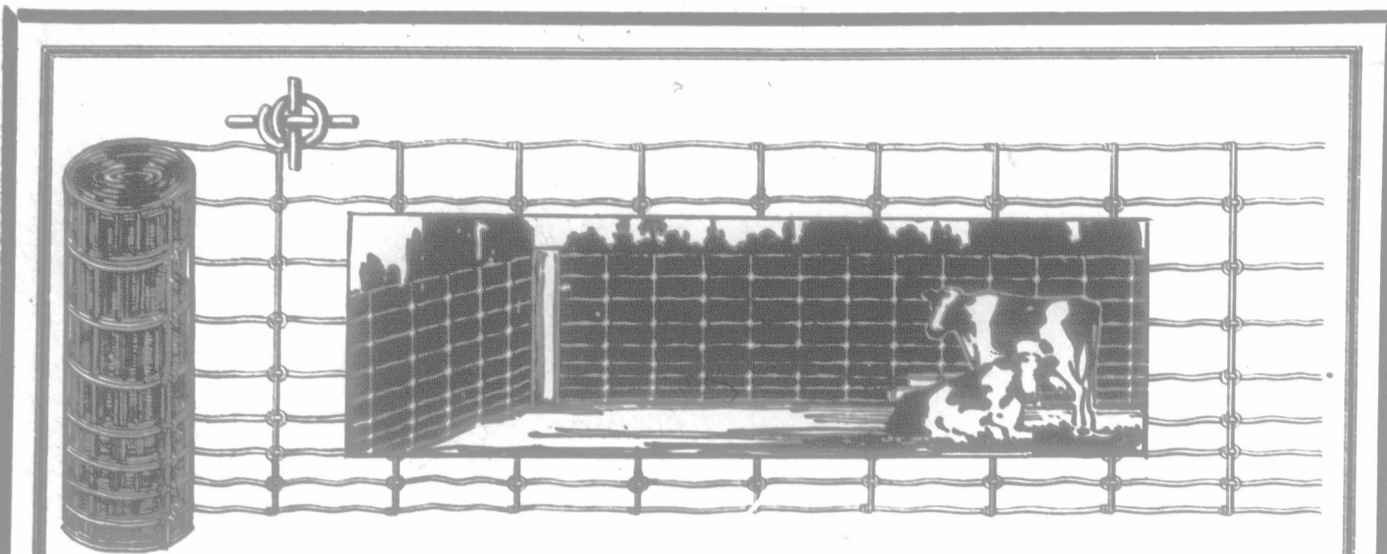
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Shows complete one-man hay-loading outfit.

Shows one side of wagon-box rack tilted to make a sheaf rack, and opposite side and ends set up for a stock rack.

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ST. THOMAS . . . Makers

roses, or scented herbs may be used. Let any odor that you like best predominate, and be sure that both leaves and blossoms are young, fresh and tender, and used immediately after gathering. Sweet marjoram, scented geranium leaves, lavender, sweet Basil, etc.; are splendid for pot-pourri, mixed with powdered orris-root, cinnamon, cloves and bay-leaves. Where only rose leaves are used sweet essences may be added instead of spices.

Current Events

The first Institute for Eastern Ontario of the Rural Community Life Movement was held at Whitby last week.

A movement is afoot to have the making of jewelry taught to returned soldiers in all the technical schools of Ontario.

Mr. Ernest MacMillan, son of Rev. Alex. MacMillan, Toronto, a former student of Toronto University, who is now in the German prison camp at Ruhleben, has been awarded the degree of Doctor of Music by the University of Oxford. He is only 24 years of age.

Hiram Walker & Sons, distillers, Walkerville, Ont., are to manufacture dyes and toluol, which is the basis of the high explosive "T. N. T.," or trinitrotoluol.

Major W. A. Bishop, Canada's star aviator, and Flight Commander Mulock, of Winnipeg, have been appointed to the British Air Board.

Capt. Bryan Peck, with a corporal, last week flew from Toronto to Montreal, a distance of 330 miles, in 4½ hours, the last half of the trip being made in a gale.

The establishment of an air route to Europe from the United States, has been decided upon as a definite project by the British Air Council.

The United States has advanced a credit of \$15,790,000 to Greece.

A Liberty Loan for \$6,000,000,000 is likely to be floated in the United States in October.

Two more small vessels were sent down

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During the interest in th where fierce first onslaught bridges over occupying th salient on th however, the assistance f troops, and s cessfully resi driving their checking the time of going flooded the of the bridge Italians, who again even or Gen. Foch H aviators, incl Americans, to bridges and bringing upsu is in comman Italy. German drive is but little to raids and the combats in t enemy again t was foiled in t Compiegne, R divisions of pulsed 3 assa French resiste Farth on June 20, n Bailleul. The most part, sou night ago Turk the second ci manufacture of this place will enemy to the

LOUDEN HAY TOOLS

Save your Time. Reduce the Labour of handling your crop of hay. Every extra hour spent in unloading your hay or sheaves in the barn may mean the loss of valuable feed. Time and weather wait for no man. Save Time and the weather won't catch you with your crop half in.

Equip your Barn with a Louden Hay Carrier Equipment if you would make sure of saving every moment of time and ounce of energy possible in the filling of your mows.

Do you know that You Can Save the Wages of an Extra Hand during harvest by letting your horses lift the loads from the wagon, carry them back into the mow and spread in a nice even shape ready for feeding. Five to seven minutes will handle your biggest loads and the work will be done without any heavy back breaking work on your part or that of your men. Think what a profit such a saving represents on the small amount of money required to fit up your barns.

Louden Hay Tools are not confined to one or two lines. Sling Carriers are here for the man that prefers them to Fork Outfits. Forks are made up ready for shipment to the man who would rather have them. Prompt shipments of any such goods can be made from the factory or our various branches. Write to your nearest distributing centre.

The New Louden Catalogue is ready for distribution. Just clip out and send the coupon to our nearest branch house. It will go to you by first mail. It contains the latest and best information on all kinds of barn and stable fittings and as well gives a great deal of other valuable information. Clip the Coupon and forward At Once.

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Without cost to me, send books or information on lines checked below:

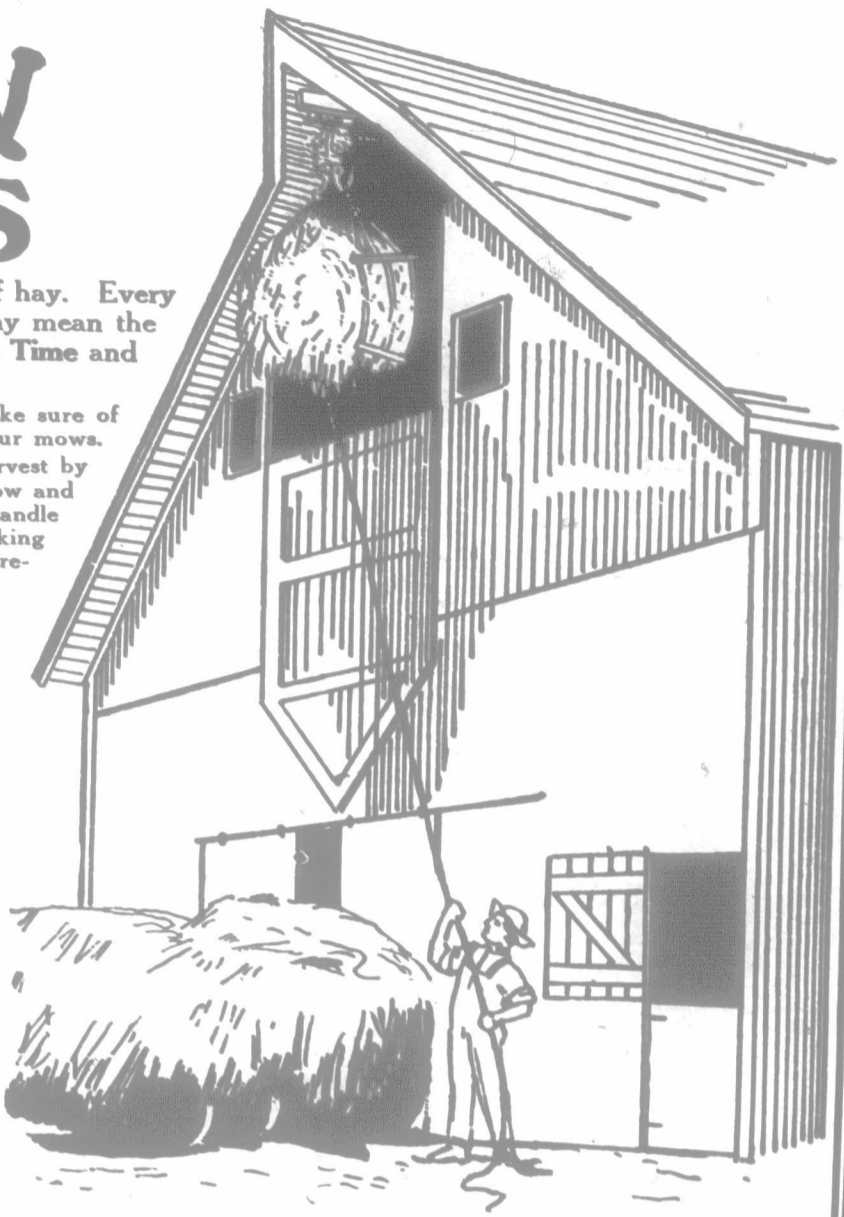
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last week off the coast of Virginia by U-boats.

Frank M. Meyer, one of the leading explorers for the United States Department of Agriculture, died recently in China. He gave many useful plants of the Orient to America.

The Austrian Cabinet has resigned. There is great scarcity of food in the country, and riots have again broken out.

During the past fortnight the world's interest in the war has centered in Italy, where fierce fighting still rages. In their first onslaught the Austrians threw 14 bridges over the Piave and succeeded in occupying the Montello Ridge and a salient on the Upper Piave. Quickly, however, the Italians rallied, with some assistance from British and French troops, and succeeded, not only in successfully resisting the Austrians, but in driving their line back and effectually checking their march on Venice. At time of going to press heavy rains have flooded the Piave, sweeping away several of the bridges and effectually aiding the Italians, who are now securing a footing again even on the Montello Ridge, while Gen. Foch has sent reinforcements of aviators, including some Canadians and Americans, to help destroy the rest of the bridges and hinder the Austrians from bringing up supplies. Gen. the Earl of Cavan is in command of the British troops in Italy. On the West front the great German drive is still awaited, and there is but little to record save incessant small raids and the constant artillery duels and combats in the air. On June 13 the enemy again tried to capture Rheims, but was foiled in that, as in the drive towards Compiègne, Rheims itself being held by 2 divisions of African troops, which repulsed 3 assaulting divisions, while the French resisted within a short distance. Farther to the north the British, on June 20, made a short advance near Bailleul. The Canadians are still, for the most part, south of Arras. A fortnight ago Turkish troops occupied Tabriz, the second city in Persia, famed for its manufacture of rugs. The capture of this place will facilitate a road for the enemy to the Caspian Sea. Meanwhile,

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WOOL FURS HIDES

When writing advertisers will you kindly mention "The Farmer's Advocate."

in Russia, the Bolshevik War Department has ordered the mobilization of all workmen and peasants from 21 to 25 to resist the Hun advances. The Barons of Esthonia and Livonia—Russian provinces that have fallen under German domination—are protesting against German rule, and the Ukraine is on the verge of rebellion.

The Dollar Chain

For the soldiers and all who are suffering because of the war.

Contributors from June 14 to June 21: "Toronto," \$2.00; Nellie, \$3.00; S. W. St. James, R. 1., La Tortue, Que., \$5.00.

Previously acknowledged.....\$5,546.00

Total to June 21.....\$5,556.00

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

Sunflower Seeds For Birds.

This is the time of year to plant sunflower seeds for the birds. A row of sunflowers started in the late spring or early summer will provide feed for the little feathered friends when the storms come next winter and the weed-seed pods are covered with snow.

The Russian sunflower is considered the best for this purpose, as the heads are larger and heavier, which causes them to bend over in the autumn, and they are thus protected from the storms. The seeds from this variety do not scatter as badly as the smaller heads and so they can be secured by the birds whenever the supply of feed is cut off. Half a dozen birds have been seen feasting from one sunflower head when snow was on the ground.—Sel.

"Liza, what fo' you buy that udder box of shoe blackin'?"

"Go on, nigga, dat ain't shoe blackin', dat's ma massage cream!"—Awgwan.

Rich Yet Delicate—
Clean and Full of Aroma.

"SALADA"

is blended from selected hill-grown teas, famed for their fine flavoury qualities. Imitated yet never equalled.

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Please Remember Me.

W. E. KNIBLOE IN WOMAN'S WORLD.

I am only a little dog, and I am very, very ill. Perhaps you are not interested in what I have to say, but oh I hope you will read this anyway, not because of any interest in me, or for your own pleasure, but for the sake of other little dogs like me, who also may be ill.

To-morrow they are going to take me to the hospital for dogs, and the kind veterinary surgeon is going to cut into my body to see if he can make me well. But I am old—almost eleven—and very weak, so it may be that I cannot survive.

Another little dog I knew, whose master was rich and good, gave one hundred dollars to the Humane Society, which helps little fellows like us, who have no kind masters to take care of us. I cannot give any money, but I want to help the best I can. So won't you please read this, and if you have no little dog at your house, please show it to someone who has.

There is a hard lump inside of me that I have known about for a long time. It was only a very little lump at first, but it kept growing and growing, and often it would hurt me terribly, but I had no way of telling about it, and sometimes when the pain was so great that I could not eat or sleep, they tried to help me but could not because they didn't know what was wrong.

You see, I have a cancer. The veterinary surgeon, who knows all about dogs, found it when he felt me all over. To-morrow they are going to take it out and try to save my life, but perhaps it is too late! It is about the beginning of this cancer that I want to tell you.

I am not a very good little dog, though I have always done the best I knew. My heart is true, and I have never stolen. I would rather go hungry than steal. But many times I have fought, though I did not always begin it. I have chased cats—and killed them. I am very, very sorry about that now, but for some reason that I do not understand myself, I just couldn't help it. I seemed to have to run after them. And when I was excited I did not always obey!

Sometimes when I have been fighting, I have been beaten with heavy sticks and even kicked—not by my dear master, but by strangers when he was not there to protect me. You see they didn't understand that I meant no harm. And it is their kicks that caused the cancer.

Never, oh never, kick a dog or beat him with anything hard or heavy. If he is

naughty and you think you must whip him, always do it with a strap or a little dog whip. He will take it to heart just as much, and try to do better next time. And you will not bruise his little body and injure him inside so that he will suffer as I have.

You see it isn't because humans hate us that they hurt us so. It is because they are so angry that they don't realize what they are doing, and forget how little we are and how helpless.

So please, please remember! Think before you strike and afterwards you will be glad.

That is all. Should I not get well, and should this help to save one little dog's health, I shall not have lived—and died—in vain.

Teaching Dogs Tricks.

BOYS, if you love dogs, don't teach them any tricks which are going to cause them anxiety, and sometimes pain, to perform. It is so natural to ask, when one sees a friend's dog for the first time, "Does he do any tricks?"

I had a friend once who owned a noble St. Bernard dog, and when people would ask if he knew any tricks, my friend would stiffen himself a bit and say quickly, "He cannot do any." I never understood so fully why the gentleman "got cross" till recently, when I saw a nice little black dog bullied into standing up and walking, with evident distress, in the unnatural pose, yet afraid of the warning hand that threatened if he did not "walk and sit up and beg." If the dog assumes these positions of his own volition, it is all right, but if he is evidently distressed at having to walk on two feet unsupported, don't make him do it. Dogs love their masters so that they will lay down their lives for them. One should be contented with having that great wealth of affection from a dog's heart, and not expect to have a motion-picture and circus outfit thrown in, when one owns a dog.

—Brooklyn, New York, Daily Eagle.

Senior Beavers' Letter Box.

Edith Crockett, in far-away British Columbia, undertook to get subscribers for our paper. In 15 days she got 11 new names and earned by her commission, \$3.00. Here is one of her letters to us:

"THE FARMER'S ADVOCATE".
Dear Sirs.—I received the check for \$2.50, and am writing to thank you. I have a small bank account, and will be pleased to add the money to it. I will try to get some more subscribers.
We all enjoy Sandy Fraser, particularly the last one. Daddy says that if Sandy will let the calf have the patience it will be better. He says to leave the calf, if he won't drink till next time and he will be hungry enough to drink.

I will close with a riddle. Why do children call the Farmer's Advocate, the Farmer's Cake? Ans.—Because it is full of good things for the farmer.

Your Agent,
Sandwick, B. C. EDITH CROCKETT.

Dear Puck and Beavers.—I have never written to your charming paper before and now I am going to try my hand at it. I am going to tell you something about my experience boiling down maple syrup in the "sugar bush". The government, as you know, asked for a double supply of maple syrup to help out the sugar.

One morning I went back to the bush with my uncle and helped to gather the sap. The pails were all running over. I was very tired when I finished. At noon I went home and ate a hearty dinner. Mamma told me I had better not eat so much. I went back to the bush again in the sleigh (though there wasn't any snow.) My uncle wanted to gather some wood so I drove the horses. I gathered more sap and was so very tired that when I got home I ate my supper and went to bed. Next day I had to help mamma clear the syrup. Some times it would boil over. In this way I did my bit to help the food supply. I am going to school every day and I am in the Jr. third class. Our teacher's name is Mr. A. R. Campbell and we all like him fine. I am eleven years of age and have blue eyes and brown hair. As this is my first letter I had better not take up too much of your valuable


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THE Car with the Half-Million Dollar Motor is so sturdily built, so staunch and true, that every owner of a Briscoe gets complete motoring satisfaction. Seek a Briscoe owner, let what he tells you be your guide when you invest in a car.

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Factory—BROCKVILLE Limited Head Office—TORONTO

Republic Motor Car Co., of Canada, Limited
518 Yonge Street, TORONTO



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space, I will close wishing the Advocate much success.

Yours truly, DOROTHEA BROWN, (age 11). Holyrood R. R. No. 2.

P. S.—I will add a conundrum which is quite in season. Why is it dangerous to be out in spring? Ans.—The grass has blades, the flowers shoot, and the bull rushes out.

Dear Puck and Beavers.—This is my second letter to your charming Circle. I saw my first letter in print so I thought I would try again. I enjoy reading the letters very much. I am not fond of reading books. I would rather go out and play. When I am out I like to climb trees, chase animals and things like that. I don't like to sit still and read.

I have a little brother about a year and a half old. He can talk some now. He likes the sheep very much and wants to see them nearly all the time.

When the last teacher was at our school she asked the pupils if they would like to get up a Literary Society. We all said that we would, so we had a nice time at each one. They were just held in the school between three and four o'clock. When the teacher was leaving we gave her a very pretty present. We had a nice time the last day of school. There was candy taken and we had a lot of fun eating it.

I will tell you about one of my holidays. I like the Easter holidays, because we have so much fun making syrup. One of my old chums and I went away one day and made maple syrup. We had a fine time. We have a great big pond in a field here. We have two rafts and we play at them quite a lot. It is great fun to be out on them. Well I guess I will close hoping the w. p. b. is full when this gets there. I will close with a riddle: If there was a five dollar bill on the ground and you were going by and saw it there, how would you punctuate this sentence? Ans.—I would make a dash after the five dollar bill.

IRENE THOMPSON.

Dear Puck and Beavers.—One day about five years ago I was up at my uncle's place and my friend lived across the road and we were over there playing in the barn, when we came to a small pair of pigeons in a nest. We played with them a while, when my brother said that he would give my friend twenty-five cents for the pair. So the bargain was made. We then got a cardboard box and cut some holes in it and put the pigeons in it and set out for home.

My father was angry at us for bringing those pigeons around, but he soon began to like them.

One time when I was away my friend got one of them and threw it up in the air to try to make it fly, but it hit its head against a beam and it died, but the other is living yet. She is the best pet I ever saw. The first time she started to fly, she flew over to our neighbor's house and we thought she was gone for good but she came back.

We used to feed our hens oats and our neighbors used to feed, wheat and she would always go and eat their wheat.

One day an old man was going down the road and she flew around and lit on his head and it frightened the wits out of the old man. One day she followed my brother to school and they made such a fuss over her that she flew up on the beam. Then school was called. Soon the school was quiet as could be and she flew down on my brother's desk and she would go like "coo, coo, coo," and would pick his fingers. A few days ago she laid two eggs but there is no male pigeon with her so I went over to my friend's and found a small pigeon, so I took it away from the nest and put it under our pigeon. She is very proud of it too.

I could tell you a great deal more about her but I am afraid my letter will be too long so good-bye.

OSCAR LEE, (age 12 yrs.) R. R. No. 4 Thorndale. Ont.

Honor Roll.—Margaret Haid, Agnes Canuck, Walter Sider, Ruby Barker, Edna Saunders, Arthur Mitchell, Frank Marran, Dora Shaw.

Beaver Circle Notes

Estella Nelson's story about a sleighing party is being held over until winter sets

in again. We are sorry it has been held out so long.

The following wish some of the Beavers to write to them: Nona Couch (age 10) R. 1, Mossley, Ont.; Edyth Johnston (age 7) Big Lake (Manitoulin Island), Ont.; Walter Sider (age 11, Sr. III) R. 1, Stevensville, Ont.; Ruby Barker (age 11) Powassan, Ont.; Edna Saunders (Bk IV) R. 3, Jarvis, Ont.; Dora Shaw, R. 1, Coldwater, Ont.; Nellie Douglas (age 11) Ice Lake, (Manitoulin I.), Ont.

Our Junior Beavers.

The High Cost of Living.

The High Cost of Living has come to our house—

I'm 'fraid it has come there to stay. I never have seen it, but still it is there, And I wish it would please go away.

We don't seem to have very many new clothes;

It's the High Cost of Living, they say. But mother remodels our dresses and sews She seems to be working all day.

Then I heard daddy say that he did not expect,

With the High Cost of Living, that he Would be able to take a vacation this year—

The whole thing's a puzzle to me.

Now, why doesn't somebody send it away,

I am sure we don't want it 'round here; It's a regular nuisance, but why does it stay—

I think it is awfully queer.

I've looked in the closets both up and down stairs,

That High Cost of Living to see, But it's not to be found tho' I've looked all around;

Now, where do you s'pose it could be?

Some day I feel sure that I'll find it; and then,

I'll steal quietly up, like a mouse, And I'll grab that old High Cost of Living, I will, And throw it right out of our house!

Tame Bees.

BY BEULAH WATKINS.

(Age 8, R. 1, Heathcote, Ont.)

I will tell you about an adventure mother and father had while cutting clover. As we had no man, mother went to drive the mower. It was the first round around the field early one Monday morning and when they were about half way down the field, father threw a forkful of clover against the fence and hit a swarm of bees which was hanging on the long stake in the fence. Mother hadn't known what had happened to father until she heard his yells away over in the clover. He didn't want the bees to get on the horses. The bees were so thick around father's head that mother could hardly see it. Mother tried to drive on but the mower caught in the long grass. Mother thought the mower would break. Mr. Julian, one of our neighbors, heard the excitement and rushed out of the barn. He ran towards us wondering what was the matter. The dog, Sport, thought he was going to hurt father so he ran and bit him, then the bees got on the dog and he went yelping all over the field. Mr. Julian helped mother to unhitch the horses and he drove them away down the field, then the bees went back little by little till they all got back to where they had swarmed. Then Mr. Julian went over to Mr. Black's who keeps bees and they came and smoked them. They said they were good Italian bees that were supposed to have been swarmed the night before.

Dear Puck and Beavers.—Again may I tap at (our) door. I am sending a story entitled, "The Mirror and The Boy."

The father went to town. He had one son, his name was Johnny.

When father came home, he bought a mirror. He had put it up in the room. When John came in, they all hid in the corner. John saw a boy in the Mirror, just like himself, he laughed and his comrade laughed. Silly John liked to have some fun, so he said, "You are afraid to touch me."

He doubled up his fist, and went to hit the boy in the mirror, and the boy hit him back; broke the mirror, cut John's hand badly. So Johnny is a sadder and a wiser boy now, and has

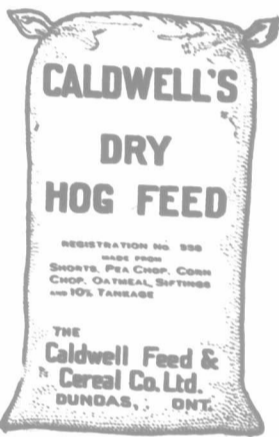
Why Feed Expensive Concentrates to Hogs?

It's the duty of each of us to economize and save everything fit for human food. Needless expenditure on highly concentrated foods for hog feeding is a waste when

Caldwell's Dry Hog Feed

gets quicker results for you and is mixed to give the best balanced ration for hogs that is possible, and at a low price.

Large hog breeders know its value and use it, and many who have responded to the call of Greater Production by raising hogs use this feed entirely.



The Government analysis shows 18% Protein, 2.5% Fat and 10% Fiber, Oil Cake, Corn Chop, Shorts, Oatmeal siftings, and tankage are used in its make up.

Order early and make sure of quick delivery. If your dealer cannot supply you, write us direct, Dept. 2.

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BUILT BY NORDHEIMER'S

THE LANSDOWNE possesses a tone of good volume and refined quality. It is built on the new LANSDOWNE

Scale, which although different from the Nordheimer Scale, possesses many of the characteristics found in Nordheimer instruments.

Here is a high-quality piano, built by the makers of the renowned Nordheimer—and sold at a moderate price, by reason of the manufacturer's elimination of the lesser essentials. It has a plainer case than the more expensive product of the same factory, but reveals the same high type of workmanship, and is made under the same rigid rules of supervision. Obtainable in mahogany or oak.

The name "Nordheimer" eliminates all risk, and safeguards your entire investment.

Write for Design Book, showing entire range of Nordheimer Pianos and giving full particulars and prices. Address:

Dept. F, The Nordheimer Piano & Music Company, Limited Nordheimer Building, Toronto

Greatest Labor-Saving Invention of the Age For the Farm and Private Home

Time is money. Save it by using the Automatic Churn. Once used, no other churn will appeal to you.



ONE MINUTE

This Wonderful Automatic Churn makes perfect butter in from one to three minutes.

Most sanitary churn in the world. Nothing but glass touches the cream. No dashers, paddle-wheels, etc. Self-cleaning in ten seconds. No corners, cracks or crevices to scrub. Operates with a slight pressure of finger. No strength or power required—vibration of steel springs does the work. A child can operate this churn successfully.

FREE: You should investigate this marvellous time, trouble and labor-saving churn. Write to-day for free, descriptive literature. Don't wait—get posted NOW.

The Hamilton Automatic Churn Company 41 King William Street, Hamilton, Ontario

ORDER NOW!

STONE'S FERTILIZER

For Fall Wheat

Manufactured by

Wm. Stone Sons, Ltd. Head Office, Woodstock, Ontario

FACTORY:—INGERSOLL, ONTARIO

LIVE POULTRY

We are open to handle large quantities of live spring chickens or live poultry of any kind; highest market prices paid according to quality. Write us for quotations; Prompt returns.

Henry Gatehouse & Son, 348 Dorchester St. W., Montreal

POULTRY AND EGGS

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

BABY CHICKS AT REDUCED PRICES. 16% off in June, 33% off in July. Buy your chicks now for spring layers. Barred Rocks, Rhode Island Reds, White Wyandottes, White Leghorns. Satisfaction guaranteed. Tay Poultry Farm, Perth, Ont.

CANADIAN RINGLET BARRED ROCKS—Bred-to-lay strain, 241-egg kind; trapnested; heavy winter layers. Eggs, \$1.50 setting, guaranteed. F. Coldham, Box 12, Kingston, Ont.

WANTED

Live Fowl

Waller's, 704 Spadina Ave., Toronto

WRITE FOR PRICE LIST

Choice Eggs for hatching, from free range flocks—S. C. White Leghorns (Barron's 282-egg strain), Bred-to-lay S. C. Brown Leghorns, (O. A. C. and Guild strains), Barred Rocks—\$2 per 15, \$10 per 100. Fawn I. R. Duck eggs, \$3 per 10; Mammoth Bronze Turkey eggs, \$5 per 9 (show stock). Also choice Yorkshire Hogs, all ages. T. A. KING, MILTON ONT.

Rose-Comb Rhode Island Reds and Barred Rock eggs for hatching, \$1.50 per 15 Rose-Comb Rhode Island Red cockerels \$3 each. ALEX. McKINNEY, R.R. 1, Erin, Ont.

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

COLLIE PUPS—SABLE AND WHITE, BRED from healers, \$5 each; also one registered female collie, two-years old, \$10. L. D. Willson, Aurora.

FOR QUICK SALE—POULTRY AND TRUCK farm; \$4,500 of orders for chicks, this season. New street being put through end of farm. Apply for full particulars to Burford Hatchery, Box 23, Burford, Ontario.

A MIDDLE-AGED GENTLEMAN WANTS permanent board and lodging with prosperous farmer, or at summer resort; good boating desirable but not essential. State rate and locality. Box H, Farmer's Advocate, London, Ont.

For Sale—At a bargain, for quick purchase; five-year-old registered Jersey cow, Effie's Violet—4818—sire, Leda's Golden King—1925—; dam, Effie's Rose of Don—362—; fresh, calved June 18th. Write or come and see. Lorne Lipsett, R. No. 1, Bolton, Ontario

FOR SALE

Three Registered Holstein Heifers
2 years old.

ADDRESS:—
Arthur Watson, Mandamun, Ontario
Phone 382, Ring 1-4 Sarnia

better sense than to quarrel with the boy in the mirror. Well as my story is getting long I will close. Hoping success may come my way.

FREDDIE A. HAMILTON, (age 9).
R. R. No. 1, Orton, Ont.

Dear Puck and Beavers.—This is my second letter to your circle. On seeing my first letter in print I took courage to write again. I am going to tell you about our school Fall Fair. I took some chickens and ducks beside my writing and drawing. It was on a Saturday. I had a good time and took first prize on my ducks, second on my essay, and fourth on chickens. As my letter is getting long I'll close hoping to see my letter in print.

CORA MCGORMAN, (age 11, III bk).
Cottam, Ont.

Dear Puck and Beavers.—I am getting subscribers for the "Farmer's Advocate", the valuable farm paper. We live on the Manitoulin Island and I enjoy reading the letters in the Beaver Circle. This paper is very helpful to the farmer, his wife, and his family.

This war seems to last a long time and it is terrible. I have two uncles in khaki. One is in France. I will close wishing the Advocate every success.

Big Lake, Ont. KARL T. JOHNSTON.

Dear Puck and Beavers.—This is my first letter to your circle. I live in Morriston. I go to school every day and like it very much. I am in the second reader. My grandfather lives on a farm near the village, and they have taken the Advocate for a number of years. I go up there nearly every night after school, and I enjoy reading the letters in the Advocate. They keep a nice little dog named Paddy. He is all white but his ears and they are brown, and I have lots of fun with him. I have read quite a few books. The names of some of them are "King Arthur's Knights," "The Babes in the Wood," "The Overton's," and lots of others. As my letter is getting long I will close with a riddle.

When does a woman have a wooden wedding? Ans.—When she marries a block-head.

MARGARET TELFER,
Morriston P.O., Ont. (Age 11.)

Dear Puck and Beavers.—This is my first letter to your circle. I enjoy reading the letters, and when the Advocate comes I want it first.

Have any of the Beavers erector sets? I have No. 2A and No. 1. I have read books out of the school library. Some of them are: "Black Beauty," "Robinson Crusoe," "The Look About You Nature Book," "Seaside and Wayside." I guess I will close with some riddles.

What is the best land for little kittens? Ans.—Lapland.

Why are some girls like an old musket? Ans.—Use lots of powder, but won't go off.

DAVID SYER,
R. R. No. 1, Petrolia, Ont. (Age 9.)

Junior Beavers' Honor Roll.—Russell Graham, Bernice Lovett, Mary Searrow, Edith Burk, Erna Cook, Doris Maxwell, Gerald Mouck.

Junior Beavers' Honor Roll.—Annie

Blair, Edyth Johnston, Lorna Davis, Lillian Garrett, Mary McCurdy, Eva Gillanders, Nellie Smart, Amy Edwards, Willie McGarman, Earl Hepton, Laurena Hague, Rosa Dietrich, Nellie Douglas, Aubrey Pratt, Irene Hitchcock.

Riddles.

What makes a pair of boots? Ans.—Two boots. Sent by Earl Hepton, Laurel, Ont.

What is a third and a half a third of ten? Ans.—Five.—Frank Marran, R. 2, St. Mary's Ont.

What divides "mountain" and "valley"? Ans.—And.—Aubrey Pratt, Kettleby, Ont.

What is most like a cat, yet not a cat? Ans.—A kitten. Sent by Ruby Irwin, MacLennan, Ont.

Black within and red without, and four corners round about. Ans.—A chimney. Sent by Mary Searrow, Allenford, Ont.

Why does a hen go across the yard? Ans.—To get to the other side. Sent by Gerald Mouck, South Bay, Ont.

Where was Humboldt going in his 39th year? Ans.—Into his fortieth year. Sent by Ethel Matthews, R. 3, Thornton, Ont.

Pease pudding hot, pease pudding cold, peas pudding in the pot, nine days old. Tell me that in four letters. Ans.—T-h-a-t.—Irene Hitchcock, R. 1, St. Ann's, Ont.

Only the Small Birds Sing.

Have you thought of it; it is only the small birds that sing? You never heard a note of a song from the eagle in your life, nor from the turkey or the ostrich; but you have heard it from the robin and the lark and the mocking-bird and the canary, and how they can sing! So it is from the little folks that we expect the best and sweetest things, the most cheerful and most loving work. So, too, we expect to hear them sing as they go.

The Elder Bush.

A few Canadians are finding out the value of the elder bush for screening off objectionable features of the garden. For this purpose the red elderberry, beautiful both in flower and fruit, is especially attractive. The black elderberry is, however, the more useful, as its berries are good for making wine and pies, and may be used with apples to make a very delicious jelly. Also its tender leaf shoots, when just sprouting are very palatable when cooked like spinach. The berries of both species are much liked by birds—and the wise farmer will try to attract as many birds as will come about his orchard and fruit garden.

Why He Lost His Friends.

He was not loyal to them.
He was suspicious of everybody.
He borrowed money from them.
He measured them by their ability to advance him.
He did not know the value of thoughtfulness in little things.
He seemed to forget that he who uses his friends loses them.
He was always saying mean things about them in their absence.
He was cold and reserved in his manner, cranky, gloomy, pessimistic.
He was always jealous of those who were more prosperous than himself.
He never thought it worth while to spend time in keeping up his friendships.
He never learned that implicit generous trust is the very foundation stone of friendship.
He never threw the doors of his heart wide open to people, or took them into his confidence.

He regarded friendship as a luxury to be enjoyed, instead of an opportunity of service.
He was always wounding their feelings, making sarcastic or funny remarks at their expense.

He did not realize that friendship will not thrive on sentiment alone; that there must be service to nourish it.

He was always ready to receive assistance from them, but always too busy or too stingy to assist them in their time of need.

He used his friends in all sorts of ways for his own ends, and never hesitated to sacrifice their reputation for his own advantage.—Dr. Orison Swett Marden, in *The New Success*.

Markets

Continued from page 1100.

for No. 3. The Peterboro Cheese Board was cleared at 22 $\frac{1}{2}$ c. Prices of small cheese for domestic account were about 22 $\frac{1}{2}$ c. to 23c. per lb.

Grain.—The market for oats was firmer, with No. 2 Canadian Western at 97 $\frac{1}{2}$ c.; tough No. 2 and extra No. 1 feed, 94 $\frac{1}{2}$ c.; No. 1 feed 91 $\frac{1}{2}$ c.; and No. 2 feed 88 $\frac{1}{2}$ c. per bushel, ex-store. Manitoba barley was firm, with rejected selling at \$1.30 in car lots and feed at \$1.24. American No. 3 yellow corn sells at \$1.75 to \$1.80; No. 4 yellow \$1.70 to \$1.75 per bushel, ex-store.

Flour.—Prices were practically unchanged, with Government standard Manitoba spring wheat flour at \$10.95 per barrel, in bags, f. o. b. cars, Montreal, and 10c. more for city bakers, delivered. Ontario winter wheat flour, \$11.40 per barrel, in cotton bags. Corn flour was steady at \$12 per barrel, in bags, delivered, but rye flour was down to \$16 per barrel, in bags. Barley flour was steady at \$13.50 and grain flour \$11.05.

Millfeed.—Pure grain mouille was easier at \$70; feed cornmeal \$68; pure barley feed \$62; mixed mouille, \$51; shorts, \$40 and bran \$35 per ton, including bags.

Baled Hay.—The market for hay was unchanged, with No. 2 selling at \$15.50 in car lots. No. 3 at \$13.50 to \$14; clover mixed \$6 to \$9 per ton, ex-track.

Hides.—Spring lambs were firmer, at 75c. to \$1 each; clipped sheep skins \$1 each; cow hides 18c. per lb.; bulls, 16c. and steers 23c. flat. Hides, Montreal inspection were 20c., 19c. and 18c. per lb. Veal skins were up to 52c.; horse hides were \$5 to \$9.50 each. Tallow, 3 $\frac{1}{4}$ c. per lb. for scrap fat; 8c. for abattoir fat; 16c. to 16 $\frac{1}{2}$ c. for rendered.

Chicago.

Hogs.—Butchers, \$16.25 to \$16.35; packing, \$15.65 to \$16.20; light, \$16.35 to \$16.40; rough, \$15.40 to \$15.60; pigs, \$16.25 to \$16.40.

Sheep.—Compared with a week ago, shorn lambs, 75c. to \$1.10 lower; springs, \$1.25 to \$1.50 lower; sheep, \$1.50 to \$2 lower ewes declined most.

Cheese Markets.

St. Hyacinthe, Que., 22 $\frac{1}{2}$ c.; Vankleek Hill, 22 $\frac{1}{2}$ c.; Montreal, finest easterns, 22 $\frac{1}{2}$ c. to 23c.; Watertown, N. Y., 22 $\frac{1}{2}$ c.; New York, specials, 23 $\frac{1}{2}$ c. to 24c.; average run, 23 $\frac{1}{2}$ c.

Gossip.

The Directors of the Canadian National Exhibition have made numerous changes of classification in the different departments of live stock and general farm sections this year. Additional classes have also been made. The premium money is greater than that previously offered by the exhibition, although the Dominion Government grant has been somewhat reduced. The total amount of agricultural premium money is in the neighborhood of \$60,000.

In the horse department some of the classes which have been poorly patronized of late years have been left off the list. New classes have been made in the cattle department, and additional premiums given in the old ones. A liberal increase has also been made in the sheep and swine department. Every effort is being made by those in charge to make this year's fair bigger and better than ever.

Man in the Making.

We are all sculptors of life. From the anthropoid ape stage clear up through the ages, in the slow process of evolution, man has been at work chiselling himself. Always on the whole bettering himself a little, eliminating the animal, the brute qualities more and more, in spite of setbacks, he has persistently struggled toward the realization of his ideals—the higher man, the ideal man.

Our sculpturing is mental, our thought is the chisel that traces the ideal in life's marble. Angel and demon, beauty and ugliness, success and failure lie side by side in the marble of life.—Dr. Orison Swett Marden, in *The New Success*.

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Make More Dairy Profits With a Better Separator

THE Viking Cream Separator costs you less but gives you more for your money. It has greater capacity than any other separator of equal rating. It skims to a mere trace. The Viking is easy running and simple to clean, strong and durable. Write today for the Free Separator Book.

Swedish Separator Company
Dept. U
515 S. Wells Street
Chicago, Ill., U. S. A.



VIKING CREAM SEPARATOR

WAREHOUSES
Calgary, Alberta
Winnipeg, Manitoba
Regina, Saskatchewan

DIGGERS

For potatoes. All growers know that it pays to use diggers even on five acres—they save valuable time, save all the crop in good condition, at less expense.

IRON-AGE DIGGERS

Wheels 30 or 36 ins. Elevator, 20 or 20 1/2 ins. wide. Thorough separation without injury to the crop. Best two wheel low truck. Right adjustment of plow, shifts in gear from the seat. Can be backed, turned short into next row. We guarantee our diggers to do the work claimed for them. Ask your dealer about them and write for booklet.



The Bateman-Wilkinson Company, Limited
41 Ryalington Ave.
Toronto, Can.

Lump Jaw

The only reliable treatment for Lump Jaw in Cattle.
Fleming's Lump Jaw Cure
Price \$2.50 a bottle. Sold under a positive guarantee since 1896. Your money back if it fails. Write for Fleming's Vest-Pocket Veterinary Adviser. 96 pages and illustrated. It is Free. Fleming's Chemical Home Shop. A small quantity applied when calves are young will prevent growth of Horns. A 50¢ tube sent postpaid is enough for 25 calves.
FLEMING BROS., Chemists,
78 Church St., Toronto, Ont.



Cream Wanted

We supply cans. We pay express charges. We remit daily and guarantee highest market prices. For prompt service ship your cream to us.
Mutual Dairy & Creamery
743 King St. W., Toronto, Ont.



SUNNYSIDE HEREFORDS

We are offering special values in heifers, and bulls with size, quality and breeding; will promise not to disappoint you if you want good cattle.

Arthur F. O'Neill & Sons, R. No. 2, Denfield, Ont.

SUNNY ACRES ABERDEEN-ANGUS

A FEW YOUNG BULLS READY TO WEAN
G. C. CHANNON
P. O. and Phone Oakwood, Ontario
Railway Connections—Lindsay, G.T.R. & C.P.R.

Alloway Lodge Stock Farm

Angus - Southdowns - Collies
SHOW FLOCKS
Rams and ewes. Heifers in calf to Queen's Edward 1st prize, Indiana State Fair.
Robt. McEwen, R. R. 4, London, Ont.

ABERDEEN-ANGUS

Aionzo Matthews, Manager, Forest, Ontario
H. Fraleigh, Proprietor, Meadowdale Farm, Forest, Ont.
When writing please mention Advocate.

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.

Cow Injured on Railway.

On September 20, 1917, about 3 p.m. my cows had wandered on to the railroad track about 1 1/4 miles from my pasture. One was struck by the engine of a freight train and badly hurt. We got the section boss to see her and report, also wrote the company and claimed \$50 damages, as the accident was due to the fact that the company had failed to put fence up. Had the fence been there the cows could not have been there. My cows are pure-bred registered Ayrshires. This one is a young one, was 2 years old at the time of the accident and proving a valuable animal. The company promised to "see" to it and "look into it", etc. Is the company liable not having a fence up, as I am told the law calls for fence along the track to within 3 miles of a settlement? There are other cattle owners less than 3 miles away, and I am within one-quarter mile. I am also told that I ought to warn the company when I have just bought valuable cattle and doing so they still did not supply fence. In fact, the track master came to see me and told me none too politely "The company wasn't going to fence a lot of wild land because someone had come to live here and got a cow." The previous year a cow was killed and another injured in this same place and the owner did not get one cent.

N. B.

J. M. H.

Ans.—It is possible that the company is liable, but the facts and circumstances are not sufficiently stated to enable us to say definitely. One thing, however, is certain. If you are to bring an action against the company for damages it ought to be brought without any further delay, beyond reasonable time to permit of a solicitor's letter being written and an answer received; and we would advise that you consult and instruct a solicitor in the matter forthwith.

Gossip.

Big Demand For Pure-bred Stock.

Robert McEwen writes to say—The live-stock market is enjoying an unprecedented boom and the pure-bred industry is receiving a similar stimulus. The demand last year for both Angus cattle and Southdown sheep exceeded the supply. The present offering in Angus cattle consists of a good yearling bull sired by an Imported Erica bull, Marshall of Woodcote; four two-year-old heifers in calf to the Queen Mother herd bull, Queen's Edward (first prize bull calf at the Indiana State Fair in 1916). There are also some very promising calves from this bull that will be offered later and they are the best lot that this herd has produced. Some recent sales of herd bulls have been made to R. A. Caldwell of Port Arthur; Thos. Broadfoot of Fergus; Frank Burroughs of Mitchell and H. C. Soldan of Hensall.

Sheep are selling very fast and from the present indications this year promises to be one of the best on record. There are sixty-five rams—the pick of last year's lambs—sired by the best imported and homebred rams, for sale and a few yearling ewes. All the sheep sold this spring have gone to the U. S. with the exception of five head for the Western Canada shows. Anyone desiring a stock ram of the first grade should place his order now to insure a selection. Personal inspection always welcome. There is nothing to offer in Collies at present but there will be a few puppies during July and August.

A War Christening.—"And the name is to be?" asked the minister as he approached the baptismal font with the baby in his arms.

"John Jellicoe Douglas Haig Lloyd George Bonar Law Smithers."

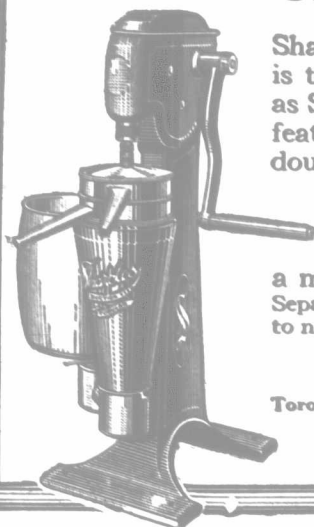
"Dear me!" said the minister, turning to the sexton. "A little more water, Mr. Jones if you please!"—*Tii-Bits.*

You Don't Permit Your Hired Man to Throw Away Cream



THEN, why let him waste your cream by using a fixed-feed separator? The moment a fixed-feed separator is turned under speed it begins to lose cream. This loss averages 10 lbs. per cow yearly. And tests have proved that only one person out of 20 keeps up a fixed speed. Eliminate this cream waste by installing a

SHARPLES SUCTION-FEED CREAM SEPARATOR



Sharples skims clean at any speed! It is the only separator that will do this, as Suction-feed is an exclusive Sharples feature. Sharples Tubular Bowl has double the skimming force of any other; yet is easy to turn. Containing only one piece and no discs, it is by far the easiest to clean. Over a million dairymen are using Sharples Separators. Why not you? Write for catalog to nearest office, addressing Dept. 78

The Sharples Separator Co.

Toronto, Ont.

Regina, Sask.

DC-25

Fall Wheat Season, 1918

To get the maximum production it is absolutely essential to use Fertilizers, and the most economical kind to buy is

Sydney Basic Slag

If our goods are not being sold convenient to you, why not take a carload of twenty tons and take advantage of the lowest rate of freight? You will need a few tons yourself, and the neighbors will help you out with the balance. The best proof we can give you as to the value of SYDNEY BASIC SLAG is that the sales for fall wheat in 1917 were 6,242 tons, as against 230 tons in 1913, the first year of its introduction.

Drop us a line and let our man call on you.

The Cross Fertilizer Co., Limited

Sydney, Nova Scotia

Clydesdales and Shorthorns

I still have some Shorthorn bulls, twelve and thirteen months old. Two grandsons of Old Sort, and four great-grandsons of Royal Blood; these are an exceptionally fine lot; also a number of females. Inspection invited. Apply to: **J. B. Calder, Glanford Station, R. R. 3**

BROOKDALE FARM HEREFORDS

Having purchased the old-established herd of Mr. Thos. Skippon, I can offer some good values in females, cows with calves by side and bred again. A few good open heifers left.

W. READHEAD

MILTON, ONT.

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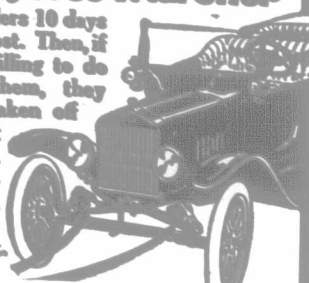


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Hassler Shock Absorbers are made of chrome vanadium steel. They cushion the car by compression—the spring is compressed to give flexibility and not stretched. The combination—Ford Car and Hassler Shock Absorbers—is irresistible. The Ford is transformed—it rides as easily as a \$2,000 car; sidesway is prevented and up-throw eliminated; tires last longer and repair bills are cut one-third. 300,000 Ford Owners recognize their economic necessity.

10-day Free Trial Offer

Try Hasslers 10 days without cost. Then, if you are willing to do without them, they will be taken off without charge. Write to-day, Now, for Free Trial Blank.



Don't ride without Hasslers simply because someone discourages you from trying them. Accept this offer and see for yourself.

ROBERT H. HASSLER, Limited
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HAY

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

Dr. Bell's Veterinary Medical Wonder, 10 C00 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly. **DR. BELL, V.S. Kingston, Ontario**

Mardella Shorthorns

Dual-purpose bulls, 20 young cows and heifers—bred, some calves by side. Size, type, quality; some full of Scotch. The great, massive Duke, dam gave 13,599 lbs. milk, 474 lbs. butter-fat, at the head.

Thomas Graham, Port Perry, R. 3, Ont.

Spruce Lodge Shorthorns and Leicesters
Herd headed by the Butterfly-bred bull, Roan Chief Imp. -60865-. Young bulls, cows, and heifers of all ages, of good breeding and quality. **W. A. DOUGLAS, CALEDONIA, ONTARIO**

Questions and Answers. Veterinary.

Pair of Lame Horses—Fistulous Wither.

1. I have a pair of horses each of which is lame in the right hind leg. When they start they are very lame, but after walking a while the lameness disappears, but they show lameness when drawing a heavy load. I think that the trouble is in their hips or stifles.

2. What can be done for a case of fistulous withers? **J. F. Jr.**

Ans.—1. The symptoms indicate spavin lameness. It will be necessary to have the hocks fired and blistered by a veterinarian. In some cases repeated blistering will effect a cure, but in most cases blistering is simply a loss of time and expense, hence it is better to have them fired at first.

2. This also requires an operation by a veterinarian. Local applications have no effect. **V.**

Injured by Train.

Heifer was hit by train last September. Her hip and hock were injured. I treated them, and the hip, while still swollen some is not sore, neither does it cause lameness. The hock broke out in two places. I treated it and it got better, but now has swollen again and she is very lame. She had mammitis which I treated successfully but one side of the udder does not yield as much milk as the other. **J. M. H.**

There is pus again forming at the hock. After it breaks, flush out the cavity 3 times daily with carbolic acid, 1 part water 30 parts. Be careful to not allow the external opening to close until the cavity is filled. Acute arthritis or open joint may occur and cause death. It is not probable that the hip will give further trouble. All that can be done for the udder is to massage the partially inactive side frequently and milk regularly and feed well. It may be that this half will not become fully active until after next calving. **V.**

Miscellaneous.

Identifying Plants.

What is the name of the enclosed plant? It grows about three feet high and we have three clumps of it on our farm. Has it any medicinal or food value? **G. V.**

Ans.—From the very small portion of the plant received at this office we are unable to identify it, and cannot give information desired. In order to identify a plant which we are not familiar with, it is necessary to have a portion of the root, stalk, leaf and flower.

Blight on Oats.

I am enclosing some young oat plants which have apparently become blighted; at least the tips of the leaves have turned whitish in color. What is the cause? **W. T.**

Ans.—Have examined the young oat plants sent under separate cover. This trouble is not the same as that which was so prevalent in the Province two or three years ago. It is also, however, not due to fungus or bacteria. I spent a good portion of the morning out through our fields here, and I found oats, barley, orchard grass, blue grass, twitch grass and many other grasses similarly affected. After looking into the matter thoroughly I feel pretty certain that the trouble is due to the very high winds that have been prevalent throughout the Province the last few weeks. We could see good evidence of this in the fact that in the valleys and sheltered places there was very little of this white tip, while on high, dry, exposed ridges it was very prevalent. The killing of the tips is probably partly due to the whipping effect of the wind breaking and tearing the tissue, and partly due to the drying-out of the tissue by the high, cold winds. I think that you will find in a short time the plants will entirely outgrow any signs of this injury, and I do not anticipate that it will reduce the crops to any appreciable extent. **J. E. H.**

Wonderful Control.—Mrs. Dents (at the ball-game, excitedly)—"Isn't our pitcher perfectly grand, Tyrus? He hits the club nearly every throw."—*Joplin Times.*

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YOU may be able to buy a gas engine for less money than you would pay for an Alpha.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Sprucedale Dual-Purpose Shorthorns

I am offering my herd sire, Braebear Prince; dam, Bessie of Low Banks 2nd, 11,636 lbs. of milk in R.O.P. Good individual, sure and right. Also a few calves by him as well as some nice young heifers in Berkshire. **Frank Teasdale, (Concord G.T.R. Station 100 Yards) Concord, Ontario.**

GERRIE BROS.' SHORTHORNS

Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows—Missies, English Ladys, Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer.

GERRIE BROS., ELORA, ONT.

THE MANOR STOCK FARM—SHORTHORNS

Bulls all sold. Have Wimples, Rosemarys, Minnas, Roan Ladys, etc., for inspection. **JOHN T. GIBSON DENFIELD, ONTARIO.**

BURNFOOT STOCK FARM

Breeders of high record, dual-purpose Shorthorns with splendid conformation for beef. Have a number of bulls calved last fall and early in winter. **S. A. MOORE, PROP. (Farm one mile north of Caledonia) CALEDONIA, ONTARIO**

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple. **WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.**

Robert Miller, Stouffville, Ontario

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.

PLEASANT VALLEY FARMS

Present offering—A number of good young Scotch cows with calves at foot and rebred to (Imp.) Newton Grand Champion; also a number of 2-year-old heifers bred to same sire. Suitable for good herd foundations; priced to move them. Inspection invited. **GEO. AMOS & SONS, Farm 11 miles east of Guelph, C.P.R. MOFFAT, ONTARIO**

MAPLE HALL SHORTHORNS

Present offering, 7 yearling bulls; One Cruickshank Duchess of Gloster. Five Cruickshank Butterflies. One Shepherd Rosemary. All pure Scotch, and extra good; also a few young cows with calves, and yearling heifers. **D. BIRRELL & SON, CLAREMONT, ONTARIO**

Dual-Purpose Shorthorns

—CROWN JEWEL still heads the herd. Present offering is 5 bulls, from 13 to 18 months. Prices from \$200 to \$250. Also some good breeding females, either bred or with calves at foot. All registered and priced to sell. **JNO. ELDER, HENSALL, ONTARIO**

IMPORTED SCOTCH SHORTHORNS

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R., is only half mile from farm. **J. A. & H. M. PETTIT, FREEMAN, ONTARIO**

Questions

Where do you get your Percheron horses?
Ans.—The Percheron and several times advised writing some undoubtedly on stock wh

Have you any seed pods?
Ans.—The seed when it is time would it would possibly part of July for hay and mature for s

What would you do with a young hickory old? The la trimmed. I and have kept destroy then engine destro spring. Wou if it were to sp

Ans.—It is place a value. them. The certain exten use to be ma the destructi a heavy loss trees would a say.

A man pur over-run wit possible to d injuring the g

Ans.—Spray has proven material is ap spray at the t into blossom. by dissolving gallons of water made adheres mustard but r of the grain. F if properly ap an acre. Must and may rem number of ye when brought t ly, it should field would b year's treatme years of a rota to rid the field

The Govern or 70 years ag acres, also 3 of 50 and two 1 township coun road and have back of our far from this road mile drive to instead of 1 1/4 tance for my ch they attend sch

1. Has the o road against o
2. How man travelled so th
3. Is there them having it to have a petitio keep it there o persons above-leave it as it is? Quebec.
Ans.—1 We
2. A prescri use of a public quired against way suggested.
3. You proba by legal proce against the pr would certainly l and it ought to by as many as p interested.

Questions and Answers. Miscellaneous.

Registered Horses.

Where could I secure registered Percheron horses? C. B. R. Ans.—There are a number of breeders of Percheron horses throughout Canada, and several of them have at different times advertised in our columns. By writing some of these breeders you would undoubtedly be able to secure quotations on stock which they have for sale.

Handling Sweet Clover.

We have about 10 acres of sweet clover which I fear we will not be able to cut in time for hay. What time should it be ready to cut for seed? I sowed it last year with oats as a nurse crop and had to cut it all with the mower, as the clover was almost as high as the oats. Had it been cut and bound with the binder I doubt if it would have dried fit to put in the barn. M. G.

Ans.—The plant is ready to cut for seed when about three-quarters of the seed pods become dark. The exact time would depend on the locality, but it would possibly be around the latter part of July. Some take the first crop for hay and allow the second crop to mature for seed.

Hickory Trees.

What would be a fair valuation for young hickory trees twenty-five years old? The largest ones have been kept trimmed. I had somewhere around 200 and have kept the cattle out so as not to destroy them. However, fire from an engine destroyed the most of them this spring. Would the wood be of any use if it were to sprout up again? D. H.

Ans.—It is rather difficult for us to place a value on these trees without seeing them. The value would depend to a certain extent on the size and on the use to be made of them. Undoubtedly the destruction of these trees means a heavy loss to you, but as to what the trees would actually be worth we cannot say.

Wild Mustard.

A man purchased a farm which was over-run with wild mustard. Is it possible to destroy this weed without injuring the grain? A. J. D.

Ans.—Spraying to destroy mustard has proven to be practicable. The material is applied in the form of a fine spray at the time the mustard is coming into blossom. The solution used is made by dissolving 10 lbs. of bluestone in 40 gallons of water. The solution if properly made adheres to the rough leaves of the mustard but runs off the smooth leaves of the grain. Forty gallons of the solution if properly applied is sufficient to treat an acre. Mustard seed has great vitality and may remain in the ground for a number of years and then germinate when brought to the surface. Consequently, it should not be expected that the field would be entirely cleared with one year's treatment; it may require several years of a rotation of crops and spraying to rid the field of this weed.

Closing a Road.

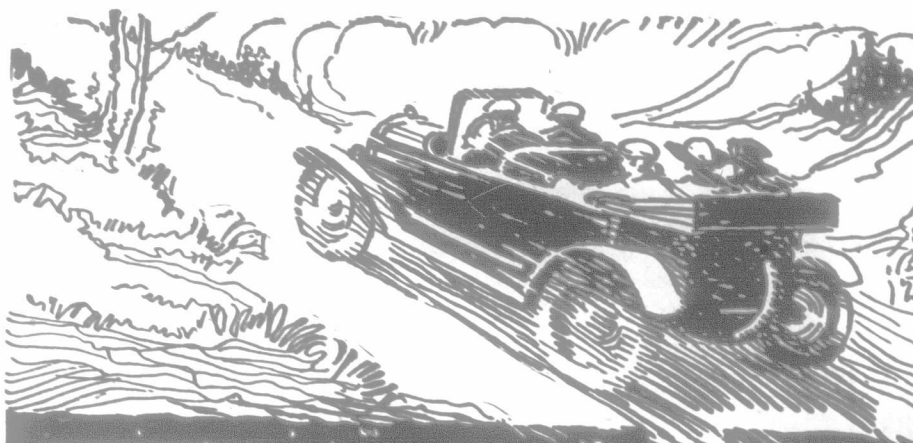
The Government road, made some 65 or 70 years ago, crosses my farm of 150 acres, also 3 of my neighbors' farms, one 50 and two 100-acre farms. Now the township council wishes to close that road and have us use a concession at the back of our farms some 5 or 6 acres back from this road. It would mean a 2 1/2 mile drive to our nearest town for me instead of 1 1/4 miles, and the same distance for my children to go to school, as they attend school in the village.

- 1. Has the council power to close that road against our wishes?
2. How many years has a road to be travelled so that it cannot be changed?
3. Is there any way I can prevent them having it closed? Would I need to have a petition signed by ratepayers to keep it there or will the wishes of the 4 persons above-mentioned be enough to leave it as it is?
Quebec.

J. H. B.

Ans.—1 We think so.
2. A prescriptive right to continued use of a public highway cannot be acquired against the municipality in the way suggested.

3. You probably cannot prevent them by legal proceedings; but a petition against the proposed closing of road would certainly be in order and advisable, and it ought to be signed and presented by as many as possible of the ratepayers interested.



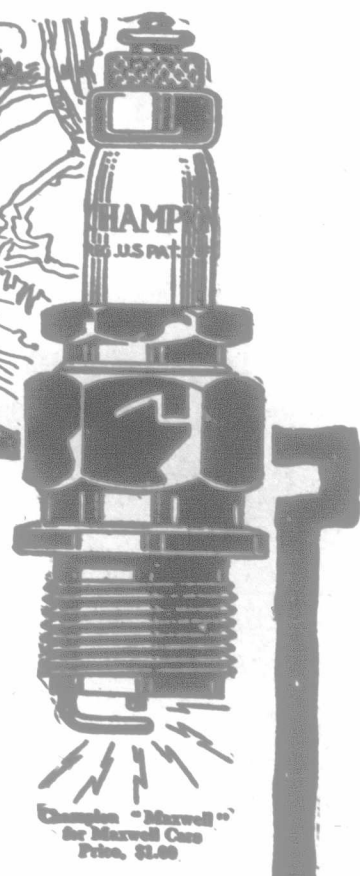
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Every motorist should have one. Cleans a lot of plugs perfectly in a few minutes without taking them apart or even getting your hands dirty. All you have to do is half fill the tube with gasoline, screw in the plug and shake for a minute.

Sells for \$1.00

were developed for and are factory equipment on all Maxwell cars—this is the strongest possible proof that your replacements should be Champions.

The patented compression-proof asbestos lined copper gaskets, on both shoulders, protect the porcelain against cylinder shock and temperature changes, guaranteeing long life and satisfaction.

Insist on the name "CHAMPION" on each porcelain. It guarantees "Absolute satisfaction to the user or free repair or replacement will be made."

Dealers everywhere sell Champions that are particularly adapted to your motor.

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Milking Shorthorns

The herd is composed of individuals with high milk records and of splendid beef conformation. Several bulls of breeding age, sired by Dominator 10629, one of the best bred bulls for milk in Canada, are now being offered. They are out of cows with records ranging from 8,000 to 11,000 pounds of milk in one lactation. Prices right.

Weldwood Farm, Farmer's Advocate, London, Ontario

SHORTHORNS LANDED HOME

My new importation of 60 head will be at home to visitors June 30th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Wimple, etc. Make your selection early. Geo. Isaacs, (All Railroads, Bell Phone) Cobourg, Ont.

SEVENTY-THREE HEAD OF SHORTHORNS

Four good young bulls of serviceable age; Nonpareil Ramsden -101081- and Royal Red Blood, -77521-, at the head of the herd. These young bulls range in age from 8 to 15 months, and are for immediate sale. They are out of good dams, which will bear inspection. Our cows and heifers will please, and you'll like the bulls. Also three extra-good grade heifers, from heavy milk-producing dams. James McPherson & Sons, Dundalk, Ontario

Here at Present—TEN IMPORTED BULLS

Sired by Beau Gaston, grandson of old Beau Brummel. These are all herd headers and good enough to head any herd. Write or phone. L. O. CLIFFORD, OSHAWA, ONTARIO.

SHORTHORN BULLS Will. A. Dryden

of my own breeding, around a year old; best families and good colors, are for sale. Also a few young imported bulls. Brooklin, Ontario Co. Myrtle, C.P.R., Brooklin, G.T.R. Brooklin, C.N.R.

SALEM SHORTHORNS

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times. J. A. WATT, ELORA, ONTARIO

ESCANA FARM SHORTHORNS

Five Bulls for Sale. One roan senior yearling; one choice twelve months white calf, by Right Sort (Imp.); one select, dark roan, ten months calf; one roan yearling, by Raphael (Imp.); one red roan yearling, for grade herd. Farm 1/2 mile from Burlington Jct., G.T.R. J. F. MITCHELL, Limited BURLINGTON, ONTARIO

SPRING VALLEY SHORTHORNS

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull Sea Gem's Pride 96365, and Nonpareil Ramsden 83422. We have for sale four as good young bulls as we ever had, and a few females. KYLE BROS., Drumbo, Ont. (Phone and telegraph via Arr.

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.

BLAIRGOWRIE SHORTHORNS

I have females all ages and bulls of serviceable age. Worth while to come and see or write JOHN MILLER Myrtle Station, C.P.R., G.T.R. ASHBURN, ONTARIO

FLINTSTONE FARM

Breeders of—

Milking Shorthorn Cattle Berkshire Swine Belgian Draft Horses

Our heifer Lady of Meadowbrook has just completed an official record of 10,916.6 lbs. of milk and 426.352 lbs. of fat. This is the world's record for the breed of a junior 3-year-old.

Another heifer Lady Sale 15th has just completed an official record of 10,178.8 lbs. of milk and 389.287 lbs. of fat, as a two-year-old.

Dalton Massachusetts

SHORTHORNS

FOR SALE

Good animals of both sexes. Burlington phone and G.T.R. Jct. Radial every hour from Hamilton.

C. N. Blanshard, R. R. 2, Freeman, Ont.

Evergreen Hill R.O.P. Shorthorns

Herd headed by the R.O.P. bull, St. Clare. Nothing for sale at present.

S. W. Jackson, R.R. No. 4, Woodstock, Ont.

GLENFOYLE SHORTHORNS

College Duke 4th in service—a high record son of Rothschild and Taylor's noted stock. Am offering young cows and heifers, bred to this great bull. Have a few bulls of breeding age on hand. Stewart M. Graham, Lindsay, Ontario

PLASTER HILL HERD

Dual-Purpose Shorthorns Six young bulls, from four to thirteen months. Size, quality and good milking strains. F. Martindale & Son, R. R. 3, Caledonia, Ont.

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THE "Eastlake" Round End Stock Tank is very popular. Made of highest quality, heavy galvanized iron; the heavy tubing is firmly locked on and the strong angle iron braces are formed around the tubing. Side seams have double row of rivets. Bottom is turned up inside—the strongest construction known.

"Eastlake" Tanks are right in every rivet. All styles including Hog Troughs, Gasoline and Coal Oil Tanks, Wagon Tanks, Feed Cookers, Sheep Dipping Tanks, etc., Silo Roofs, Garages, Corrugated Iron, etc.

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Weights and Measures.
EDITOR "THE FARMER'S ADVOCATE":

There is a growing demand for a change to the metric system, and there is no doubt that when a year or two has passed that demand will be too big to be ignored. It will then be granted, and those of us who are not ready to reckon in decimals will find that we are out of date, and we shall wish we had paid more attention to the study of this system. If it is introduced it will be because the majority of business men believe that it will be a simpler and more satisfactory way of expressing details of our daily work which have to do with weights and measures. In many businesses in this country the metric system is in constant use to-day. In fine machine work, for instance, workmen use what are known as micrometer callipers; instruments designed to measure diameters very accurately, even to 1,000th part of an inch. Our old scale of feet and inches—when divided into eighths, sixteenths, thirty-secondths, and even sixty-fourths of an inch is too cumbersome for fine work, and the mechanic finds it easier to reckon in tenths, and multiples of ten than to bother with inches, feet and yards. When it comes to measuring land we have feet, yards, rods and acres, which would be easy enough to handle if ten feet made a yard and ten yards a rod, and ten rods an acre. That would be easy enough to remember, but what do we find. We can use what is known as square measure, 9 sq. ft. = 1 sq. yard; 30 1/4 sq. yards = 1 sq. rod; 160 sq. rods = 1 acre, or we can use what is known as surveyors' measure, in which 7.92 inches = 1 link; 25 links = 1 rod; 4 rods = 1 chain; 10 sq. chains or 160 sq. rods = 1 acre. Both these tables are totally unsuitable for use in the present day when a proved system so much easier to remember and so much quicker to work with is already in use in 40 different countries of the world. The metric system is known as the "International Systems of Weights and Measures," and it took years to bring it into existence. Among the famous Englishmen who took part in formulating the metric system were Christopher Wren, the famous architect of St. Paul's Cathedral, and James Watt, inventor of the steam engine. The first country to adopt a decimal system of any kind was our neighbor to the South. The present monetary system of the United States was adopted in 1782 on the suggestion of Governor Morris, of Philadelphia, and we may thank him for having proposed the use of the decimal ratio which has been adopted in Canada also, and which has done away with farthings, pence, shillings, crowns, pounds and guineas. It was shortly after the adoption of the decimal system of coinage in the United States that Thomas Jefferson, who was at that time Secretary of State, published a report outlining a decimal system of weights and measures. It was in France, however, that the metric system was gradually being perfected, and scientists from ten independent nations met at the French academy in 1799 to deduce and establish the precise length of the proposed metre, which term they had decided to give to the standard unit of length. It took ten years after this for expert chemists to produce a metal composed of platinum and iridium which was sufficiently immune from changes either by heat or chemical action out of which they could make the master bars on which were engraved the exact length of the meter. Thirty-one of these bars were made, each one being a true copy of the standard metre deposited in the French archives. Each of the countries which had been represented on the commission to create the metric system received two of these prototype metres, one to be used as a working standard, and one as a reference standard. The United States was the first to sign the decree establishing the International Bureau of Weights and Measures at the Metric Convention in Paris, May 20, 1875. Two copies of the metric standard were received at the White House in 1890, and the seals broken in the presence of President Harrison, who was in office at that time, and were at once deposited in the U. S. Office of Standard Weights and Measures. It will be seen from this brief description of the birth of the metric system that it is truly international, and that it is considered to be the most satisfactory one for the world to adopt. It takes time to get rid of the old systems, but the time will eventually come when feet, yards and rods will be

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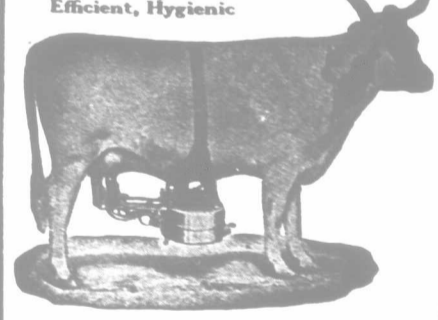
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swept away just as the old pounds, shillings and pence were, and we shall be talking in terms of millimetres and centimetres. In weights we shall be talking in terms of kilograms and grams instead of pounds and ounces, and in volume we shall speak of litres and hecto-litres instead of quarts and barrels.

It seems that our present system of measuring grain is also clumsy and out of date. Why should not the bushel measure be discontinued altogether? Why not talk in terms of pounds only? Grain is sold at so much per bushel, and the bushel represents 34 lbs. oats; 48 lbs. barley; 60 lbs. wheat; 56 lbs. for corn, rye and flax. Of course, it has to be weighed and converted into bushels till the price is arrived at, but how much easier it would be if grain was sold at so much per 100 lbs. The different in values of the different grains would be immediately apparent then. The bushel measure is about as useful as a fifth wheel would be on a wagon. The weight after all is what we go by, for we sell by weight, and feed by weight, and all extra figuring about bushels is waste of time. We have an idea that when the metric system comes in the bushel measure will get its passport together with other fussy denominations which clutter up our present system of weights and measures.

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With coarse grains at abnormally high prices the question will arise in the minds of many dairy farmers as to whether or not it will pay to feed concentrated feeds of any kind to dairy cows while on pasture.

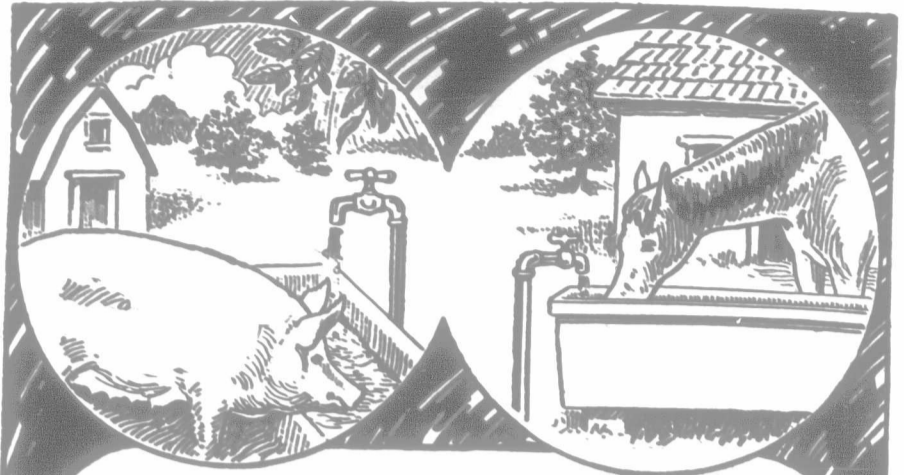
Given an abundance of good pasture, experiments at Macdonald College have proved that, it will not pay to feed the average dairy cow grain. With limited pasture and a summer of extremely unfavorable weather, it will pay to feed milking cows something besides the pasture. If soiling crop or silage is available, concentrated feed is less important, but for the best returns from every standpoint a combination of the two is necessary.

The prevailing practice in many districts is to depend upon pasture entirely. For the average cow having as she does small milking capacity and usually quite a territory of rough pasture, it is questionable if grain feeding will pay under present conditions. On the other hand when farming is more intensified, with less acreage in pasture and better cows, it is absolutely necessary and it will pay to supplement the grass when it gets short with at least a limited amount of grain feed.

The time to commence feeding is just when the cows begin or even a little before they begin to shrink because of short pasture. If feed is delayed until the cows have materially decreased in milk and flesh the results from feeding will at first be disappointing and will continue so until the cows regain normal condition. This fact explains many of the apparently poor results from extra feeding.

The amount of feed necessary must depend on the cow's work, her condition, and what else she is receiving. In the average case three to five pounds of meal per day will suffice. At the present time it is often a case of taking what meal may be available and mixtures are almost out of the question. Oil cake meal seems about as good value as anything and less of it will do. It is a good milk producer, and is a splendid feed for sustaining and increasing body weight. If other feeds can be combined with it so much the better, but one pound of it per day even alone on short grass will go a long way in tiding the cows over a bad time.

The Western Fair is to be held in London from September 6 to 14. The management have added \$1,500 in cash to the prize list and this has been distributed throughout the different departments. The management are planning a larger and better exhibition than has ever been held before. The increase in the prize list should draw large entries in the live stock department. An endeavor is being made to have an exhibit put on by different branches of the Government. The process building will be entirely taken up by the Pure Food Show. Write the Secretary, A. M. Hunt, of London, for a prize list, entry forms, and detailed information regarding the show.



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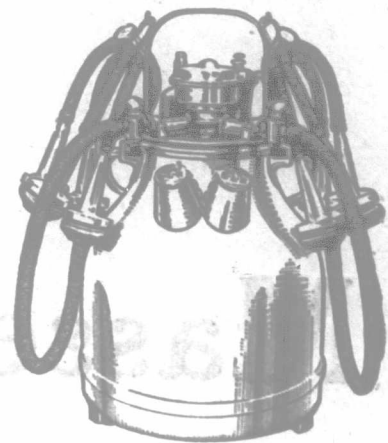
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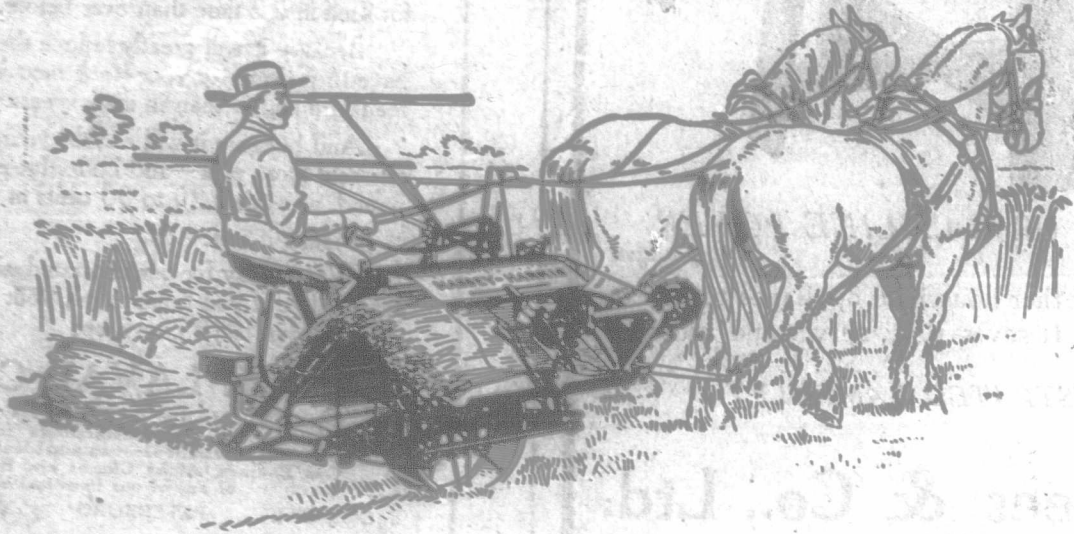
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