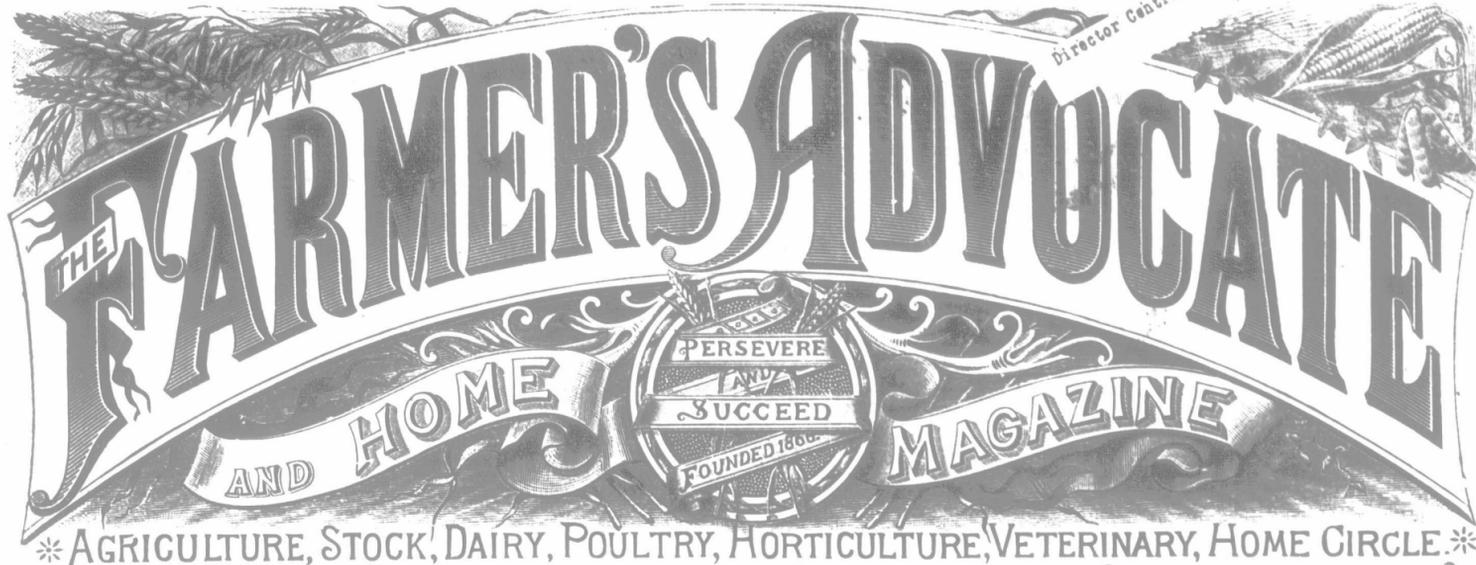


PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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

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Vol. LIII.

LONDON, ONTARIO, FEBRUARY 7, 1918.

No. 1324

Prompt Shipments Assured And Quality Guaranteed

Manufacturers, to-day, are laboring under difficulties, because of the scarcity of materials, shortage of labor and delays in transportation.

Notwithstanding these difficulties, we are able to assure good service, and can make prompt shipments of telephones and telephone materials.

We are maintaining the same high standard of quality in our telephones as we did before the scarcity of materials developed. The instruments we are making to-day are fully capable of sustaining our reputation as makers of the highest class telephones.



Five Bulletins

The No. 3 tells how to build rural lines.

The No. 6 describes our rural telephones.

The No. 5 describes our Presto-Phone Automatic Systems for large factories.

The No. 7 describes our small private systems for homes, garages, etc.

Everything we sell is guaranteed, and we carry everything required for equipping a complete telephone system, no matter how large or how small.

We are the only INDEPENDENT company manufacturing telephones in Canada for the INDEPENDENT operators, and as such solicit the patronage of all who have the interests of the INDEPENDENT telephone movement at heart.

Our prices are right.
Let us estimate on your requirements during 1918.

Canadian Independent Telephone Co., Limited

261 Adelaide Street West, TORONTO

WILL SILO FILLING TIME FIND YOU READY?

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

WRITE FOR FREE SILO FILLER BOOK TO-DAY

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

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

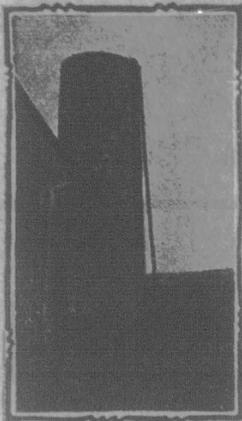
GILSON MFG. CO., Limited

389 York St, GUELPH, Ont.

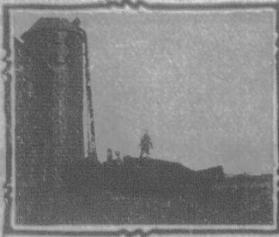
You need this **SILO FILLER**



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



"My Silo is 40' high, writes FRANK BOLTON, Guelph, Ont. but my 8 h.p. engine which I purchased from you nine years ago operates my 13' ensilage cutter splendidly, sending corn over the top in a steady stream. This outfit is the admiration of all who see it."



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



FRED HURTER's farm at Kitchener, Ont., showing his 8 h.p. Gilson Engine and 13' Gilson ensilage cutter filling his 30' Gilson Hylo Silo.



JACOB N. HART, Ridgville, Ont., writes: "The enclosed picture shows our 13' Silo Filler and 12 h.p. Gilson Engine hard at work filling our silo. This outfit works beautifully and is as much a part of every farm as a binder or mower."



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

GILSON TRACTOR

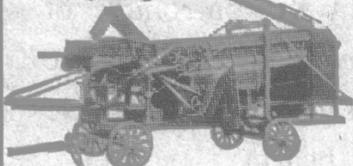


THE STANDARDIZED TRACTOR

—is a business machine designed along sound mechanical lines of proven worth, with no freak features. 15-30 h.p. Write for free catalogue and rock bottom prices. GILSON MFG. CO., LTD. 379 York St. Guelph, Canada 37

The Wonderful—Light-Running Gilson Thresher

"Goes like Sixty"



Saves Time—Money—Labor. Be independent of the gang. Keep your farm free of weeds. Do your threshing when you please with a 6 to 12 h.p. Engine and the Wonderful Light-Running Gilson Thresher. Furnished with or without Blower. Send for full particulars. GILSON MANUFACTURING COMPANY LTD. 489 York St., Guelph, Ont. 48

Snow Ploughs

FOR TOWNSHIP ROADS

Snow Ploughs for sidewalks Stone and Stump Pullers A. Lemire, Prop. Wotton, Que.

O. A. C. 21 BARLEY O. A. C. 72 OATS

which are the best yielders and most improved varieties now grown in Ontario. Our supply was grown on choice land and from selected seed, so is clean and true to name. Barley, \$1.75, Oats, \$1.30 per bushel. Bags free.

JOHN ELDER & SONS - Seed Growers Hensall, Ont.

The HYLO SILO

THE everlasting silo—yields 100% profit on the investment every season—sweet, fresh ensilage down to the last forkful. Exclusive patented features of great value—specially selected, imported material of the highest quality, and careful workmanship, explain why the Hylo is the choice of the most progressive and prosperous farmers in each community.

Write for free silo book to-day.

GILSON MFG. CO. LTD
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O.A.C. No. 72 Oats

Ten years' test at Guelph show a yield of over 17 bus. per acre over highest competitors. Use your pencil, 17 bus. at 85c. = \$14.45 per acre.

YOU CAN'T AFFORD TO SOW ANY OTHER VARIETY

Have good seed, testing 38 lbs., from registered stock. Price \$1.25 per bus. Sacks free. Samples sent.

ORDER TO-DAY

Transportation is likely to be slow.

W. T. Davidson & Son, Meadowdale, Ontario.



"HANDY" LONDON CONCRETE MIXER No. 4

Capacity, 40 cu. yards per day. Price, complete, with gasoline engine, \$225. Pays for itself in fifteen days' use. Built to last a lifetime. Send for catalogue No. 1 K.

LONDON CONCRETE MACHINERY CO Dept. B., London, Ontario World's Largest Mfrs. of Concrete Machinery



THIS ENGINE WILL COST YOU NOTHING

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

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

GILSON MFG. CO., Limited - 519 York St., GUELPH, Ont.



How Long Life is Built into Beaver Board

First big logs of spruce, then strong, clean spruce fibre, and finally sturdy panels without a crack, knot or blemish, make Beaver Board.

That's the right way to think of Beaver Board and when you think of it as knotless, crackless manufactured lumber you will realize its true worth as a building material.

You will then realize why it is so satisfying on walls, and ceilings, why it is warmer in winter and cooler in summer than lath and plaster and why it cannot crack.

You can nail Beaver Board directly over old papered walls and ceilings or to the studding of new partitions. You can saw it just like any other kind of lumber. Beaver Boarding is so easy, you can do the work yourself.

Our Department of Design and Decoration will gladly assist you in the planning of your home decoration. This is a free service that carries no obligation.

Write for booklet, "Building More Comfort into the Farm Home."

THE BEAVER COMPANY, LIMITED
214 Wall St., Beaverdale, Ottawa, Can.

Plants at Ottawa and Thorold, Ont.
Most Lumber and Building Supply Dealers carry Beaver Board. Write us for the name of your nearest dealer.



Made in Canada

BEAVER BOARD FOR BETTER WALLS & CEILINGS



These tools enable you to cultivate triple the acreage

They are so scientifically constructed that you can do 3 to 6 times as much as with old-fashioned tools in the same time, and get bigger and better crops because of more thorough cultivation. 45 years of practical farming and manufacturing experience is back of every Planet Jr. Fully guaranteed.

No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow sows all garden seeds (in drills or hills), plows, opens furrows and covers them, hoes and cultivates all through the season. A hand machine that does the work so easily, quickly and thoroughly that it pays for itself in a single season.

No. 12 Planet Jr Double and Single Wheel-Hoe is the greatest combination hand-cultivating tool in the world. The plows open furrows, cover them, and hill growing crops. The hoes are wonderful weed-killers. The cultivator teeth work deep or shallow. Crops are straddled-til 20 inches high; then the tool works between rows with one or two wheels. 24 styles—various prices.

S. L. Allen & Co. Philadelphia
Box 1108 F
72-page Catalog, free!

Illustrates Planet Jrs doing actual farm and garden work, and describes over 55 different tools, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet, and Pivot-Wheel Riding Cultivators. Write postal for it today; also name of nearest agency.



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If you require information regarding Life Insurance, but for any reason find it inconvenient to see an agent, you can complete the matter entirely by mail. Send your name, address, and date of birth to The Great-West Life, when interesting details of a suitable Policy will be sent by return of mail. Remember—to "put off" Life Insurance merely means extra cost when you do insure—with a big risk in the meantime.

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

Ask for a 1918 Desk Calendar—free on request.



"The Most Reliable Worker on My Farm"

My Alpha Gas Engine

THAT'S what Alpha users all over the Dominion are saying. Owners of Alpha Engines are getting real engine service. The more they know about engines, the more they appreciate the sterling qualities of the Alpha.

If you are without an Alpha, you are not equipped to do your share of Canada's farm work.

The Alpha never wants a holiday, and will work twenty-four hours a day if necessary.

You can overcome the lack of human labor by installing an Alpha Gas Engine. The Alpha does many kinds of work more quickly and more cheaply than it can be done by hand, and you can always depend upon it when you need it.

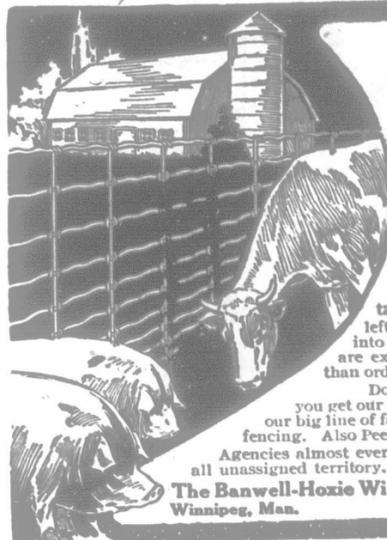
The sooner you get the Alpha working for you, the sooner it will begin to save its cost.

Alpha Gas Engines are made in eleven sizes, 2 to 28 H. P., and each size is furnished in stationary, semi-portable, or portable style, with hopper or tank-cooled cylinder.

THE DE LAVAL COMPANY, Ltd.

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

MONTREAL PETERBORO WINNIPEG VANCOUVER



PEERLESS PERFECTION

No matter how fast it comes, the most unruly animal can't break through a Peerless Perfection Farm Fence—it springs back into shape.

Made of heavy Open Hearth steel galvanized wire with all the impurities taken out and all the strength and toughness left in. Every wire is crimped making the fence into one continuous spring. Top and bottom wires are extra heavy. Will not sag. Requires less posts than ordinary fence. Absolutely guaranteed.

Don't buy a rod of fencing until you get our illustrated Catalog. Describes our big line of farm, poultry and ornamental fencing. Also Peerless farm gates.

Agencies almost everywhere. Agents wanted in all unassigned territory.

The Banwell-Hoxie Wire Fence Company, Ltd.
Winnipeg, Man. Hamilton, Ont.



Less Hogs, Cattle or Wheat will To-day Buy More MILTON BRICK Than Before the War!

MILTON BRICK

BUY TO-DAY—WHILE SLEIGHING IS GOOD.

Milton Pressed Brick Co., Limited

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



"I'm Off to Town, Is There Anything More You Want?"

YOUR son or daughter will be able to handle your shopping in town,—to take your produce to market, or to invite "hands" to the threshing or silo-filling, if you own a Ford. Furthermore they always will be glad to make the trips.

In doing these errands they take a man's place. They save your time—and that of a horse. This time saving means money to you, and again, a Ford, it has been estimated, costs less than two cents a mile to drive, or two-fifths of a cent a mile per passenger. The Ford is, therefore, much cheaper than a horse to drive. It is safer. It is more enjoyable. It requires less attention. It will soon pay for itself. The Ford is the farmer's utility car.

Ford

THE UNIVERSAL CAR

- Runabout - - \$475
- Touring - - \$495
- Coupe - - \$770
- Sedan - - - \$970

F. O. B. FORD, ONT.



Ford Motor Company of Canada, Limited
Ford, Ontario

Steel Rails

for Reinforcing Bridges and Barn Driveways.
CUT ANY LENGTH

JNO. J. GARTSHORE
58 Front Street West Toronto

BE YOUR OWN

BLACK-SMITH

FARMERS! SAVE REPAIR BILLS A VALUABLE TIME. ONE OF OUR BLACK-SMITHING OUT-FITS WILL PAY FOR ITSELF. CATALOG FREE

THE HALLIDAY COMPANY, LTD. HAMILTON FACTORY DISTRIBUTORS CANADA

The Aylmer Sprayer

The Only Spray Pump Without Packing

Trouble proof—works when you want it most.

Write To-day For Bulletin "F"

The Aylmer Pump & Scale Co., Limited
Water Street, AYLMEER, ONT.



PINE TREE BRAND



IT STANDS ALONE

Pine Tree Brand TIMOTHY SEED

GRADE NO. 2
PURITY NO. 1 AND EXTRA NO. 1
If your dealer cannot supply you, write
The Albert Dickinson Co.
SEED MERCHANTS
CHICAGO, U.S.A. Established 1855

Compare the SANITARY KING with all other Cream Separators

Then you will understand why so many farmers are using the "Sanitary King"

Built of the very best material, which insures long life. Stands solid, turns easy, close skimmer, splash oiling system, solid or detachable spindle. Capacities for from one cow to a large herd—operated by hand gasoline or electricity. Sold on easy terms if desired. Write for local agent's address. Try it before you buy.

King Separator Works of Canada
Bridgeburg, Ontario

Artificial limbs are admitted DUTY FREE. SOLDIERS and others should get the best

Erickson Artificial Limb Co., 30 Wash. Av., St. Louis, Mo.
Draw One Circle Overcoat or Draw One Circle of Shoes

Bax Legal Will Form has stood the test in the Canadian Courts. Don't take substitute. A Bax Will Form is simple, has full directions. You can't make any mistake. Ask for Bax at stationers, 35c., make your own will at home.

BEEES WANTED

Twenty-five or more colonies. Full particulars required. Might consider a good proposition of working an apiary on shares.
R. A. FOWLER, MOOREFIELD, ONT.

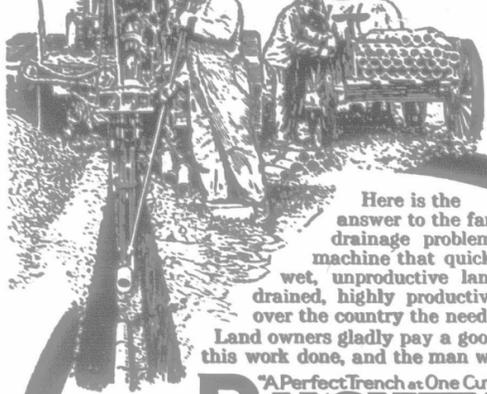
O.A.C. No. 72 Oats

Good, bright seed, testing 40 lbs. Price \$1.00 per bushel.

JOHN THOMSON, Simcoe, R.5, Ont.

Seed Oats—O.A.C. 72—Grown from pure seed; \$1.75 per bus. Bags free.
THE POTTER FARM
R. D. Potter, Mgr. Essex, Ont.

Ditching Pays Big Money!



There's Unusual Opportunity Now for Useful Service to the Nation and Large Profits for Yourself.

Here is the answer to the farm drainage problem—the machine that quickly turns wet, unproductive land into well-drained, highly productive fields. All over the country the need exists. Land owners gladly pay a good price for having this work done, and the man with a

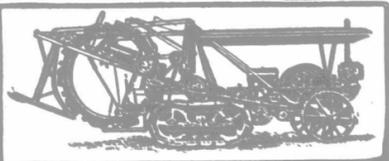
"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

easily cleans up an average of from \$15 to \$25 a day. Contract ditching with a "Buckeye" is a highly profitable business, practically without competition as the machine does more ditching in a day than 15 men by hand and the finished trench is clean and true to grade. You cut from 100 to 150 rods a day, winter as well as summer, and you deal with a reliable class of people who are able to pay their bills.

Mr. Mann's experience is a fair sample of what "Buckeye" owners all over the country are accomplishing. He says:—

"I certainly think the Buckeye Traction Ditcher is O.K. or I would not have bought my sixth one. We have dug from 30 to 300 rods in 10 hours, according to soil and depth. We consider 130 rods an average day's work. A man can make more money with a Buckeye than with the best 100 acre farm I know of. C. G. MANN, Washington, C. E. Ohio.

We invite you to make a thorough study of this subject by sending for the instructive literature we have prepared. We have a Service Department who can show you how to get started at this business and how to make it pay big from the very first. Just write us that you are interested and we'll send you full particulars free.



The Buckeye Traction Ditcher Co.
201 Crystal Ave.
Findlay, Ohio

Haul A Load Each Way

Crops must be hauled to town, and fertilizer must be hauled home.

Why Not Combine the Trips?

When you take a load to town
Plan to haul
a load of



SPRING FERTILIZER on the return trip

Play safe and get your fertilizer stored in your own barn. War conditions have decreased the supply of fertilizer, and increased the demand. Late orders may be disappointed.

Co-operate With Your Dealer

Few dealers have sufficient storage space to carry large fertilizer stocks on hand. Shipments in less than capacity car loads—40 to 50 tons—are discouraged—even refused.

Co-operate with your dealer—place your order now—enable him to combine orders and make up a full car load. When your car arrives haul as soon as possible—on one of your return trips. Take part of the fertilizer directly from the car if you can. Hasten unloading—free the car for other uses.

Order Spring Fertilizer NOW

Make certain of your supply and at the same time do your part toward relieving railroad congestion.

Send for literature to Department 40

Soil Improvement Committee of the National Fertilizer Association

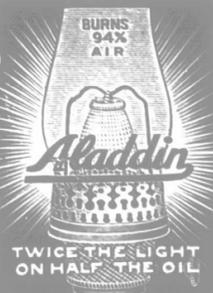
Postal Telegraph Bldg., Chicago The Munsey Bldg., Baltimore

New GOAL OIL LIGHT FREE BEATS ELECTRIC or GASOLINE

Here's your opportunity to get the wonderful new Aladdin Coal Oil Mantle light FREE. Write quick for particulars. This great free offer will be withdrawn as soon as some distributor starts work in your neighborhood. You only need show the Aladdin to a few friends and neighbors; they will want one. We give you yours free for this help. Takes very little time, no investment. Costs nothing to try the Aladdin 10 nights.

Burns 70 Hours on One Gallon

common coal oil, no odor, smoke or noise, simple, no pumping up, no pressure, won't explode. Tests by Government and thirty-five leading universities show the Aladdin gives three times as much light as best round wick flame lamps. Won Gold Medal at Panama Exposition. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Guaranteed. And think of it—you can get it without paying out a cent. All charges prepaid. Ask for our 10-day Free Trial Offer and learn how to get one free. MANTLE LAMP COMPANY, 233 Aladdin Building, MONTREAL Largest Coal Oil Mantle Lamp House in the World



"Phonola"

REGISTERED

a better instrument for less money

Because we make our own cabinets, sound boxes, tone arms and motors in our own two specially equipped factories right here in Canada, saving duty and middlemen's profits, you are enabled to get the "Phonola" for \$10 to \$25 less than other high-class phonographs.

There is no finer sound box made than the "Phonola Angelus." It reproduces with absolute fidelity and splendid volume.



Model Duke \$90

Our motors wind easily, run noiselessly. Our cabinets are of rare beauty and finish, the designs being copyrighted and exclusive to the "Phonola."

Hear and see the "Phonola." It will prove its own value. Models from \$18 to \$250.

DEALERS are finding the "Phonola" becoming more popular every month. If your town is unrepresented write for our proposition.

The Pollock Manufacturing Co., Limited
Kitchener, Canada

MORE WORK FROM YOUR HORSES

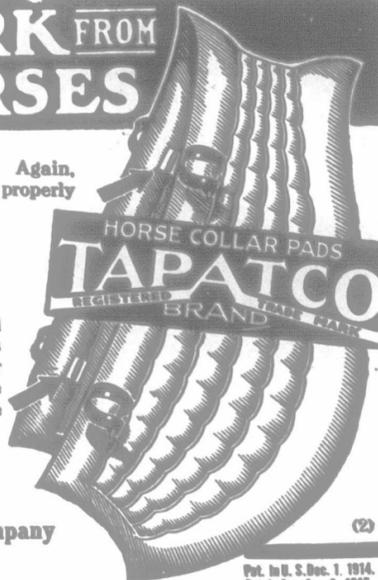
The use of collar pads is humane. Again, your horses will do more work if properly protected by the right kind of pad. TAPATCO is the right kind.

A NEW AND BETTER HOOK ATTACHMENT

Consisting of wire staple, reinforced with felt washer (note where arrows point). This gives the hooks a better hold and prevents pulling off. The weakest point is made strong and life of pad greatly lengthened.

Look For The Felt Washer.
SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Company
Chatham, Ontario, Canada



Pat. in U. S. Dec. 1, 1914.
Pat. in Can. Apr. 6, 1915.

100-ACRE FARM \$6,500

With 17 Acres Fall Wheat, 3 acres Hardwood Bush

Solid brick house, 9 rooms, good cellar, new garage, school 1 mile; 70 acres workable, 2 acres orchard, bank barn 60 x 48, good stabling, driving house 98 x 24, windmill and hen house. Church 2 miles, 5 miles from town of Acton, a good live town of 2,000 population. Has electric and steam railways. Toronto 40 miles, Guelph 12 miles. Good roads for motoring. Write for New FREE catalogue and bulletin of 750 farms to—

THE WILLOUGHBY FARM AGENCY
Dept. 400, GEORGETOWN OR GUELPH, ONT.

War Flour Good Flour

By Caro M. Brown,

Chemist—Lake of the Woods Milling Company Limited

IN the interest of food conservation, it has been proved most economical to insist upon a standard loaf of bread from all bake-shops, and this is only possible when a standard flour is manufactured. In order to effect this standardization of flour all over Canada, the Government requires that the mills make not less than 74 per cent flour from wheat, that is 74 pounds of War Flour is to be made from 100 pounds of wheat. This is only very slightly more than most mills are already extracting.

Not "Graham" Flour

The slight increase of flour extracted will be true flour, and not bran or dust. Formerly this slight amount of flour had been allowed to go into the feeds for animal consumption, but when every grain of wheat counts as it does now, this is too extravagant a practice. There need be no apprehension as to the quality of Government Regulation flour. It is NOT to be "Graham," nor even so called "Whole-wheat" flour, and it is NOT flour mixed with Bran and Shorts. It will be simply pure flour as taken from the wheat berry, purified and sifted exactly as in the past; but, instead of several grades, such as FIVE ROSES, HARVEST QUEEN, LAKEWOODS, etc., being separated, all the flour will be blended together and only one brand will be on the market.

Colour More Creamy

The War Flour will not have quite the white colour of FIVE ROSES, but for all practical uses it will give identical results in baking. Flavour, texture, general appearance and nutritive value will not be impaired in any way.

Excellent Baking Results

Foreseeing that some regulation of this sort was imminent, we have been trying out in our Laboratory recipes for Bread, Cakes and Pastry, using the new "War Flour," our idea being to ascertain if any modification of present methods should be adopted. There need be no fear that the new flour will make unpalatable bread, cake or pastry. We were more than pleased with the results, and found that for bread no variation seemed to be necessary.

Some Suggestions for Housewives

In making pie crust and puff paste we have obtained the best results by using very slightly less water than with FIVE ROSES. The crust was flaky, crisp and well-flavoured. For cake, we followed exactly the same recipe in using FIVE ROSES and the War Flour; the cake from the War Flour was equal to that from FIVE ROSES in lightness and texture, was excellent in flavour and of a rich, creamy colour.

As the War Flour will be rich in gluten, care should be taken in making baking-powder biscuit and pastry not to work it or handle it any more than is absolutely necessary, as this toughens the gluten, resulting in a texture less tender and flaky.

It will require a little study and ingenuity on the part of each housewife to adapt her favourite recipe to this flour, but the little time given to this will be more than repaid by the results obtained.

Lake of the Woods Milling Company Limited

Makers of Five Roses Flour

Montreal - - - Winnipeg

FIVE ROSES IN KHAKI.—To conserve wheat so essential to the Allied Cause, your favorite brand is now being milled according to Government Regulations. But the name "FIVE ROSES" which, for over a quarter century, has been a positive assurance of quality is still your protection. Users of "FIVE ROSES Government Grade" Flour are assured of the best available flour under all conditions. Fortunate possessors of the famous FIVE ROSES Cook Book can bake with the new FIVE ROSES with practically no change in their present recipes and in the certainty of excellent baking results.



The Farmer's Advocate and Home Magazine

PERSEVERE
AND
SUCCEED

ESTABLISHED
1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

LIII.

LONDON, ONTARIO, FEBRUARY 7, 1918.

1324

EDITORIAL.

Canada should have no idle men in 1918.

When stockmen get together they get results.

There is no use making a peace that cannot be maintained.

You cannot plow or cultivate now, but you can plan and repair.

The surest method of hastening peace is to prepare to go on with the war.

The big outfit with one man will be the rule this year, instead of two outfits and two men.

All organization for greater production in 1918 should be under way now. An early start is half the battle.

Lloyd-George says, "if the Allies are short of food it is because the farmer is handling a rifle to defend his country, instead of the plough."

It is possible for one seed of oats to produce 100 bushels in the third year. The careful farmer is sure that his seed is of the best variety.

Short tests do not mean as much to the experienced dairyman as long-term tests. Long-distance producers are the cows which make the herd valuable.

The task of a Food Controller is more or less a thankless one. It is not without difficulty that producers and consumers are pleased at one and the same time.

The man in the country feels the thing called the high cost of living too and perhaps just a little more than his brother in the city, because he has more to buy.

Threshing gangs would allow the farmer two weeks to work on his own farm in the fall, instead of his having to "go threshing" for those two weeks, leaving his team idle.

The successful feeder studies his animals individually and in his barn there never is any feed left in manger or troughs and yet the stock are all fed to the satisfied stage.

When feed is high cull flocks and herds closely. Heavy producers pay better now than ever before while the boarder cows and hens are more costly than ever.

Sheep breeders should be careful to watch their interests and not allow textile manufacturers to gain an undue advantage through the embargo route or other means.

Increased freight rates would mean an extra burden on the people of Canada of about forty million dollars, about twenty-five millions of which would go into the coffers of corporations now making good returns and paying satisfactory dividends.

In some Canadian cities drastic action has been taken to prevent farmers from getting coal and in some places farmers have been refused coal tickets. Some people do not seem to realize that thousands of farms have no wood on them and that the people living on them are just as dependent upon coal for fuel as are those living in cities. Moreover, on many farms labor is not available to cut a supply of wood on short notice. City Fuel Commissions should take these points into consideration.

Farm Labor Must be Had.

We have grown so accustomed to reading headlines after the following style: "Food Will Win The War," and "The Farmer Holds the Second Line of Trenches," that many of us pass over them without a second thought much as we do the hundreds of war headlines which we read from day to day and forget just as regularly when the next "extra" comes off the press. But we should not forget. The year 1918 will be more than ever a testing time for the farms and farmers of North America. It becomes more apparent daily that food will win this war and, this being true, it bears out the statement that the man honestly working on the land holds the second line of defence, and to his lot falls the duty of producing that which will send the first line over the top and on to glorious victory. Food is necessary to maintain the strength and morale of the army. It is also necessary to maintain the morale of the people at home. A nation insufficiently fed cannot fight its best, nay it cannot even fight well. America, closer to Britain, France, Belgium and Italy than other food-producing nations such as Argentina, Australia and India must, because of scarcity of transport space, do its utmost in 1918. More food for the shortest haul should be the motto. Canada, per capita the heaviest producing country in the world, must do better than ever before. The new United States army of over a million men will make great calls upon the food supplies of that country. Canada must put forth the greatest possible effort. The land is everywhere abundant in this country but laborers are few. The time is short in which to act. If food will win the war, then the man who conscientiously works his best to produce food is doing his country's work. Millions of men on the firing line without rations would be just as helpless as millions without arms and ammunition. Food is also absolutely essential for the people who carry on industry in the countries of the Allies. Men, women and children comprising the civilian population of the Allied countries must be fed. The farmer is in the fight. The farm laborer is in it too, whether on the farm or at the front. True, a large number have left the plow for the rifle, perhaps too many, but that is not for us to say. The thing to be done now is to organize for a big effort this year. The extremity of the nations demanded that Canada conscript men to fight the battle of Democracy. Has it reached the stage where it is found necessary to change the occupations of other men? If so let it be done. If not, let us give up the dream of greater production in Canada for it cannot be reasonably expected that with an average year the crops of this country can be very greatly increased unless more farm labor is available. There should be no idle men in 1918. There should be no men working at unnecessary industry if we are on the verge of starvation. Recruit for the farms if it will result in supplying the necessary labor. If not, then there is only one road open, conscript for food production. Remember Canada is peculiarly situated. One man on the land here is worth, in actual production, from six to ten men in the older countries because we have the acreage to grow cereals, and cereals are needed. The cry is for food. Farmers, as a class, are doing all they can with the help available. The few who slink under the circumstances do not matter. It is obvious then that greater production, if it is to be accomplished, requires more men, women, boys and girls on the farm. It is the Government's duty to secure the supply before it asks for increased production. It is then the duty of farmers, once the supply is available, to use it to the best advantage, to be fair and considerate and do all possible to make the new arrangements a success. This country is in a war which must be won. We are told that food will win it. The boys at the front have never shirked their responsibility. The Government and the people at home are surely not going to flunk now. A fair, square deal is all farmers and those who might be taken as farm laborers ask. Those at home

work on a little different basis from the men at the front. There are many industries here. "Out there," there is only one job. Here each industry will expect fair treatment according to its value to the nation in the war. Industry must not be too badly upset, but neither must our brave boys, our Allies with their women and children, and our own people starve. What action will be taken? The time grows short. Canada's duty is plain. The help must be had to produce food.

Canada's Billion-dollar Live-stock Industry.

The crisis in the Great War is turning thought toward food production, and Canada's part is this end of the game. Canada is a country of fertile acres. In a pinch cereals and other farm crops are more essential than meats to save people from starvation. But our live-stock industry must be preserved and pushed forward to meet after-the-war demands as well as to supply meat and necessary fats while the war is still in progress. No sane man would say kill off all live stock and grow only wheat and oats. On the other hand, he would advise the growing of all wheat and oats possible, while our live-stock breeders "carry on" in live stock and endeavor by breeding the best and culling out the inferior to keep the industry to the front and in a state to emerge from the war in a position to be a real force in the reconstruction to follow. At present there is an urgent call for more pork. The meat and fat supply can be increased through pigs more quickly than through any other class of stock, and that is why they were chosen for the special call. More cattle and more sheep are needed also, and not only more, but higher quality stock.

The breeders of pure-bred stock have worked untold good for this country, but there task is only begun. There are too many grade and scrub sires still in use. There are too many inferior breeding females which do not pay their way still on the farms, and yet we have not enough stock—enough of the right kind. World depletion of live stock is in daily progress. Since 1915 there has been a decrease of over 115,000,000 head, of which over 50,000,000 head have been cattle and the remainder almost equally divided between sheep and swine. Canada, since 1914, has shown a decrease of 31,000 milk cows, 38,000 other cattle, 49,000 sheep and 921,000 hogs. The Canadian live-stock breeders have a big task ahead, but they are big men and, when big men get together as they are doing this week in Toronto, no problem is unsolvable. Now is the time for Canada's live-stock breeders to get together, to further organization, to improve their own herds and flocks through the use of the best available sires and to induce those using grades and scrubs to discard them for the better. Never was a choice sire so valuable as he is to-day, and never was a scrub at the head of a herd or flock such a curse. Community breeding should be promoted now so that the influence of the few choice sires might be more widespread. A recent dairy investigation revealed the fact that nearly 50 per cent. of the sires in use in a good dairy district were grades, and one-third the remainder scrub pure-breds. A similar state of affairs likely exists with other classes of stock. Now is the time for members of a community to decide on a breed, buy a good sire and a few foundation females and get a start on the right road. A world shortage of live stock is imminent. Will Canadian breeders be ready? Working together will help.

Canada's live stock to-day is worth over one billion dollars. Roughly, we have three million horses worth 420 million dollars; six million cattle worth over 480 million dollars; two million sheep worth 40 million dollars; three million hogs worth 45 million dollars, and twenty-eight million hens worth 28 million dollars. A total of 1,013 millions of dollars. Truly the live-stock industry is a great industry. It is a billion-dollar in-

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

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dustry, but it might be doubled and quadrupled. Choice pure-bred mares are worth \$200 to \$300 each, yet we figured the horses of Canada at less than \$150 each. Cattle we figured at \$80 each, when if all were choice we might have almost doubled the figure. These only indicate the need for more quality. Then as to numbers—according to the area of Canada and its suitability for live-stock production only the fringes of the business have been touched. Live stock makes crops. The older-settled portions of Canada would fail without it. The fertility of the soil largely depends upon it. Such an essential and large industry so closely connected with all lines of farm production is also closely linked up with manufacture and transportation. Dominion-wide live stock organization is necessary. The size and importance of the industry demand it. There is a reason for such meetings as are being held in Toronto this week. A billion-dollar industry speaks.

Do You Favor Threshing Gangs?

It has been suggested that the Provincial Government in Ontario make arrangements to send out threshing gangs next fall consisting of sufficient men to operate the outfit complete and do the farmer's threshing without his having to call upon his neighbors for help. Such a suggestion is worth thinking over and while on the subject the advisability of a similar arrangement for silo filling might be considered. Threshing and silo filling come at a time when the farm teams should be busy preparing land for the following season's crop and any extra farm help should be gathering in such crops as roots, potatoes, apples, etc. and getting the odds and ends cleaned up before the approach of winter. Speaking from experience we have no hesitation in saying that fall is one of the busiest seasons of the year on the farm. Then too there is "harvest threshing" which under our present system takes men away from their own harvest to help a neighbor so that he may safely house the remainder of his crop. The whole is a problem which must be faced now that the average farm is worked by one man only and that the proprietor. On the average the Ontario farmer spends about twelve days or

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two weeks of his valuable time helping his neighbors thresh. We certainly favor changing work where such is necessary and up to the present it has been necessary for threshing, but the Department of Agriculture has suggested helping out with threshing gangs and the suggestion is worth thinking over. Can you afford to pay the price of the gang threshing by the bushel? On the other hand, can you afford to stop your team twelve days while you help your neighbors thresh, if you can get the threshing done by outside help? There is your question. For the machine and two men you have paid \$20 per day, which seemed a lot of money, but few threshers have grown well off. By the time most of the machines are paid for they are worn out, and some go to the scrap heap before they are out of debt. Gang threshing would have to be done by the bushel, and the cost per day would be much higher than formerly in actual dollars and cents, but the system would save two weeks of your own time to work on your own farm. Twelve days with the plow in the fall are worth something. How much? If you drive three or four big horses on a two-furrowed plow you would probably plow forty acres in the time you would otherwise have been threshing for your neighbors. If you use a single plow and two horses you would probably manage to turn over twenty acres. This would be a big boost to the fall work, and the chances for a good crop the following year. And in those districts where silos are plentiful silo filling takes almost as much time as threshing in the fall. Gangs might help out at this work too. It is a new idea and, of course, some will find weak places in such a method. The cost will seem higher, and if tried those who make the price should be careful to get it fair at the start. The scheme will not be a success if too high a rate is set. Moreover, producers should be willing to pay a reasonable and fair charge. Then, too, there are places where the old system is working well and others have their own small outfits for threshing. All these facts must be considered. Besides the success of the scheme also depends largely on the managers of the several outfits. It would be wise to utilize as far as possible those men who have operated threshing outfits of their own as head men in the various gangs and have them thresh in districts where they are known. What do readers think of the scheme?

Too Many Scrub Dogs.

Never was there less excuse for allowing worthless mongrel dogs to go on living, consuming food and often destroying valuable stock, than at the present time. The bane of the sheep breeder has been and still is the wandering, half-starved village or town dog, which goes on a rampage, is followed by other innocent dogs which are so led astray that the lot often do irreparable damage to flocks of sheep, upon which years of constructive breeding have worked wonders, all to go to nought at one terrifying chase from the savage band led by the valueless mongrel. No one has more admiration for a good dog than has the writer. A good dog is a true friend, but a large percentage of the dogs of this country have no real reason for existing and they should be put out of misery by the quickest and most humane known method. Sheep are more needed now than ownerless dogs. The tax on females of the dog race should be raised so high that nothing but the useful, well-bred and those with good homes remain, and the tax on males should be set at a rate which would do away with all but those dogs of value as workers or well-bred pets. Farm dogs are often led off by bands of wandering dogs and help with the mischief done. The careful dog owner will see to it that his dog is shut in or chained every night. A working dog is useful on most farms but most of the town and village wanderers could be done without to the advantage of everyone. The smaller pet dogs do no harm and being house hogs do no wandering. These have their place and interfere with no one but their owner. No

person should keep a dog unless he can feed it and house it well and thousands of useless curs are harbored which should be humanely done away with. A little more drastic action is necessary to abate the dog nuisance. Start now and save the sheep. A reliable gun is a handy weapon for the sheep breeder to keep on a high hook in the corner of the kitchen. With wool scarce and meat going higher all the time, sheep are worth more than useless dogs and the feed these dogs eat is needed for other animals.

Seeing New York.

BY SANDY FRASER.

If I mind right I said I'd tell ye some more about my trip tae New York, so I may as weel be daein' it noo while I hae a little time tae spare. The next place Jennie and I went tae, after we were at the jeweller chap's where I tried tae buy the ring, wis to a sort o' an art-gallery on the same street. Fifth Avenue I think they call it. It's a fine place is Fifth Avenue, but I'd advise ye, the day ye are gaen' tae visit it, tae forget yer purse. If ye carry ony money wi' ye they will hauld ye up an' tak' it from ye. It's on Fifth Avenue that the millionaires live, so ye may know what to expect. However Jennie and I went intae this art-gallery that I mentioned an' we saw some vera fine pictures, no mistak'. A few o' these pictures had been painted by men who were in the trenches in France and a chap who was showin' us around asked us if we wouldn't like tae buy one or two o' them. "We will sell this one," says he, pointin' tae one aboot as big as a post-card, "for fifteen dollars, and this one", showin' us anither a little bigger, for thirty-five." After we were oot on the street I says tae Jennie, "they say artists are generally poor an' I can weel believe it if they all ask prices like that for their pictures. Dae ye suppose they'll sell one in a century at those prices?" says I. "O yes", replied Jennie, "they'll sell them all right. Ye must remember ye're not vera well acquainted wi' New York yet Uncle Sandy," says she.

The next place we went to wis the Natural History Museum. This is where they keep samples o' everything that ever was made, as weel as patterns for a lot o' things that they must be intendin' to make at some future time, I'm thinkin', for I never saw or heard tell o' them before. For one thing there wis a chunk o' iron or some kind o' metal that wis supposed to hae fallen on to this earth frae one o' the stars, and which was picked up in Africa, a chap told us. "Weel", says I to him, "for my part I'd rather see the man that picked it up than the thing itself, if it's true that ye are tellin' us aboot it weighin' thirty-six tons." There wis aboot a million ither things there waitin' tae be looked at and Jennie and I stayed till dark, when they pit us oot. We hadna' time to tak' mair than a glimpse at this an' that. If one lived a wee bit nearer to New York it wad be an unco' fine place tae spend the stormy days.

That night after we'd got back to the hotel Jennie says tae me, "how would ye like to go to the theatre this evening, Uncle Sandy?" "Fine", I replied. "But if wegoddinna tell yer auntie on me, for she doesna think muckle o' the theatre, especially for an auld married man like myself. She's doon on them for she's never been at one, ye see." "Weel", said Jennie, "in New York the theatre is an institution. In fact the way some people here put it is that the Church is an 'institution' and the theatre is a 'force'. And na doot for New Yorkers there's some truth in it. It's the theatre that draws the crowds, onyway." Which last I found oot for myself before the night was over. The first item on every program, in the cities across the lines, these days is the singin' o' "The Star-Spangled Banner." Everybody is supposed tae stand up an' say it if ye canna' sing. Ye've got to stand onyway. I wis mighty slow in comin' to my feet that night, an' Jennie says to me, "get up, Uncle Sandy, or they'll pit ye oot." "Weel, if it wasn't for the curiosity I hae to see what's behind that curtain I'd go," I replied. "But I dinna like that tune" I went on. "Ye should juist hear 'God Save the King!'"

The play was fine but I'm not goin' tae tell ye muckle aboot it. Na doot ye can still see it for yourself if ye go to the city, for they run a good play twa or three months sometimes. As we were comin' oot that night a chap juist ahead o' me says to his girl, "Weel, the theatre is some educator, believe me." And if it's what makes an impression on ye that educates ye, I'm willin' tae admit that there wis some truth in his remark. What gets tae ye by way o' yer eye as weel as yer ear is apt to stay wi' ye for some time.

And for onyone that has ony curiosity to see some o' New York's "Four Hundred," that we hear aboot noo an' again, the theatre's the place tae go. These "Gold-bugs", as they call them, dinna care to associate wi' the common herd, sae they hae wee box-stalls for them all around the first gallery where they can keep by themselves an' look doon on the ordinary people below them. They all hae their opera-glasses for the purpose o' examining the kind o' dresses the women in the ither box-stalls have on. From what I could mak' oot frae where I was they needed their glasses all right tae see ony dress at all on maist o' them. A few diamond bracelets an' a necklace or twa an' they're dressed for the theatre.

The next day I wis doon in what they call the "East End." Ye don't see mony diamonds doon there. It wis coal they were thinkin' aboot, tae keep themselves frae freezin'. Coal is unco' hard to get in New York this winter an' the poor people have their own time o' it, I can tell ye. I saw aboot twenty men an' women at one place, some o' them wi' wee floursacks, beggin' for

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fifty or a hundred pounds o' coal to keep them goin' for two or three days. It wis ten below zero that day an' it wad mak ye sorry tae see them. There are those in the city that ken what hard times are, a'richt. They dinna a' belong to the "Four Hundred."

An' talk about yer lang hours. It seemed tae me they never stopped workin' there. They were at it when I went tae bed, which wis late enough sometimes, an' they were at it when I wakened up in the morning. However, I suppose it wouldna be the same crowd. I mind one morning I wis lying in my bed, not quite half awake, an' I heard someone ootside callin'. I forgot where I wis, an' the time o' the year it happened tae be' an' thinks I, "there's someone callin' the coos. It's time tae get up." So I rolled oot, but when I got right awake I found it wis a chap doon in the street sellin' the mornin' papers. I went back to bed for anither snooze, but some way the thing pit me in the notion o' hame, an' I made up my mind that I'd seen about all o' New York that wis good for me at the present time. So, tae sort o' wind the thing up, Jennie and I went that day to the park where they keep samples o' all the snakes, birds, beasts and fishes that hae been made up tae the end o' 1917. But I canna tell ye about them all. It's like the theatre, ye'll hae to see it for yersel'.

That night I took the train for hame an' twenty-four hours later I wis back on the job again. It's no' the worst place in the world, is the auld farm. I saw a good deal while I was awa' but I didna' see anything tae beat it. I'll say that. The city's all right for a week but I dinna see how they stand it the year round. I suppose it's like Paddy's auld joke about the hanging. They get used tae it.

Nature's Diary.

A. B. KLUGH, M. A.

Canada From Ocean to Ocean—VI.

When we pass north of the line drawn from Ottawa to the middle of Georgian Bay we are in another of the great divisions of Canada considered from the standpoint of its fauna and flora. We are on the southern border of a region which extends as far north as the point at which James Bay joins Hudson Bay, a region in which the characteristic trees are Spruces, Firs and Jack Pine. In this region are many animals which do not occur further south, and some which have their centre of abundance in this region but whose range extends some distance south of its southern border. Among the latter are the White-throated Sparrow, Porcupine and Varying Hare.

The Canada Lynx is a characteristic animal of this region. This species very rarely occurs to the south of the above-mentioned line and most of the so-called Lynx from Central or Southern Ontario are really Wild Cats, the distinction between the two species being frequently over-looked by trappers and sportsmen. The Lynx is somewhat lower set than the Wild Cat and has larger feet, but the main distinctions are that in the Lynx the tail has wholly a black tip and the rest of the tail is grayish-white, while in the Wild Cat the tail is black above at the tip and white below and has several broken bars on the upper part, and that the inner side of the legs is marked with bars in the Wild Cat while they are plain in the Lynx.

The main food of the Lynx is the Varying Hare, and when the periodic diminutions in the abundance of this animal, due to disease and internal parasites occur, the Lynx population is often reduced by starvation. The Lynx also feeds on the Spruce Grouse, other ground birds and small rodents, and when pressed by hunger will attack deer. The Lynx is sometimes termed "the Shadow of the Northern Woods," an extremely appropriate name because of the manner in which it can

silently appear and disappear by reason of its coat of inconspicuous gray and the silent tread of its large turry feet. The cry of the Lynx is a terrific and blood-curdling screech, and when heard in the forest at night is enough to make the heart of the boldest voyageur flutter for a moment.

Another mammal of this zone is the Marten. In general appearance this animal is of a rich, dark yellowish-brown, shaded into blackish on the tail and legs and into gray on the head, with ear linings of dull whitish and with a large irregular patch of pale buff on the throat and breast. When seen in the trees it gives the impression of a large, dark squirrel with white ears and a yellow throat and on the ground it looks like a dark-colored young fox. The cries of the Marten are a growl, a hiss and a snarl.

The Marten belongs to the Weasel Family and it is the most arboreal of the members of this family. It delights in climbing from crotch to crotch, or scampering up and down the long branches with endless power and vivacity, and it can catch the Red Squirrel in its favorite haunts among the trees unless the latter manages to get into a hole into which the Marten cannot follow it. In habits it is both diurnal and nocturnal, hunting either by day or by night as the fancy takes it.

The food of the Marten consists of Hares, Squirrels, Chipmunks, Mice, Shrews, birds and birds' eggs, frogs, toads, fish and insects, and also to a limited extent it eats nuts, berries and honey.

The Marten is one of the first animals to disappear from a locality as soon as any settlement takes place, as it is a lover of the dense forest and keeps away from clearings.

The Moose is another mammal characteristic of this region. This animal which is of considerable importance as a source of meat supply in this zone, often attains very large proportions, the largest on record, which was killed at Mattawa, measuring seven feet four inches at the withers. The usual height at the withers is six feet. The food of the Moose consists of twigs and leaves of hardwoods, its favorite being those of the Striped Maple which is a common shrub or small tree in this region. They also eat grass, straddling to reach it if it is low. They usually rise and feed at dawn and about sunrise they lie down and chew the cud until ten or eleven o'clock. Then they feed until two o'clock, again lie down until four or five o'clock, then feed until dusk, when they lie down for the night.

Other mammals characteristic of this zone are the Varying Hare, Canada Porcupine and in the more northern portions the Woodland Caribou.

Among the birds which characterize this region are the Canada Jay, White-throated Sparrow, Spruce Grouse, Olive-backed Thrush, Three-toed Woodpecker, and White-winged Crossbill. Of these the White-throat is also found breeding farther south, but its centre of abundance is in this zone.

The Canada Jay is often called "Whiskey Jack" and "Meat Bird". The former name is a corruption of the Indian Name "Wis-ka-tjan" which sounds so much like "Whiskey John" that "Whiskey Jack" followed naturally. "Meat Bird" is due to its habit of picking up bits of meat about camp and also of perching on and pecking at the carcasses hung in the woods. This species is a very early breeder, laying its eggs early in March, the young being hatched out when the temperature is sometimes below zero. Its nest is bulky and cup-shaped, made of twigs, moss and grass and warmly lined with feathers.

The Spruce Grouse is about the size of the Ruffed Grouse, the main color being black, barred and spotted on the lower parts with white.

THE HORSE.

Incised Wounds—II.

When bleeding has been arrested, as discussed in a former issue, or in cases where bleeding has not been excessive, and required no special treatment, all blood clots, dirt and foreign bodies of all kinds should be removed from the wound by carefully sponging with warm water, to which has been added carbolic acid or one of the coal-tar antiseptics, or other good disinfectant. In sponging a wound care should be taken not to injure its surface by undue pressure. It is quite sufficient to squeeze the water out of the sponge and allow it to flow over the wound, the sponge not being brought in contact with the tissues. If any materials are firmly imbedded in the tissues, they should be carefully removed by the use of forceps or the fingers. Cleaning a wound by using a coarse brush cannot be too highly condemned. The wound should be carefully examined, and, if the instrument that inflicted it has penetrated the muscular tissue to a lower point than the skin is severed, thereby forming a sac or pocket, from which serum or pus cannot escape, the opening in the skin must be enlarged to the lowest point of the wound in the muscles; or, if the difference in depth be considerable a counter and independent opening should be made through the skin and underlying tissues to connect with the lowest point of the wound in order to allow effective drainage. It is seldom this condition exists in incised wounds. Having observed the above preparations, the wound is now ready to be sutured or stitched. The materials used for sutures are many. The best is carbolized catgut or silk, which can be purchased ready for use from dealers in veterinary supplies, but for suturing the skin ordinary shoemakers' hemp, slightly waxed with beeswax, answers the purpose well. A suture requires to be strong, at the same time soft, as fine, hard sutures more readily cut through the tissues and skin if there be any considerable tension. The needle should be a curved suture needle, but where one of these cannot be procured a large darning needle can be used. Various forms of sutures are employed, as the uninterrupted, the interrupted, and the quilled. The first, as the word indicates, is that in which the whole wound is sutured without the suture thread being severed; the stitches are continuous, as a person would stitch a rent in a garment. This form is not used except in cases where there is absolutely no tension, or in some cases in suturing an internal organ. The interrupted suture is generally employed. This is where each stitch is tied and the thread severed, thus rendering each stitch independent of the others. This is the favorite suture from the fact that one stitch may be severed or torn out and the others not thereby interfered with. When the wound is a transverse one and the gaping considerable, the tension upon the sutures will be in proportion and in some cases this is so great that there is danger of the sutures tearing through the tissues quickly. In such cases the quilled suture is often employed. This consists in a double thread being used; they are tied together, the skin pierced by the needle about an inch from the edge on each side, and when the suture is pulled up a piece of cane, whalebone, or wood is passed through the loop made by the two ends being tied together; the suture is then cut, leaving sufficient length to allow another quill being tied firmly against the skin. Each stitch is used this way the same quills may answer for two or more stitches, but some prefer using a pair of quills for each. This causes the tension to be greatly exerted upon the quills, rather than on the suture thread, hence the stitches are more likely to withstand the tension without cutting



Big Brood Mares Like These are Always in Demand.

through the tissues. Having decided upon the form of suture to use, the operator will proceed to close the wound. It is necessary to have an antiseptic solution (such as recommended for cleansing the wound) to disinfect the hands of the operator, the sutures and the needles. Precaution to secure the safety of the operator must be observed. One of the essential points in veterinary surgery is to observe such precautions. The patient must be secured so that he cannot kick or strike the operator and at the same time not be liable to injure himself. In rare cases it is necessary to cast and secure the patient in order to dress and stitch a wound, but in the majority of cases if a twitch be applied to the upper lip and a strap to which a long, strong rope is attached, is buckled around one hind pastern, the rope passed between the fore legs, then around the neck and drawn until the hind foot is brought so far forward that it cannot touch the ground, and the rope then tied, it is all that is necessary. When the hind foot is in this position the patient can neither kick, strike with the fore feet, nor rear. He may throw himself, and if so can be secured when down, and the operation proceeded with. When one fore foot is held or tied up, it exerts some restraint but the patient can rear, strike or kick hence the operator is not safe.

Having secured the animal, the hair should be clipped off closely on each side of the wound in order to prevent any of it being pulled through the tissues and retarding the healing process. It is good practice to do this clipping before washing out the wound in the first place. As it causes no pain the patient will not object, and any hair that enters the wound can be removed when the wound is being washed, which may save a second cleansing. The wound is then sutured, a stitch being inserted about every three-quarters of an inch. A portion at the lowest part of the wound must be left open for drainage, except where a counter-opening has been made, in which case the whole wound is stitched. The stitches are drawn sufficiently tight to fetch the lips of the wound into contact, but must not be tight enough cause overlapping. The patient is then placed in a

comfortable stall and tied so that he cannot bite or rub the wound, which must be kept clean and aseptic by sponging with a warm antiseptic solution frequently, care being taken not to rub the sutures. Thorough washing twice daily is sufficient, but it is wise to apply a little of the antiseptic more frequently. If the sutures hold they should be removed in ten to fourteen days. Constitutional treatment consists in administering a laxative and feeding lightly on hay or grass and bran. If proud flesh forms, it can be detected by the lips of the wound assuming a dark red color and refusal to heal. In such cases the parts should be dressed once daily, as long as necessary with equal parts of tincture of myrrh and butter of antimony applied with a feather.

W.H.P.

LIVE STOCK.

Good Returns From Pigs.

EDITOR "THE FARMER'S ADVOCATE":

I am sending in the following hog feeding account which I believe will interest some of your readers. On September 17, 1916, I weaned eleven pigs and commenced feeding them. My feed bill included 11 cwt. of shorts at \$1.52, \$16.72; 6 cwt. shorts at \$1.50, \$9; 14 cwt. middlings at \$1.70, \$23.80; 8 cwt. middlings at \$1.90, \$15.20; 10 cwt. middlings at \$1.95, \$19.50; 5 lbs. salts, 25 cents; 13 cwt. middlings at \$1.90, \$24.70; 1,337 lbs. of rye at 2 cents, \$26.74; total cost was \$135.91. One pig was sold on Feb. 1, 1917, weighing 160 lbs. at \$13.60 per cwt, \$21.66 and the other ten were sold March 15, weighing 2,225 lbs. at \$15.25 per cwt. or \$339.31 making the total sale price \$360.97, an amount over and above feed cost of \$225.06. Value of pigs at weaning is not reckoned but would reduce profits considerably. However, these are good returns.

Hastings Co., Ont.

FRANK TERRY.

Rationing Canada's Live Stock.

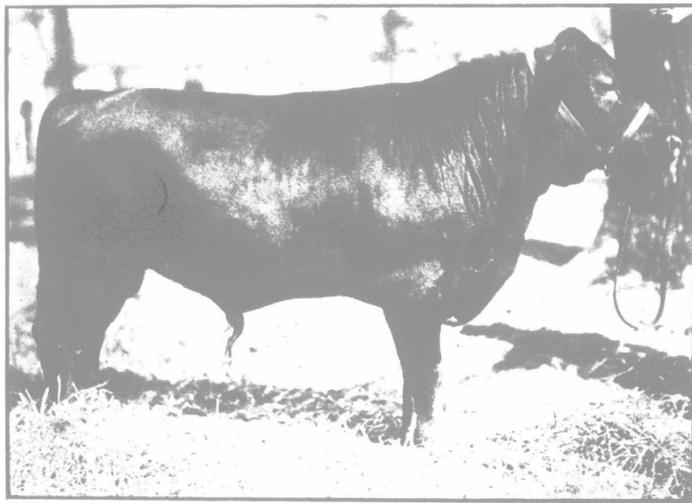
We have it from good authority that Egypt once had a Food Controller in the person of a young man named Joseph. This was quite a long time ago, and until recently no analogy has been recorded by history. Of late, however, we have reverted to primitive methods and now all countries are rivaling each other in the matter of control. The Egyptian Food Controller was necessitated by the lack of good dry-farming methods, but our problem is of a vastly different character. We are husbanding our stores and resources that our comrades in arms beyond the seas may not be confronted with an empty cupboard. Industry has been so set upon that production has fallen off and now we have Fuel Controllers and Food Controllers to so distribute the product of labor that we may "keep the home fires burning" and have "a full dinner pail." More than this, we must still be able to send a large volume of wheat and bacon overseas to maintain the spirits of the brave men who are "strafing" the Hun. Food control has made itself felt already but it has come so gradually upon a people already disciplined that few emphatic complaints are heard. On the other hand, however, the hog population, wholly porcine, is beginning to revolt, and while this branch of our live stock have long been known as "squealers" it was felt that in this case their grunts of disapproval were not without cause. While we produce plenty of food for our own consumption, and some to spare, we cannot boast so loudly regarding our feed for live stock. Every move on the part of the Food Controller to stretch out the wheat and flour takes a corresponding slice off our stock of feed. Effective man power and increased live stock are two competing elements in our national life, and as champion of the latter we have the new Feed Division of the Live Stock Branch at Ottawa.

This Division in one sense means a Feed Controller, but the Food Controller has the first say, and then the Feed Division steps in and in accordance with the Divine injunction, gathers up the fragments that remain that nothing may be lost. Perhaps this phraseology may belittle the duties and obligations of the Feed Division in the eyes of some readers, which is not our purpose. It is really a clearing house through which large quantities of home-grown feed are moved and which is instrumental in obtaining for Canada any available supply from abroad. This is distributed to the Provinces or to men or a number of men who can purchase in car lots. The Division is, in fact, a feed broker which uses the Provincial Governments, or Provincial organizations as a selling force. In this connection it was stated in an interview that the Food Controller had arranged for a blanket permit allowing for the importation of 1,200

carloads of corn from the United States during the month of February. The Feed Division then purchases what it can obtain and distributes it to the different Provinces, according to their respective requirements. At time of writing it is very difficult to close contracts on account of conditions in the Corn Belt. Provision will also be made for subsequent months in regard to corn. Dealers or associations are also permitted to import corn so long as they make the proper arrangements with the Food Controller's Department.

Screenings.

For a time a considerable trade was carried on in screenings, but we were given to understand that the supply for the present is exhausted. Normally, this



Middlebrook Jock.

First-prize junior bull calf and champion Aberdeen-Angus at London for John Lowe, Elora, Ont.

feed amounts to about one thousand carloads annually, and the embargo placed upon it makes it all available for use in Canada. The product is now regulated is known as "Re-cleaned Screenings", or "Standard Stock Food". It is Government-inspected and must conform with Government standards as to general character and especially in regard to the number of undesirable seeds. A chemical analysis of these screenings shows 11 per cent. protein, 5 per cent. fat, and 8 per cent. fibre. Botanically, it is made up of: Broken wheat, 46.1 per cent.; oats, 1 per cent.; flax, .1 per cent.; wild oats, 10.65 per cent.; wild buckwheat, 35.15 per cent.; mustard, .7 per cent.; other seeds, .65 per cent.; chaff, 5.65 per cent.

While the botanical composition may vary to a slight extent, the percentage of protein, fat and fibre will remain almost constant, and consequently the feeding value will change but very little. These screenings

moved at \$35 per ton, in bulk, underground, f. o. b. Fort William.

Price Fixing.

While order No. 5 of the Food Controller, setting the price on bran and shorts, appeared to be simple and easily understood, several complications have arisen necessitating further treatment. To make this matter clear, we are reproducing here order No. 5, which reads: "That the maximum price at which millers shall sell bran and shorts after the 17th day of December, 1917, shall be:

\$24.50 per ton of 2,000 lbs. for bran.
\$29.50 per ton of 2,000 lbs. for shorts.

"These prices shall be for bran and shorts in bulk, freight paid at Fort William and Port Arthur. To these prices may be added the cost of bags and freight from Fort William and Port Arthur to the point of destination, east of Fort William and Port Arthur. At points west of Fort William and Port Arthur, the maximum price of bran and shorts in bulk shall be, the price at Fort William and Port Arthur, less the difference between the freight charges to such points and the freight charges for delivery at Fort William and Port Arthur.

"On all invoices covering sales made east of Fort William and Port Arthur, the following information shall be given:

- (a) The maximum price at Fort William and Port Arthur.
- (b) The freight charges to point of destination.
- (c) The cost of bags.
- (d) Any rebate or other deductions that may be made."

As will be noticed, this order did not refer to dealers and omitted other factors relative to the trade. Following this came order No. 14, on January 19, which was to the effect:

"That the amount which may be charged for bran and shorts from and after the nineteenth day of January, 1918, shall not be greater than is hereinafter set forth, namely:

"By dealers distributing ex-warehouses or premises to consumers, not more than 10 cents per bag of 100 pounds may be added to the cost (as set forth in Order No. 5 issued on December 17th, 1917,) at the railway station where dealer takes delivery.

"Where delivery is ex-car by the purchaser from the dealer, not more than 5 cents per bag of 100 pounds may be added to the cost at the dealer's railway station.

"Where the miller sells at the mill direct to the consumer, in quantity or quantities less than 10-ton lots, not more than 5 cents per bag of 100 pounds shall be added to the price at which the miller is permitted to sell under Order No. 5.

"Where, however, the purchaser brings bags to the mill and such bags are filled at the mill, then not more than \$2 per ton shall be added to the price of bran and shorts in bulk, as directed by Order No. 5."

Under these rulings the original car-lot prices on these feeds in a freight zone such as Toronto should be the price at Fort William, plus the freight which is about \$4.20 per ton (for such zone) plus \$6.30 per ton for bags, making shorts worth \$10 per ton. Order No. 14 gives further details in regard to dealers and millers' profits which must also enter into all transactions of a retail nature.

It is said that the daily production of Canadian mills amounts to 2,100 tons of bran and shorts. The daily feeding requirements under winter conditions amount to 5,000 tons, so it is evident that there is ample scope for feed control. These figures also suggest that heavy deliveries should be accepted in summer and fall in order to retain every bit of available feed in the country.

Study the Analyses.

A memorandum issued by the Department of Inland Revenue under date of December 10, 1917, defines bran, shorts or middlings, and chop feed as follows:

"Bran is a product of the milling of wheat or other grain, and contains not less than fourteen (14) per cent. of proteids, not less than three (3) per cent. of fat, not more than ten (10) per cent. of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'"

"Shorts or Middlings is the coarser material sifted out from the products of a second treatment of the grain by crushing the coarsely ground material that is sifted out from the bran after the first grinding; and contains not less than fifteen (15) per cent. of proteids, not less than four (4) per cent. of fat, not more than eight (8) per cent. of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'"

"Chop Feed is whole grain of one or more kinds more or less finely ground, and contains not less than ten (10) per cent. of proteids, not less than two (2) per cent. of fat, not more than ten (10) per cent. of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'"

While the foregoing standards are quite explicitly defined a manufacturer is governed largely by the guaranteed analysis of his product which he is required to file with the Inland Revenue Department. The practical feeder frequently discerns a difference in different brands of shorts. The analyses of the various makes is the buyer's only guide and this must be attached to or stamped on the bag. The following statement is required of the manufacturer and must be attached to every bag:

1. (Name of brand.)
2. (Registration number.)
3. (Name and address of manufacturer.)

4. (Analysis as guaranteed by the manufacturer, which shall show the percentage content of protein, fat and fibre.)

Never was it so important to know the relative merits of different feeds and the exact analysis of the product we buy as it now is. Live stock is being fed high-priced feeds, and farm stock must be carefully rationed in order to show the desired returns.

British Farm Live Stock in 1917.

EDITOR "THE FARMER'S ADVOCATE":

Farm live stock have occupied a very prominent place in the agricultural annals of Great Britain in 1917, and it is not too much to say that the events of the year have demonstrated the very high place which our farm animals occupy in connection with the food supply of the nation. We might almost say that 1917 has demonstrated that our farm live stock are the key to the whole food position, and that mistakes with regard to them may not only be costly to the people's food supply, but very nearly irreparable. Their great economic place on the farm is that they are maintained and reared to a very large extent on crop residues or crops which are necessary to maintain the soil in high fertility for the more special crops for human consumption. These supply overwhelmingly the bulk of the food of our farm, such supplementary "concentrated" foods as are added being given only—in the great majority of cases—to an extent necessary for the more effective utilization for meat or milk on the farm roughages which are the bulk of the food. This is the part which "concentrated" foods play in the feeding of farm animals, although during the times of low prices probably more grain, meal, or cake was used than was absolutely necessary for the actual economic utilization of farm roughages. But just as low prices brought about such extra use of these supplementary foods, so we may take it that the high prices which the war has brought about would be a sufficient corrective. At any rate, beyond a rigorous economy in the use of "concentrated" foods, a proper handling of our home food production would have seen to it that the effective feeding of farm animals should not be allowed to deteriorate in any way. This was as necessary for the maintenance of our supplies of meat, milk, and dairy produce, as any measures for conserving human foods. It was fully recognized by Mr. Prothero, in his circular letter of the 28th of December, 1916, and has been emphasized by that gentleman in December, 1917, in advice that in the croppings of the new arable lands, crops for the feeding of live stock are as important as wheat and potatoes for human beings. Unfortunately, between these dates, other "controllers" evidently under the idea that farm animals are fed entirely, or almost so, on concentrated foods—have not only interfered with the business of stock feeding, but have even gone so far as to issue orders based on the assumption that "a large reduction of our flocks and herds" is essential.

This policy of reducing our flocks and herds has been helped very much by the fixing of prices for both meat and milk at a figure which was declared by agriculturists to be below the cost of production, and as early as May last the Royal Agricultural Society formed a War Emergency Committee, and this body has been doing much to present the agricultural side of this and other questions to the country, and to get modifications of quite a number of orders. This committee has also asked, in connection with several matters, that all agricultural matters shall be left to the Board of Agriculture and not be dealt with by other bodies. At its December meeting the committee passed a resolution declaring its conviction that the position with regard to meat supplies of the country is so grave "that it feels compelled to warn the government of the serious consequences that must arise, and urges the necessity for an immediate inquiry into the whole position."

Such is the situation as the year 1917 merges into 1918, and it finds us with our live stock situation by no means promising statistically. We have been recovering somewhat in the number of our dairy cattle ever since the twentieth century opened, but such recovery has been small and slow. Meat animals and horses, however, had made very little advance before the war, while sheep were declining. Since the war commenced, the changes shown may be best described as follows:—

Numbers of Live Stock in England & Wales in 1917.

	Numbers in 1917 No.	+ Increase or—Decrease compared with	
		1916 No.	1914 No.
Horses.....	1,372,820	+ 13,250	— 26,727
Cattle.....	6,227,150	+ 11,370	+ 349,206
Sheep.....	17,169,860	— 781,260	— 898,834
Pigs.....	1,918,540	— 249,400	— 562,941

Under the conditions which now prevail these figures are not satisfactory, and there can be no doubt that, just as we are increasing our arable land, so also we ought

the agricultural year has been presented by the pedigree stock sales, at which not only have records been broken continuously and in every direction but which can only be regarded as very satisfactory from the faith which these high prices have shown in the future of stock-breeding. For practically all British breeds a new high-water mark of prices has been reached, and there can be little doubt that the Live Stock Journal Almanac for 1918—in which the doings of every breed is chronicled in detail—will long be cherished for the records it gives on the wonderful war year for breeders. The sales have been about the usual numbers, and there is no evidence of any getting out of the business, as is sometimes the case when prices are high. Such dispersion sales as there have been have been those which usually follow in the usual course of events. On the other hand, the election of from 100 to 200 new members at every meeting of the council of the Shire Horse Society in 1917 is evidence that not a few men are coming into the business. It also shows that draft horse breeders are certainly not dismayed at the coming of the motor tractor. And the fact that 530 guineas and 490 guineas were paid for colt foals during the year at ordinary repository sales at Peterborough is something tangible to base their faith upon. Both Clydesdales and Suffolks have had a year equally noteworthy with the Shire. Shorthorns have had a phenomenal year. Not only were 6,497 head sold at 73 sales for £512,826 14s. 6d., or a general average of £78 18s. 8d. apiece, but at seven of those sales individual animals ran into four figures in guineas, and at sixteen sales the total realized ran into five figures in pounds sterling. The Holstein-Friesian breed increased the number of animals sold over 1916, and also increased its average price per head from £55 10s. to £103 7s. All the other cattle breeds shared this advance in values, as have also sheep and pigs, and altogether the year 1917 has shown, as we cannot help repeating, great faith in the future of the British live stock industry. And it has been a faith that has been well backed up with "cash down".

ALBION.

THE FARM.

Strong Reason for Seed Testing.

EDITOR "THE FARMER'S ADVOCATE":

There are some features in farming which are not under the control of the operator, or are only partially so. There are other things, however, about which he may have exact knowledge. Too frequently farmers take a gambling chance with the seed they use, both from the standpoint of its purity and vitality, but most frequently with the last point. It is true that more farmers from year to year test or have their seed corn tested for them before planting. So many have sustained such losses in the past from poor germinating seed corn that it is rare for them now to sow or plant any corn of which they have not some assurance that most of it at least will grow when given a fair show. Farmers cannot control weather conditions and they may be able to control only in a measure the availability of the plant food required by the crop, but there seems to be no reason why they should take a chance on the vitality of their seed grain when they can so easily make a test themselves between dampened folds of blotting paper, used with inverted plates on the back of the stove, or by planting a given number of seeds in soil. If they don't want to take that much trouble they have the Dominion Government, through the Seed Branch of the Department of Agriculture, Ottawa, to help them out without any fees or even the cost of a postage stamp to send, up to 8 ounces of seed through the mail. Seed testing under Seed Branch auspices is also done at Calgary, Alta. In sending seed there, however, postage is required. Usually a little over 200 seeds is all that is required. However, it is better to send double that quantity in case a second test is necessary.

Had a farmer, living near Ottawa, whose crop was visited by members of the Seed Branch last season and who sowed forty dollars' worth of barley on a rented field which he was required to leave seeded with clover and timothy, had his barley tested before sowing he would not be the sad man he now is. His barley crop proved to be so light that it wasn't worth harvesting. When some of the seed which he sowed was tested later only 8 per cent. of it grew. Fancy making such a mistake as that in a year when greater production was such a necessity! Let no farmer make such a mistake this year, as the need for production is even greater than last year.

But the loss of the crop wasn't all. In this field there were some wild mustard plants which grew up and went to seed along with other weeds and the barley, none of which was cut or harvested but went into the soil again. The farmer hadn't the time or labor to spend on it, and the owner evidently didn't look after it.

It may be that such extreme cases are rare, but look out for the seed corn this year and any Western oats that may have been frosted.

T. G. RAYNOR.

A woman who knows whereof she speaks, deals with the work of the women on our farms in this issue. Many farm women are working altogether too hard not but even these would do more if strength permitted. The women of the farms are doing their share.



The Champion Bacon-hog Carcasses at Guelph Winter Fair.
Exhibited by J. E. Brethour & Nephews, Burford, Ont.

to make a brave and vigorous effort to increase our live stock. Such a policy is, in fact, a necessary sequence to our increase of arable land, for unless we also increase our live stock and dung we shall not be able to make the best use, or even any adequate use of the land we are breaking up at so great a cost. Any increase of arable land should be accompanied by an increase of live stock, not only because of the need for more dung to keep the soil in physical condition, but also because proper arable croppings produce not only more food for man but more food, also, for stock.

The policy that is imperatively called for in 1918, is one that will maintain to the full all breeding stocks in the country, and that will aim at increasing them in the near future by rearing all young animals to maturity and usefulness. No young animals—whether suckling pigs, lambs, or calves—should be slaughtered for food until our live stock stocks have been increased to the same proportion as our arable land has been increased. This should, broadly, be our policy.

What is probably the most satisfactory feature of

Some Sources of a Suitable Supply of Seed for 1918.

At the present time one of the most important questions which the farmers of Canada have to face is that of seed supplies to sow and plant as large an acreage as possible with the best quality and variety of seed of the several leading farm crops. Seed prices are likely to be high, but it is not a matter of price altogether; very often the highest-priced seed is the cheapest in the end. This spring the main consideration will be to get the seed of the desired varieties and of the highest quality. Increased production will depend considerably upon better quality and the use of the highest-yielding varieties of seed.

Local Supply.

There are several sources of good seed, and it might be well to run over briefly some of these. First, of course, we must consider local supplies. By this is meant seed available on the farmer's own farm, or from some of his neighbors. In most districts the great bulk of the cereal grains sown is obtained in the immediate locality, and it is time now that the fanning mills were busy cleaning and re-cleaning this seed so that nothing but the purest and plumpest remains to be sown. If you have not a sufficient supply in your own granary, we would advise securing it at an early date.

Seed Dealers.

After the local supply, we would mention the seedsmen. There are a number of reliable seed merchants in Eastern Canada who are doing their best to secure for their customers supplies of high-quality seed. At the Experimental Union meeting, Walter Steele, speaking for seedsmen, stated that they always had a large demand for choice seed oats, and this year are experiencing an increased demand for Red Fife spring wheat. There seemed to be, in his opinion, a sufficient supply available of good Marquis spring wheat, barley and buckwheat. Red clover is short and, at writing, is being quoted by some dealers at \$22 per bushel and upward. Alsike is said to be in ample supply, but it is quoted up to \$16 and \$17 per bushel. Alfalfa seed will be very scarce, and seed corn is likely to be rather difficult to obtain although seedsmen expect to get a sufficient supply from the United States, but will have to go farther South than usual to obtain it.

The William Rennie Company, in reply to an enquiry, state that, "there will be a fair supply of good seed, sufficient for Canadian farmers, available for seed purposes this coming season. Seed corn will be the exception and will be below the average quality. For this reason farmers will have to exercise more than ordinary care in the purchase and selection of corn for seed, as corn of doubtful germination will, in all likelihood, be offered for seed. A moderate quantity of seed of various kinds is obtainable in Canada, and every effort is being expended to supply the needs of the farming community." Evidently seedsmen realize that the call for good seed is a call for national service, and they state that they are prepared to do their part.

Field Root Seeds.

Before discussing some of the other sources of seed, we should again mention the field root seed situation. It would appear that if there is to be a supply of field root seed for the spring of 1919 it will be necessary to produce the bulk of it in Canada. Keeping this in mind, farmers will do well, where favorably situated, to plant a few choice roots early this spring to grow

their own seed supply. Failure will not mean a big loss, and success may mean quite a considerable gain. At the present time turnip seed is \$1.25 per pound, and likely to go higher, and mangel seed is selling around 65 to 70 cents per pound. These prices are given the last week in January, and by the time this is in print may have advanced. It would seem, then, good policy to secure root seed supplies as soon as possible and to make arrangements to grow seed on the farm for next year. And, while ordering your root seed, it would be a safe policy to send your list of requirements of garden vegetable seeds. The early bird will get the worm as far as purchasing seed supplies this year is concerned, and if, as the seedsmen believe, there will be a sufficient supply, those purchasing early will have the best choice.

Organizations as a Source of Seed.

There are in Canada a number of organizations which have been the source of vast supplies of pure seed. True, this has been sent out in small quantities at first, but these soon increase to considerable supply. It is said that one kernel of oats will in three years increase to 100 bushels, so that those interested in better seed would do well to take advantage of offers made by Departments of Agriculture to send small quantities of seed for testing, because, carefully handled, the pound or five pounds of seed, as the case may be, will, in two or three years, be a substantial amount of pure seed for the home farm and further distribution.

The Dominion Experimental Farms.

The Dominion Experimental Farms have done considerable work in distributing good seed. Their regular seed distribution, as outlined by J. H. Grisdale, the Director, consists of samples of spring wheat, barley, oats, field peas and potatoes, which are sent out annually through the Cereal Division, the samples weighing from three to five pounds, depending on the article. For this year the Cerealist expects to send out 9,000 samples in all, divided into 7,500 samples of grain and 1,500 samples of potatoes. The total quantities to be sent out by the Central Farm are estimated as follows: Spring wheat, 11,000 pounds; oats, 9,200 pounds; barley, 6,000 pounds; field peas, 8,500 pounds; potatoes, 4,500 pounds. Mr. Grisdale states that at a very moderate estimate they have been averaging at least this quantity and probably considerably more for each year during the past thirty years. Readers will see from this the great amount of good seed which has gone out over Eastern Canada from this source in three decades, and should plan to make the best use of the supply available this year. There have also been made from the Central Experimental Farms small distributions of various seeds for test under special circumstances. Readers desirous of getting outstanding new varieties to replace some lighter-yielding sorts, should make the best possible use of this opportunity.

The Experimental Union.

Another source of the best seed obtainable of tried and proven varieties is the Ontario Agricultural and Experimental Union. We can do no better than publish a short letter from Dr. C. A. Zavitz, Professor of Field Husbandry at the Ontario Agricultural College and Secretary of the Union, referring to this matter, Dr. Zavitz says:

"It is probably accepted by farmers, generally, that

the quality of seed sown is the great regulator in crop production. While this is true it seems peculiarly strange that some men do not give greater attention to the quality of the seed which they use. At this critical period when labor is so scarce and the demand for food material is so great a very keen interest is being aroused in regard to the use of the very best seed available. The farmer who carelessly uses poor seed at this time is not worthy of the noble occupation which he follows. We are greatly encouraged, however, in the belief that more attention is being given to good seed in Ontario than ever before. May this increasing interest be intensified during the present year.

"The Experimental Union has realized the great importance in the use of good seed for crop production. For the past thirty-two years this organization has distributed to many of the most progressive farmers of Ontario seed of high quality. This has included not only the very best varieties but also pure seed of strong vitality. About 15,000 packages of seed, including that of grains, fodder crops, roots, potatoes, grasses, clovers, etc., are used for the co-operative experiments annually. In every instance the seed is hand picked so that all experimenters receive nothing but the best. In the spring of 1917, 7,830 pounds of choice selected seed were used for the co-operative experiments. This was in addition to the seed supplied in the autumn. Since the work first started thousands of bushels of seed have been distributed and used in the co-operative experiments. It is quite probable that fully 18,000 packages of selected seed of the best varieties will be distributed to Ontario farmers, at their own request, for co-operative experiments in the spring of 1918. Each experimenter compares the varieties which he received with the best one which he has grown on his own farm for a number of years. This enables him to ascertain which one of the most promising varieties tested at the College will give the best results on his own particular farm. The seed obtained from the variety giving the best returns can be readily increased. Some of the varieties of farm crops which are now grown the most extensively over Ontario were introduced through the co-operative experiments in pound lots. We believe that the most careful, painstaking and progressive farmer is the one who takes this opportunity of securing the best kinds of crops for his own particular soil. A circular outlining the numerous experiments will be issued about the end of February, and each farmer who wishes to take part in the co-operative work in the present year should write to the College for a copy of same, and should then apply in the regular way for the material required for the particular experiment which he wishes to conduct. It should be remembered that the experiments include only those of field crops and should be confined to farmers.

"Practically all of the crops which some farmers are growing were started from seed secured through the Experimental Union. It is interesting to notice the rapid increase from small samples of seed of which many instances could be mentioned.

"When the O. A. C. No. 21 barley was first introduced a farmer in Huron County received one pound for his test. In the third year he had over nine hundred bushels as the direct result of the small lot. This seed he sold at \$1.50 per bushel, and the variety increased rapidly in the neighborhood. As the result of similar experiments throughout Ontario the O. A. C. No. 21 variety is now grown to the exclusion of practically all other kinds. For the past three years at the Provincial Winter Fair all the named entries of barley, of which there has been a total of about 120, have, with one exception, been the O. A. C. No. 21.

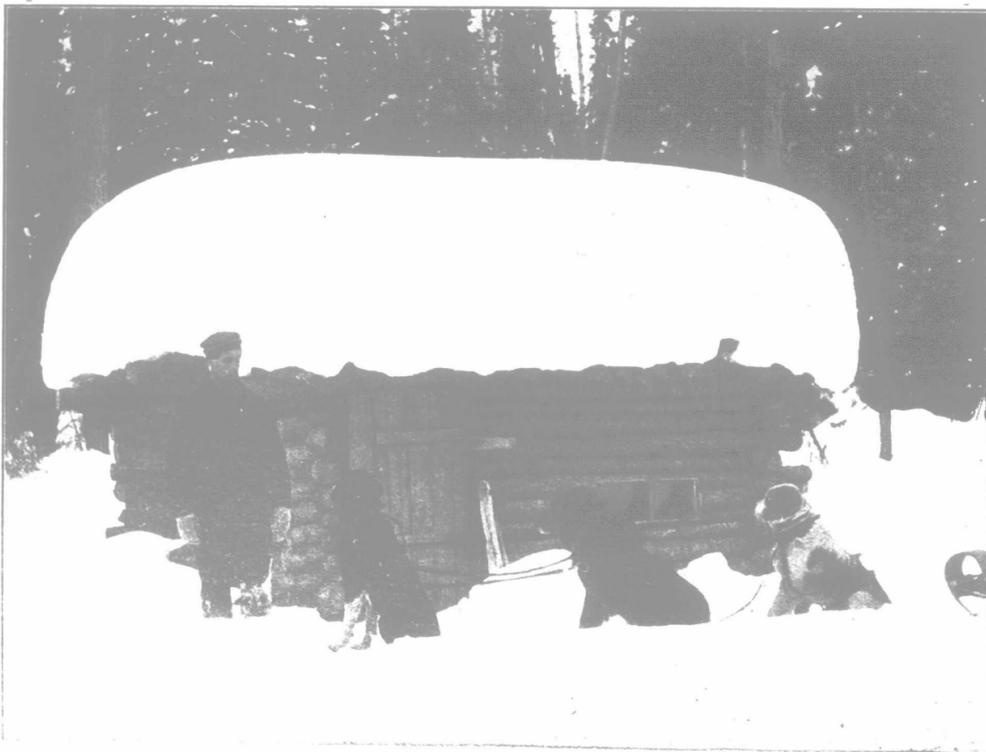
"In 1911 the O. A. C. No. 72 oats were first distributed in pound lots to three hundred Ontario farmers for co-operative experiments. They have now been sent out in pound lots to experimenters in each of the past seven years. This variety is increasing production, and is worth millions of dollars to Ontario annually. The following tabulated results show the number of first prizes in the Field Crop Competitions over the Province received by the Banner and by the O. A. C. No. 72 oats in the years for which the records are available:

Year	"Banner"	"O. A. C. No. 72"
1913	41	1
1914	34	20
1915	33	48
1916	26	76

"When the O. A. C. No. 72 oats were first introduced, two farmers in York County received the experimental material and conducted the two tests separately. At the close of the experiment the product of the two one-pound lots of the O. A. C. No. 72 oats were placed together and in the second year 93 bushels were obtained, three of which sold for \$25. The remainder was sown and produced about 3,400 bushels, nearly all of which sold at from \$2.25 to \$2.50 per bushel.

"The first prize lot of two bushels of O. A. C. No. 72 oats at the Provincial Winter Fair at Guelph sold by auction for \$11 in 1916, and for \$13 in 1917.

"The best farmers know the value of seed of high quality. May Ontario have a greater number of good crop producers in 1918 than ever before."



A Visit to a Woodman's Camp.



Fig. 1.—Sliding Rack for Hay.
First half of load on.

Corn and the Corn Growers' Association.

Considerable work has been done by the Ontario Corn Growers' Association in developing varieties of corn suitable for Eastern Canada, but last year being such an unfavorable season for the corn crop to mature, the supplies of seed from this source are not as large as usual, nor of as good quality. P. L. Fancher, Secretary of the Association, states that growers of silage will have to be content with corn imported from the United States, and this seed will come from farther south than usual. In a letter to this office he states that the amount of corn available to members of the Association this spring is hard to determine. An effort is being made to retain as much of the Ontario-grown seed as possible for use in the seed-corn-growing sections of southwestern Ontario. The exact amount in number of bushels he cannot state, but says that what appears to be a fairly large source of good seed is not so. Much of the seed that is claimed to be good seed is worthless, and some that is claimed as excellent is only fair, according to Mr. Fancher's statement. He believes, however, that there is somewhere around 5,000 to 10,000 bushels all told in the Association. As to the number of bushels of seed corn which can be purchased in Ontario, Mr. Fancher believes there is none, as there is no corn grown in this Province that is of any value which has not already been purchased, and that which has been purchased will be largely distributed through the southwestern part of Ontario, as previously intimated. Ontario, figuring from the total acreage of corn grown and placing an estimate of five bushels for 12 acres, requires 350,000 bushels of seed corn. Mr. Fancher states that most of the corn now being imported into Ontario comes from Nebraska and Missouri States, principally from Missouri. Practically all corn in the ear is coming from Missouri.

The Departments of Agriculture.

Justus Miller, Assistant Commissioner of Agriculture, writes that the "Federal and Provincial Governments are co-operating to the end that there be no shortage of any variety of seed to be used in this spring's planting, with the possible exception of corn. Acting under the instruction of the Federal Minister of Agriculture, the Dominion Seed Commissioner has caused to be assembled and held in reserve wheat, oats, barley, peas and beans, all of which are sound, reasonably clean and suitable for seeding. This grain is not, however, of the highest quality of seed grown as is understood by farmers who make a specialty of growing registered seed and other high-quality brands. This supply of grain will be re-cleaned, mainly in the Government terminal and harbor elevators and held in reserve on requisitions from the Provincial Departments of Agriculture. The Ontario Department of Agriculture is, therefore, in a position to enable any farmers, farmers' organizations, or others, who wish to buy seed grain to purchase the same in carload lots. It will be very much to the advantage of anyone wishing to get this grain to apply to the Ontario Department of Agriculture for the same as soon as possible."

Continuing, Mr. Miller stated that it would appear that Canada must produce her own root and vegetable seed until normal conditions are re-established. The Federal Experimental Farms undertook last year to produce twenty-five per cent. of the Canadian requirements of field root seed, in addition to the production of stock seed for other seed growers. Dr. Zavitz, at Guelph, has made good progress in the production of stock seed of the Yellow Intermediate mangel. It is planned this year to plant at least ten acres of this seed on farms in connection with provincial institutions in order that there may be available stocklings sufficient to plant 75 acres next year. In Mr. Miller's opinion seed dealers will be able to secure an adequate supply of seed corn to meet all the requirements, but he admits that the situation is serious.

Institution Farms.

Thinking that the farms operated under the Provincial Secretary's Department in connection with the

various hospital institutions over the Province might have some seed for sale, we communicated with the Director, John R. Spry, who replied that they have no seed for distribution with the possible exception of a little mangel seed. Last year they produced 1,300 pounds of mangel seed and they will require 405 pounds for their own use this year, leaving a surplus of 895 pounds, but the germination of this seed is low—only about forty per cent.—and this seed would not be very suitable for sale. Mr. Spry states that for the coming season the Institution Farms will have to purchase practically all their seed.

The Canadian Seed Growers' Association generally has a considerable quantity of registered and pure seed listed by its members. From 1906 to 1916, 308,849 bushels of pure seed have been listed. Besides, there are a few Seed Centres in Ontario which will have quantities of certain grains for sale this spring.

Root and Vegetable Seed Requirements.

With further reference to field root and vegetable seed we publish the following from Geo. H. Clark, Seed Commissioner:

"The approximate average annual Canadian requirements of field root and vegetable seeds are as follows: mangel, 367,000 lbs.; sugar beet, 300,000 lbs.; beet, garden, 63,600 lbs.; Swede, 410,000 lbs.; turnip, fall, 60,000 lbs.; rape, 317,900 lbs.; turnip, garden, 22,500 lbs.; carrot, field, 17,300 lbs.; carrot, garden, 45,000 lbs.; parsnip, 17,650 lbs.; radish, 67,600 lbs.; onion, 88,000 lbs.; leek, 1,100 lbs.; lettuce, 18,700 lbs.; celery, 2,160 lbs.; cabbage, 18,700 lbs.; cauliflower, 1,850 lbs.; Brussels sprouts, 250 lbs.; cress, 2,100 lbs.; parsley, 2,850 lbs.; salsify, 730 lbs.; spinach, 18,400 lbs.; tomato, 6,300 lbs.; cucumber, 36,800 lbs.; squash, 8,600 lbs.; pumpkin,

all seeds and, test them as to germination, by placing between two heavy sheets of blotting paper on a plate behind the kitchen stove. This plan is suitable for cereal grains and small seeds; for corn, ear tests should be made by taking six kernels from each ear and testing them in separate squares in a box of earth prepared for the purpose.

Handy Devices for Haying.

EDITOR "THE FARMER'S ADVOCATE":

I am taking the liberty of sending you a few pictures taken last summer, and feel that some of your readers might be interested, and during the winter months, as I did last winter make one of the one-man loaders. It surely is a big saving of time and energy.

We have a 16-ft. hayrack. We made an 8-ft. truck with flanged wheels to run on rack, the front part of truck with head stay. This was run to back of wagon for first part of load, (illustration No. 1,) with two pulleys one attached to truck and one to front of wagon. One man can easily pull a half load to the front part of wagon, (illustration No. 2); the time required is about three minutes. I also used my motor car on the hay fork. It also handled all our grain. We found it was much quicker than unhitching horses. I might say the cost of the truck for the wagon was about \$22, the flanged wheels being the most expensive.

G. S. HARDING.

Wellington Co., Ont.

Wider Sleighs.

EDITOR "THE FARMER'S ADVOCATE":

I would like to hear from a good many of your subscribers what they think of having a law passed to have the sleighs made the same width as the wagons, for I know it would be much better. Just now if you go on the roads with the sleigh or cutter over you go. I have already seen some using hub runners on their buggies, and they thought it was just the thing. There are a good many getting covered cutters, but they say they are too narrow. There is danger of upsetting, so if they were the same width, wagons and autos could go a good many times when the sleighing is about gone, but they have to wait until the heaps of snow are dug away.

Wentworth Co., Ont.

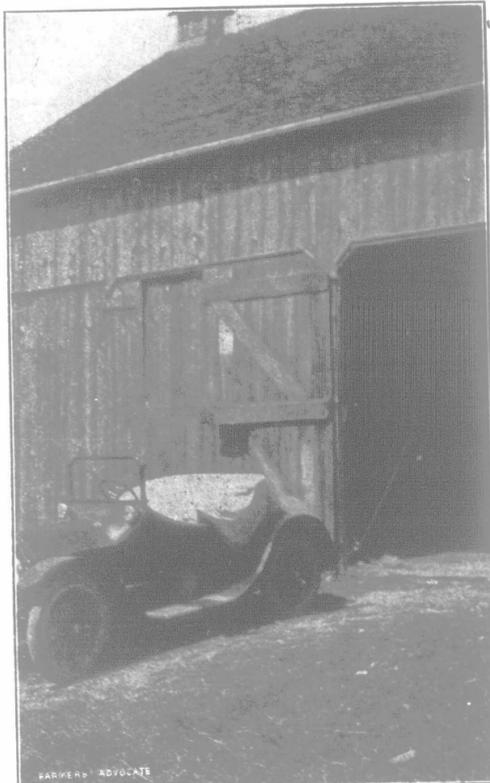
SUBSCRIBER.

Where is the Woman?

EDITOR "THE FARMER'S ADVOCATE":

The scarcity of labor is one of the subjects which at present may be said to be in the air. It is no new subject, for at least a dozen years ago we heard it authoritatively stated by prominent Canadians that the land in Canada was being "starved" for want of labor. How much more acute that starvation has become we can only guess. The experts who organize and conduct labor bureaux say there is plenty of labor to be had, only it needs to be organized. We are inclined to think that to some extent these experts are right, perhaps the labor is not of the first class, but when the first class is not to be had it is the part of employers to do the best they can with the second or even the third rate. The highest class of work no doubt requires the best class of tools, but if these are not forthcoming good work can be done with indifferent tools, though these require both skill and patience in the using.

The one thing that strikes the reader of many papers of instruction and advice on agricultural matters is the free and easy manner in which certain portions of farm work are handed over to old men and particularly to women on the farm. Undoubtedly it is good for elderly men to do as much as they can in these present times and at all times it is better to wear out by work than to rust out by disuse. Still even on that particular branch of agriculture, the fruit farm, which is laid off as the happy hunting ground of women and aged men there is plenty of room for young and active men. It was even pathetic a couple of years ago to see an



Car Used on Hay Fork and Slings.

The cloth in the car was used to protect against dust and dirt. G. S. Harding, of Wellington County, used this means of unloading.

8,500 lbs.; citron, 2,300 lbs.; melon, water, 3,167 lbs.; melon, musk, 2,760 lbs.; peas, garden, 452,000 lbs.; peas, canners, 32,000 bushels; sweet corn, canners, 5,500 bushels; sweet corn, garden, 420,000 lbs.; beans, garden, 400,000 lbs.; beans, pole, 22,400 lbs.; beans, broad, 10,500 lbs.

"Supplies of these seeds are now practically cut off from Europe. However, with the exception of a few kinds, notably turnip seed, there may be sufficient to meet our 1918 requirements. Prices are abnormally high because, in part, the prospective supplies for 1918 are not visible.

"The war has given an impetus to production in North America. California had previously proven suitable for the growing of onion, carrot and other kinds, and operations there have been considerably extended. The growers in Canada have been encouraged by a bonus from the Seed Branch amounting to nearly one-half of the normal wholesale price, but progress has been slow because field root and vegetable seed crops generally require a great deal of experienced hand labor. The Dominion Experimental Farms and Provincial Experiment Stations are giving special attention to this work, but farmers and gardeners must assist in preventing a shortage."

Test all Seed.

There is just one point which we wish to emphasize again: No matter what the source of seed, it should be thoroughly tested as to germination powers. Particularly is this true of corn and Western oats, but while there is time it would be well to select a fair sample of



Fig. 2.—Sliding Rack for Hay.
First half of load pulled to front of wagon, ready to load rear half.

elderly and rather stout gentleman balancing himself on the all-too-yielding branch of an apple tree. We could not but agree with him when he explained, "I ain't no squirrel". His boys had gone, his girls were married and his wife a lady of ample proportions and matronly figure was no more a squirrel than he, so what was to be done?

At the beginning of the war the withdrawal of many young people of British birth as well as many Canadians was not so much felt as might be supposed. It will be remembered that the war broke out in the end of the summer when farm work was not so pressing. None of us thought in spite of the forebodings of those who knew the state of affairs much better than we, that in three years from then we should still be fighting and not within sight of the end. At that time the idea of women being of much use on the land was scouted. "Our women are not strong enough, they cannot do as our mother's did." This was the authoritative statement of many men who ought to have known, having lived long in this land and knowing the people well.

At that time it was our opinion that the women of the present time are, if anything, stronger than "our mothers" were, but they have exercised a different set of muscles. A girl, who in the morning can take a round of an eighteen hole golf course, in the afternoon—and a fairly hot afternoon too—can play six sets at tennis, and in the evening is not too much fatigued to engage in any amusement that turns up, cannot be considered a weakling. At a certain stage of all civilizations the women of the wealthier classes are withdrawn from all productive labor, to the loss of the world and their own detriment. This is true in the East as in the West. A clever American points out that while the Eastern potentate keeps his women in luxurious idleness in the harem and only permits them to appear in public places veiled, the American merchant princes, allow their women folk to show a great deal too much of themselves in public and in private and keep them in an equally useless state of luxury and idleness. He asks "What combination more tempting to physical and mental and, consequently, moral degeneration can be made than a rocking chair and a cheap novel in a steam-heated room?"

If the love of outdoor sport has done nothing else it certainly has done one great thing in helping to emancipate women from this degeneration. In Great Britain, which still to a great extent provides a standard of living for the world, this healthy love of out of doors has kept our young women strong and active if not useful. During the last generation the girls of the classes have certainly increased in stature and the sensitive plants of early Victorian days, who, if we are to believe the novelists of the period, took every opportunity of swooning, etc., are entirely out of fashion. The higher classes in America, travelling over all the world as they do, have also begun to see that the life of the novel and the rocking chair is neither a good nor a happy life and the restlessness which is permeating the female society of this continent is the result of this knowledge. The war will do great good to women and through them to society if it can show a means by which this knowledge can be put to some use. For of what use is learning unless it be made to work good for the world. The time is past to say that the women of Canada cannot do a great deal of the work hitherto done by men. They have proved that when necessary they can. One lady in Ontario cut all the grain on a good-sized farm, giving a hand at taking it to the barn, and this besides doing a great deal of work in house and garden. Another lady, who, in spite of her four children, said not a word to prevent her husband enlisting, has taken up his work and done it successfully. She engaged an elderly man to help her to take the produce to town and to do hoeing. She herself being a good hand with horses does cultivating and indeed all the horse work except teaming. Her neighbors say that by her business capacity and good judgment she has improved her farm so much that on her husband's return he will be able to increase his holding and work on a much larger scale. These are only two instances out of many but they are enough, if there were plenty of women they could do a great deal but where are the women?

In Great Britain there are many more women than men. In Scotland alone, where women do and always have done a great deal of out-door work on the farm there were, before the war, over a million more women than men. All over the world 105 to 106 male infants are born to 100 female, but we suppose it is unnecessary at this time of day, particularly at present, to enumerate the causes why in old civilizations there are always more women than men. They live more sheltered lives, are less liable to death by accident and more men emigrate to new countries than women. On this continent there are more men, particularly young men, than women. Of course in the West the preponderance of men is more marked than it is in the older settled provinces. At the present time when so many young men are for the time being doing battle for freedom this is, of course, not so marked, but these boys will come back and others with them we hope and believe. Even with this drain on the male population of Canada there are not enough women to do any more than the work which seems naturally to belong to them. Meetings are got up to try to create an interest in Child Welfare, and addresses are given by the learned on subjects connected more or less remotely therewith. Of what use are these unless the mothers of the children have time to put the knowledge gained at these functions or elsewhere into practice, or are able to find other women who can do it in their place? Gardening, for instance, is a very good exercise but if a woman has a heavy afternoon's work in the garden, her desire to go into the house and cook suitable and appetizing food for the children is not overwhelming.

Last summer we had the pleasure of listening to a farmer's wife giving an enumeration of the various duties that had fallen to her lot the day before. On enquiry we found that the farmer is prosperous and for at least a part of the year employs two men. This lady had come on the Sunday afternoon to thank a neighbor for allowing her children, a boy and girl of 9 and 7 years, to gather strawberries on the previous afternoon. Let us enumerate some of her occupations, we cannot pretend to give a full list. She rose at 5, milked 3 of the 6 cows, got breakfast for the husband and hired man, set bread and then went to the garden and occupied herself in much needed work till 10 a.m. The children had, meanwhile, washed the dishes. So she proceeded to look after her bread and get the family dinner ready and also tidy up the house making beds and doing the various little bits of work which fall to the housewife's duty on Saturday morning. After dinner she sent off her children, baked her bread, scrubbed the kitchen premises, and on the return of her children with the strawberries prepared some for supper and made pies and cakes for Sunday. The work was not done then, there was the milking and attendant wash up and Saturday being "tub-night" the children took a little more of her time. She felt, she said, too sleepy to read the paper but played the piano for half an hour. Truly music must have charms.

This woman did not seem to think her lot was other than that of her neighbors. She and her husband were prospering and were evidently happy. Domestic help in the country and in their environment was not to be thought of.

When women on the farm have to slave like this at what we should call their legitimate work, we would like to ask where are they to find time to do work on the land? It reminds us of the puzzle popular in our childhood days. A picture of a scraggy tree, or perhaps an equally scraggy landscape and we were requested to find, let us say, Napoleon or perhaps Lord Roberts. By the use of the imagination most of us could do so, but the puzzle now is where to find the woman. Canadian women can and do work on the land as well as others but the women are not here. If they are to do their duty to themselves, their children and their homes they have already enough to occupy all their energies in some cases more than they can accomplish without drawing unnecessarily on their nervous force, and it pays no man or woman either to work on their nerves.

Middlesex Co., Ont.

A FARM WOMAN.

A Year for Great Accomplishments in Agriculture.

EDITOR "THE FARMER'S ADVOCATE":

John Prout, 1810-1894, was the son of Wm. Prout, a farmer of South Petherwin, Cornwall. His early education was obtained at Launceston, while his training in farming was gained at his father's side. As a young man he became dissatisfied with English tenant systems emigrated to Canada, settling on a farm near Pickering, Ontario, in 1832. In 1842 he returned to England and engaged in business in London till 1861. In this year he bought Blount's and Sweet Dew's farms at Sawbridgeworth, England, which he operated until his death in 1894. Mr. Prout, in his 33 years operation of Blount's farm, demonstrated a system of farming of special interest and value at this time. His system was based upon his Canadian experience and his intimate knowledge of Rothamsted experiments of Sir John Bennett Lawes. Mr. Prout demonstrated that successive crops of cereals could be raised on heavy clayland if it is drained well, and properly fertilized. In 1881, he published a book describing his methods, entitled, "Profitable Clay Farming Under a Just Tenant System."

America Must Raise Maximum Crops in 1918.

If America is to live we must raise a maximum of food in 1918.

It isn't a question of ability—it is one of absolute necessity!

Food includes beef, mutton, pork, poultry, corn, wheat, oats, rye, barley, potatoes, turnips and all that contributes either to the table or to the ration of farm animals.

No need rehearsing the story of starving myriads in Europe, of millions of patriots in training camps, of the destructive power of the devils of Berlin and their secret vassals in our midst. For our own preservation, our 1918 yield must be maximum.

We have no patent for favorable growing weather next spring and summer. All the more reason why we should consider now, in all seriousness, the needs of our Allies, who at present are fighting our battles,—and the needs of our homefolk. All the more reason why we should actually put knowledge into practice.

I venture the opinion that 60% of the poor corn now in the middle west, could have been changed to high-grade corn if we had only done last spring *what we know*.

But, this is no time for regrets. The rapacious Hun is on the road to America—determined on pillage and destruction of property and the absolute wiping out of the principles of democracy. The thin red lines of gallant Belgian, French, British and Canadian heroes with Americans fast coming is all that holds him back. Canadian farmers are square behind their defenders. Nineteen-eighteen crops must show the world that this is so.

In a month or two every state and province will be actively campaigning for maximum crop acreage. Every means possible to increase total crops will be urged—and rightly.

The farm tractor has made possible the working of large land areas. Especially has the tractor been useful

or the first stage of soil preparation—plowing. Enormous reduction in cost of plowing under favorable conditions has been made possible by tractor power.

The careful use of stock manures and abundant use of fertilizers has made it possible for farms that employ these means of crop increase to the full, to harvest over double per acre of what is produced on hungry half-starved soils. Not only has this been the case in good seasons, but in poor and good seasons alike—in fact, proper crop feeding very often has paid a higher per cent. on investment in bad seasons than in good.

Combining Ideas.

Larger areas worked by tractor + Larger yields produced by fertilization.

A new idea? No! An idea that was put into practice in England during the last dark days of America, when the sons of America fought and died so that a great basic principle of democracy should live.

In 1861 John Prout of Sawbridgeworth, England, began operating a farm of 450 acres—or rather a combination of two farms totalling this acreage, employing, as his principal power, steam tractors; and as his source of plantfood,—fertilizers.

Did he succeed? Did it pay? Didn't he keep live stock? What effect did the system have on the permanent productivity of the farms?

These are the practical questions an average American farmer wishes answered:

Let Prout defend his own case. He considered the following things indispensable to most economic farm operations: 1st.—Effectual soil drainage; 2nd, Fields of considerable dimensions; 3rd, Straight fences; 4th, Sound head-land roads; 5th, Convenient field water supply.

Item number five is about the only thing that is not essential in the operation of a similar area at the present time, since gasoline engines use but little water.

Before discussing Mr. Prout's figures let it here be noted that this article is not intended as an advocate of farming without live stock, or of continuous cropping without systematic rotation,—both of which practices Mr. Prout followed on his own farm. The only live stock that were kept on the farm were from six to eight farm horses, and one cow to supply milk and butter for the household. The story shows what can be done under extraordinary conditions, by the record of what has been done. The spring of 1918 will see many farmers, on account of shortage of labor, reducing the number of live stock which they have normally kept. It will furthermore see many large farms where enormously more food cereals could and would be grown if the owners could be assured of the profitability of intensive grain growing under present war conditions. Necessarily, the question of labor shortage will apply under such conditions; however, government and industrial agencies of all sorts are co-operating with the farmer, with the one purpose of supplying sufficient labor this coming summer.

Now, as to some of Mr. Prout's figures: When he had remodeled his farm, Mr. Prout laid out the farming areas in nine rectangular fields approximately 50 acres each. As an average of 13 years he plowed 429 acres of the 450 per annum. As an average of 13 years, from 1866 to 1878, his farm labor bill amounted to approximately \$2,545 per annum. Mr. Prout's expenditures for fertilizers averaged about \$12.50 an acre. His soil was a heavy clay, fairly rich in potash, but for the best producing of cereal crops, requiring phosphoric acid and nitrogen. The soil was naturally well supplied with lime.

In Mr. Prout's typical yearly outlay statement, he figured the land at a rental of about \$8.75 an acre. All necessary expenses were included and interest at 5% on working capital as well as depreciation in equipment and horses. These items, along with annual expenditures for manures, seed, etc., totaled as an average of 13 years, \$16,600 per annum. The profit account is analyzed into three columns, the first covering 13 years, 1866 to 1878; the second, the first nine years of the period; the third, the last four years of the period, as follows:

Average Yearly Returns and Profits.

	Average of 13 yrs. 1866-1878	Average of 9 yrs. 1866-1874	Average last 4 yrs. 1875-1878
Returns.....	\$22,545	\$22,120	\$23,490
Less selling expenses.....	1,000	1,000	1,000
Gross returns.....	\$21,545	\$21,120	\$22,490
Less outlay.....	16,600	16,795	16,175
Net profit per annum....	\$4,945	\$4,325	\$6,315

The average of the last four years (column 3) shows the financial returns when Mr. Prout's system was established. He made \$6,315 per annum on an investment of about \$80,000,—an interest rate of a little less than 8%. But mark that this rate of interest—8%—was made in years when the price of wheat ranged from \$1.32 to \$1.86,—average \$1.62 a bushel in England. These prices are far exceeded at the present time.

Now, as to the permanent effect upon the soil of this great farm, the problem was submitted to the renowned soil authority, Dr. Voelcker, who gave it exhaustive study. He summarized his findings in the following sentence:

"I can see no reason why, with this system of manuring and an occasional dead summer fallow in order to give a thorough cleaning to the land, Mr. Prout should not

be able to definite.

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be able to grow wheat or barley profitably for an indefinite number of years without injury to his land."

As to the kind of fertilizer Mr. Prout used, in recording the purchase of the various years, he mentions bone meal, superphosphate, Peruvian Guano, nitrate of soda, and kainit. With the exception of guano, all the foregoing carriers of plantfood are found in modern fertilizers, hence the results obtained are quite comparable with those possible under present conditions.

Mr. Prout's experiment is of special interest to Canadian farmers at the present time, first because he employed tractor power for the major operations of a large farm long before modern gasoline power was thought

of; second, because he successfully produced large acreages of wheat and sold off the grain while he maintained the fertility of the soil by the use of commercial fertilizers entirely, and by so doing not only made a material increase in his annual net returns from the farm, but actually increased the productivity of his land.

Many a Canadian farmer is this year asking what effect will all this rearrangement of farming systems, which the government and colleges are urging, have upon the permanent operation of his farm. Every farmer is as anxious to do his full duty in the face of present exigencies, as is any other patriotic citizen. Not only is he willing to do his duty, but he is anxious to

contribute in the largest measure possible. At the same time it is perfectly legitimate for him to be anxious to realize maximum returns from present high prices of food products.

Mr. Prout's demonstration has served more than his own generation. It has outlived what was looked upon as the wonderful age of the steam engine. It has reached down into the war-ridden days of the gasoline tractor, the flying machine and the wireless telegraph. It may again serve humanity as it was able to do in the days when Mr. Prout owned and remodelled Blount's and Sweet Dew's farms. The big thing necessary is to apply the information. HENRY G. BELL.

Automobiles, Farm Machinery and Farm Motors.

Regulating the Lights.

Ever since motor vehicles have been allowed upon the highways the question of the lights to be carried by them has been a vexed one. For a limited period there were only minor restrictions. It was not long, however, until laws were passed making it necessary that the front of a car should be illuminated, and the rear of the machine carry a lamp or other light so placed as to conspicuously show the license number. In the past year a large number of complaints have come from those who have been compelled to do a great deal of night driving. Anyone familiar with the perils of travel from dusk to dawn knows that the search lights of an approaching automobile frequently create embarrassing situations. The glare is so blinding at times that even the most skillful drivers cannot determine how close it is safe to approach the edge of a ditch on one side or an advancing machine on the other. Accidents without number have happened, and many unfortunately were attended by fatalities. The menace of the glaring headlight became so pronounced that the Ontario Government passed legislation which makes it "unlawful to carry on a motor vehicle any lighting device of over four candle power, equipped with a reflector, unless the same shall be so designed, deflected, or arranged that no portion of the beam of reflected light when measured seventy-five feet or more ahead of the lamp shall rise above forty-two inches from the level surface on which the

vehicle stands." This law will, in all probability, be enacted along similar lines in Quebec and the Maritime Provinces, because there is an insistent demand for maximum safety upon the highway. As a result the head-light lens has developed into a subject of extreme importance. There are two distinct types, one that diffuses by means of bubbles blown in the surface of the glass and another that deflects. We believe that the main question you will have to settle is one of economy. What we all naturally desire is compliance with the law at the lowest expenditure. In Toronto at the meeting of the Ontario Motor League an electric bulb similar to the average used in most cars was placed in a room and the different lenses attached to it. Automobile owners were then able to judge for themselves the respective values of the makes on exhibition. Other demonstrations of a similar nature are being held all over the province, and motorists should make it a point to be in attendance at one or more of these events, as the information to be gleaned is of the most valuable character. If, however, it is not possible for you to be present at one of these exhibitions use your own judgment in the selection of a lens and having installed it make sure of it in a test upon some country road and satisfy yourself that the light is without glare and that no beam rises higher than forty-two inches, twenty-five yards in front of the car. When you install these lenses do not expect to find the road as well illuminated straight ahead as it was with the old type of sheet glass. You will be surprised and delighted, however, to find that

the new lenses throw light on both sides of the road and so reveal any lurking dangers. You may be a little timid at first for there is an element of uncertainty in the non-glare light of a lens that diffuses or deflects. Some motorists have increased the candle power of the bulbs, but we consider that such action places a too heavy responsibility upon the battery and is, therefore, not advisable. What you must do is to drive slowly at first and accustom yourself to the improved system of lighting. After a while you will forget all about the old type of light which shot a glaring streak out in front of you and become enamored of the non-glaring system which spreads a thin but useful fan-shaped illumination in front of your auto.

We do not think that anyone should attempt to avoid the law, because if an accident happens the blame can be easily placed, and we do not think that there is a motorist so careless of the rights of the road as to deliberately endanger a fellow driver when safety has been made so easy and so certain.

While we are on the subject of light it might be well to remind our readers that it is unlawful to carry on any motor vehicle a lamp or other light which revolves in any manner so that the rays may be turned in different directions. A few of these "spot lights," as they are called, are still being carried in defiance to existing legislation. Their use has already caused a number of serious accidents, because the keen glare is deceptive and gives an approaching machine no idea of the difficulties that have to be faced. AUTO.

Canada's Young Farmers and Future Leaders.

The Men and Women of To-morrow

In these times, when the unexpected happens every other day, he must indeed be bold who undertakes to give an imitation of a prophet. This is undoubtedly true in so far as it applies to prophecy as to what shall happen in the near future. On the other hand, it is not so certain that even the strenuous three and one-half years just past have so disorganized things in Canada as to preclude the possibility of one venturing to prophecy as to what sort of men and women our present boys and girls shall become, or as to what the environment shall be in which they shall live, move and have their being, when the prophet shall be only a memory, or at least in no position to influence things one way or another. Since the astonishing fulfilment of Tennyson's prophecies is now recognized, some of us may be excused if we too attempt to dip "into the future far as human eye can see," and try to discern these visions "of the world and all the wonders that will be."

The writer may as well confess at once that in writing this article he has chiefly in mind the people that are to live in rural communities, because it is only for such that he can claim right to speak, but it will also be herein shown that this can only be discussed with a realization that no class can live unto itself alone.

Perhaps no one condition has tended to retard national progress in Canada so much as the segregation of town and country life and interests. We need not acknowledge advanced years when we hark back in our memory to the period when the line between rural and urban life was very clearly drawn, when the words "rube" and "dude" were not only terms of derision but also expressions of opinion. Despite the fact of a steady procession of ambitious country youths toward to take no mean part in building up these centres of population, the city people continued to regard the farmer as a being of a different order and often a fit subject for ridicule. I think I once charged our press with part of the blame for perpetrating this ridiculous attitude; so much of the alleged humor in the funny columns being devoted to the blowing out of gas, the problem of making peas stay on the knife, and other time-honored quips, periodically resurrected by callow scribes, some of whom in all probability left the country for the country's good. On the other hand, the attitude of the farmer towards the city and its people was not all that it should be. Because the city man wore better clothes he must of necessity be "stuck up," and just to show there was no hard feeling, the farmer refused to fix up when he went to town. The town visitor to the farm had no picnic because his hands were soft and because of his lamentable ignorance displayed in attempting to milk a cow from the wrong side, or confessed when he admitted that he thought Tamworth was a kind of tree instead of a breed of swine. But enough of this reference to a relation some of us remember only too well. It should be a subject of pleasant self-congratulation that we live in a day which marks a passing of this old order of things. The change is taking place so much

more rapidly than we ever hoped for that we may well wonder what cause or combination of causes is bringing it about. Some explanation may perhaps be offered in the remainder of this article, but be that as it may, the boys and girls of to-day may look forward to a work blessed by a cordial co-operation between urban and rural peoples; the signs of the times are too plain to be misrepresented.

There is nothing new in the idea of co-operation. The active principles have been clearly defined by experts many moons past. It would seem like a reasonable assumption that many working together can accomplish vastly more than the same number striving individually. However, despite all this that appears to be obvious, the fact remains that our people have been slow to put into operation schemes, the value of which they are ready to admit. The reason probably lies in the cosmopolitan nature of our population and in a sort of feeling that co-operation signifies the sacrifice of that individuality upon which we pride ourselves. We seem to have been passing through a time wherein we have gradually prepared ourselves to attack this all-important problem, and all signs point to a more rapid progress in the direction of co-operation among the Canadian people. Enough has been done to give us bright hope for what may be accomplished in the future. We need but mention in passing the law and medical associations, organized to guard the welfare of the respective professions and to secure efficiency in the same, to illustrate what may be done in other professions.

Farmers in the past have been difficult to organize for purposes of co-operation. Each farm home seemed such a complete unit in itself and was so far removed from its neighbors, that the principle of at least community effort made little impression. Much could be added in the way of explanation, but it is rather unnecessary in the face of a difficulty so frankly acknowledged.

So much for the past—what about the future? One does not need to be a prophet or the son of a prophet to know that there are wonderful probabilities in co-operation among the Canadian farmers of the near future. Let me speak of an organization with which I am upon more than speaking terms—"The United Farmers of Alberta." To me the most striking thing about this organization is the splendid spirit manifested, the desire not alone to unite for greater profit, but to make better and brighter the home life of the country people. This spirit is manifest in the election and reelection of the president of the organization, a farmer who came to the university and addressed the students and faculty last winter. Later on the university thought it an honor to entertain eight hundred United Farmer delegates. How is that for making history? And what about the boys and girls brought up in an atmosphere where this spirit becomes more and more paramount? Let me say here what I might have said at the opening, that the spirit back of attempts at co-operation spells the probability of success or failure. There has long been a recognition of the desirability of union—as I heard one farmer from the south of us say: "Even the

mules in the Ozark country knew enough to put their heads together when the wolves came down from the hills." But co-operation for protection or for profit seems to get only so far; it is when community effort has for its ideal the advancement of the people, socially, intellectually and morally that one hopes for continued progress, because then the base of supplies is well and soundly established. Our boys and girls of to-day have the pioneer work done for them. They will go on and perform as a matter of course, those things that at one time looked to their parents as rather difficult of accomplishment.

As already intimated, one result of the proper spirit in co-operation will be improvement in social conditions surrounding home life. The most serious rural problem that we have to face is the abnormally large percentage of people living in towns in this agricultural Canada of ours. We have diagnosed and prescribed over and over again, but the unfortunate conditions persist. One thing we must admit, the life in the town, and it is not such a modern Sodom of a life as we once deemed it, pulls more strongly than the life in the country. David Grayson may rhapsodize over the different concrete items in country life, from the violet to the hired man, but such efforts to date have chiefly been effective in luring for a time unsophisticated town-bred to the simple agricultural life. The plain fact of the case is that the next generation must strive to further the work already begun, the task of making country conditions more attractive, so attractive that the bright and ambitious among our youth will feel, not too late in life, that the country is after all a pretty good place wherein to plan and establish a home. The most potent factor will be in the direction of improved social conditions; nature has done her part in furnishing a setting. The country men and women have a splendid opportunity to correct our balance of population. Look at some of the facilities. The rural telephone has already done much; it can do a great deal more. One advance will be in the establishment of better central accommodation. Part of the joy of a gossip with our neighbor is clouded by the fact that we are hampered by too many possible listeners. Our town cousins have no such obstacles to healthy discussions over the wire. However, the rural phone has done much to reduce distances between homes and to keep the rural home in touch at least with local town happenings. Then the advent of the automobile has already worked wonders and the end is not yet. Pleasure rides are well earned by the hard-working men and women on the farm. Ponder on what it means to the women and children to get out oftener and to visit the town at less remote intervals. It is well to specify the women and children; possibly the men went to town enough even in the old days. The town is not going to be such a dangerous illusion to the young people when they see it oftener and when distance no longer lends enchantment. Rural mail delivery has removed another of the drawbacks to country life. The consequent increase in reading matter is already noticeable. In this connection also one might

mention the increase in the number of travelling libraries. There has been too little temptation to our young people to become readers, and it is regrettable that such has been the case. Let us hope that the men and women of to-morrow will take up more seriously the cultivation of a taste for reading. This can only be done by beginning with the child. The taste is not often acquired during mature years. Our teachers already have the matter under serious consideration, and it would seem that it were not out of place to urge the farmers' organizations to strengthen the hands of the teachers in this matter. A taste for reading will beget a regard for ideals, and our people frequently fall short in cherishing high ideals. The spirit of the present age, as already said, is potent for much good, but it were well that we take stock of the dangers which are ever present.

There is one thing in which the men and women of the future—I mean those fortunate enough to live in the country—may do better than we of to-day are doing. I mean in the direction of physical care and culture. I know this is delicate ground upon which to tread, but I will throw down the gauntlet by saying that nowhere would physical training be more welcome and nowhere is it more needed than among the young people of our rural communities. The recent reports from medical examiners in connection with the Military Service Act furnish us with food for serious thought. There seems to be a settled opinion that the country boy, because of his access to a superabundance of fresh air and a fair amount of hard labor, must of a necessity be physically stronger than the lad going to school or working in an office. I well remember the idea we had in the old school back home, an idea that was almost a creed, that because of our advantages just mentioned, we each could just naturally take care of at least three town boys, without over-exertion. My opinion was modified the first time I went to the country fair at the local seat without my father. As a matter of fact, the town boy is very often better developed physically than the country boy, thanks chiefly to the Y. M. C. A. effort. What a fine opportunity for lectures and practices in physical training the country affords during our long winters! No boy, no man, no race can achieve best effort unless the healthy mind has a well-developed body in which to act. Let the men and women of to-morrow see that their school-houses and their halls shall be given over to some sort of supervised physical training during the winter, and that their young people are encouraged to go in for team playing at intervals during the summer. Team plays exemplify co-operation in its best sense.

The next generation, because of better team work, will wield a greater influence in politics. It would appear now as if the war will leave us with a somewhat clarified political sense. Party politics may continue. Probably we have nothing better to take its place (something like the examinations at school), but people will hold political opinions by conviction and not by inheritance. The agricultural communities should have a larger representation in our halls of parliament. I believe they will achieve that very thing because they will go after it. And when they send their representatives let us hope that they will follow what they do and propose to do, not necessarily to check, but rather to share responsibility.

The men and women of to-morrow will be religious, not as we understand the matter, but in the light of a new relation between church and people. The young theologians now in training are keenly alive to the responsibilities that rest upon them, the responsibility of regaining the grip upon the people that the church has lost. They are going to do it by going to the people. Students in theology are asking us to arrange for them courses in agriculture at the college. They say in effect that they want to go out to their work filled with a sympathy made strong by understanding.

The justification for the faith that is in us, as laid down in the foregoing paragraphs, is the fact that the young people of to-day are being educated along the right lines. Because this is so, the men and women of to-morrow will vindicate this prophecy of the dawn of a better day. The people of the town and the people of the country will no longer look for difficulties but rather for common interest. The young people of the country will no longer seek advancement necessarily by leaving the farm, because they will realize that theirs is probably a better birthright, that agriculture need not stand for culture in word only, that the profession of their fathers and mothers is of a dignity on a par with that of any other profession, and they may think once in a while that it is just as profitable. They will realize all of these things because of the attitude of the school life,

because there agriculture is coming into its own. Education will foster co-operation because it is only by study, and beginning it young, that one can sense the true spirit of co-operation. The team plays and games will help. Education and social improvement will go hand in hand. They are naturally dependent. Education will imply physical as well as mental training. The healthy mind in the healthy body will make inevitably for healthy politics and healthy religion. All of these things will come to pass, if we be not carried away in this generation by things material—there is grave danger of it—and neglect our highest privilege, the unprecedented opportunity of making conditions better for the next generation than we found them prepared for us.—A. E. Howes, Dean College of Agriculture, Edmonton.

THE DAIRY.

What Verdict Would be Pronounced on Your Herd?

If your herd was brought before the jury indicated in the accompanying illustration, what would be the verdict? Would every individual prove her right to be fed on expensive concentrates in your stable, or would some be condemned to the block as unprofitable producers of food in the form of milk and butter-fat? Many dairy cows are merely a bill of expense to their owner. This is unfortunate, as a herd of poor cows prevents a dairyman from getting ahead no matter how hard or how long he works. Revenue that comes in from one branch of the farm is paid out for feed to keep the cow. Because roughage and the bulk of the grain part of the ration is grown on the farm is no reason for not reckoning such feeds at market price, less cost of marketing, or else at what it cost to produce such crops. The dairy is one branch of the farm. All feeds used should be credited to the crop branch and charged against the cows, and the value of the manure should be credited to the stock. If a good many of the cows now kept were charged market price for feed consumed and labor involved, the balance would be on the wrong side of the ledger, as receipts from milk, manure and calf would not meet expenses. The cow isn't entirely to blame. She hasn't any control over the quality of blood which flows in her veins and perhaps she is not fed the ration or given the attention that is required if she is to reach her maximum in production. It must ever be remembered that a dairy cow is a machine for the transforming of farm crops into lactic fluid and milk fat. The more highly specialized and efficient this machine is the greater the quantity of milk and fat it will extract from the raw material used. While the dairy cow is a wonderful machine, she cannot take something from nothing, or, in other words, the materials found in milk and fat must be fed in some form, and the more available those materials are in the feed the better the returns. Corn stalks and timothy hay, while satisfactory feeds as part of the ration for some classes of stock, do not contain the nutrients that would warrant heavy production from the best bred cow. They might form part of the ration but protein-rich material should be added to balance it.

From the method in which some herds are fed, one might draw the conclusion that the feed was merely to keep the animals alive, and that milk was the result of some inherent power embodied in the cow. While it is true that the cow inherits her power for production, it is also true that heavy milk yields are accompanied by high feed bills. For instance, Young Springwood, an O. A. C. cow which gave 20,110 lbs. of milk and 821 lbs. of fat in 365 days, consumed 3,936 lbs. of meal, 12,270 lbs. of silage, 6,435 lbs. of mangels, and 9,504 lbs. of hay. This seems like a big order but the cow made good use of it as she produced milk at a cost of 66 cents per 100 pounds and fat at a fraction over 16 cents a pound. Compare this with the ration fed Molly Rue 2nd, a cow of the same age and breed which gave 12,677 lbs. of milk and 469 lbs. of fat in 365 days. She didn't give as heavy production, nor did she consume as much feed. The meal weighed 2,958 lbs., which was about a thousand pounds less. She consumed a few hundred pounds more of silage and mangels, while her hay allowance was about two tons less. She did not produce milk or fat quite so cheaply as her stablemate, although there was not a very great difference. Supposing these two cows had been fed the same allowance of meal, silage and roots, what would have been the result? It is difficult

to say, but by keeping feed and milk records the cost of production and profit are ascertained. Few cows in the average herd give as large a yield, nor are they fed so liberally although many are fed more grains than their yield of milk would warrant. Of the two and one-half million cows believed to be kept in Canada, comparatively few of their owners can give the milk or fat yield or give the approximate feed bill for those cows in any one year. Some dairymen, and the number is gradually increasing, can give this information for all cows in the herd. They know which are the best cows and which to save heifer calves from. There is no guessing.

Why do not more dairymen keep milk and feed records? A large percentage claim it is too much bother, but yet they take the trouble to feed, stable, care for and milk cows which do not pay a red cent for the labor. We heard one man state that he believed in keeping records but he was afraid he would be disgusted with three-quarters of his herd if he had their milk record on paper so, he just kept putting off the day when he would have his cows up before the bar and learn their yearly yield of milk and fat, together with cost of feed. There are too many in a similar frame of mind for their own good. It would be ruinous to dispose of all mediocre cows at once but a systematic effort should be followed by every cow owner to gradually eliminate the inferior cow, save heifers from the very best and by culling out and using a bull of recognized blood lines build up a herd that not only pays its way but returns interest for money invested. It can be done.

Over 200,000 individual cow records were received at the Dairy Records Office last year. These cows were before a jury; some of them were condemned while others were exonerated. Thousands, yes, hundreds of thousands of cows will appear before this same jury in 1918, and according to their performance before this elect body they will be branded as unworthy of remaining in the herd or will receive a certificate which will be an indication that they deserve good treatment and liberal feeding. Will your cows appear before the jury? Are you worrying about what the verdict will be? It has been said that a man must become dissatisfied with his herd before he commences to improve it. The average milk yield per cow is claimed to be around 4,300 pounds, which at \$2 per hundred pounds, would give a gross income of \$86. Compared with past years this sum looks large, but, when the high-priced labor and feeds are deducted the net income is very small. If your cows reached the 8,000-pound mark the net returns would be much greater in comparison with extra cost for feed to produce the increased yield.

The jury, while not of the authorized number, is composed of Messrs. Scales, Babcock Test, Feed Record and Milk Record, who carefully collect evidence throughout the lactation period and are in a position to render an unbiased opinion at the end of the year relative to the character and value of the animal.

Mr. Scales prefers that a record be kept of each milking and that all the weighing be done in one pail, as pails vary in weight. By so doing one danger of error is minimized. It does not take more than one-half minute to weigh and record each cow's milk yield. Sometimes weighing the milk night and morning the first and fifteenth of each month will satisfy this jurymen. The yield for the month can be reckoned from these two days' milking. This gives an idea of what a cow is doing but is not so accurate as the daily weighings. Mr. Milk Record is a co-partner of Scales. On a sheet ruled for night and morning milkings each day of the month, for each cow in the herd, the weights are tabulated and can be totalled at the end of the month. These totals for each cow are then transferred to another book where the monthly and yearly totals of each cow are kept so that a cow's record can be found for any one month or year. It is advisable to record the names of the daughters and their yearly records besides that of their dams, so that transmission of milk qualities can be studied. Milk Record enables each cow owner to know his cows by milk yield, as well as by name and appearance.

Mr. Feed Record keeps approximate account of the rations and amount fed each cow. An occasional feed of hay, silage, roots and grain are weighed and by using the same measure it is possible to feed about the same amount from day to day. A feeder will give about the same amount of hay at each feed. Milk Record and Feed Record compare notes frequently and if it is found that Rose gives twelve pounds more milk a day than Blacky, she is entitled to more concentrates. The amount of the roughage part of the ration is about the



The Cow Before the Jury.

Milk scales, Babcock test, feed records and milk records comprise a jury that render a fair decision.

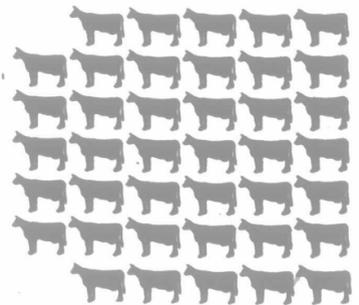
From I. H. C. Bulletin.



The Verdict of the Jury.

This cow returns a greater profit in one year than some herds of forty cows.

From I. H. C. Bulletin.



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same for all cows of like weight. An endeavor should be made to feed the high-priced feeds according to production. It is frequently found that one cow will respond to increased grain while another one will not, thus the dairyman can, by following the information given by these two members of the jury, secure maximum returns for his feed. It may be easier to go down the line and dump the same amount of chop into each cow's manger than to give Rose 8 pounds of meal, Blacky 5 pounds, De Kol 9 pounds, etc. However, it is not always the easiest method that gives the best returns. Knowing what each cow gives and feeding concentrates accordingly, is getting dairying down to a business basis.

By having these records a little experimental work can be carried on. The amount of grain may be increased or decreased and the effect on the milk yield noted. Different kinds of concentrates may be tried and their effect studied. In this way it is possible to get the feeding of each cow down to the most economical basis. There are cows which respond to increased grain while others do not, hence the necessity of keeping records if concentrates are to be fed to greatest advantage.

The other member of the jury is of a scientific and technical turn of mind, and makes a business of finding out the amount of butter-fat in milk, in order to further determine an animal's value. By use of sulphuric acid and centrifugal force, the fat in milk is separated from the other milk constituents. The fat rises in the graduated neck of the bottles so that the percentage can easily be figured out and the total amount of butter-fat in a given quantity of milk be computed. A cow giving a large flow of low-testing milk may not be as valuable as her stablemate, giving less milk of higher test. Quality as well as quantity is wanted, whether milk is marketed at cheese factory, creamery, condensery or supplied to a town or city trade. A low test is damaging evidence against the value of a cow or to her right of a place in the herd.

The accompanying illustration shows that one cow returned greater profit than forty other cows. Practically the same results have been in evidence in cow testing centres throughout this country. There are herds in which one cow gives as great net returns as the other ten or twelve members of the herd. The jury above-mentioned have been instrumental in picking out these profitable members of some herds and have induced the owners to discriminate against the poor cow and to give more attention and feed to the cow which has the ability of making best use of feed and environment. It would be to the advantage of every dairyman to pay more attention to milk and feed records. The records alone will not make better cows but by using the information which the records impart one is able to gradually build up a more profitable herd.

When purchasing a sire the milk and fat records of the dam and grandam should be taken into consideration, as well as the individuality of the animal. It is dangerous to go to extremes either way, but a dairy sire should have good backing if improvement is to be made in the herd. Appearances are not always an accurate gauge for measuring or estimating a cow's or a bull's value as a producer. If the sire has better individuality and is from a cow with a higher record than the members of the herd he is used on, there is reason to look for improvement in the heifers, but the reverse will be the case if the sire is not equal to the cows in quality. Have the jury pronounce a verdict on every member of your herd. If evidence is against the cow and she is condemned to die at the shambles, it is no doubt to your interests to turn her carcass into meat rather than have her reproduce her kind and be a stumbling block in the road to higher average milk yields. When looking for a herd sire see that his dam has a good record.

Farm Butter-making Problems.

The labor involved and the difficulties encountered in getting butter to come in a reasonable time has led many dairymen to ship cream to a creamery rather than manufacture it into butter on the farm. At certain seasons of the year some have trouble with cream foaming in the churn, butter coming soft, etc. The cause is said by many to be due to feed or time of lactation. The Dairy Department of the Ontario Agricultural College have done a good deal of experimental work to determine the cause of difficult churning and if possible to arrive at a practicable remedy. The following is from an address by Prof. Dean given at the Eastern Ontario Dairymen's Association Convention:

The causes of difficult churning were studied as to the effects of: Breed of Cows, Lactation Period, Percentage of fat in or Richness of Cream, Temperature of the Cream at Time of Churning; Ripened vs. Sweet Cream and Amount of Cream in the Churn. Briefly, the results were: little or no difference was observed by churning separately the cream from three breeds of dairy cattle—Ayrshire, Holstein and Jersey. Sometimes the cream from one breed took a long time to churn and sometimes from another breed. Neither was there very much difference in the losses of fat in skim-milk and buttermilk nor in the quality of the butter made, from the three breeds.

Cream from cows fed in the stable, churned as readily or even more so, than did cream from the same cows when on grass feed.

The cream from cows on stable feed milking for less than two months churned in 21 minutes; and from those milking two months and under six months on stable feed, the cream churned in 39 minutes, an increase in the time required for churning of eighteen minutes. On grass in September, the cream from the group, over two and under six months milking took 52 minutes to churn, and a group milking over six months took 33 minutes

to churn. Owing to scarcity of milk in the dairy herd, it was not possible to make further tests, but the results indicate more difficult churning of cream from cows advanced in lactation as compared with churning cream from fresh cows' milk. The work will be continued.

The churning tests as to the effects of richness, ripeness and temperature of cream were made in a No. 3 size barrel churn, having from two-and-one-half to three gallons of cream for each churning. The results were:

Kind of Cream	Lbs. Cream Churned	Per Cent. fat in Cream	Temp. Cream Degrees F	Minutes Churning	Per cent. fat in Butter-milk	Average score of Butter Max. 100
Rich.....	30	28	52	29	.14	95.75
Thin.....	30	16	56	38	.10	95.75
Thin and Warm.....	30	16	56	38	.10	95.75
Thin and Cold.....	30	16	52	54	.15	93.
Rich and Warm.....	30	28	52	29	.14	95.75
Rich and Cold.....	30	28	46	40	.07	95.5
Normal Temp.....	25	26	54	41	.35	95.
High Temp.....	25	26	69	12	2.40	93.5
Ripe Cream.....	32	26.5	50	30	.15	94.5
Sweet Cream.....	32	24	50	48	.70	94.5
Normal quantity in churn.....	32	26.5	50	30	.15	94.5
Churn half full.....	63	26	50	70	.15	94.5

CONCLUSIONS.—1. A thin cream (16% fat) took a longer time to churn than did rich cream, or cream containing from 25 to 30 per cent. fat. A thin cold cream was still more difficult to churn, taking nearly double the time to churn as did normal cream at ordinary churning temperature.

2. A rich, cream, too cold, also required a long time for churning but gave an exhaustive churning; that is, one with very little loss of fat in the buttermilk.

3. A high churning temperature caused the butter to come quickly, but caused an excessive loss of fat in the buttermilk, and the quality of the butter was poor.

4. A well-ripened cream churned in a shorter time and with less loss of fat in the buttermilk than did similar cream churned sweet. It is advisable on the farm to ripen cream, as a rule.

5. A small barrel churn filled half full of cream took 40 minutes longer to churn than did a churning of similar cream when the churn was but one-third full. The churning one-half full, rose four degrees in temperature after churning for thirty minutes. A churn with too much cream in it is a cause of difficult churning.

Speed Up Milk Production by Using Better Sires.

Of recent years considerable investigational work has been carried on in order to determine the cost of producing a hundred pounds of milk or a pound of fat. There are many items which have to be considered and while the feed bill may be similar for a number of dairymen, no two will be able to produce their product at the same cost. One man can feed and manage his herd better than another. One has a more convenient barn than his neighbor and is able to do his chores at the minimum expenditure of energy. It is difficult to get two herds that will produce a like amount of milk and fat at the same expense. This is where the main difference lies. A cow must produce so much milk in order to pay for her keep; all over that amount is profit. Consequently, the herd that averages 8,000 pounds of milk would naturally return greater profit than the one averaging 6,000 or 7,000 pounds because the market price of the product is the same. The goal to which dairymen are climbing is higher production which comes by improving the individuality of the animals and in better feeding. Progress is comparatively slow. There are a number of exceptionally heavy milkers of all breeds, but at best they do not on the average reproduce themselves oftener than once every two years and it is three years before that heifer reproduces herself and yields the lactic fluid. Improvement comes more rapidly through the male. A prepotent bull of the right quality and backing will leave daughters which will in the majority of cases be heavier producers than their dams. This is the quickest way of improving the producing qualities of the herd and yet many will stop at a few dollars when purchasing a herd header. A bull of desirable conformation that is from high-producing stock, cannot be bought for beef prices. He is worth more. Have you noticed how much more the progeny of certain bulls bring than do the progeny of others at a sale? It is the result of the blood lines. If a bull cost four hundred dollars and was used on a herd of twelve cows, he would return fifteen per cent. interest on the investment if there were six heifers and each were worth but ten dollars more than if sired by a bull of inferior quality. Ten dollars is a much smaller increase in value than frequently results, but at that few investments give as good returns.

Ten years of culling the females and using the right quality bull has resulted in some dairymen practically doubling the average production for their herd. It has been done with grade as well as pure-bred females. Due to the improved individuality of the animals, more milk is made from a certain amount of feed than formerly, and in this way the farm crops marketed through the improved herd have a greater value. The improved herd has very often been the result of using

a selected sire and culling out low milkers rather than of purchasing heavy-producing females.

The present prices of dairy products give some dairymen a fair profit after paying for labor, feed and interest on investment. With others the dairy barely breaks even at the present prices. The difference is largely due to the producing power of the two herds. It would be impossible to set a price to the consumer that would put both producers on an equal basis regarding returns. After a certain production is reached, advancement is

much slower than up to that point. This may be due to the scarcity of sires of the heaviest producing strains. Some dairymen find it difficult to make ends meet with the present price of feed and labor. One solution is to increase the producing powers of the herd. Too many are spending feed and labor on cows which are "dead beats" so far as milk production is concerned. Better get rid of those and give extra feed and attention to those which pay their bills regularly. This would almost deplete some herds and the owner would be well rid of them; but don't sell them to your neighbor; send them to the block. Five good cows, well cared for, will very often give larger returns at less expense than ten poor cows. Breed the good females to a sire whose ancestors have stood the test, even if it costs five dollars a service. At that it is the cheapest and quickest way of building up a high-producing herd. If a bull of the right quality can be bought cheap, all well and good, but it is not economy to take an inferior animal just because he can be purchased for less money. His offspring may be worse than their dam's and no dairyman should allow production to decrease through laxity in choosing breeding animals. The yield of milk and fat per cow or herd sets the cost of production per quart or pound. The higher the milk yield, other things being equal, the less it costs to produce a quart of milk.

Many do not pay sufficient attention to the ration. They appear to forget that milk is made out of the feed and that if the nutrients contained in milk are not in the feed the cow is unable to give a maximum yield. The various constituents must be fed in definite proportions in order to get the highest and most economical production. Abundance of one does not entirely make up for lack in another. With timothy hay and straw as roughage, more high-priced nitrogenous concentrates are required to keep up production than if the cow had all the legume hay she cared to eat. Silage helps to keep down the cost of a ration. More legume hay should be grown on the average dairy farm. We know of the difficulties encountered in getting a catch of this crop, but it is worth trying year after year. Legumes are not only excellent feeds for stock, but they enrich rather than deplete the soil on which they grow. More attention given to breeding and feeding problems will tend to increase the returns from the herd.

Some cows consume more roughage and will pay for more concentrates than others, consequently each member of the herd should be studied and fed high-priced feeds according to their returns. There is need for a little more accounting in the dairy than has been practiced in the past. The slackers should not be tolerated in the herd, but the only accurate way to detecting them is to keep feed and milk records. These record sheets show which cows should be beefed and which will pay for the heavier feeding. Dairymen who do not know the individuality of each member of their herd are working more or less in the dark and are not getting the most efficient service. Business principles are as necessary in the dairy as in commercial enterprises.

Picking a Winner.

EDITOR "THE FARMER'S ADVOCATE":

Although it is well understood that certain characteristics in the appearance of a dairy cow indicate her probable milking value, yet it is not always easy to pick a winner just by appearance. The following incident is worth consideration. At a recent farmers' picnic a prize of ten dollars was offered to the man placing in their correct order of production the first six cows whose records were from 6,000 up to 14,000 lbs. milk.

Fifty men entered the competition, but no one was entitled to the prize. As a matter of fact, only one farmer succeeded in placing the first three cows; 37 did not place the best; and 30 did not place the poorest.

In other words, the external indications of milk producing ability may be lacking in cows, or may be misunderstood by even the experienced farmer. Appearances are often deceitful. There is one way, however,

and only one certain way to judge accurately, namely, by keeping simple milk records. There can be no mistake then whatever at the end of the lactation period as to what each cow has done.

C. F. W.

Oleo Not Liked.

EDITOR "THE FARMER'S ADVOCATE":

May I give an English opinion of oleomargarine? In pre-war days it sold for from 8 cents to 20 cents per pound. I never knew it higher except that to tempt people to buy, it was offered in some shops at 24 cents and they "gave" a pound with every pound you bought. Of course, it was the sixpenny (12-cent) article, and when you paid double you had double quantity, the amusing thing was that some people were actually gulled into thinking they had it given them. Although I was quite glad to save where I could, I always found that to buy oleo was so much money wasted, as it made leathery, indigestible pastry, and I never yet made a decent cake with it nor did I find it good for frying, and as to eating it instead of butter!—as uncle Remus has it—"dat was de las' ac." We lived in the country where we had currants, gooseberries and plums in the garden, and in the commons, blackberries for the picking, so always had jam, and when short of butter and waiting for the week's wages, ate bread and jam in preference to oleo. There is lots of oleo sold for butter in countries where the sale of oleo is allowed and will be here, especially when children are sent to buy.

New Brunswick.

JOANNA M. HUDSON.

A New Plan for Cow Testing.

EDITOR "THE FARMER'S ADVOCATE":

The time has come when a change of plan for the cow-testing work seems to be imperative. The Dairy Record Centres have served their purpose, but a more comprehensive scheme, whereby the whole country will be covered instead of limited areas, now seems to be necessary. This is all the more important in view of the desirability of increasing production as much as possible, and there is no simpler or easier way of increasing dairy production than to improve the yield of the dairy herds. The Dairy Record Centres will cease to exist and the position of Dairy Recorder will be abolished after May 1, 1918. In place of such organization the Department will enlist the services of cheesemakers, buttermakers and other qualified persons to test samples of milk, paying sufficient to make it worth while for anyone to give some attention to it. By transferring the work of the Dairy Recorders to a large number of persons who are already employed, some 30 men will be released for other work. The average yield of milk per cow has increased fully 30 per cent. on recent years, but there is still room for improvement. By this new plan we hope to reach a large number of milk producers who have not so far been keeping records, and thus give a further impetus to herd improvement.

J. A. RUDDICK.

Cows are appealed to as Empire necessities.

—C. F. Whitley.

During the month of December, 74 Holstein cows and heifers were accepted for entry in the Record of Merit.

The expenses of the Cheese Commission have amounted to eight-tenths of a cent per box.

—J. A. Ruddick.

Anything which benefits the farmer and adds to his prosperity benefits the city near which he resides.

—J. Donaldson.

If butter is to be held in storage the cream from which it is to be made should be pasteurized, by heating to 160 or 165 degrees and holding it at that temperature for ten to fifteen minutes.

Stock and land are productive capital; buildings and implements are considered as unproductive capital; the small farmer has a smaller proportion of capital working than has the owner of a large farm. This is one reason why a larger labor income is made on the farm of 150 to 200 acres than on a farm comprising less than 100 acres.

If farms are the second-line trenches as some authorities claim them to be, and are almost as important as the first-line trenches in the fight for liberty, why is the farmer not given every support and consideration? Why is the profit to manufacturers of certain articles guaranteed and the farmer asked to make further sacrifice, to work harder, to produce more even if there is no profit in it? It should be remembered that the farmer must have a little profit over cost of production in order that he may continue to carry on.

In explaining the rural survey carried on in Peel County, A. Leitch defined labor income as "What is left of the farm receipts after paying running expenses of the farm, allowing a reasonable amount for unpaid members of the family, and interest on investment." At least twenty-two farmers, tilling 85 acres and under, in the township in which the survey was conducted, had \$108 with which to clothe and feed themselves and family, pay insurance, provide education, etc., and that in one of the best years so far as crops and prices are concerned. Very attractive proposition! Does it solve the problem why boys leave the farm?

HORTICULTURE.

Have all tools repaired and in proper condition before they will be required for use.

Any pruning that can be done in the orchard, even during the middle of the day in comparatively cold weather, is that much gained.

Earliness is an important factor in gardening, and as aids to this the hot-bed, cold-frame and house germination of seed might be mentioned.

Even if the temperature does sometimes fall to 15 or 20 degrees below zero it is not too early to consider the garden seed supply for next spring.

In the Horticultural Department of the January 17 issue an article appeared regarding the care of a sweet cherry orchard, and the recommendation was made that nitrate of potash be used in conjunction with bone meal as a fertilizer. This should have read "muriate of potash" instead of "nitrate of potash," as the latter product is used extensively for medicinal and industrial purposes. Muriate of potash and sulphate of potash were our two leading potash fertilizers before the war, but since then they have been practically unobtainable. Some small amounts of potash are now incorporated with mixed fertilizers, but it is largely a by-product of beet-sugar manufacture and other industrial lines.

The Fruit Grower's Position Defined.

We do not hear very much said about the duty of the fruit grower in these critical times. He is neither asked to speed up nor to slow down. His product is desired by our consuming population, but those in authority probably feel that if they leave the matter alone there will still be sufficient fruit to go round. Their very reticence in regard to fruit growing acts as a blanket which stifles enthusiasm and leaves the grower undecided as to what he should do. The embargo is another obstacle which always looms up when one discusses apples, and everyone is apprehensive as to results in case of a large crop. It is time some definite policy was presented to the people, but no doubt these topics will be discussed at the coming Fruit Growers' Convention at Toronto, and an understanding may be arrived at. A representative of this paper discussed the problem recently with the Dominion Fruit Commissioner and with Prof. Bunting, of Macdonald College, Que. In their opinion the fruit grower should "carry on."

The Commissioner, Mr. Johnson, expressed himself as in no wise pessimistic and of the opinion that fruit growing should not be neglected. He thought the specialist who has a large acreage, which represents the major part of his investment should devote all his attention and efforts to his work; but the mixed farmer should look to the production of wheat and bacon first and then, if any time remain, spend it on the orchard, which is with him only a part of his revenue-bearing investment. Mr. Johnson considered fruit a necessity, not to the same extent, perhaps, as potatoes and some other staples, but he thought it necessary in the diet and a good substitute for other foods which we are asked to conserve. The suggestion was made that it might not be possible to accomplish everything in the way of orchard work and in such a case pruning might better be omitted than either spraying or cultivation. Mr. Johnson was emphatic in regard to the need of thorough spraying under all circumstances and advised the fruit specialist to give due attention to cultivation. In the State of New York, pruning is being neglected, owing to the shortage of labor, and this is the first operation that we should overlook if the demands upon time become too urgent.

As labor savers, the dusting method was mentioned and the use of the spray gun, which is a recent invention that has been tried out. The cost of dusting is equivalent to that of spraying. It is the saving of labor that commends the dusting practice most.

"The people," said Mr. Johnson, "are not eating one-quarter the apples they would if the price were right. Food Control and proper substitution of some kinds of foods with fruit should make the demand for this commodity much greater." It was intimated that efforts would be made to curb speculation in fruit so the price would remain normal and larger quantities would move into consumption. The Commissioner considered over-production out of the question so long as speculation was prevented and the price maintained at a reasonable level. Owing to the condition of orchards generally, and the neglect they have suffered, a large crop would not be possible unless we enjoy remarkably favorable climatic conditions.

Female help will likely be as plentiful this coming season as it was last year and more will be available if needed. Two thousand extra women worked in the Niagara district last year, but four thousand or five thousand extra helpers could have been obtained quite as easily. Female help is also quite plentiful in British Columbia.

Prof. Bunting, head of the Horticultural Department, Macdonald College, advised that the fruit grower spray well and care for his orchard in spite of the price of material and labor. "In Ontario and Quebec," he said, "orchards are not in as good condition as they were two or three years ago, so a full crop of high-grade fruit is impossible. High-priced labor and spray material will not allow of cheap apples." Prof. Bunting said he recalled several years when growers were feeling pessimistic

in regard to prices and it was then that they always received good returns.

With regard to the value of fruit as a food, Prof. Bunting said that it was necessary in all diets. Artic explorers suffer from the lack of fruit, and the United States Food Controller, Mr. Hoover, laid considerable emphasis upon it as an outcome of what he saw in Belgium. The following figures were presented by Prof. Bunting as evidence of the value of fruit compared with other foods. The comparison is made in fuel value, or calories, an equal quantity being taken in each case. The figures are: Milk, 320 calories; apples, 290 calories; grapes (fresh), 450 calories; plums, 380 calories; cherries, 300 calories.

Dried fruit shows even better advantage; one pound of beef steak has 1,100 calories; dried apples, 1,320 calories; raisins, 1,570 calories; prunes, 1,370 calories. Fruit, of course, could never be depended on to supply all bodily requirements, any more than could sugar alone, or fat. However, as a part of the diet it is indispensable to properly ration a nation.

The fruit grower might leave a part of his orchard in sod to save time and labor in cultivation. This should be left in the form of a strip along each tree row and wide enough in each case so about half the land in the orchard would be in sod and the other half under cultivation. Rape and buckwheat make effective cover crops, not so good perhaps as clover but very much less expensive. It was suggested also that under some circumstances we might be able to employ cattle, sheep or swine in an orchard to consume some of the grass grown there and to pick up diseased or wormy apples. The spray gun and dusting machine were mentioned as labor-savers, and, in order to get as much pruning done as possible, Prof. Bunting recommended getting at it early in the season, even if one could only work a few hours in the middle of each day.

It was furthermore suggested that vegetable growers take into consideration the city garden, and perhaps go a little stronger on staples, such as peas and beans.

Home-grown Turnip Seed.

EDITOR "THE FARMER'S ADVOCATE":

Quite a lot has been said in the last two years or so about Canada raising her own vegetable seeds, so last spring just to try it out for myself I planted twelve turnips (the best shaped ones I could procure) in a space of not more than six by eight feet on May 24. I sprinkled over the ground, after the turnips were planted, potassium nitrate which I was lucky enough to have on hand. The plants grew over six feet tall so I had to tie the branches to a stick. By the last week in August all the seed was ripe and had been picked, which amounted to exactly one and a quarter lbs. One quarter lb., the first to ripen, I kept separate from the rest. I haven't a table here just now to see exactly what the production would be per acre but should imagine it would be quite high.

Simcoe Co., Ont.

F. T. LAMBLE.

POULTRY.

Returns From a City Flock.

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue of The Farmer's Advocate, there appeared an article in the Poultry Department relating to poultry accounting. As I have kept account of receipts and expenditures during the past year, I thought possibly my experience might interest some of your readers. My operations were carried on under adverse conditions, as the yard space was limited, being located in the centre of a large city. The soil was a cold, heavy clay, which, in my opinion, is detrimental to the success of poultry raising. All the feeds were purchased in comparatively small quantities; consequently, I paid higher prices than if I had been able to buy in bulk. The ration consisted of bran, shorts, wheat, oats, buckwheat, and some corn when procurable. Occasionally, in severe weather, I fed boiled oats with the bran.

On January 1, 1917, I started with a flock of 48 hens, pullets and cockerels, which I valued at \$48. For the twelve months the feed bill was \$136.28. I paid \$6.87 for eggs for hatching, and in October I bought fifteen hens at \$1 apiece. The interest on my original investment at seven per cent. was \$3.36, making a total expenditure of \$209.51. A total of 2,970 eggs were produced in the year and were worth \$116.42. Other receipts were the sale of 29 cockerels for \$28.40, and 82 hens and pullets for \$76.35. At the 31st of December, 1917, I had 53 hens and pullets on hand, which I valued at \$51 apiece. Thus, my poultry gave me a profit of \$64.66 over the cost of feed and interest; or, in other words, I have this sum for my labor.

Wentworth Co., Ontario.

A. K.

Special vs. Side Line Poultry Production.

EDITOR "THE FARMER'S ADVOCATE":

At this time when economical production is of first consideration, the question of whether production should be increased by encouraging the number of poultry farms or by increasing the flocks kept in farms and in backyards in the towns and cities, becomes of special interest.

That the poultry specialist usually gets better results than the farmer, goes without saying. He gets better results because he has to; if he did not he would soon be out of business. He has nothing but his poultry

to depend on; he must show a profit. It costs him so much more to feed his poultry than it does the farmer that his only salvation is in increased production. He must get it or fall by the wayside—one of the failures in the poultry business.

With the present high and the ever-ascending prices of feed, it is becoming more and more difficult for the specialist to show a satisfactory profit so that we must turn for increased production to sources where the feed problem is not so acute. This brings us to the mixed farm where a flock is kept as a side line and to the town-dweller.

Every farm in the country should carry a flock large enough to make the best use of the unsalable grains, vegetables and waste milk. There are few farms that could not to great advantage carry a flock of at least one hundred hens. But the flock must be put on a business basis. One member of the family—preferably one of the younger members—should be given full charge. Careful records should be kept and all wasters promptly disposed of. In this way the production may be greatly increased without any corresponding increase in cost.

Most of the work will be done by one of the younger members of the family. It will interfere very little with the general farm work. It will generally be necessary to purchase some feeds to supplement those available on the farm, but by so doing much of the lower grade products may be fed to produce a greater profit than if sold or fed to any other live stock.

The greatest hope for increased production at the present time lies in the backyard flocks. There is no reason why every city, town and village should not be wholly or in great part at any rate, self-supporting from an egg standpoint. There are hundreds and thousands of dollars' worth of good feed thrown in the garbage pails every day. The waste going on even yet in our cities is simply appalling. The kitchen waste from the ordinary family of five or six people may be fed to best advantage to a flock of about twenty-five birds. This is more than many will want to keep, but a flock of this size will only require a house about twelve feet square—even a little less will do—no yard room is necessary and the eggs produced should keep the house supplied and still leave enough to sell to less thrifty neighbors, to pay for all the supplementary feeds which it is necessary to purchase.

What is more tempting to the appetite than an absolutely new laid egg from a flock that has been cleanly fed? Once used to home produced eggs, the consumer will never be content to depend on store eggs. If you don't believe this, try it.

Under present conditions, increased production should not be brought about by increasing the number of poultry farms, but rather by increasing the size and number of farm flocks, culling closely, and keeping nothing but good producers and last but of primary importance—by the increase in number of backyard poultry plants where flocks may be kept largely on feed that would otherwise be wasted.—Experimental Farms Note.

The Crisis in the Poultry Business.

EDITOR "THE FARMER'S ADVOCATE":

Do you know that commercial poultry plants all over the country are going out of business? Is the high cost of feed responsible? Yes, that is the immediate cause—but the most important reasons are rather obscure. You see, the commercial poultry plant buys most of its feed, hires special help, grades the products and ships to a select market that pays just enough more than market price to ensure a fair profit to the producer.

The price of feeds has more than doubled, but not the price of poultry and eggs, so the doom of the commercial poultryman is certain unless one of two miracles happens. Either the price of feed must come down, or the public be educated to pay a fair price for good fresh chicken and newly laid eggs. The poultry business has always been clouded with doubts and uncertainties. Now the upheaval has come, and it is to be hoped that new bricks will be mixed with the old and a common sense structure planned on new foundations.

It is a fact that the average farmer takes little pride in his poultry, and less care of them. Nevertheless he supplies the vast bulk of the poultry products consumed. If I were to allow the simple fact that supply and demand would always regulate the price, then the commercial poultry business is hopelessly on the rocks. But I do believe that supply can be sanely regulated and demand properly stimulated. At present the "dunghill" fowl in the enthusiasm of spring days and a full crop of the right food then possible, will manage to pour enough eggs into the cold storage houses to allow most of us a chance at a fairly good egg for breakfast and a not too bad fowl for Sunday dinner now and then. Think of the great glut of eggs in March, April and May,—a mighty stream of food pouring through the channels of commerce, fouled here and there by batches of rotten eggs from hidden nests, from laggard gatherings and marketings. Then follows nine months of hit and miss mustiness. A remedy for such conditions must exist, for it is not pleasant to think that matters must always be so.

Our neighbor, Uncle Sam, is spending \$184,000 on poultry extension work at present. This is fair evidence that he believes the remedy to be—education! A dozen good-sized, really fresh eggs have never sold at their proper value as delicious, easily assimilated nourishment. Our grandparents shied at the tomato. It was considered poison not many years ago. They had to learn. We have to learn many things in this world of constant change, and not the least is the value of eggs—fresh eggs. Now the farmer is not going to join a co-operative

egg association and take an intelligent interest in chickens right away. He really has more important matters crowding his elbow. Therefore, when fresh eggs go to ninety cents a dozen in January only such of us as are munition makers, army contractors or bacon packers and politicians are going to sit down to a fresh poached egg on a cold morning. But when we once learn to pay a fair price for new-laid winter eggs, or new-laid October ones, then the commercial poultryman can stay in business. We will learn to demand his product the year round, and pay a reasonable premium for it, letting the poor have a fill of cheap country eggs in summer and the same grade out of storage in winter for the added cost of handling.

Although the United States is spending many thousands of dollars in the effort to have farmers grade their flocks as they do their cattle, collect and ship their poultry products as carefully as they do those of the dairy, it will be a long time before the wasteful torrent of spring laying will be coaxed into a steady stream for the greater part of the year. You see, the United States is a great deal bigger than Denmark, where every farmer has a solid chunk of co-operative intelligence, knocked into him, as it must be in most of us, by the force of circumstance. And that none too gentle force of circumstance is not a great way under our own horizon.

Do you know that if you were dining in London, England, before the war, that if your eggs happened to be a bit off color,—why,—you will scarcely believe it, but the man that owned the hens that laid those eggs would have the matter brought to his attention by the officials of the Denmark farmer's association that supplies England with eggs? And that is the reason why Denmark can sell eggs at a premium in the same market with English country eggs from practically next door.

Meanwhile, until the first steps of education in these matters have been taken, and the great commercial poultry plants turning out standard products from standard-bred fowl saved thereby, it is the fancier who will shoulder the burden of keeping pure our many excellent breeds of poultry. He will do it cheerfully, for he is that most excellent of humans, a fancier! He may have to cut down his flock to fit his purse, but he is going to have fresh eggs while his neighbor is opening them gingerly. He is going to hang on to his breeding stock and support the poultry shows that are the breath of life to his hobby. Then when the wholesale panic slaughter of stock is over he will step to the front and produce the standard-bred birds that will restock the country. And by that time it is to be hoped the country will know a little more about the chicken business.

Leeds Co., Ont. W. A. STAEBLER.

FARM BULLETIN.

The 1918 Short Courses at the O. A. C.

As a means of carrying the work of the Agricultural College direct to the farm, the Short Course is growing in favor from one end of Canada to the other. A little more than a decade ago the first Short Course in stock and seed judging was held at the Ontario Agricultural College, Guelph. At that time a big class was not anticipated. Those responsible for the inauguration of the course hoped that twenty-five or fifty farmers and farmers' sons would avail themselves of the opportunity of spending two weeks at the College in practical work in stock and seed judging. Little advertising was done and a big class was not expected. However, over two hundred turned up for the course and from the beginning this line of work was a success. At the present time nine separate and distinct Short Courses are carried on at the College and for this year most of them have just been completed, while the remainder are now in progress. The courses cover practical instruction in stock and seed judging, dairying, fruit growing, farm drainage, poultry keeping, and floriculture and landscape gardening.

With conditions as they are at the present time, notwithstanding the fact that the Short Course has become well established, and is exceedingly popular with the young and older men of the Province, the staff did not expect large classes this year. However, to their surprise, taking the courses all round, they never have been so well patronized and never was more interest shown. In the poultry course, thirty students were enrolled. The dairy course was a little lighter numerically with twenty-two. All told, one hundred and forty-three were enrolled in the short course in stock and seed judging. The course in apiculture brought out thirty-one students anxious to know more of this branch of agriculture. Fourteen took up the work in farm drainage, and in fruit growing an even dozen were in attendance. The courses in vegetable growing and in floriculture and landscape gardening come a little later, but the new course in farm power drew an unexpectedly large number of young men anxious to fit themselves with the increasingly necessary knowledge of operating power machinery on the farm. This latter course was of two week's duration and it was expected that probably twenty-five students would be enrolled. However, proving that the tractor and other machinery, particularly engines, are being relied upon to do more of the farm work year after year between 150 and 160 students were regularly in attendance at the lectures and practical demonstrations in this work. There were eleven farm tractors on the grounds and with them to take charge of the practical instruction in tractor operation were experts sent by the manufacturers of the various machines. The students got practical training with the various types. Among the machines used in the demonstrations

were: the Happy Farmer, Sawyer-Massey, the Allis-Chalmers, the Sandusky, the Avery, the Gould Shapley & Muir (2), the Gilson, the Denning, the Case, and the Titan. These machines were operated in a clear space outside the mechanical building, and the students had instruction on each working the outfits themselves under the direction of the company experts. Lectures were given by Prof. W. H. Day and R. R. Graham of the College staff, and by such experts sent by various companies as G. B. Wheeler, of the Canadian Fairbanks-Morse Company; C. I. Grierson, of the Imperial Oil Company; W. A. P. Shorman, of the British American Oil Company; M. K. Douglas, of the Massey-Harris Company; H. R. Robson, of the International Harvester Company; A. H. Pepall; and J. W. Purcell of the Hydro Electric Power Commission. Electricity, the gasoline engine, carburetion, systems of ignition, lubrication, the oil industry, compression, engine troubles, water power, operation and care of engines and tractors, types of motor and tractor designs and construction, Hydro installation, Hydro-electric power on the farm, windmills, and systems of power transmission were subjects taken up in the forenoon lectures, followed by the practical instruction each afternoon. C. F. Bailey, Deputy Minister of Agriculture, was present and gave an address dealing with the tractor situation in Ontario. On the whole this was one of the most successful Short Courses ever held at the Institution.

With the growing necessity for the use of more power and less hand labor on the farms of the country and with the interest that is taken in this branch of the farm work, as evidenced by the large attendance at this the initial course of its kind in Ontario, it would seem that plans should be made to increase the scope of the work leading possibly to a great deal more of this class of instruction at the College. The two-year and four-year-term men we have always contended should get all the practical instruction possible on farm engines, farm machinery and farm mechanics all the way from splicing ropes up to the operation of the most intricate piece of machinery now in use on the modern Canadian farm. We must commend the authorities of the College for starting this Short Course, and the people of Ontario hope that it will be followed up with more such instruction which will work for the good of both the manufacturer of farm machinery and the men on the farm, because it is a fact that machinery will last longer and do more satisfactory work if operated by men who understand it sufficiently to operate it properly.

All the Short-Course work is having a good effect. In the beginning, to use the words of Dr. Zavitz "many old men as well as the younger men came out. Now, speaking particularly of the stock and seed judging course, an annual crop of young men comes forward." Keep up the good work. Ontario desires and deserves to get the most possible out of its Agricultural College. Short Courses reach the men who are actually on the land and who cannot take the time to avail themselves of the longer courses. These must get the largest amount of practical information in the shortest possible time. Let us have more Short Courses.

Cold in New Ontario.

EDITOR "THE FARMER'S ADVOCATE":

Having heard and read lately of the cold weather that our neighbors in Old Ontario have been experiencing, I thought that some might be interested in knowing how Northern Ontario folks are faring. The past week or two those of us living between Liskeard and Englehart have gladly welcomed the rather mild spell, for those cold days around Christmas and New Year's were too much of a good thing. Those 50 degrees below zero nights are all right, but one can have too many. When one lay in bed and came near freezing it was no joke; and to arise in the morning to find everything in the house frozen solid in spite of a good fire in the box stove made us realize how cold it was. One morning the temperature dropped to 60 degrees below zero, and the blue mist which hangs over the country, denoting intense cold, was on that morning almost a fog. It was hard to breathe outdoors, and no wonder Jack Frost touched nose and ears going to the stable. One wanted to hug the stove then, instead of turning out to do chores. We were thankful that the wood box was well supplied, and that we did not have to rely on coal for firing as we are feeling the shortage up here, as well as are the people in Old Ontario. However, we lived through it, and are now hoping that our next cold spell will be a few degrees milder than our last.

New Ontario. D. HILL.

Government Cordwood.

An announcement has been made that Hon. G. H. Ferguson, Ontario Minister of Lands and Mines, has granted permits to the municipal authorities of Ottawa, Toronto and other towns to secure supplies of cordwood for fuel on that portion of the provincial domain known as Algonquin Park. The timber will be cut under the direction of expert foresters on either of the railway lines that traverse the park. This undertaking is in accord with the suggestion proposed in "The Farmers' Advocate" some time ago. Ottawa plans to get out some 10,000 cords, consisting of maple, birch and tamarac, during the coming season.

Never Better.

EDITOR "THE FARMER'S ADVOCATE":

I have been a reader of "The Farmer's Advocate" for many years, but I think it was never better than, or as good as it is now.

Peel Co., Ont. J. PICKERING.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending January 31.

Receipts and Market Tops.

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

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	3,449	3,641	8,032	\$12.25	\$10.50	\$12.50	338	502	671	\$17.50	\$14.00	\$17.50
Montreal (Pt. St. Charles)	869	3,404	784	11.50	10.40	12.00	229	1,000	225	16.00	11.50	16.00
Montreal (East End)	1,156	4,136	945	11.50	10.40	12.00	216	970	270	16.00	11.50	16.00
Winnipeg	2,810	2,913	2,205	12.25	9.75	12.00	88	179	77	11.00	9.00	12.00
Calgary	1,749	1,357	1,261	11.25	8.00	11.50						

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	4,244	9,780	13,933	\$19.00	\$14.25	\$19.75	391	1,142	1,465	\$18.75	\$14.50	\$19.25
Montreal (Pt. St. Charles)	1,283	5,018	1,003	19.75	14.90	20.25	669	3,797	1,682	17.00	13.75	17.00
Montreal (East End)	759	4,178	1,170	19.75	14.90	20.25	512	4,811	1,135	17.00	13.75	17.00
Winnipeg	7,472	12,056	6,528	18.25	13.25	18.75	32	10	5	17.50		17.00
Calgary	2,345	4,826	4,548	17.50	12.75	19.00	211				12.00	

Market Comments.

Toronto (Union Stock Yards)

Thirty-two hundred cattle were on sale during the week; twenty-four hundred of which were on the market on Monday, two hundred on Wednesday, and six hundred on Thursday. The severe storm that swept over Ontario on Monday was responsible for curtailed receipts, as with a second blockade impending early Monday morning, the railways refused to accept any further consignments of live stock until the storm had abated and the line cleared of the snow. The result was, that no stock arrived for Tuesday trading, and only seven or eight loads were received on Wednesday. The market opened on Monday at about steady prices, but following the increasing severity of the storm and information to the effect that the railways were cancelling all trains, considerable activity in the market followed, the various buyers endeavoring to secure as large a proportion of the available supply as possible. This resulted in prices advancing from 25 to 50 cents above last week's closing quotations. On Tuesday and Wednesday, scarcely any cattle were available. On Thursday the market was very inactive, buyers being determined that no inflated values would be paid for the available supply. The result was that barely half the offerings were bought up by the noon hour, and those purchased sold at prices from 25 to 50 cents below those paid on Monday, or about on a level with the quotations of last week, the market closing at the lower level. Few heavy cattle were available on Monday, but one exceptionally choice steer of fifteen hundred pounds sold at \$12.50 per hundred, while a few straight loads of steers of about thirteen hundred pounds sold at \$12.75. On Tuesday another good load that was held over from the Monday market sold at \$12.60. For steers ranging from ten hundred to twelve hundred pounds the top price was \$12.25, which was paid for twenty head that averaged slightly better than ten hundred pounds each; other good sales were made as high as \$12, while the bulk of the good cattle in this class moved at \$11.25 to \$11.75 per hundred. Of steers and heifers of eight hundred to ten hundred pounds, forty-six head, choice in quality, sold at \$11.75, a number of odd sales reaching the same level, while the bulk moved out at \$10.50 to \$11.25 per hundred. Cows were active and higher, one choice cow sold at \$11.40, one at \$11, and four at \$10.90, while quite a number went to the scales at \$10.00 to \$10.50. Good cows sold from \$9.50 to \$10.00, and medium from \$8 to \$8.75. Bulls were in demand; one extra choice bull of twenty-two hundred pounds realizing \$11.40, and another \$10.75, while a number of sales were made at \$9.75 to \$10.50; medium bulls sold from \$8 to \$8.75. There was very little movement in stockers and feeders, but any transactions occurring were made at steady prices. Calves were barely steady, the bulk of the best veal moving at \$15 to \$16, with real choice veal reaching \$17, and common veal at \$13 to \$15.

The market for lambs was practically unchanged, a very few lambs were available. Prices were about steady at \$18 to \$18.75 for choice, and common from \$15 to \$17, light sheep sold from \$12 to \$14.50, heavy sheep at \$11 to \$13.

The majority of the hogs on the market

CLASSIFICATION	No.	TORONTO (Union Stock Yards)				MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price	
STEERS									
heavy finished	38	\$12.50	\$12.00-\$12.75	\$12.75					
STEERS									
good	328	11.45	10.75-12.00	12.25	19	\$11.50	\$11.50-	\$11.50	
1,000-1,200 common	15	10.45	10.00-10.75	11.00	9	11.00	11.00-	11.00	
STEERS									
good	706	11.16	10.50-11.50	11.75	81	10.75	10.25-\$11.00	11.00	
700-1,000 common	208	9.75	9.25-10.25	10.25	90	9.50	9.25-10.00	10.00	
HEIFERS									
good	261	11.41	10.50-12.00	12.00	27	10.75	10.50-11.00	11.00	
fair	344	9.67	9.00-10.00	10.25	31	9.25	9.00-10.25	10.25	
common	17	8.75	8.00-9.00	9.00	62	8.00	7.50-8.75	8.75	
COWS									
good	171	9.95	9.00-10.50	11.00	58	9.50	9.25-10.75	10.75	
common	467	7.75	7.00-8.50	8.75	181	8.75	8.00-9.00	9.00	
BULLS									
good	60	10.15	9.50-10.50	11.25	18	10.25	10.00-10.50	11.50	
common	62	8.58	7.75-9.50	9.75	63	8.00	7.50-9.50	9.75	
CANNERS & CUTTERS	387	6.25	6.00-6.50	6.50	161	6.50	6.00-6.75	6.75	
OXEN					2				
CALVES									
veal	322	15.12	14.00-17.00	17.50	174	14.50	11.00-16.00	16.00	
grass	16	8.00	7.00-9.00	9.00	55	7.00	6.75-8.00	8.00	
STOCKERS									
good	39	8.32	8.00-8.75	8.75					
450-800 fair	104	7.75	7.50-8.00	8.50					
FEEDERS									
good	142	9.69	9.25-10.00	10.00					
800-1,000 fair	100	9.00	8.50-9.25	9.25					
HOGS									
selects	4,074	18.69	18.50-19.00	19.00	1,096	19.07	19.00-19.50	19.75	
(fed and watered) heavies									
lights	111	17.50	17.00-18.00	18.00	166	18.60	18.25-19.00	19.00	
sows	58	17.50	17.00-18.00	18.00	17	16.84	16.75-17.25	17.25	
stags	1				4				
LAMBS									
good	307	18.39	18.00-18.75	18.75	441	16.50	16.50-	17.00	
common	29	16.00	15.00-17.00	17.00	134	15.50	15.00-16.00	16.00	
SHEEP									
heavy	22	11.50	10.00-13.00	13.00					
light	22	13.50	12.00-14.50	14.50	75	12.60	12.50-13.00	13.00	
common	11	8.00	7.00-9.00	9.00	19	11.55	10.00-12.00	12.00	

this week were consigned or contracted for previously, and little change in prices occurred. On Monday the hogs on the open market sold from \$18.50 to \$18.75, with one deck at \$19. No further supplies were forthcoming until Thursday, when eleven hundred were on sale. The packers, however, refused to bid above \$18.50, and most of the hogs sold at this level, although isolated sales were made at \$18.60 to \$18.75. With a liberal movement next week lower prices may be expected.

Of the disposition from the Yards for the week ending January 24th, Canadian packing houses bought 373 calves, 102 bulls, 20 heavy steers, 6,054 butcher cattle, 16,092 hogs and 1,274 sheep and lambs. Local butchers purchased 260 calves, 823 butcher cattle, 388 hogs, and 58 sheep and lambs. Canadian shipments consisted of 11 calves, 92 milk cows, 248 butcher cattle, 169 stockers, 112 feeders and 16 sheep and lambs. Shipments to United States points consisted of 21 feeders.

The total receipts from January 1st to January 24th, inclusive, were 16,913 cattle, 1,551 calves, 32,185 hogs, and 5,156 sheep, compared to 19,639 cattle, 2,551 calves, 37,431 hogs, and 6,116 sheep, received during the corresponding period of 1917.

Montreal.

Following the strong market of the pre-

vious week, there was a slight increase in receipts at the local yards. The market failed to maintain the high prices prevailing at the close of the previous week and declined 50 cents per hundred on actual sales and an additional 25 cents on a quality basis, despite the advances made on other markets which recovered from the break recently experienced. Two loads of mixed cattle averaging eleven hundred and fifteen pounds made the best sales of the week; these loads included twenty-five steers of very fair quality which, with the remainder which were of poor flesh, sold at \$11.50 per hundred. Eighteen steers averaging eight hundred and twenty-five pounds sold at \$9.75; fifteen head of mixed steers and heifers averaging nine hundred pounds at \$9.75, and twelve steers of fair quality averaging one thousand pounds sold at \$11. The best butcher cows on the market sold at \$10.75 per hundred and had been shipped from the Union Stock Yards, Toronto, for re-sale at Montreal; the majority of the cows offered sold from \$9.25 to \$10.50. Seventy milk cows sold from \$75 to \$150 each, and one sale of twenty-five head was made at \$118 each. Bulls sold at a top of \$11.50, while most of those of good quality sold from \$9.50 to \$10, and common to medium from \$7.50 to \$9.50. Cannery and cutters sold at a range similar to that of the previous week, but the majority of the sales were made at lower prices. The run

of calves was less uniform in quality than that of the previous week, and while the top price was unchanged, the average sales were transacted at a decline of 50 cents per hundred.

Sheep and lambs were steady and unchanged from the close of the previous week. Receipts were fewer by fifty per cent. than the average of the last four weeks. The best lambs offered sold at \$17 per hundred.

The market for hogs opened on Friday at \$18.75 to \$19 for selects, fed and watered, quotations being lower by 75 cents to \$1 than those prevailing at the close of the previous market. On Monday receipts were light owing to curtailment of shipments on account of the decline and, under a somewhat improved demand, prices were advanced 25 cents per hundred. Only forty-nine hogs were received on Tuesday and a further advance of 25 cents was made, while a number sold at 50 cents per hundred above Monday's prices. On Thursday the market closed in an unsettled condition for all grades of hogs, selects selling at \$19.50 per hundred.

Pt. St. Charles.—Of the disposition from the Yards for the week ending January 24th, Canadian packers and local butchers bought 225 calves, 164 cannery and cutters, 94 bulls, 521 butcher cattle, 1,682 hogs and 1,003 sheep and lambs. There were no Canadian shipments or

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The Molsons Bank

is always glad to assist farmers in any legitimate financial way to make their farms more productive.

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

shipments to United States points during the week.

The total receipts from January 1st to January 24th, inclusive, were 2,385 cattle, 631 calves, 4,607 hogs, and 3,710 sheep; compared to 3,404 cattle, 1,000 calves, 5,018 hogs, and 3,797 sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending January 24th, Canadian packers and local butchers bought 271 calves, 945 butcher cattle, 1,170 hogs, and 549 sheep and lambs. There were no Canadian shipments during the week. Shipments to United States points consisted of 586 sheep and lambs.

The total receipts from January 1st to January 24th, inclusive, were 2,692 cattle, 578 calves, 2,947 hogs, and 3,637 sheep; compared to 4,136 cattle, 970 calves, 4,178 hogs, and 4,811 sheep, received during the corresponding period of 1917.

Winnipeg.

Five loads from Cochrane, Alberta, consisting of eighty-three head averaging thirteen hundred pounds sold at \$11.35 per hundred, and twenty-two head averaging twelve hundred and ten pounds sold at \$11.25. The top price of the week was made by two steers averaging eleven hundred and forty pounds, which sold at \$12.25 per hundred; five steers averaging eleven hundred pounds sold at \$12, and twenty-three weighing ten hundred and seventy-five brought \$11.35; the majority of good quality steers over one thousand pounds sold between \$10 and \$11.60, and medium from \$8.70 to \$9.50. Choice heavy-weight steers realized steady prices selling from \$8.90 to \$10 per hundred, but those of medium grading sold at lower prices, bringing from \$6.75 to \$8.50.

Receipts of sheep totalled only one hundred and thirteen, of which seventy-eight were on through billing. Choice lambs sold from \$15.75 to \$16.50 per hundred, the best sheep sold from \$15 to \$16, and common from \$10 to \$13.

Receipts of hogs totalled seventy-five hundred, showing an increase of approximately one thousand over last week. On Friday the packing houses bid 15 cents below the closing prices of the previous period, but dealers held firm and sold at unchanged prices, selects bringing \$17.50 per hundred, fed and watered.

Buffalo.

Cattle.—Offerings were more plentiful at Buffalo last week but notwithstanding, anything in the shipping steer line—and there were more good steers in this division than for many weeks past—sold full steady with the previous week, top steers running from \$13.50 on up to \$14.25, the latter price being the highest of the year at any market. Some Canadian shipping steers on the medium to fair order, these ranging from \$12.15 to \$12.65. In all, there were around twenty-five to thirty loads of shipping cattle. In the handy weight butchering line and in the tidy butchering heifer classes, the fewest number ran to the choice and prime order, best handy steers ranging from \$11.50 to \$12, while the best heifers sold on a range of from \$10.90 to \$11.50. Medium and commoner light butchering stuff sold lower by a big quarter, the few choice butchering grades remaining about steady. Bulls of all classes were strong sale, up to \$11.50 being paid. Trade on lighter kinds of stockers and feeders a quarter lower, with the fleshy, weightier

grades about steady. Milk cow and and springer trade remained unchanged. Offerings of the week were larger than for the previous week, being 5,400 head, as against 4,050 and as compared with 4,775 head for the corresponding week last year. Quotations:

Shipping Steers—Native—Choice to prime, \$13.50 to \$14.25; fair to good, \$12.50 to \$13; plain, \$10.75 to \$11.75; very coarse and common, \$10 to \$10.50.

Shipping Steers—Canadians—Choice to prime, \$12.25 to \$12.65; fair to good \$11.50 to \$11.75; common and plain, \$9.50 to \$10.

Butchering Steers.—Choice heavy, \$12.50 to \$13; fair to good, \$11.50 to \$12.25; best handy, \$11.75 to \$12.25; fair to good, \$11 to \$11.50; light and common, \$9.50 to \$10.75; yearlings, choice to prime, \$12.50 to \$13; fair to good, \$11.75 to \$12.

Cows and Heifers.—Best heavy heifers, \$10.75 to \$11.50; good butchering heifers, \$10.25 to \$11; fair butchering heifers, \$9 to \$9.75; common, \$7 to \$8; very fancy fat cows, \$10 to \$10.50; best heavy fat cows, \$9.50 to \$9.75; good butchering cows, \$8.50 to \$9; medium to fair, \$7 to \$7.50; cutters, \$6 to \$6.75; canners, \$4.50 to \$5.75.

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

Stockers and Feeders.—Best feeders, \$9 to \$9.25; common to fair, \$7.25 to \$8.50, best stockers, \$7.50 to \$8; fair to good, \$6 to \$7; common, \$5 to \$5.75.

Milchers and Springers.—Good to best, (small lots), \$90 to \$120; in car loads, \$80 to \$100; medium to fair, (small lots), \$75 to \$85.

Hogs.—Prices were considerably improved last week. Trading was active and a good clearance was had from day to day. Monday, when there was an advance of a dime to twenty-five cents over last week's close, better weight grades sold generally at \$16.75 and \$16.85, few made \$16.90, and two decks reached \$17. Tuesday the bulk went at \$17.10, few \$17.15. Wednesday the range was from \$17 to \$17.10, and Thursday and Friday the spread was from \$17.25 to \$17.35. Pigs brought from \$16.50 to \$16.75, some lights made \$17, roughs ranged from \$15.25 to \$15.75 and stags \$14.50 down. Last week receipts were 31,000 head, as against 31,549 head for the week before and 23,500 head for the same week a year ago.

Sheep and Lambs.—Market on lambs was slow last week and several decks had to be carried over from day to day. Monday the bulk of the handy lots sold at \$18.50 and the next three days prices ruled steady. Friday a few choice handy lambs made \$18.65, but the bulk again had to go at \$18.50. Lambs weighing around 90 and 95 pounds undersold the more desirable kinds from a quarter to fifty cents and kinds weighing around 100 pounds showed the same range as culls, being from \$17.50 down. Top for yearlings was \$16.75, wether sheep were quoted from \$14 to \$14.50 and ewes went from \$13.50 down. Receipts last week totalled 15,800 head, as compared with 12,528 head for the week previous and 21,000 head for the corresponding week a year ago.

Calves.—Last week started with top veals selling at \$18.50 and the next three days saw but few selling above \$18. Friday's trade was quite a bit higher, best lots being placed up to \$19. Culls at no time of the week could be quoted above \$15 and fed calves ranged from \$6.50 to \$9. Receipts the past week totaled 2,400 head, as against 2,131 head for the week before and 2,250 head for the same week a year ago.

Toronto Produce.

Live stock receipts at the Union Stock Yards, West Toronto, Monday, February 4, were: 178 cars 2,988 cattle, 200 calves, 2,091 hogs, 394 sheep and lambs. Trade in cattle about worst in history of yards, packers doing little or no buying. Prices on all classes good fifty cents lower than last Thursday's close. Only five hundred head sold at twelve o'clock. Sheep, lambs and calves steady. Hogs \$18.50 fed.

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., 90¼c.; No. 3 C.W.,

88¾c.; extra No. 1 feed, 84¼c.; No. 1 feed, 81¼c.

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

Barley (according to freights outside)—malting, \$1.50 to \$1.52.

Buckwheat (according to freights outside)—\$1.57 to \$1.60.

Rye (according to freights outside)—No. 2, \$1.83 to \$1.85.

American corn (track, Toronto)—No. 3 yellow, nominal.

Flour.—Ontario (in bags, prompt shipment)—War quality, \$10.60. Manitoba flour (Toronto)—War quality, \$11.10.

Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$16 to \$17; mixed, \$13 to \$16.

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

Bran.—Per ton, \$35; shorts, per ton, \$40; middlings, per ton, \$45 to \$46; good feed flour, per bag, \$3.25.

Country Produce.

Butter.—Butter of all classes kept stationary in price on the wholesales during the past week, selling as follows: Creamery, fresh-made pound squares, 50c. to 51c. per lb.; creamery solids, 46c. to 47c. per lb.; dairy, 35c. to 40c. per lb.

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

Eggs.—Both new laid and cold storage sold at unchanged prices, wholesale; new laid bringing 60c. to 65c. per dozen, and cold storage No. 1's, 48c. to 49c. per dozen. Selects 52c. per dozen.

Cheese.—Old, 30c. per lb.; new, 24c. per lb.; new twins, 24½c. per lb.

Honey.—There is very little honey on the market, which brings the following prices: Strained, 22c. per lb.; comb, \$3.25 to \$3.75 per dozen.

Poultry.—Poultry of all classes was only shipped in very lightly during the week, bringing the following high prices for live-weight variety: Chickens, milk-fed, 25c. per lb.; chickens, ordinary fed, 22c. per lb.; fowl, 3½ lbs. and under, 20c. per lb.; fowl, 3½ lbs. to 5 lbs., 24c. per lb.; fowl, 5 lbs. and over, 27c. per lb.; ducklings, 24c. per lb.; geese, 18c. per lb.; turkeys, young, 25c. per lb.; turkeys, old, 22c. per lb.

Hides and Wool.

Prices delivered, Toronto, John Hallam: City Hides.—City butcher hides, green flats, 20c.; calf skins, green flat, 23c.; veal kip, 20c.; horse hides, city take off, \$5 to \$6; city lamb skins, shearing and pelts, \$1.50 to \$2.25; sheep, \$2.50 to \$4.

Country Markets.—Beef hides, flat, cured, 18c. to 19c.; deacon or bob calf, \$1.50 to \$1.75; horse hides, country take off, No. 1, \$5.50 to \$6; No. 2, \$5 to \$6; No. 1, sheep's skins, \$2.50 to \$3.50. Horse hair, farmers' stock, \$25.

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

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

Montreal Produce.

Horses.—Horse dealers continue to report much indifference in the market. Supplies were light, and demand almost nil. They quoted heavy draft horses, weighing 1,500 to 1,700 lbs., \$225 to \$275 each; light, draft, weighing 1,400 to 1,500 lbs., \$175 to \$225 each; small horses, \$150 to \$200 each; culls, \$75 to \$125 each; good saddle and carriage horses \$200 to \$250 each.

Poultry.—Receipts of all kinds of poultry were light, and demand was fairly good, with the result that prices continued firm all the way round. Turkeys were quoted at 35c. to 36c. per lb., with choicest chickens at about the same range, and good stock at 3c. less. Geese were offered at 26c. to 28c., and fowl at around the same figures, with some very good stock at slightly more. Ducks were 28c. to 30c.

Dressed Hogs.—The market for dressed hogs continued firm, and the offerings were limited. Sales of abattoir-dressed took place at steady prices, namely, 27½c. to 28c. per lb., while country-dressed were available at 2c. under these figures.

Potatoes.—Supplies have shown some improvement recently, in the matter of quantity, and in consequence of this, prices were somewhat lower, as was recently predicted would be the case. Green Mountains were quoted at \$2.15 per 30 lbs., ex-store, with Ontario white at \$2, and red at \$1.90. Smaller lots sold at 20c. more than these prices.

Honey and Maple Syrup.—Very little syrup is available, and the price was more or less nominal, at \$1.40 to \$1.80 per gal. Sugar was 15c. to 20c. per lb. Honey was quoted unchanged at 19c. to 22c. for white clover comb; and 17c. to 19c. for brown comb and white extracted.

Eggs.—Recent storms have no doubt interfered with the production, and as demand continued quite active, the tendency of the market was very firm. New laid were quoted in the vicinity of 70c., but were said to be practically unobtainable. Fall fresh were 50c., and cold storage selects 52c., with No. 1 stock 48c. and No. 2 45c. per dozen.

Butter.—Business in oleo has been fairly active, but does not seem to have greatly affected the price of creamery, which ranged from 47c. to 47½c. for finest fall makes, and 1 cent less for fine quality. Current receipts were very light, and ranged in price from 45c. to 45½c. Dairies ranged from 38c. to 40c., according to quality.

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

Grain.—Car lots of No. 3 Canadian Western, and No. 1 feed oats were quoted at \$1.01½ to \$1.02, while No. 1 feed sold at 98½c. to 99c.; No. 2 feed, 95½c. to 96c. Ontario No. 2 white, 97½c. to 98c.; No. 3, sold 1 c. under these prices and No. 4 at 95½c. to 96c. per bushel, ex-store.

Flour.—Old grades of flour have been withdrawn from the market, and the standard Manitoba spring wheat flour sold at the price at which business in No. 2 patents closed, namely, \$11.10 per barrel, in bags, Montreal, with 30c. more in barrels. Somewhat higher prices were charged for smaller quantities. The Ontario standard flour was not yet offered.

Millfeed.—Prices of mouille advanced, but bran was steady at \$35; shorts at \$40; middlings at \$45 to \$50, mixed mouille at \$58 to \$60; pure grain mouille \$64 to \$65 per ton, including bags.

Baled Hay.—The market held steady at \$14.50 to \$15.50 for No. 2 hay, car lots; \$13.50 to \$14.50 for No. 3; \$10 to \$12 for mixed.

Seeds.—Prices were unchanged. Dealers offered at country points 18c. to 21c. per lb. for alsike; 27 to 30c. for red clover; 7c. to 10c. for timothy.

Hides.—The market was steady, beef hides were quoted at 14c.; cows at 15c. and steers at 19c., flat; Montreal inspection is 16c., 17c. and 18c. Calf skins were 18c. to 20c. per lb., for grassers, and 28c. to 30c. for veals. Lamb skins unchanged at \$4.50 to \$4.65 each. Horse hides \$5 to \$6 each. Tallow was 3½c. per lb. for scrap fat, and 8c. for abattoir fat. Rendered tallow was 18c. per lb.

Chicago.

Cattle.—Beeves, \$8.65 to \$14.15; stockers and feeders, \$7.45 to \$10.60; cows and heifers, \$6.40 to \$11.90; calves, \$9.50 to \$16.

Hogs.—Light, \$15.75 to \$16.45; mixed, \$16 to \$16.55; heavy, \$15.90 to \$16.60; rough, \$15.90 to \$16.10; pigs, \$13.25 to \$15.30.

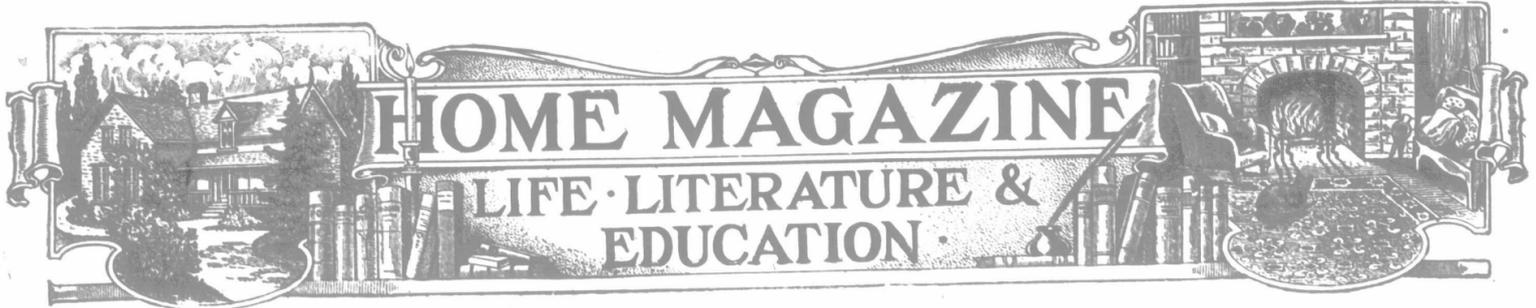
Sheep.—Lambs, native, \$14.75 to \$17.75.

Cheese Markets.

Montreal, finest westerns, 21¼c.; finest easterns, 21¼c.; New York, specials, 26c. to 26½c.; average run, 25½c. to 26c.

Keep the date of Wm. A. Rife's sale of Holsteins at Hespeler in mind. The offering consists of a number of large-framed heavy-producing females and a bunch of good heifers and calves. The herd sire has left some choice stock. The sale will be held February 21st at Hespeler which is on the electric and G. T. R. lines. Write Wm. A. Rife, Hespeler, for a catalogue.

A humane society secured a downtown show-window and filled it with attractive pictures of wild animals in their native haunts. A placard in the middle of the exhibit read: "We were skinned to provide women with fashionable furs." A man paused before the window and his harassed expression for a moment gave place to one of sympathy. "I know just how you feel, old tops," he muttered. "So was I!"—San Francisco Argonaut.



The Red Cross Spirit.

BY JOHN H. FINLEY

"I kneel behind the soldier's trench,
I walk 'mid shambles' smear and stench,
The dead I mourn;
I bear the stretcher and I bend
O'er Fritz and Pierre and Jack to mend
What shells have torn.

"I go wherever men may dare,
I go wherever woman's care
And love can live;
Wherever strength and skill can bring
Surcease to human suffering,
Or solace give.

"I am your pennies and your pounds;
I am your bodies on their rounds
Of pain afar;
I am you, doing what you would
If you were only where you could—
Your avatar.

"The cross which on my arm I wear,
The flag which o'er my breast I bear,
Is but the sign
Of what you'd sacrifice for him
Who suffers on the hellish rim
Of war's red line."—
—In School Bulletin.

Through the Eyes of a Canadian Woman in England.

I have just returned from six days' leave and must tell you a little about my trip to London—for London, of course, was my destination; one usually goes there with the intention of making it a starting point, and ends by staying till the very last moment. It is hard then to tear oneself away from the wonderful sights and sounds of the great city, and there is nowhere that time flies so quickly.

I can think of no more interesting entertainment than to sit for hours in the lounge of one of its large hotels and watch the ever-moving throngs of people. One hears on all sides soft English voices, as well as French, Flemish, Australian, Canadian and American ones. Leave seemed to be very general this holiday season, for there were hosts of khaki men still bearing the stains of Flanders mud hourly arriving; numbers, too, of limbless ones going cheerfully about with friends who ever sought to secure for them the most comfortable places. It was a delight to mingle with the crowds who were sitting at tiny tables sipping cups of afternoon tea, always to the sound of a fine orchestra hidden behind palms in the background.

Now the January sales are on and drapers', milliners' and furriers' windows in Regent and Bond Streets are wonderful to behold, and give no suggestion of war-time economy. One has to go where there are provision shops to be reminded of the sad fact. The tea and margarine queues are still with us, and every here and there one would run into a long line of tired, patient people waiting their turn for the necessities of life. There was one near Ludgate Circus which stretched the whole length of a street. It is indeed a difficult matter to obtain a substantial meal in London to-day. Hotels and restaurants are very closely watched, and they take advantage of rations to give you much less than your share at as high prices as they dare ask. Almost everything is an "extra," one small boiled potato, for instance, being quoted on the menu at fourpence. We know this is an exorbitant charge for they can be bought for a penny a pound, and a pound usually consists of four or five. Or a "compo of fruit," which turns out to be less than half an apple thinly sliced with one section of orange! You are taxed fourpence for a tiny cup of black coffee or tea, and sufficient butter for a slice of bread is out of the question. Nor do you get your

allowance of bread at these places, just a thin, half slice or a tiny roll. It is easier just now, strange to say, to get fish than anything else.

I heard a man opposite me at table relating to his companion how he had, during his year in Gallipoli, thought by day and dreamed at night of the good roast beef and its accompaniments which he used to get at "Simpson's," a favorite and well-known restaurant in the Strand. At last the long-looked-for leave came, and as soon as he reached London and had visited the barber, he started headlong for "Simpson's," every fibre of his being calling out for a good, well-cooked meal; and what do you suppose happened when he arrived there? He found that it was a meatless day! The story ended there for he looked as if he might burst into tears at any moment at the very recollection of it. Cheese, so dear to every Englishman's heart, is scarce too, and fruit is almost prohibitive in price. Of course, a great deal of the shortage is due to unequal distribution, which is very hard to regulate. To-day's paper tells us that Lady Mabel G— and Marie Corelli have been before the courts for hoarding! The former was found to be in possession of a hundred and twenty-five pounds of tea, thirty-five pounds coffee, twenty pounds sugar, and a forbidden quantity of other good things; while the latter had purchased in different places in one month eighty-three pounds of sugar, and forty-three of tea. Some of these valuables were confiscated, and heavy fines were imposed. I trust this does not sound as if we were actually in need for such is not the case. There are plenty of vegetables and there is a generous ration of bread, and many other things, but we must all go carefully, and we hope that before long the control of all foods will be such that rich and poor will be treated alike. Old England moves slowly!

English people are opening their homes most hospitably to overseas men, and I noticed many families taking tables in hotels and restaurants for themselves and Canadian lads who were their guests. The best that could be procured was placed before these boys—the lion's share—and every kind attention was shown them. I am sure our men will never be able to say that they have not received the glad hand during their sojourn in the mother country. On Christmas day this town of Guildford, which is near a large military camp, entertained two thousand of them in private homes. A good dinner was provided at the camp (for the army is looked-out for first), but the people here felt that something else was needed to make that day a happy one for those so far from home. The different churches took it in hand, and the result was that the town was full of pleased Canadian boys enjoying a taste of "home" which is such a treat after the monotony of camp life.

I must confess to some disappointment on New Year's day in London. It is not honored in any way, and shops are open and all business goes on as usual. It is, however, the greatest day in all the year in Scotland, and men who went there to spend their leave have great stories to tell of its observance even in war-time.

A great change has come over the women of England in these days of war-weirdness. In fact, one can scarcely distinguish many of them from the sterner sex as they stride along the streets. I noticed particularly two who entered the big Lounge of a London hotel during the evening hours when coffee and smokes are indulged in. They wore jaunty felt hats, khaki great-coats to their knees, puttees and heavy boots. They made their way through the crowds with a mannish stride, flung themselves into chairs beside a little table and ordered coffee and produced cigarettes. Tall, strong-looking and bronzed, they looked thoroughly at home in their uniforms, on

the sleeves of which I noticed the "Woman's Army" badge. Some say that women who have worn these practical and comfortable clothes will never go back to skirts again, but "nous verrons que nous verrons." For the present the woman who has cut her hair and got into uniform, and looks after horses or drives motor-lorries has nearly forgotten that she is a woman.

Then there is the woman who can work with and for women, and has ceased to find her own sex petty and unjust. She has all the great qualities of both sexes and none of the small ones.

The domesticated woman, too, has appeared on the horizon. The woman of means in England did not hertofore dare to go into her kitchen. The cook barred the way and her own ignorance made her afraid. She was quite unaware of her natural gift for domestic economy—till the cook left to command higher pay in munitions. Like her Canadian sister, she entered the world of domesticity and has found it so full of interest that her daughter will be brought up to enjoy the game too. Then there is the woman of forty who was rather laid on the shelf. At one time she dreaded to show her few grey hairs at the employment bureaux. Now she finds they are no handicap, for no war agency these days can afford to fix an age limit. Women past middle age have won a place for themselves in munitions, hostels, in the W. A. A. C. S., the Woman's Land Army and in government offices. This has been one of the greatest triumphs of the war. And last but not least—the mother-in-law has surely come into her own. She has never been so popular before. When homes had to be broken up she made room for wives and children. When there is "leave" her home is the refuge. Children were left in her care while their mother flew to her husband in the hospital; and on many occasions her house has been filled at a moment's notice. She knows how to rise to an emergency. May she have her reward! This is the age of emancipation for woman in England, and she is enjoying it. The war has done more for her independence and usefulness than any "woman's rights" or franchise could ever accomplish, and many a sweet, retiring English girl who never ventured out into the world without her companion or chaperone in time of peace, is now nursing the wounded in our hospitals or doing her shift in the munition factory.

Before closing I must thank the numbers of Canadian women who so kindly responded to my request for recipes for pumpkin pies (unknown in England), and assure them that very soon some of our wounded men, including Canadians, will be enjoying that toothsome dish.

We all felt the sad incongruity of this year wishing our friends a "Merry" Christmas, but I hope there need be no such shrinking scruples in wishing one another a happy new year. Old 1917 goes out like his three unholy predecessors, unwept, unhonored and unsung. Together they will be recalled as the most terrible years in history. Survey their record: 1914, Belgium; 1915, Serbia; 1916, Roumania; 1917, Russia. Optimists assure us that 1918 will atone for all. In any case the only thing to do is "carry on," and we may reap the reward that comes to him who fights for a righteous cause. And so, good readers, I wish you a Happy New Year!

Some Further Helps for the Rural School.

By "THE OWL."
Paper VII.

ONE of the greatest helps that a rural school can have is a good library, and when rural schools are what they ought to be there will be a large proportion of the wall space given over to cases with sliding glass doors in which the

books may be kept. If a separate room could be supplied all the better.

It has been said that many a genius has been set in his way through having been turned loose, at an early age, in a comprehensive library of the world's best books, and there is not the slightest doubt but that this is true. Books are of use, not only for amusement and information, but also for inspiration.

In the school-room they are also of the greatest value for what is known in the profession as "busy work," that is, work to keep the children busy when their regular work is done and they are waiting, perhaps, for slower workers to catch up. As soon as a lively boy has his lesson done he is ready for mischief, and is likely to prove a nuisance and hindrance to every pupil within reach and to the teacher. It is a very different matter if he can go to the bookcase and take out a volume which he is anxious to read. Here it is that the library may be a godsend, and care should be taken that, outside of the books that must be kept for reference, a fresh supply is always on hand. This may be managed by exchanging with neighboring schools, a very advisable proceeding, since it is utterly useless to keep in any school books that have been read by all the children. Of course, there will always be a few favorites that the little ones want to read over and over, hence the children should be consulted before exchanges are made.

CHOOSING a library for a school is not an easy matter. Certainly "anything" will not do. Indeed the work should be undertaken carefully, almost prayerfully, and the fullest investigation should be made before purchasing.

For the reference department in the rural school there should certainly be some interesting books on elementary agriculture, illustrated nature books (moths, butterflies, other insects, birds, flowers and weeds), and a few popular science and crafts books, e. g., on electricity, carpentering, rug-weaving, painting, potteries, manual training, etc. By watching the books consulted most frequently by the pupils, especially in the higher classes, the teacher may often find out just what the young readers are likely to be good for, and in a good position to consult with the parents in regard to the lines in which encouragement should be given. . . . Biographies of statesmen, authors, musicians, artists, etc., should also have a place in this section of the library; also books of travel and a few on history (e. g., the interesting "Parkman's," and others of like literary quality).

The rest of the space may be given over to carefully selected stories of all kinds, which the pupils can read for amusement, then reproduce in their own words as an exercise in composition.

Children should not, as a rule, be permitted to take the books home at night, but parents who wish to examine them should be welcomed at any time in the school-room.

IN a rich section—and especially where there is a Consolidated School—a good phonograph for the school is not beyond possibility, but as much care should be given to choosing the records as in choosing the books for the library. Cheap ragtime and ordinary songs should not be let come within hailing distance of the school. Only the best music, interpreted by the best musicians should be tolerated, and a few spirited marches, etc., to be used for the school exercises in physical drill and (if permitted) folk dances.

A more ambitious purchase might be a moving picture machine. These are now used in many Sunday Schools in Canada, and in many of the public schools in the

United States, where they are used in teaching many subjects.

Of course, all these things call for money, but "where there's a will, there's a way."—And the children are worth the effort.

From "A Rural Teacher."

"Now that your paper is voicing my own difficulties and views about rural schools, I simply cannot rest until I read several items. I have taken the paper to school and read to the class about "Hot Lunches." A very important change has taken place since I read that essay. I shall save this week's edition and use the item by 'The Owl.' Trusting you will recognize my spirit of good cheer."

Essex Co., Ont. A RURAL TEACHER.

"The Owl" and others will be pleased to hear details about that "important change." Also, to hear from any rural teachers who wish to voice their needs or tell about plans which they have discovered for helping on their work.

Hope's Quiet Hour

Tempered Perfume.

Thou shalt make it a perfume. . . . tempered together, pure and holy.—Exod. 30:35.

WALK in love, as Christ also hath loved us, and hath given himself for us an offering and a sacrifice to God for a sweet-smelling savour.—Eph. 5:2.

Because if the savour of thy good ointments thy name is as ointment poured forth.—Cant. 1:3.

The perfume, made of spices and frankincense tempered together, which was offered to God in His Tent of Meeting, was carefully prepared. Each ingredient was accurately weighed and the compound was declared "holy for the LORD."

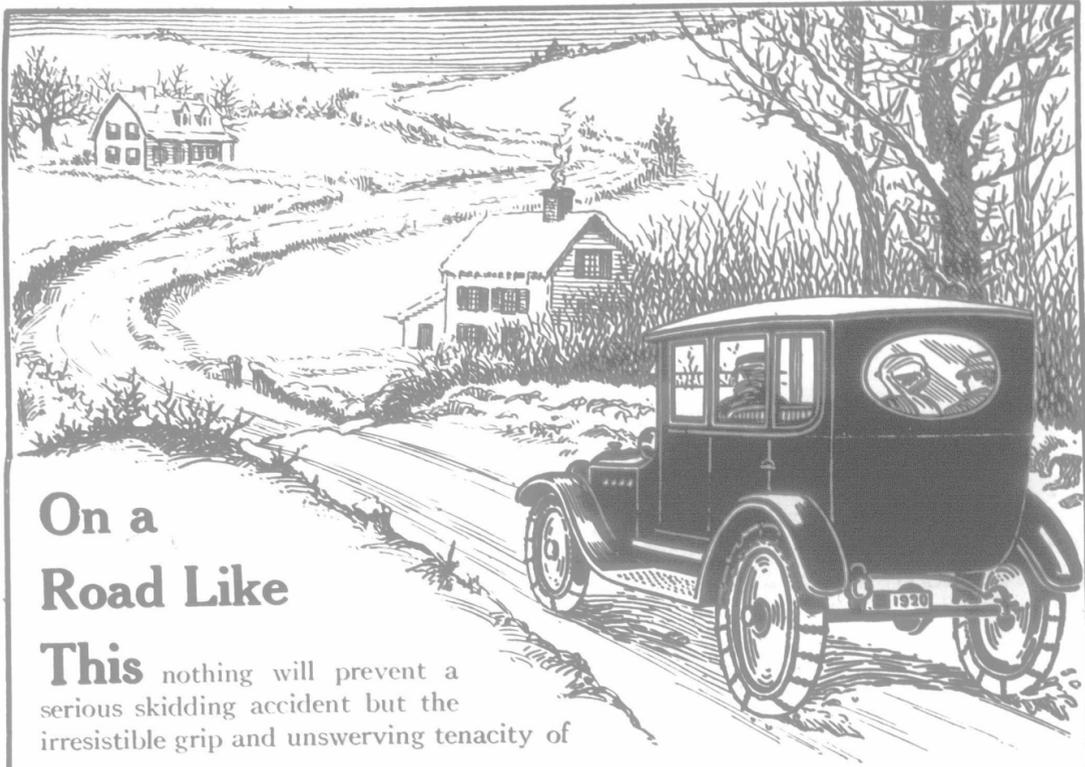
In the Old Testament an acceptable offering is often compared to a "sweet savour" unto the Lord; and the people were warned that if they disobeyed their Invisible King He would refuse to smell the savour of their sweet odors.

St. Paul said, in one of his epistles, "We are unto God a sweet savor of Christ." But the only perfume which is perfectly "tempered together, pure and holy" is the offering of our Lord's life of love—see texts above. His Name is as ointment poured forth. As the holy perfume, offered to God in the sanctuary, was made of sweet spices and incense—"of each a like weight"—so various beautiful graces in Him were perfectly balanced. His strength, and boldness of speech were marvellous. In absolute fearlessness, and towering majesty of authority, the village Carpenter lashed with tremendous words the cowering leaders of the people. He poured out His declaration of woe and judgment upon Chorazin, Bethsaida and Capernaum; then—almost in the same breath—came those gracious words of invitation: "Come unto Me, all ye that labor and are heavy laden, and I will give you rest."—S. Matt. 11. His power was tempered with gentleness.

The mighty wonder-worker, who used His power untiringly to help the sick and needy, held that power in check when He was hungry (in the wilderness) and suffering (on the cross). He offered the water of life to all who were thirsty, yet suffered the agony of thirst Himself. He came to save the world, and yet He curbed all impatience to be out in the thick of the battle and worked humbly and quietly in an obscure and despised village until He was thirty years old.

His time was so taken up with public work, during the short years when He was healing the diseased and speaking to the poor, that He scarcely had leisure to eat; yet He never was too busy to pray. Sometimes whole nights were spent in prayer, on lonely mountains; sometimes He rose up very early in the morning and slipped away from earthly friends to some solitary place where He could speak undisturbed to His Father.

The most terrible physical agony never made Him forgetful of others or inconsiderate. His mother was provided

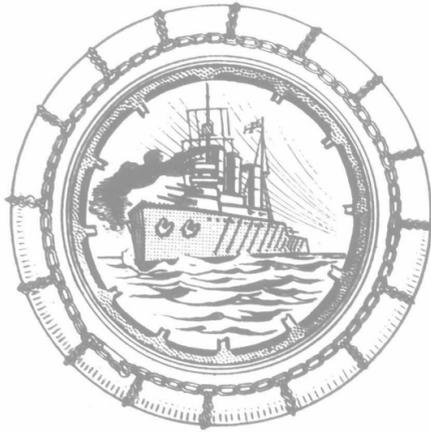


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Dreadnaught Chains will not injure tires. They are securely, but loosely applied and have play enough to work themselves around the tire, thereby distributing the strain to all points alike.

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The STANDARD Colony Brooder Raises Every Raisable Chick

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The Buckeye Incubator and the Standard Colony Brooder make it possible also to raise poultry profitably always.

There's no guess work about it. Given good hatchable eggs, the incubator will always bring out the full number of healthy chicks. Put them under this brooder, and 95 of every 100 can be raised to a marketable size.

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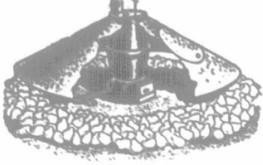
It is used by over half a million breeders—in the largest ranches and in the piano-box outfit of the beginner—and every user is enthusiastic. All the Agricultural Colleges and Experiment Stations endorse it. Success always accompanies it.

Our guarantee is simple, but look! Put a Buckeye in the same room with any other incubator. If it doesn't hatch more chicks and stronger chicks than any other, regardless of price—the first time you use it—we will take it back.

There's real reason for Buckeye superiority. We've put it into a striking new catalog, with a wonderful array of proof. Get that catalog! It means success with poultry! Write for it today.

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STANDARD
 Colony Brooder



Makes three chicks grow where one grew before, and removes the gamble from chicken raising.

Its use has ended the awful mortality of chicks, reduced operating costs for any number from 100 to 1000 to less than six cents a day; reduced labor to a fourth and hastened chicks to profitable maturity in less time than ever.

It's the most practical brooding device ever invented, simple, safe, sure, sanitary. Burns soft or hard coal, keeps fire 24 hours at one coaling, requires little attention. Write your own guarantee—we will sign it.

Our catalog will absolutely convince you of its wonderful results, told over their own signatures by delighted patrons, who have learned that there is such a thing as certainty in chicken raising, and who know that it is found in Buckeye quality and Buckeye service. Get that catalog today!

for as calmly as if bodily torments were nothing, and His murderers pitied and forgiven as if their cruelty were helpless to stay the mighty stream of His love. The more we study His life the more amazed we grow at His perfect balance. Look at the easy grace with which He welcomed thousands of hungry guests to His bountiful table; and yet generosity was tempered by careful economy. They might eat all they wanted but not a crumb was allowed to be wasted.

We see the stern Reformer, with a whip upraised in His hand, driving crowds of angry yet terrified men out of the Temple courts. Then we see the same Man, with happy children in His arms, or tenderly uplifting a brokenhearted penitent, or drawing beautiful lessons from birds and flowers. The prophets of old were too occupied with "great" matters to fondle little children or enjoy the beauties of nature, but JESUS loved great and small.

St. Paul wanted Christians to live fragrant lives. They were to offer their service as a sweet savor unto God. He told them to walk in love, as Christ did, for love is the "tempered perfume, pure and holy", which is well-pleasing to God. The perfume made so carefully "after the art of the apothecary" was only a type of the real ointment—the precious anointing oil which forgiven sinners pour out upon the feet of their Lord.

I have read that the "aviator's sixth sense" is the gift of "balance", which seems to be lacking in some men. An aviator, in a fog or a thick cloud, may be upside down and quite unable to right himself. So he may lose his life because he lacks the sense of balance and does not know when his machine is upside down.

Now it seems to me that the sense of balance is needed in our religion. If we don't balance our virtues they become more like thorns than roses. Economy is a good thing if it is kept in check by generosity—otherwise it may degenerate into the ugly vice of stinginess. Gentleness is a virtue, but if it is not balanced by firmness it drifts into weakness. Meekness is one of the most beautiful of graces, but it must be kept in its right place by self-respect. So it is all along the line. The one perfectly-balanced character is our Example, but we fall far short of the ideal presented in the Gospels.

Yesterday I was carefully studying the latter part of the tenth chapter of St. Luke, and I was greatly struck by the way the two stories told there balance each other. We look at the Good Samaritan, carefully tending a wounded and needy "neighbor", and we feel impelled to go and do likewise. But the world is crammed with wounded and needy neighbors of ours, in these days. We can hardly spend a cent on anything without feeling that it ought to go to some fund or other. We can hardly sit down to darn our own stockings—and stockings wear into holes in a day, now—without feeling that we should be knitting for the soldiers. We get breathless and nervous feeling as if life were one mad whirl of work; and sometimes we are almost tempted to echo the saying of the unprofitable servant, who asserted that his master was a hard man.

Isn't that feeling the result of rushing to extremes and being unbalanced? Look at what God—in His wisdom—has placed in our lesson-book immediately after the story of the Good Samaritan. There we see a woman distracted by trying to serve Christ, and yet He is evidently much more pleased with the woman who sits with quiet hands (not even knitting) and opens her whole soul to His offered fellowship.

The story of the Good Samaritan was prefaced by that wonderful summary of the Law, which shows that to keep the commandments in act is not well-pleasing to God, unless love be the motive-power behind the outward obedience. To love one's neighbor as one's self is only the second half of life's business and joy. The first half is to love God more than oneself—with all the heart, soul, strength and mind.

As a matter of balance, we need both commandments. It would be wicked, in this time of great need, to spend our whole lives in peaceful meditation and prayer. We bring dishonor on our Christian profession if we are shirkers and "slackers", slipping past on the other side when we have the chance of doing a kindness. Love of one's neighbor is a mockery if it is only word-love. (S. James 2.)

But, if we allow service to crowd God out of our busy days, we are not only breaking the first commandment but we are disappointing Him, losing our own peace of spirit and refusing His offered fellowship.

If the offering of our lives is to be "a sweet-smelling savor" it must be a love-offering. He does not care for any other kind of perfume.

But life is so short, and—though we work at fever heat—we can accomplish so very little. Perhaps we make a mistake there. Life is not short, for it has all eternity for its fulfilment. As for the work, which we imagine cannot be done without us—it is an old saying "God removes His workers, yet the work goes on."

He can do great things, through offered lives, but we are certain to make sad mistakes if we try to do our work—His work—apart from Him. Let us take time to heed our Master's warning: "He that abideth in Me, and I in him, the same beareth much fruit; for apart from Me ye can do nothing—"S. John 15 : 5, R. V.

If the Name which is "as ointment poured forth" is hidden in the secret heart of a humble worker for God, the fragrance will pervade all the life and sweeten all the work. Then, walking in love, the sacrifice will be acceptable to God as the pure and holy perfume of the sanctuary.

"As some rare perfume in a vase of clay Pervades it with a fragrance not its own, So, when Christ dwelleth in a mortal soul, All heaven's own sweetness seems around it thrown."

DORA FARNCOMB.

Gifts for the Needy.

During the last week gifts for the needy have been poured into the Quiet Hour purse, as follows. A "Sunbeam Class" sent five dollars (which went out at once to three large families of small children.) One dollar came from Mr. D. and three dollars from Mr. H.

During the last week seventeen gifts have gone out of the Quiet Hour purse to sick and needy people. I have been trying to catch up, you see!

I can't begin to tell you all the messages of gratitude which were entrusted to me for you. You will just have to imagine them—indeed the sick and needy have good reason to thank their unknown friends.

The S. S. papers, which many readers have sent, give both pleasure and profit to the "shut-in".

Two dollars for the needy, from Miss J. S., passed through the Quiet Hour purse last week—going out at once to a sick woman. A box of warm children's clothing, from a "Friend", was swiftly divided among the children of six families. I hardly need to say that these gifts were thoroughly appreciated by those who received them. My thanks go to you with theirs.

DORA FARNCOMB.
 52 Victor Ave., Toronto.

Teacher's Prayer.

To-morrow will be Monday, and again My week's work is before me, and,

Dear God I pray
 That Thou wilt in Thy kindness guide my hands,
 And keep my heart, that it may all be done
 In the best way.

To-morrow will be Monday, and once more I shall face those little faces, and,

My Father take
 My patience in Thy hands, and take my will
 And mould it to suit Thee, and this I ask,
 For Jesus' sake.
 ANNIE AFFLECK, ("SUNRISE".)

Boys and Girls.

See the list of premiums on page 223 for securing NEW subscribers to The Farmer's Advocate and Home Magazine. Remember, no subscription must be taken for less than \$1.50, the premium is payment for your trouble in obtaining the NEW subscriber.

Griffith Team Outfit



MORE SERVICE AT LESS COST

FOR plowing, harvesting and general farm work, your harness must stand the roughest kind of usage. A good all-leather harness costs too much. Cheap leather is worse than useless. Griffith's Team Outfit has been tried and proved. No stitches in traces to rip—no soft leather to stretch. The "whole business end of a harness" at much less cost than leather. Outfit includes: Giant Rope Traces, Giant Yoke Ropes, Hames, Hama Straps, Blow Pads, Belly Bands and Billets, complete for TWO horses. Price, \$15 (or \$16 west of Ft. William). Giant Rope Traces only—set of 4, with best chafes, \$6 (or \$6.50 west of Ft. William). Giant Yoke Ropes only—per pair, with straps and chafes, \$1.50 (or \$1.75 west of Ft. William). If your dealer can't supply you, order direct. Write for booklet.

G. L. GRIFFITH & SON,
 68 Waterloo St., Stratford, Ont.

The Ingle Nook.

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

AS I look out of my window to-day I see another blizzard raging. Following so closely on the heels of "the big storm" it is not in the least welcome. Everyone is coughing and everywhere one hears of illness, for a hard winter such as this always brings a train of evils.

Probably the same condition exists with you in the country, although you are not so greatly exposed to germs of contagion as are the people in the city.

At such times, if we are lucky enough to escape illness ourselves, almost inevitably we know some of those who have not been so fortunate, and so the question of how we shall show our sympathy comes up.

During the past fortnight I have been in rather close touch with a household in which three people were ill in bed at once, the care of them, with the housework besides, falling on the shoulders of the sole remaining member of the family. Of course, in such an extreme case, many people wanted to show their good-will, but it was rather interesting to see the various ways by which they undertook to do so. Some sent little letters, and very acceptable indeed were these to the patients to whom lying in bed was becoming, day by day, more monotonous. Others contributed flowers, than which nothing can be sweeter, or more appreciated in any sick-room. A few mailed notes to the worker of the house, asking that she let them know at once, in case they could "do anything"—quiet little messages bearing sincerity in every word,—and one or two, going a step further, handed in to the tired girl a nicely cooked dinner all ready to be warmed up. Only she, perhaps, understood just how substantial was that expression of sympathy.

Then there were the others, the many, many others, kindly-intentioned folk who put themselves out of their way to call, every day and at any hour of the day, to "ask for the folk"—and the remaining few who dropped in, usually almost at tea-time, and laughed and talked for an hour at a stretch. Probably the basic motive of both of these types was to cheer the general atmosphere a bit, but the effect, had they known it, was rather to add the last straw to the burdens of a girl already overcrowded with too much to do, and to whom even answering the doorbell unnecessarily was an additional strain.

I suppose, even in such a little matter as this, it is essential to stop to think a bit in order that we do the really kind and helpful thing. Indeed our whole lives seem to be made up of "balancing," do they not?—considering first one side, then the other, to see that we do wisely and not foolishly, helpfully and not hinderingly.

AND now, when we are on the subject of sick folk, I must tell you that the Byron Military Hospital for tubercular soldiers, to which so many of you subscribed so splendidly some time ago, was formally opened here a fortnight ago, the Duke of Devonshire being present for the ceremony.

Owing to having a heavy cold at the time I could not go out that day, but a short time previously I had the privilege, and can assure you that the place is very fine indeed for our poor sick soldier lads. It is bright and airy, and equipped with the very latest and best methods of heating and ventilation. It will accommodate 100 soldiers, four or five in each ward, and each ward is to be equipped not only with beds, but with reclining wheel chairs which can be raised or lowered at will, and can be run out easily every day on the open-air porch on which tubercular patients, warmly wrapped up in padded bags, must spend so much of their time. These chairs are quite expensive, but are very, very comfortable.

We were particularly interested in the big dining-room with its white-topped tables, and in the kitchen with its huge electric stove and warming ovens,—everything planned for quick, systematic and scientifically clean service. I am sure that if you could see it all you would

**CROWN-BRAND
CORN PURE SYRUP**

Children prefer it to the most expensive butter. Why not save money by using more of this syrup?
In 2, 5, 10 and 20 pound tins—3 lb. Glass Jars.

Write for free Cook Book. 34

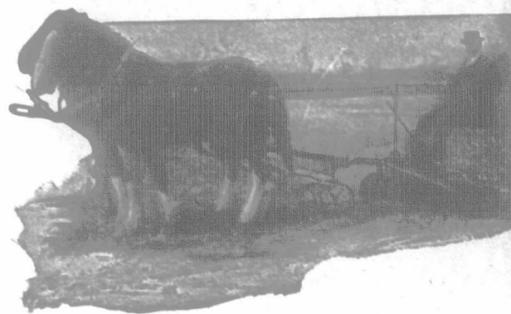
THE CANADA STARCH CO. LIMITED, MONTREAL.

A Good Seed Bed and the Seed Properly Sown if you use Massey-Harris Implements

Massey-Harris Drills

- ¶ The Reliable Force-Feed Runs sow uniformly and without injury to the seed.
- ¶ Strong Steel Frame holds all parts in proper relation.
- ¶ Positive Gear Drive.
- ¶ Simple and easy control—one motion of a Lever lowers the Furrow Openers, applies pressure and starts the feed—the opposite motion raises the Furrow Openers and stops the feed.

Massey-Harris Drills are made in a wide range of sizes and with Hoes, Discs or Shoes. Grass Seed Boxes, when ordered.



Massey-Harris Disc Harrows

- ¶ Being equipped with Pressure Springs, the Gangs are held to their work on rough and uneven ground, on ridges and in furrows, so that the entire surface is cultivated.
- ¶ Should one Gang strike an obstruction, it may rise and pass over it without disturbing the other Gang, or without danger of injury to the machine.
- ¶ Angle of Gangs is readily controlled by a single, easily-operated Lever.
- ¶ Bearings have oil-soaked Maple Bushings and Spring Oil Caps.
- ¶ The Low Hitch takes all the weight from the horses' necks.

The Massey-Harris Line of Cultivating Machinery also includes Spring-Tooth Cultivators, Stiff-Tooth Cultivators, Drag Harrows, etc.

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Head Offices—Toronto, Canada.

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Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton, E. G. Prior & Co., Ltd., Victoria, Vancouver, Kamloops.

— AGENCIES EVERYWHERE —

be very much pleased, and glad that some of your money has been placed where it will do so much good.

A little later I hope to give you a picture of the sanatorium, but it is too stormy and cold yet to ask anyone to go out to take a picture of it.

Thanking you, on behalf of "the boys" whom you have helped to make comfortable.
JUNIA.

Needle Points of Thought.
"The basis of all reform is educa-

tion." — Col. George Nasmith, in "On the Fringe of the Great Fight."

"There is no 'woman question'. There is the question of equality for all human beings. The woman question is only quarrel hunting." — Tolstoi, in his "Journal."

Honey Vinegar.

To the request of "E. H.", Lambton Co., Ont., for information in regard to making honey vinegar, a reader very kindly sends the following:

Dear Sirs.—From the query of "E. H.", I take it that extracted honey as it comes from the hives is to be used in the making of honey vinegar. The following is probably one of the best recipes for making it on a small scale and does not require the use of a hydrometer and special containers.

If thick honey is to be made into vinegar it must be put into a barrel (with the top head taken out) and thinned with water until it will just float a fresh egg so as to leave a spot about the size of a ten-cent piece exposed above the surface of the

BOYS!

It isn't what you make that counts, but what you save.

BUT—

If you don't make anything you're not likely to save an awful lot.

THE FARMER'S ADVOCATE

will help you to make money in an easy way, but you have only until the end of February to win one of the 3 prizes in the **EXTRA SPECIAL CASH PRIZE COMPETITION!** **First Prize, \$5.00 Second Prize, \$3.00 Third Prize, \$2.00**

THIS COMPETITION

is open to all readers of the Advocate, and the prizes will be given to the three readers sending in before the end of February the three largest lists of names of New, Paid-for Subscribers. These cash prizes are given *in addition* to a special commission on each name sent in—and a bonus of \$2.50 on each complete list of ten new subscribers.

IN YOUR SPARE TIME

You can easily secure a few *new* subscribers every day. You can make a canvass among the farmers living near you, and you will be surprised at the large amount you will have earned in a short time. Begin right away—cut out the coupon at the bottom of the advertisement and we will send you instructions and supplies per return mail.

COUPON

Date.....1918

THE FARMER'S ADVOCATE, London, Ont.

Gentlemen:—I am interested in your Cash Prize Competition. Send me supplies, contest rules and helps.

PLEASE STATE CLEARLY THE NAME OF THE SUBSCRIBER IN YOUR HOUSE.

NAME.....

ADDRESS.....

AGE.....

2

Would You Like to Earn \$1 or \$2 Daily the Year Round at Home?

The hosiery trade is booming and the demand far exceeds the supply. We gladly take all the goods you can send us.



We must have more workers at once to help us keep pace with the demand. The Auto Knitter is sent on favorable terms to reliable persons, and we furnish full instructions how to knit socks, etc., also all yarn needed. The work is simple and easily learned; the Auto Knitter is a high-speed machine, and works by turning a handle. Our fixed rates of pay guarantee you a steady income the year round, no matter where you live, but our workers often largely increase this by working for private customers.

Working either whole or spare time, this pleasant employment has brought prosperity to many workers in their own homes, and should do the same for you.

Write to-day, enclosing 3c. in stamps, for full particulars, rates of pay, etc., and see what you and your family can now earn at home. 606

Auto-Knitter Hosiery (Canada) Co., Limited

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IF TOO FAR TO COME FOR TREATMENT WRITE TO THE INSTITUTE



The Hiscott Institute extends the advantage of its scientific treatments to any person in Canada. Treatment by experts at the Institute is preferred, but, for those who cannot come, the preparations employed are packed and sent by mail or express, with full instructions for home use. Wonderful results are obtained in the complete cure of Pimples, Blackheads, Wrinkles, Roughness or Redness of skin, and of all non-infectious skin diseases.

Princess Skin Food.....\$1.50

Hiscott Hair Rejuvenator.....1.00

Goitre Cure.....2.00

Sent to any address by mail or express, with full instructions, on receipt of price. **SUPERFLUOUS HAIR PERMANENTLY REMOVED.**—We are experts in Electrolysis, the only permanent method known to science that is harmless. Write for booklet "F"—FREE.

HISCOTT INSTITUTE, LIMITED, 61A College St., Toronto

liquid. Next, cover the top of the barrel with cheesecloth and let stand in a warm place where it can work and sour. In from one to two years it will make good vinegar.

There are two good reasons why honey should not be made into vinegar, especially at the present time when our country is asking us to conserve our food supplies.

First, at the present price of common vinegar and the present price of honey it would not be profitable to make vinegar from honey.

Second, honey may be substituted for sugar in a great many ways, especially in cookery. When used in cookery, honey does not always produce the same results as corresponding quantities of sugar so it is necessary to use slightly different recipes.

A good booklet "Honey and its uses in the home" containing over 50 recipes for making bread, muffins, cakes, cookies, desserts and candies with the use of honey may be had free for the asking by sending to: U. S. Dept. of Agriculture, Bureau of Entomology, Washington, D. C.

Bread and cakes made with honey instead of sugar keep moist longer and have a better flavor than if made with sugar. The large biscuit companies use enormous quantities of honey in the manufacture of their cakes and wafers.

Honey vinegar is usually made from the washings of honey containers around the apiary that would otherwise be wasted.

"I am a farmer, beekeeper and greatly enjoy reading 'The Farmer's Advocate.' I have seen a few, very few articles in your magazine on bee-management.

The majority of beekeepers are farmers who keep bees as a sideline. There are tons and tons of honey in this country going to waste every year for want of better management. Most of the farmers have only a few colonies and do not take enough interest in them to subscribe to a magazine devoted entirely to bee-culture. Do you not think it would do a great deal of good to occasionally publish seasonable hints on their management as you do in the agricultural columns of your paper on the management of the farm?"

Sincerely yours,

Brant Co., Ont. E. C. HARDIE.

A Sympathizer.

I sympathize with you so heartily in your "stocking trouble", that it draws me out of my shell to write my first letter to the Nook. Isn't it discouraging to darn and darn and still the holes will not stay darned? I invested in two pairs of Penman's cashmere stockings last fall at eighty-five cents a pair and they are good yet—have only had tiny holes in toes. They will last me the winter. I determined to cut down darning my husbands socks, so bought yarn at forty cents a skein and hired the knitting done at fifty cents a pair. I bought six skeins of yarn and that made four pairs—making the stockings cost \$1.10 a pair; but they are going to last. Oh the comfort of not having them to darn! Fortunately hubby does not object to wearing homemade socks. But the children's stockings drive me to despair. I couldn't get Penman's for them at the village store where I bought mine and have tried other stores but cannot get them. Do you know whether it is possible to get them any place? When one has to darn "shoddy" stockings for five children, one longs for something to change. I managed to unearth some "before the war" stockings for one tiny tot. They have seen a year's wear and are still wearable, more so than the new ones. One sturdy youngster of four has gone through three pairs of "modern" cashmere since last fall and is ready for more. Where shall I get them? I think I shall be obliged to resort to the knitting process even if they do cost a dollar a pair. They will probably last—unless the yarn is shoddy too.

They tell us we will soon not be able to buy woollen goods. I think perhaps it would be a wise plan to buy our underwear for next winter now. We people who live in the country need warm underwear. I bought two suits of Wolsey underwear for five dollars and this is the third season's wear I am getting out of them. This year will finish them and I see in the catalogues they are six dollars a suit now. Don't you think it pays in the end, Junia, to get good things?—if you can find them—that's the problem now-a-days. There are a great many things I would like to "raise a cry" about, these days, but I'm just one among a lot of seemingly indifferent ones, so I just have to "boil" all to myself, except when I "boil over."

Hoping I haven't bored you with my long letter. (It will probably be ages before I write again.)

MOTHER OF FIVE.

Welland Co., Ont.

I am very thankful to you for recommending to me the "brand" you mention. Probably you could get the children's stockings of the same kind by writing directly to the Penman Company, Paris, Ont.—Yes, I certainly think it pays in the end, to get good things and have great care taken in the making of them so that they will be "just right." "Just-right" things carry such a satisfaction with them, don't they?

War Time Cookery.

Brown Bread Toast with Vegetables: Toast slices of brown bread nicely, butter and place over a hot platter. Over the top pour any vegetable cooked and mixed with a white sauce. Sprinkle with paprika and serve hot for supper. Vegetables that are especially nice for this are: canned or fresh asparagus, peas, green beans, cabbage, stewed celery or greens (the last without cream sauce).

Toast with Fish.—Prepare the bread as above and pour over creamed fish of any kind; salmon and codfish are especially nice. Left-overs of any kind of meat may be chopped, mixed with the white sauce and used in the same way; also hard-boiled egg coarsely chopped.

Bread Griddlecakes.—One and a half cups scalded milk, 1½ cups stale bread crumbs, 2 tablespoons butter, 2 eggs, ½ cup flour, ½ teaspoon salt, 3½ teaspoons baking powder. Pour the hot milk and melted butter over the crumbs and soak until soft. Add the beaten eggs, flour, salt and last the baking powder. Cook as usual. Serve with butter and jam or syrup for supper.

Scalloped Apples.—Six large tart apples, 2 cups stale bread crumbs, 2 tablespoons molasses, ½ cup hot water. Pare the apples and cut in thick slices. Into a buttered baking-dish put a layer of bread crumbs, then a layer of the apples and a top layer of crumbs. Add the hot water to the molasses and pour over the pudding. Bake 20 minutes.

Crusty Apple Pudding.—Eight large tart apples, ½ cup sugar, ¼ cup seeded raisins, citron and lemon peel, ½ cup water, 1 cup stale breadcrumbs. Pare the apples and core them. Set them in a deep baking dish of granite or earthenware. Fill the space from which the cores were cut with bits of shredded lemon and citron peel, sugar and seeded raisins mixed. Pour over them the water, dust lightly with salt and granulated sugar and bake in a moderate oven till nearly tender. Take from the oven and sprinkle over the top a thick crust of buttered bread crumbs and another dust of sugar. Let bake until the crumbs brown. Serve hot with sauce. To butter crumbs always melt the butter then stir in with a spoon.

Baked Bananas.—Bananas must be baked in the skins quickly, just until they are soft and the juice begins to flow. If baked longer they become tough and dark and lose much of their flavor. If unripe they should be baked without the skins and basted frequently with syrup. Also bananas may be mashed and stewed with a little water, sugar to sweeten and lemon juice to flavor, making a palatable sauce.

Vegetable Chowder.—One-half lb. dried beans (preferably Lima), 1 lb. sliced carrots, 2 tablespoons fat, 1 onion sliced, 1 tablespoon flour, ½ cup milk, pepper and salt to taste. Soak the beans overnight and cook in same water until tender. Melt the fat and cook the onion in it. Add this and the diced carrots to the beans and cook slowly 20 or 30 minutes, or until the vegetables are very tender. Blend the flour with the milk, and add 10 minutes before the chowder is to be served.

Split Pea Soup.—One cup split peas, 1 pint milk, 2 tablespoons butter or fat, 1 small onion, 2 tablespoons flour, salt and pepper to season. Wash and pick over the peas and cover with 3 pints cold water. Soak over night, then add the sliced onion and cook slowly until the peas are soft. It will take about 2 hours. Put through a sieve or ricer to remove skins. Add milk, thicken with the fat and flour mixed together, cooking thoroughly, season and serve very hot for supper, with toast or biscuits.

Cream of Carrot Soup.—Mix together 2 tablespoons butter or fat with 2 tablespoons flour and cook, adding very

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season and
biscuits.
weather.

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gradually 3 cups milk. Add 1 cup cooked carrots put through a ricer or mashed, season and serve very hot with toast or biscuits. A nice supper dish in cold weather.

Oatmeal Drop Cookies.—Mix together 1 cup oatmeal, ½ cup sugar and 1 teaspoon baking powder. Rub in 1 tablespoon butter. Finally mix in 2 eggs beaten to a liquid and 1 teaspoon vanilla. Drop by the tablespoon on buttered tins and bake in a moderate oven.

The Scrap Bag.

Gargles and Nose Wash.

Gargles and nose wash are of great use when one is taking or has taken cold, and, indeed, if used every day, will greatly help to prevent one's taking cold. Tepid salty water is good for both nose and throat, a cupful being used for the gargle and another cupful sniffed into the nose morning and evening. A good gargle for ordinary sore throat is made by dissolving a teaspoonful of chlorate of potash in a tumblerful of water.

Mustard Liniment.

Put 1 oz. mustard into a bottle with a pint of spirits of turpentine and shake daily for two or three days. Pour off the clear liquid and use as a liniment for sore chest or pains anywhere. Do not shake the mustard up before using as it will be too severe.

Note to "I. H. G."

If "I. H. G." will look at the bottom of page 98, Jan. 17th issue, he (or she) will find the contribution of \$2 to Dollar Chain acknowledged. Very many thanks.

Serial Story.

An Alabaster Box.

By MARY E. WILKINS FREEMAN AND FLORENCE MORSE KINGSLEY
By arrangement with McClelland, Goodchild & Stewart, Publishers, Toronto, Ont.

Chapter XIII.

Lydia laid the picture carefully away in a pigeonhole of her desk. She was still thinking soberly of the subtle web of prejudices, feelings and conditions into which she had obtruded her one fixed purpose in life. But if Mr. Elliot had been as good as engaged to Fanny Dodge, as Mrs. Solomon Black had been at some pains to imply, in what way had she (Lydia) interfered with the dénouement? She shook her head at last over the intricacies of the imperfectly stated problem. The idea of coquetting with a man had never entered Lydia's fancy. Long since, in the chill spring of her girlhood, she had understood her position in life as compared with that of other girls. She must never marry. She must never fall in love, even. The inflexible Puritan code of her uncle's wife had found ready acceptance in Lydia's nature. If not an active participant in her father's crime, she still felt herself in a measure responsible for it. He had determined to grow rich and powerful for her sake. More than once, in the empty rambling talk which he poured forth in a turbid stream during their infrequent meetings, he had told her so, with extravagant phrase and gesture. And so, as last, she had come to share his punishment in a hundred secret, unconfessed ways. She ate scant food, slept on the hardest of beds, labored unceasingly, with the great, impossible purpose of some day making things right: of restoring the money they—she no longer said *he*—had stolen; of building again the waste places desolated by the fire, of his ambition for her. There had followed that other purpose, growing ever stronger with the years, and deepening with the deepening stream of her womanhood: her love, her vast, unavailing pity for the broken and aging man, who would some day be free. She came at length to the time when she saw clearly that he would never leave the prison alive, unless in some way she could contrive to keep open the clogging springs of hope and desire. She began deliberately and with purpose to call back memories of the past: the house in which he had lived, the gardens and orchards in which he once had taken pride, his ambitious projects for village improvement.

"You shall have it all back, father!" she promised him, with passionate re-

solve. "And it will only be a little while to wait now."

Thus encouraged, the prisoner's horizon widened, day by day. He appeared, indeed, to almost forget the prison, so busy was he in recalling trivial details and unimportant memories of events long since past. He babbled incessantly of his old neighbors, calling them by name, and chuckling feebly as he told her of their foibles and peculiarities.

"But we must give them every cent of the money, father," she insisted; "we must make everything right."

"Oh, yes! Oh, yes, we'll fix it up somehow with the creditors," he would say. Then he would scowl and rub his shorn head with his tremulous old hands.

"What did they do with the house, Margaret?" he asked, over and over, a furtive gleam of anxiety in his eyes. "They didn't tear it down; did they?"

He waxed increasingly anxious on this point as the years of his imprisonment dwindled at last to months. And then her dream had unexpectedly come true. She had money—plenty of it—and nothing stood in the way. She could never forget the day she told him about the house. Always she had tried to quiet him with vague promises and imagined descriptions of a place she had completely forgotten.

"The house is ours, father," she assured him, jubilantly. "And I am having it painted on the outside."

"You are having it painted on the outside, Margaret? Was that necessary, already?"

"Yes, father. But I am Lydia. Don't you remember? I am your little girl, grown up."

"Yes, yes, of course. You are like your mother—And you are having the house painted? Who's doing the job?"

She told him the man's name and he laughed rather immoderately.

"He'll do you on the white lead, if you don't watch him," he said. "I know Asa Todd. Talk about frauds—You must be sure he puts honest linseed oil in the paint. He won't, unless you watch him."

"I'll see to it, father."

"But whatever you do, don't let 'em into my room," he went on, after a frowning pause.

"You mean your library, father? I'm having the ceiling whitened. It—it needed it."

"I mean my bedroom, child. I won't have workmen pottering about in there."

But you won't mind if they paint the woodwork, father? It—has grown quite yellow in places."

"Nonsense, my dear! Why, I had all the paint upstairs gone over—let me see—"

And he fell into one of his heavy moods of introspection which seemed, indeed, not far removed from torpor.

When she had at last roused him with an animated description of the vegetable garden, he appeared to have forgotten his objections to having workmen enter his chamber. And Lydia was careful not to call it to his mind.

She was still sitting before his desk, ostensibly absorbed in the rows of incomprehensible figures Deacon Whittle, as general contractor, had urged upon her attention, when Martha again parted the heavy cloud of her thoughts.

"The minister, come to see you again," she announced, with a slight but mordant emphasis on the ultimate word.

"Yes," said Lydia, rousing herself, with an effort. "Mr. Elliot, you said?"

"I s'pose that's his name," conceded Martha ungraciously. "I set him in the dining room. It's about the only place with two chairs in it; an' I shan't have no time to make more lemonade, in case you wanted it, m'm."

(To be continued.)

Child's Welfare Week.

February 14th, St. Valentine's Day, has been set apart as Western Ontario day for Child's Welfare Week, which begins in London on Feb. 11th. Mothers of Western Ontario are invited to come and bring their little children. Automobiles will be at the station to meet them and everything possible will be done for their comfort, pleasure and profit, including a clinic, educational "movies" on care of children, and a special matinee with good music in the afternoon. The medical department will be in charge of Dr. Tillman, assisted by several other prominent physicians of the city. It is understood that reduced railway rates will be secured for February 14th from all points in Western Ontario.

ROYAL PURPLE POULTRY SPECIFIC

Big Egg Yield

Royal Purple Poultry Specific is a great egg producer and poultry conditioner. It makes hens lay in the winter almost as well as they do in summer. This is because our Poultry Specific supplies the missing food elements that fowl need in their winter ration and without which they cannot lay. Royal Purple Poultry Specific tones up the digestive system, and keeps the fowl active and healthy. It should be fed daily in a hot or cold mash.

Royal Purple Poultry Specific

has pleased thousands of farmers and poultrymen. It has enabled them to get winter eggs without trouble. Read the views of the following users:

Fred E. Bond, Kincardine, Ont., writes:

"I have been feeding Royal Purple Poultry Specific to my hens this winter and I find it beats anything I have ever used as an egg producer. They started to lay right away and kept on gaining. I will never feed anything else as long as I can get it."

T. W. Hale, Toronto Annex, writes:

"I have fed your Specific to poultry, and it is a valuable tonic; increases the production of eggs. Would not be without it; keeps them in good health and I recommend it highly. Any person trying it once will not be without it."

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6 Draft Horses 6

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30 TONS OF HAY.

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The Cockshutt Light Tractor Plow is an ideal plow of 2 or 3 furrows. You can turn it into either a 2 or a 3-furrow plow at will. The bottoms are raised to clear an obstruction, etc., and lowered again automatically—just by two pulls on the same rope.

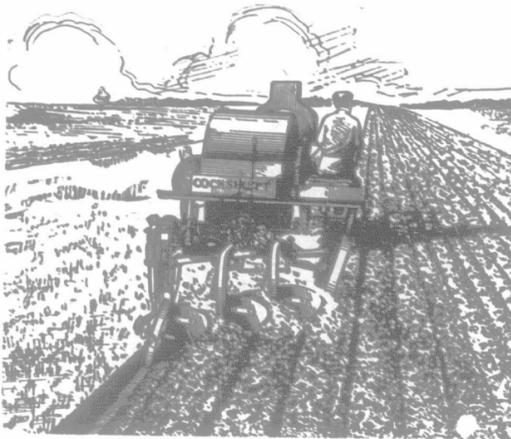
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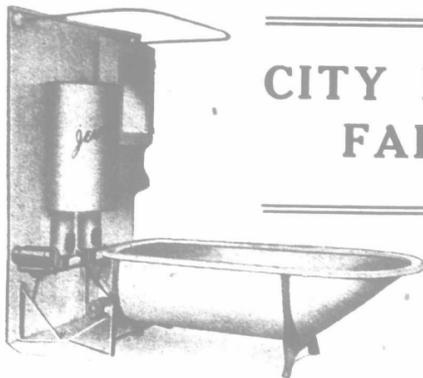


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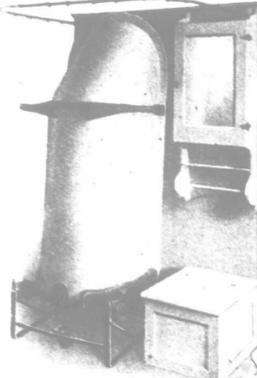


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Current Events

The Supreme War Council of the Allies met in Paris last week.

A food-rationing system went into effect in the United States on Jan. 28. On the same day Canadian mills began grind-only standard flour, and after March 1st only bread made from this will be sold.

The United States is arranging to send 1,500,000 soldiers to France this year, 500,000 of whom will be sent in the spring.

A Brazilian fleet is to operate with the Allied fleets in European waters.

Former German warship "Vaterland" and 15 other German ships seized in the

United States are now being used to convey troops and supplies to Europe.

The transportation of Chinese troops from Pekin to France has begun. Already in France there are 100,000 Chinese workmen employed at military works behind the lines.

Possibly because of bad weather no definite occurrence other than the incessant duelling of artillery and airmen has taken place during the week on the west front. Very significant, however, are the rumors of strikes in Germany where, if reports be not exaggerated, hundreds of thousands of men have stopped work and are clamoring for more food and peace without annexations, the strikes extending to the ship-building yards at Kiel, the aeroplane plants at Adershof, the arsenal at Spandau and the

foundries, and coal and iron mines in Westphalia. Whether the demonstration will develop into a revolution or not must, of course, depend upon the temper of the army. At time of going to press it is reported that troops have been called out to suppress the strikers, and the papers "Berliner Tageblatt," "Vorwaerts," and "Berliner Post" have been ordered to cease publication because of their sympathy with the strikers. Also many socialists have been arrested. In any case conditions do not omen favorably for the Prussian autocracy; a forced people will submit only to arise again. It is said also that the unrest increases every day in Austria, which appears to be affected even more than Germany by the Russian revolution, and where the food conditions have been rendered desperate by fires last week in the big grain warehouses at Vienna. In the meantime it is hard to get hold of

the tangled ends of affairs in Russia where events continue their usual kaleidoscopic course. In the north Finland is in revolt against the Bolsheviki, whose Red Guard has taken possession of the southern part of the country, taking Viborg and Helsingfors, and, apparently run amuck, are said to be plundering and murdering. In the northern part of the country they have been beaten. In Finland the Socialists everywhere are making common cause with the revolutionists. In Southern Russia the Ukrainians appear to have united with the Roumanians against the Bolsheviki in their desire to gain Bessarabia (north of Roumania) to which several battalions of Red Guards have been sent. Evidently severe fighting has taken place, and at time of going to press it is reported that Odessa, on the Black Sea, and the city of Kiev have fallen to the Bolsheviki troops. While all this goes on, parleys continue at Brest-Litovsk, where Russian Foreign Minister Trotsky, Count Czernin of Austria, and Dr. von Kuehlmann of Germany have again assembled with their delegations. Trotsky in his recent speech there, has made it clear that the aims of the Bolsheviki are directed against Imperialism everywhere. In Italy the Austrians have been again defeated on the Asiago Plateau, where Gen. Diaz' troops captured 2,600 prisoners, 6 guns and 100 machine guns during two or three days' fighting.

The Dollar Chain

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

Contributions from Jan 25 to Feb. 1: M. T. Lloyd, Ont., \$1; M. W. Millbrook, Ont., \$1; P. M. B., Glanworth, Ont., \$1; "Reader", Pembroke, Ont., \$1; "Scotia", London, Ont., \$1; Mrs. David Macdonald, R. 3, Allenford, Ont., \$1; "A Subscriber", Bruce Co., Ont., \$2; Edward Tye, Dallas, Ore., \$2.50; "A Friend", Langton, Ont., \$3; J. P., Novar, Ont., \$1.

Previously acknowledged.....\$5,140.40

Total to Feb. 1st.....\$5,154.90

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

For the Halifax Blind.

More than 200 men, women and children were blinded for life by the explosion at Halifax. A fund to help these people and put them in the way of earning their living has been started in Halifax. Will those who would like to contribute to it kindly send their contributions to Sir Fredrick Fraser, School for the Blind, Halifax.

The Beaver Circle

Something About Skunks.

I wonder how many of you ever got a good look at a skunk. I remember very well the first time I ever saw one. He came loping along in his odd fashion in broad daylight, making for the barn and not appearing to see us at all. If he did see us he did not pay the least attention, and certainly was not afraid. As we had lost some chickens quite recently, we did not look upon him as a very welcome visitor, but we were interested in having a look at him, and very pretty indeed did he seem, with his glossy black coat enlivened with streaks of white. Needless to say he did not reach the chicken-house that time.

At another time, in the same barn a skunk was trapped in a curious way. One of the family whom we will call Jack, happening to hear a great commotion in the goose pen, looked in, and was greeted at the door by the unmistakable odor of skunk. All of the geese were huddled in one corner, while the big gander stood in the middle of the floor, making a tremendous noise. Nothing was to be seen elsewhere, so Jack, thinking that the skunk had decamped, went about his business and did up the chores, continuing to hear, however, the noise from the goose pen.

"They're in a great fuss," he thought, "I must watch out for that fellow."

In about an hour he looked again into the pen, and there were the geese

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exactly as before, with the big gander still standing on guard. Evidently something was still wrong, so Jack made a close search. The result was that he found, squeezed in behind a board in the corner, Master Skunk, frightened out of his wits at the big gander.

I am afraid he found a worse enemy in Jack, for skunks that visit chicken yards are outlaws, and have to be treated as such.

Not all skunks, you know, do that. Most of them never come near chickens, and are real helps to the farmer, as they eat field mice and many kinds of insects. They are especially fond of the big June beetle that sometimes gets into the house and clicks about the walls on warm summer nights. These beetles come from the well known "white grub", which causes so much trouble in gardens, and the skunk thinks white grubs so very nice for his dinner that he will even dig down into the ground for them. He has, however, a bad fashion of eating, also, the eggs and young of ground-nesting birds.

Now, in closing, I want to pass on to you a skunk story told by a writer in that nice little Boston paper "Our Dumb Animals." The writer begins by saying that he spent a summer once tenting on the shore of a lake in a pasture where a whole skunk family chanced to live. The other man in the tent was not used to the country, and was rather afraid of it. Always on stormy nights he went to bed "in his clothes", wrapped in a rubber coat and wearing his rubber boots, to be ready in case the tent blew over. Also he had brought a revolver to use against burglars or bears.

"The burglar came", says the writer, "but we did not use the revolver against him. He was a four-legged burglar with silky black hair and altogether too dangerous to shoot. We both waked together one moonlight night to find the burglar—Mr. Skunk—sitting in the middle of the floor, eating to-morrow's breakfast. We kept very still and presently, having finished the breakfast, he went his way, greatly to our relief. We took this as a warning and afterward before retiring always stretched across the front of the tent some chicken wire two feet high.

"A night or two after this my literary friend waked me in much excitement. 'Look out there' he said, and pointed to the grassy lawn in front of the tent. There was the entire skunk family—father, mother, and three grown children—having a lawn party. Just what they were doing I am not sure, but it seemed to be a dance in the moonlight. They wove a sort of minuet, turning and wheeling and seeming really to enjoy it, whatever it was. My literary friend got out his revolver in some excitement, but I persuaded him not to use it. Peace was better than war under these circumstances. For an overt act, while it might have meant disaster to the skunks, would surely have meant ruin to ourselves and our camp. It was really a very pretty dance and presently the dancers strolled away and our reception ended.

"A night or two afterwards a stray Irish terrier dog came along and insisted on joining our party. He was a brown-eyed, genial little chap and when night fell we did not have the heart to send him away. At bedtime he curled up in a chair at the back of the tent between our two bunks, and with our skunk fence in position we fell asleep feeling secure from all disaster. I think it was towards morning, for the last of the old moon shone in at the tent door and lighted what I saw there, when I waked. It was the largest of all the skunks; and how he got there I cannot tell, but he was inside our fence. Everybody else in the tent seemed to wake up at the same time, especially the dog, and it really seemed as if disaster enormous and inevitable must immediately result. With simultaneous exclamations of 'Good heavens! the dog,' my tent mate and myself both sat up in bed. So did the dog. In a flash the two—dog and skunk—were standing eye to eye each with his back humped up, glaring at the other. It seemed an hour but I don't suppose it was more than a second that it took me to lean from my bunk, grab the dog by the scruff of the neck, haul him into bed with me, and roll us both up in as many folds of blanket as possible. I held him there as long as I could, but he was a very active Irish terrier dog and eventually he scratched his way out and with one wild howl of indignation at outraged hospitality

he bounded over our fence and disappeared.

"The skunk had gone too,—how, I cannot say,—and my literary tent mate also had disappeared, but he had not gone far. He was rolled and swathed in all the bed clothing that he could find on his side of the tent and it took me some time to get him reassured so that he would come out. How Mr. Skunk had managed to pass our wire fence barrier, either coming or going, is a mystery still unsolved, but I want to pay a tribute to his gentleness and his most excellent behavior under what was a trying state of affairs for all of us. I have always had a friendly feeling toward him and his tribe. They are pretty good country neighbors."

You may wonder how the two people in the tent could bear the odor, but, you know, the writer says the skunk behaved well. The skunk, in fact, is as sweet-smelling as any other animal unless really alarmed, when he uses the odor as a protection. If the dog had really jumped at the skunk—well, that tent would have made a bonfire.

When kindly used the skunk is really easily petted, and is gentle and lovable. Mr. Thompson-Seton, the writer about animals whom some of you already know by his books, tells of keeping one in his back yard when living in Toronto. It used to come into the house and play with the children, and all went well until one day when a big tomcat found its way into the yard. Then the neighbors complained and poor pet skunk had to be banished.

Competition.

Now I have told you an animal story, and I want you to tell me any true story you have to tell about animals or birds about your own home,—"wild" or "tame". The story must be true, and never published before. Perhaps you raised chickens, or a calf or pig to help win the war,—then tell us about it in the most interesting way you can. Or perhaps one of your horses or cows or your dog has done something wise—then tell about that. Or maybe your story will be about wild bees, birds or animals. Only don't let it be a bloodthirsty one. In this department we don't want to talk much about cruelty and killing things.

Prizes will be given as usual, for the best letters. Kindly send the letters so they will reach here not later than February 25th.

Address: *Beaver Circle Competition, The Farmer's Advocate and Home Magazine, London, Ont.*

The competition is open to both senior and Junior Beavers.

Senior Beavers' Letter Box.

Dear Puck and Beavers.—This is my sixth letter to your charming Circle, and I've seen every letter in print. I am sending you a copy of the essay I got second prize for. Here it is:

How Boys and Girls can Help in War Time.

When this terrible war broke out, it meant that all women, men and children must help as soon as possible.

The men enlisted, while the women made comforts for them. Some boys and girls didn't know what to do. There are many things they can do, and these are some of them:

The boys and girls both can knit socks, make and roll bandages, hem handkerchiefs, write long letters to the boys in France, and tell them all the bright news, read to mother while she knits, grow large plots of vegetables to feed the soldiers, and feed the pets separator milk and potatoes, so as to save the good bread for the soldiers.

The girls can do the work in the house and let their mothers work outside; they also can hoe the garden, gather the eggs and feed the fowl, and be as good and cheerful as possible. Very small children can mind the baby, which is helping a great deal.

The boys can help with the harvest, do the chores, such as pulp mangels and turnips, put down hay and straw, milk the cows, feeds the horses, cows and sheep.

This is a great help to the busy farmer, who is trying to grow grain, to feed the boy Allies in France.

Wishing your Circle every success, I remain,

JEAN GILCHRIST, (age 11 years.) Shanty Bay, Ont.

Dear Puck and Beavers.—I enjoy reading the letters printed in your merry Circle very much and thought I would write one myself. We have taken the Farmer's Advocate for nearly a year and we would not like to do without it.

I have four pets, namely a dog which we call Mike, two cats, an old cat and a kitten and a little canary which I call Dick. I got Dick three years ago last summer for my birthday. He is a great singer and we all are very fond of him. When he wants anything to eat he will chirp until we get it for him. I am going to tell you about an adventure Dick had. We used to let him out of his cage sometimes and one day while out flying around he fell into a bucket of buttermilk which, unfortunately, happened to be sitting without a lid on. We had to give him an awful bath then and never since will he wash himself properly.

Wishing every success to the Beaver Circle, I remain,

JANET WHITE, (age 13, Sr. IV.) R. R. No. 2, Allenford, Ontario.

Dear Puck and Beavers.—It is about a year since I wrote last, although I have read all the letter in the Circle. It is storming to-day and I thought I would write. I was not at school for nearly seven months before Christmas.

My brother and I do all the chores. We have fourteen head of cattle, four horses, seven sheep and eight pigs to tend to. I guess I will close with a riddle: Twelve horses in eleven stalls, what shall we do? Ans.—Give it up.

I hope the w. p. b. has been eating affy and has its teeth stuck together when this arrives. I remain, Yekhummah, Ont. LLOYD WAGG.

I think it is perfectly splendid of you to work so well, Lloyd. The boys who are working well now are all helping to keep the world together in spite of the war.

Honor Roll.—Harold Ratz, R. 2, Mitchell, Ont.; Greta Bailey, Evansville, Ont.; Edward Renecker, R. 5, Stratford, Ont.

Riddles.

Crooked as a rainbow, teeth like a cat, Guess all night and you can't guess that.

Ans.—A gooseberry bush. Sent by Kenneth MacFarlane.

Why does the moon never get rich? Ans.—Because it spends all its quarters getting full.—Sent by Greta Bailey.

Beaver Circle Notes.

Edward Renecker, R. 5, Stratford, Ont., wishes some of the Beavers would write to him.

Perhaps Stanford Pitts, R. 1, Ida, Ont. would like to tell us just how he raised the chickens for which he got a prize at the fall fair.

Junior Beavers' Letter Box.

Dear Puck and Beavers.—This is my second letter to your Circle. I guess the other one went into the waste paper basket. I have read quite a few books. The name of some of them are: Alice in Wonderland, Black Beauty, Beautiful Joe, Heroes of the Nations, What Hilda saw, and a lot of others. Our school has a good library and a lot of good books in it. We usually have a school concert at our school every year. At school the games we like to play are, "Silo", "Quiet Mice", "Jacob and Rachel" and a lot of others.

I like sending parcels to the soldiers in France, and getting letters from them. Well as my letter is getting long I will close with a riddle.

What tune do we all like. Ans.—A fortune.

HELEN GILBERTSON, (age 9.) R. R. No. 2, Simcoe.

Dear Puck and Beavers.—This is my first letter to your charming Circle. My sister is twelve years old. I have read quite a few of your letters, so I thought I would write one too. I live on a farm half a mile from school. My teacher's name is Miss Patterson; I like her very well. We had a school fair this year and last year too. I got first prize on a work bag last year, but this year I did not do anything. My sister got first on public speaking. We have a little pony called Billy; he is a great pet. My sister can drive him to

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

GOOD FARM FOR SALE. FIRST-CLASS 100-acre farm, new brick house, bank barn, drive house, silo, never-failing spring, good stone road, about three miles to Hamilton. On Dundas Street, 1/4 mile west of Clappison's Corners, Township of West Flamboro, Wentworth County. Apply to Percy Lyons, Executor, Phone—Waterdown, 37 R. 4. P.O. Address: Dundas R. R. No. 2, or on premises, Phone 38 R. 6.

MARRIED MAN AND SON SEEK POSITION as general farm hands; would like to rent, after a year's engagement, around 150-acre farm. Would be free in April. Please state wages and all particulars. Box 2, Farmer's Advocate, London, Ont.

WANTED AT ONCE—A MAN WHO UNDERSTANDS feeding and looking after cattle. Will hire by the year. Apply to A. J. Fox, Harrow P.O., Ont., R. R. No. 3.

WANTED—CAPABLE MANAGER 3,000-ACRE wheat and cattle ranch (Western Canada) buildings and all conveniences. High salary or interest in farm. A. Pierce, 90 St. Peter Street, Montreal.

WANTED—WORKING FOREMAN AND wife for pure bred stock farm in Western Ontario; man to be thoroughly good general farmer and capable manager; wife to be good housekeeper and able and willing to do usual work of farmer's wife. Apply to T. M., Farmer's Advocate, London, Ont.



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.

AM SOLD OUT OF GEESSE AND TURKEYS. Now offering Indian Runner Ducks and Barred Rock Cockerels. Bred right, priced right. John Amos, Tilbury, Ont.

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

FOR SALE—PURE-BRED, LARGE ROSE-Comb Brown Leghorn Cockerels, bred from our best pens, at most reasonable prices. Satisfaction guaranteed. Galloway & English, Ingersoll, Ont.

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

TWENTY-FIVE YEARS A BREEDER OF Barred Rocks that are barred and bred right, from first-class laying hens. Cockerels for sale, both show and utility. Walter Bennett, No. 1, Cottam, Ont.

30c. for Chickens
25c. for Old Hens
Above Prices Paid by
Waller's, 702 Spadina Ave., Toronto
Write for Price List

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

Herd Books Wanted
Parties having copies of Volumes 8, 9, 14 or 15, of the Dominion Shorthorn Herd Books for sale, please communicate with
G. E. DAY, GUELPH, ONTARIO

For Sale—One Registered Clydesdale Stallion, rising four years old, "Baron Striding" (17084), sire, "Baron Fling" Imp., (13321); "Castle" "Baron's Pride" (12254); sire, Rossmore (17423); sire, Mackintosh Imp. (1458). This is a big, thick, smooth, good-going colt, with the best of feet and legs, has several other registered dams, and has proved himself a most successful sire. For price and particulars apply to T. A. Hand, R. R. No. 2, Shitville, Ontario.

town and my mother can drive him also; so can I.

I remain,
MARY SEWARD, (age 10 years).
Maple Grove, Bowmanville, Ont.
P. S.—I wish some of the Beavers would write to me.

Junior Beavers' Honor Roll.—Myra Holliday, R. 1, Brooklin, Ont.; Mae Edmonds, Silver Water, Manitoulin Island, Ont.; Stanford Pitts, Ida, Ont.

Gossip.

Sales Dates.

Jan. 29, 1918.—Victoria County Pure-bred Stock Association, Lindsay, Ont.—Shorthorns and Herefords.

Jan. 30, 1918.—Alex. Hastings, Cross-hill, Ont.—Shorthorns, Leicester Sheep and Hampshire Hogs.

Feb. 13, 1918.—Plum Grove Farm, Collingwood, Ont.—Herefords, Leicester Sheep, and Horses.

Feb. 20, 1918.—J. K. Moore, R. No. 2, Peterboro, Ont.—Horses, Holsteins and Swine.

Feb. 20, 1918.—Neil McElheren, Chatsworth, Ont.—Clydesdales.

Feb. 20, 1918.—A. Stevenson, Atwood, Ont.—Shorthorns and Yorkshires.

Feb. 21, 1918.—Wm. A. Rife, Hespeler, Ont.—Holsteins.

Feb. 22, 1918.—F. L. Green, Greenwood, Ont.—Jerseys.

Feb. 23, 1918.—W. A. Dryden, Brooklin, Ont.—Shorthorns.

Feb. 26, 1918.—J. Lloyd-Jones, Burford Ont.—Shropshires, Southdowns and Jerseys, etc.

March 12, 1918.—J. M. Van Patter & Sons, R. 1, Aylmer, Ont.—Holsteins.

March 5, 1918.—E. C. Chambers & Sons, Harley, G. T. R. or Scotland, Ont. L. H. & B.—Holsteins.

March 5, 1918.—Montgomery Bros., Lanark, Scotland.—Clydesdales.

March 6, 1918.—Guelph Fat Stock Club.—Pure-breds; J. M. Duff Secretary.

March 6, 1918.—G. F. Mahon, Woodstock, Ont.—Holsteins.

March 7, 1918.—L. K. Weber, Hawkesville, Ont.—Shorthorns.

March 13, 1918.—Perth District Holstein Breeders' Club, Stratford, Ont.

March 14, 1918.—London District Holstein Breeders' Club, London, Ont.—Holsteins.

March 15, 1918.—H. Clark Hamner, Norwich, Ont.—Holsteins.

March 20, 1918.—Oxford District Holstein Breeders' Club Consignment Sale, Woodstock, Ont.—Holsteins.

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

Stevenson Dispersal Sale.

Judging from the sale catalogue issued by A. Stevenson, the Shorthorn and Yorkshire offering at the Stevenson Farm, near Atwood, Ont., on Wednesday, February 20, promise to be one of the most select small lots any public sale ring has brought forth this season. The Shorthorn herd, although small has for years been represented as one of the best herds bred along dual-purpose lines in the province and as it has been one of the few herds where hand milking has always been practised the demand for the good record females on February 20 should be strong. Of the fourteen milking cows in the herd, all of which have calves at foot or are well along in calf, several have qualified in the R. O. P. with good records and others are prospects for record producers. The official R. O. P. records on those that have been through the test run up to 9,040 lbs. of milk and 316 lbs. of fat for the year, and there are a number of others that have done almost as well, age and everything considered. From these dams there are 5 young bulls ranging in age from 10 to 15 months and nearly all are sired by the herd sire General (96407). This bull weighs around a ton and is sure and right in every way. His calves will speak for him as a sire on sale day. Prince Grimmon 19365, a well-turned and good-moving bay 2-years-old Clydesdale stallion will also be in the sale, as well as Mr. Stevenson's entire herd of prize-winning Yorkshires. The Yorkshire offering includes sows farrowing soon after sale, others that will have litters by their side, as well as some younger bred sows. Several young boars fit for service are also catalogued. See advertisement and write for catalogue.

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.

Dog Causing Damage.

A man is driving team and sleigh along road. His dog is following close behind. In passing a horse and cutter dog jumps out from behind sleigh and frightens horse so that it breaks harness and cutter and runs away. Is the owner of the dog responsible and should he pay the damage?

Ontario. H. W. C.
Ans.—We think so.

Landlord and Tenants.

A has 100-acre farm. A rents 50 acres for one year to B holding 50 acres for pasture. At expiration of 6 months A rents whole hundred to C for one year-lease giving full possession. B gives C permission to plough front 50 acres if C so desires.

1. Can A collect rent from both B and C for front 50 acres for last 6 months?

2. Could C collect rent from B for front 50 acres for last 6 months?

Ontario. SUBSCRIBER.
Ans.—1. Yes.
2. No.

Ashes—Clover.

Why would my neighbor use hardwood ashes on his cattle's backs? Is there any benefit derived from this? Would it be more beneficial to give them a handful occasionally to eat?

2. Which kind of clover is the better to seed down, the red or mammoth?

Ontario. W. H. D.
Ans.—It is possible that the ashes were applied to kill vermin. A few wood ashes given in the feed increases the mineral matter in the ration and aids in curing a depraved appetite.

2. Mammoth clover grows very rank and is included to make coarse hay. We prefer red clover for hay.

Noxious Weeds—Quarantine

My neighbor has ox-eye daisy both in his cultivated land and in waste pasture land.

1. To what extent can I compel him to cut them?

2. Can he be forced to do it any more than once in a season? They keep coming so long once is no good.

3. If he refuses what are the proceedings to get them cut?

4. When a family is quarantined for a fever, whose place is it to see that those people obey the law and stay in? Is it their doctor, or who?

Ontario. J. D. L.
Ans.—1. He can be compelled to either cut down or destroy them.

2. Yes.

3. You should report the matter to the local inspector appointed for the carrying out of the Noxious Weeds Act.

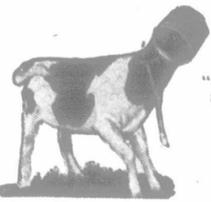
4. The Medical Health Officer; but any person who contravenes the provisions of the Public Health Act is himself liable to a heavy penalty.

Farm Railway Crossing.

Section men have orders to tear up plank in farm railway crossing to allow snowplow to pass. Previously one plank was taken up next each rail. A new type of plow makes it necessary that all planks be taken up. This makes the crossing very difficult for loaded sleighs or manure boats, even though the space between the rails is packed with snow, which is scooped out, of course, every time the snowplow passes. What rights have the railways in the matter of tearing up such crossings?

Ontario.

Ans.—The railway company was bound by law to make the crossing convenient and proper for farm purposes. As to the terms and conditions upon which such crossing is to be maintained we must refer you to the order made by the Board of Railway Commissioners for Canada—if the railway is one within the jurisdiction of the Dominion Government, or made by the Ontario Railway and Municipal Board—if within Provincial jurisdiction. In either case write the Secretary of the Board at Ottawa or Toronto as the case may require.



"Good to the Last Drop"

Raise Your Calves on Blatchford's Calf Meal and Sell the Milk

More calves have been raised on Blatchford's Calf Meal than on all other milk substitutes combined.

100 lbs. makes 100 gallons of milk substitute, costing only one-third as much as milk. Prevents scouring and insures the early maturity of sleek, handsome calves.

It is steam-cooked and no trouble to prepare or use.
Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or **Steele, Briggs Seed Co., 64 Toronto, Ont.**

Protein Productiveness—Proficiency—Prosperity

More and more do we realize the tremendous significance of protein and nitrogen in our business as farmers. They mean flesh-forming elements in the stable, plant food in the soil. We pay out good money for both, and regard it as good business to do so. Our own business is to demonstrate to you that there are two ways of getting these precious elements. One is the railway, the other is the clover way. Every now and then some enthusiastic experimenter tells you something about the enormous food-producing and soil-fertilizing power of sweet clover. Who doubts its value as a food now? Who discredits its soil-rebuilding power? Its reputation is established, the need for its services are insistent. Grow bigger crops of feed, feed more live stock and feed them better, at the same time rebuilding, not depleting your fields. Probably ten thousand farmers will grow it this year for the first time. As others' experiences have been, theirs will be. Sow Sweet Clover. Sow the best. For forage, for pasture, we recommend our own select strain of sweet clover, known as Canadian Alborea. It is finer of stalk, more tender and less rank, more prolific of seed. Write for our descriptive pamphlet, "The Hollow Stem," that tells you all about it.

CANADIAN ALBOTREA CLOVER CO., LTD.
Warehouse and Shipping Office:
Listowel, Ontario

Adam and Eve A.D. 1917.

He planted the garden
With seventeen sorts
Of vegetables,
And bought a wheel-hoe,
Trowel, dibble, rake and spade,
A complete spraying outfit
And much lime and fertilizer;
The only things he did not buy
Were weeds and bugs;
They came free
In countless quantities.

She bought a canning outfit—
Glass jars and rubber rings,
Cans and solder,
Thermometers,
Parers and corers,
Paraffin and gummed labels;
And a subscription book
For five dollars
On "How to Conserve Food."
The cook left
When she saw these things.

The weather
Was too hot for the lettuce,
Too cool for the corn,
Too wet for the beans,
Too dry for the cucumbers;
But it seemed to suit
The cutworms exactly,
And the late drought
Did its appointed part.

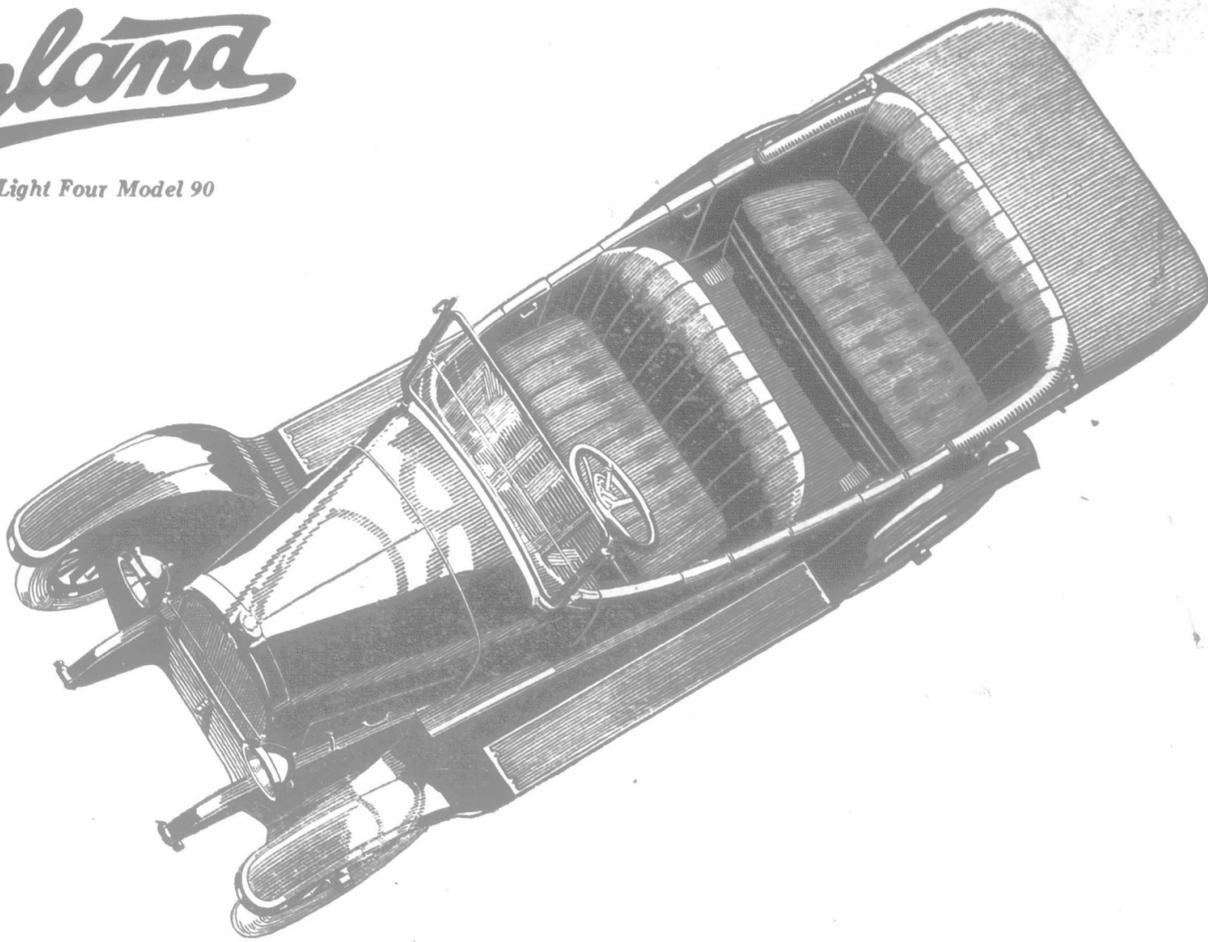
All the survivals
Ripened well nigh
Simultaneously,
And had to be canned at once,
On the very hottest days.
Or when the range
Was out of order.
Ants swarmed into the kitchen,
The solder would not stick,
The rubbers were defective,
But the bacteria
Had a bully time
As the stuff spoiled
Slowly, relentlessly,
On the pantry shelves.

Now, hour after hour,
In the suburban gloamings,
They two sit
Alone with their memories,
And bitterly revile
Conservation!

P. LEONARD, in "Life."

Overland

Light Four Model 90



The Thrift Car

A farmer 30 miles from town with an Overland is closer than one 5 miles away who depends entirely upon horses.

Often a repair is suddenly needed when harvesting—with an Overland it is no trick to go to town, get the repair and return to work without losing precious time.

Sixty percent of all the Overland cars sold are bought by farmers. Why?

Because this thrift car combines in a maximum degree *all* of the five essentials necessary for complete satisfaction.

*Appearance, Performance,
Comfort, Service and Price*

Catalogue on request. Please address Dept. 1209

Willys-Overland, Limited

Willys-Knight and Overland Motor Cars and Light Commercial Wagons
Head Office and Works, West Toronto, Ontario
Branches: Montreal, Que., Winnipeg, Man., Regina, Sask.

You Win—but you don't have to die

An advertisement to farmers in their "twenties" and "thirties"

\$5,000 or \$10,000 would come in mighty handy to you to-day, wouldn't it?

Think, then, how much more valuable it will be to you at fifty-five or sixty.

Of course, you'll say, I'll have been successful and won't need it then. But stop! You may—and if you do, you'll need it more than you do to-day.

Your producing years will be about over and ready money, or a guaranteed monthly pension, will mean all the difference between a dependent and an independent old age.

Man, there's a big idea back of Imperial Endowment insurance—one that will prove mighty interesting to you. Write today for our booklet "Penniless Old Men" which gives full particulars. A post card will bring you a free copy.

THE IMPERIAL LIFE Assurance Company of Canada
HEAD OFFICE - TORONTO

Branches and Agents in all important centres

McCormick's

JERSEY CREAM Sodas



Are Made in a New, Snow-White, Sunshine Factory—the Largest, Most Modern and Most Sanitary Factory of Its Kind in Canada

Cleanliness is the watchword at McCormick's—the building is pure white, both inside and out, and is kept immaculately clean, thoroughly sanitary and perfectly ventilated throughout. And all employees—both men and women—are dressed in spotless white uniforms.

McCormick's Jersey Cream Sodas are packed in air-tight, waxed-paper lined boxes, and will reach your table in all their original purity and crispness. Order a package to-day.

Sold Fresh Everywhere in Different Sized Packages. 73

Gossip.

Nicholson's Shorthorns.

The Nicholson's Shorthorns are well known by all lovers of the roans and reds. In the sale and show-rings entries from this herd have always been to the fore in price and honors received, which speaks well for the quality and breeding. The senior sire, Best Boy, a Kilblean Beauty, is still at the head of the herd. While past his prime he is a splendid individual and shows character to a marked degree. That he is an excellent breeder is shown by the individuality and records of his get. He has three times sired the top-priced bull and once the highest-priced heifer at the London sale. The junior sire, Browndale Winner, a two-year-old, is a straight, deep, thick-bodied individual, with a masculine appearance. He is an excellent handler and is evenly fleshed. His dam, Woodhill Duchess 3rd, is one of the best breeding cows of the breed in this country, as shown by the records of her progeny in sale and show-rings. This sire used on the get of Best Boy is giving the Nicholson's choice stock.

When a representative of "The Farmer's Advocate" visited the Nicholson stables recently, he had the pleasure of seeing a fine bunch of Shorthorn cows and young stuff. In two of the barns were rows of young cows of choice quality which were either due to freshen or with calf at foot. While not in high flesh they were in good breeding condition and showed smoothness of form. Some of them are closely related to champions of many shows. Among the families represented are: Kilblean Beauty, Clementina, Matchless, Claret, Rosebuds, Nonpareil, Lovely, Wimple, Missie, Averde, Village Blossom and Golden Drop. The young stuff was practically all running loose in box stalls and they were in the pink of condition. Among the young stock on hand was a two-year-old Kilblean Beauty heifer, by Bandsman's Commander. She is a full sister of Britannia, which was the highest priced heifer at the Watt-Gardhouse sale in 1917. She is one of the choice females in the herd and has a heifer calf by Best Boy. There are three Clementina heifers which are stylish, straight, deep, thick individuals and have good handling qualities. There is a year-old Clementina bull, which is a strong-



Guaranteed for two full years

Even apart from the guarantee, you would choose an Arlington—it's made of live red rubber, extra thick—strong and durable—yet it's a pouch you are proud to show.

ARLINGTON Tobacco Pouch

There is a size and shape to fit any pocket.

The two years' guarantee is an additional reason for insisting upon an Arlington.

Next time you are in town ask your dealer to show you the Arlington—compare it with any other pouch you like. You will agree that there's real pouch value in it.

Priced from 50c up, according to size.

Gasoline and Kerosene Engines

Saw Frames, Saw Blades, Grain Grinders, Straw Cutters, Belting, Scales, Farm and Lawn Fence. Write for price list.

A. R. Lundy, 251 West King Street, Toronto

A Better Separator For Less Money

VIKING

Cream Separators of Quality

topped, deep, thick, low set calf with splendid expression. He is as well fleshed a calf as one would wish to see and his dam is one of the best breeding cows in the herd. An Averde calf is also a deep, sappy youngster, and is out of a good cow. A white bull, about one year old, is a strong calf with well sprung rib and full quarters. He has good length and gives promise of developing into a great herd sire. In one box stall were three heifers, two roans and one red. The red one, a Nonpareil, is a full sister to the bull which topped the London sale last spring. All three are choice individuals with smooth shoulders, splendid heart girth and straight lines. One of the roans, Rose Missie 2nd, is a particularly deep, thick calf and is a splendid handler. Another particularly sweet heifer, sired by Proud Augusta, attracted attention, as did also a Golden Drop heifer by the same bull. Rose Missie, a six-year-old cow, showed milking qualities to a pronounced degree. She hardly help being a good individual when backed by such bulls as Joy of Morning and Barmpton Hero. Her daughter, Rose Missie 2nd, is a show heifer. Alongside of her stood a Nonpareil, a big, thick cow about due to freshen. She has splendid form and is a regular breeder. The mention of these few individuals will suffice to give our readers an idea of the quality of stock on hand in the Nicholson stables. There are a considerable number of young bulls, heifers and cows which can be spared at the present time. There is also a choice crop of calves out of Best Boy heifers and by the young herd sire. There are also a few few calves by the old bull. If in need of a herd sire, or wishing to secure foundation stock, write R. & S. Nicholson, Parkhill.

Smithers (gazing Zep-ward)—"By Jove! Isn't it low? I believe I could hit it with my gun!"

Mrs. S.—"Oh, please, dear, don't do anything to irritate it!"

Feminine Touch.—A girl who was running a London bus was making out her first report. Under the heading "Accidents," she stated:

"Bumped into an old gent."

Under the heading "Remarks," she said: "Simply awful."

Belonging
cows and
to freshen
some very

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10 York
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5 horses

TERMS
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Trains
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Wm. Maw

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Make your
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HOP - M
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Large Cans, m
Small Cans, m
Sample Cans 1

This temper
and has been
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beer.

Get also our
beer bottle, at
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Hop-Malt Com

Order



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BUSH MOTOR

FOR SA

York

Due to fa

GAVIN

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Excellent ind

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R. R. No. 4

Public Auction Sale

AT GREENWOOD, ONT.

February 22nd, 1918

OF

65 Head of Purebred (Unregistered)

Jerseys

Belonging to F. L. Green, consisting of cows and heifers in full milk and due to freshen in next few weeks. Also some very choice heifers and calves.

1 herd bull.

10 Yorkshire brood sows of splendid quality.

5 horses.

TERMS: Cash. Credit will be given on approved notes, to suit purchaser, not exceeding 7 months, with interest at 5% per annum.

Trains on C. N. Ry. at Greenbush Station will be met on day of sale.

Sale to start at 12.30 sharp.

Wm. Maw and J. H. Prentice, Auctioneers

PROHIBITION IS BOUND TO STAY
Make your Genuine, Superior Lager Beer at Home with Our Popular

HOP-MALT BEER EXTRACT CONFORMING TO TEMPERANCE ACT.
Large Cans, making 6 1/2 to 7 gallons . . . \$1.75
Small Cans, making 2 1/2 to 3 gallons . . . \$1.25
Sample Cans making 1 gallon50
This temperance beer has been a distinct surprise and has been called a most satisfactory and equal substitute by everyone who is fond of the regular beer.

Get also our patent stoppers, fitting any ordinary beer bottle, at 40c. a dozen. Prepaid throughout Canada. Agents wanted. Satisfied customers everywhere.

J. S. in Trout Creek, Ont., writes:—
"I must truly say that the Hop-Malt Extract makes the best beer that I ever drank, and, as I am an old brewer I just know how to handle it."
"Trusting that you will have many more customers, etc."

Hop-Malt Company Limited, Dept. D.3, Hamilton, Ont

Order Nursery Stock



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

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

J. H. McCombs Nurseries
L. B. 818, Fonthill, Ont.

ARE YOU BUILDING OR REPAIRING?
OUR CATALOGUE OF BUILDING MATERIALS AND TOOLS WILL SAVE YOU MONEY. WRITE FOR FREE COPY.
THE HALLIDAY COMPANY, LIMITED, HAMILTON, CANADA.
FACTORY DISTRIBUTORS

Driver Agents Wanted
Drive and demonstrate the Bush Car. Pay for it out of four commissions on sales. My agents are making money. Ship-ment is free. Bush Cars guaranteed or money back. 1918 models ready.
Write at once for my 48-page catalogue and all particulars. Address: J. H. Bush, Pres. Dept. 2100, 115-19 Wabasha St., Detroit, Mich.
BUSH MOTOR COMPANY, Bush Temple, Chicago, Illinois

FOR SALE — A CHOICE LOT OF Yorkshire Sows

Due to farrow in April and May.
GAVIN BARBOUR & SON
CROSSHILL, ONT.

Registered Shorthorn Bulls

Excellent individuals and ready for service. Sired by the famous bull that sold in Toronto, December last, for \$1,075. These choice young animals possess perfect Gloster type and finish (their dams excellent milkers.) Priced right for quick sale.

W. S. BRAGG
R. R. No. 4, Box 11, Bowmanville, Ont.

The Feeding of Calves.

Giving a calf an extra good start the first six months of its life and doing so cheaply, is the secret of successful and economical stock raising. No matter how good the calf at birth, it will be handled at a loss, or more or less seriously handicapped for future usefulness and profit if not fed carefully and cheaply in its early days.

The present high price of whole milk practically exclude this product being used to any extent in calf rearing although it is absolutely necessary for the first three or four weeks if best results are to be obtained. To discover the best substitutes for whole milk and the best methods and practices in calf feeding, a large number of experiments have, during the past three years, been conducted on the Dominion Experimental Farms. The detailed results of this work will be published in the near future. However, a few deductions from these experiments are given herewith.

1. It is more profitable to breed and rear good young stock to maturity than to purchase the average cows for sale, which are usually the animals least profitable and desirable in the neighbor's herd.

2. The cheapest way of building up a good herd is to raise it. The feed costs of good rearing in Canada range from \$16 to \$24.30 for 6-months calves, \$24 to \$45 for 12-months calves and \$37 to \$74.30 for 24 months heifers, the variation depending on methods of feeding, feeds available and market values of these feeds.

3. Calves of poor type and breeding are not worth rearing, but good calves properly bred will be worth at least 30 per cent. and up to 100 per cent. more than their feed cost at two years of age.

4. Calves of good size, strong constitution and large capacity will, on the same feed, make greater growth and better gains than small, weak, narrow individuals.

5. Good rearing of calves is most profitable as shown in such results as: Earlier maturity in size.

Earlier maturity in profitable production.

Greater production throughout the whole lifetime.

More valuable and in greater demand at the highest price.

Healthier stock.

More durable animals.

Better able to consume most profitably all cheap farm grown roughages and convert these into milk.

6. The calf reared on its dam costs 25 to 50 per cent. more than the pail-fed calf, and the more productive the cow the greater will be the charges against the calf.

7. Pail-fed calves reared to 6 to 8 months largely on whole milk, make gains which cost \$14 to \$18.75 per cwt., which is several times the cost when a properly fed substitute for whole milk is used.

8. Skim-milk fed sweet and at a temperature of about 90 degrees Fahr. is the best single substitute for whole milk, and may reach a value of 70 cents per cwt. or more in feeding young calves. However, skim-milk may be improved by the addition of a good cream substitute such as flaxseed jelly, oatmeal or a well-balanced calf meal.

9. Buttermilk, if fed uniformly as to acidity and temperature, may have a slightly greater value than skim-milk. Great caution must, however, be taken to start calves at a greater age and very gradually.

10. In feeding calves to 6 to 8 months of age on rations composed largely of skim-milk or buttermilk and a good cream substitute, gains may be made at a cost of feed amounting to from \$2 to \$7.15, per cwt., this amount varying with the character and price of meal and the ruggedness and thrift of the calves.

11. If well started on mother's milk, calves may be well reared on calf meals without whole or skim-milk. However, greater care and attention must be paid to these calves, and even so, gains cost from \$5 to \$15.41 per cwt. or nearly double the cost where some skim-milk is used.

12. There are many excellent calf meals on the market in Canada. The Canadian manufactured meals are as good as and generally decidedly superior to imported meals, due not only to the palatability of the ingredients and the chemical balance, but even more to freshness and freedom from mustiness.

Of the Canadian made calf meals used the three which in total gains have

EDWARDSBURG GLUTEN FEED **23% PROTEIN GUARANTEED**

is the ideal feed for milk production.

THE mere fact that it costs a little more than Bran, does not mean that it is more expensive. On the contrary, it is cheaper than Bran—it is about the cheapest feed you can give the cows—because it increases the milk yield so much.

We have a little book that tells about Edwardsburg Gluten Feed—what it does and how it makes money for you—write for a copy, free. O 68

—FATTEN HOGS ON EDWARDSBURG OIL CAKE.
THE CANADA STARCH CO., LIMITED TORONTO
WORKS AT CARDINAL, BRANTFORD, FORT WILLIAM

There is BIG MONEY IN TRAPPING

FREE

Hallam's Trappers' Guide—96 pages; illustrated; English or French; tells how and where to trap; what bait and traps to use; is full of useful information.

Hallam's Trappers' Supply Catalog—36 pages; illustrated; rifles, traps, animal bait, headlights, fish nets, and all necessary trappers' and sportsmen's supplies at low prices.

Hallam's Raw Fur News—Gives latest prices and advance information on the raw fur market.

Write to-day. Address giving number as below.

when you ship your **RAW FURS** to **John Hallam Limited** 131 HALLAM BUILDING, TORONTO.

Make the Days Longer

One farmer's wife said "If we could add a few hours to the day, we could do more for 'greater production'. It's time and labor that counts." Some time can be added to one day in the week, and a lot of labor saved by the use of

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Spiral Cut Gear
Hand Washing Machine

The balanced Fly-wheel and Steel Ball Bearings of the Patriot work so easily that one of the children can do all the work, and do it safely too.

Ask your dealer to show you the Patriot, or send to us for particulars.

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Tap Every Tree

MAPLE syrup and sugar is a food—a necessity. Make preparations now to save this valuable crop and double or treble the production. Every pound of sugar; every gallon of syrup helps food conservation, and the market gives a price unheard-of before the war.

With a

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you can make more syrup with less help and in less time and at less cost than any other way. Put your maple bush in working order and get in touch with us on the question of outfit.

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

IRON AGE Combined Hill and Drill Seeder solves the garden labor problem. Takes the place of many tools—stored in small space. Sows, covers, cultivates, weeds, ridges, etc., better than old-time tools. A woman, boy or girl can push it and do a day's work in 60 minutes, 30 combinations, \$4.50 to \$30.00. Write for booklet.

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41 Symington Avenue, Toronto, Can.

THE MARTIN DITCHER AND GRADER

DIGS YOUR DITCHES
GRADES YOUR ROADS
EASILY QUICKLY CHEAPLY

REVERSIBLE ADJUSTABLE



DOES THE WORK OF 50 MEN
SEND FOR FREE BOOKLET

THE PRESTON CAR & COACH CO LIMITED
97 DOVER ST. PRESTON CANADA

MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the eighth day of March, 1918, for the conveyance of His Majesty's Mails, on a proposed contract for four years, six times per week on the Strathroy No. 3 Rural Route, from the 1st of April, 1918.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Strathroy, and at the office of the Post Office Inspector, London.

CHAS. E. H. FISHER,
Post Office Inspector,
Post Office Department, Canada, Mail Service Branch, Ottawa, January 25th, 1918.

MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the eighth day of March, 1918, for the conveyance of His Majesty's mails, on a proposed contract for four years, six times per week on the Dorchester Station No. 3 Rural Route, from the 1st of April, 1918.

Printed notices containing further information as to conditions of proposed contract may be seen and blank forms of tender may be obtained at the Post Office of Dorchester Station and at the office of the Post Office Inspector, London.

CHAS. E. H. FISHER,
Post Office Inspector,
Post Office Department, Canada, Mail Service Branch, Ottawa, January 25th, 1918.

given excellent satisfaction are Royal Purple, Gold Dollar and Caldwell's.

Providing the necessary ingredients are available, it may often be more economical for the feeder to mix his own calf meals. If properly done, the resulting gains in weight of the calves may be nearly as great and often at a much reduced cost.

13. In order to rear the best and cheapest cows, all pail-fed calves should be taught to eat, at an early age, cheap and nutritious farm-grown roughages and grains. The best roughages are grass, fine alfalfa or clover hay, swede turnips, mangels and ensilage. Of the grains, oats and barley are unexcelled.

- #### To Have Better Calves.
1. Give suitable feeds and avoid overfeeding.
 2. Feed regularly and carefully.
 3. Keep calf pens clean and freshly bedded.
 4. Avoid in every possible way all such infectious diseases as scours, tuberculosis, black leg and abortion.
 5. Destroy parasites such as worms, ringworm and lice.

EXPERIMENTAL FARMS NOTE.

Questions and Answers.

Miscellaneous.

Price of Potatoes.

Is there a price of \$2.25 per bag of potatoes, set by the food controller? If so kindly let us know when it comes in force.

F. P.

Ans.—So far as we are aware the price has not been set although there was talk of it at one time.

Sick Kitten.

My kitten has a bad cold. It sneezes frequently and has a nasal discharge. What remedy would you advise?

R. M.

Ans.—A kitten is rather hard to treat. Allowing it to inhale steam may aid in dislodging the cold. It is difficult to administer any medicinal treatment. If the kitten has been ailing for some time, our advice would be to destroy it.

Self-feeder for Hogs.

I have been experimenting with a self-feeder for hogs but I am not satisfied with the way it handled oat chop for young pigs. The chop does not run down freely in it. However, I am highly pleased with this method of feeding hogs and also with the way the hogs are thriving. I would like to see a plan of a feeder which works satisfactorily.

D. C.

Ans.—Oat chop is of rather a bulky nature and therefore more liable to choke up in the hopper than if some of the heavier feeds were mixed with it. Having a slightly larger opening at the bottom might help some, but even then it would be necessary to see that the chop is feeding down each day. A plan of a feed hopper was published in the January 17 issue of The Farmer's Advocate. This one was for feeding out at both sides. A description of the feeder is given in the same issue.

Cow in Rindown Condition.

A cow which was very thin freshened a little over one month ago but never came to her milk as she should have. The afterbirth had to be removed. The womb was flushed out and there was a lot of discharge. She has not given over 2 quarts of milk at a milking. There were symptoms of inflammation of the womb and we treated her. She eats well but is weak. We feed 2 quarts of boiled oats with a small cup of flaxseed and bran, also give a little sulphate of iron. Why doesn't she give more milk? When is she likely to come to her milk? How long will it take to build her up?

A. M.

Ans.—When a cow is very thin at time of freshening she has no reserve force and cannot be expected to give the quantity of milk that she would if she were in fair condition. For a cow to do her best she must be dry for a time and fed so that she will be gaining in flesh at time of freshening. It is possible that her system has become more or less poisoned by the afterbirth not being removed soon enough, and it may take several months to build her up. You are feeding a fairly good ration although the cow might stand dry chop and bran extra, and when she does not give more milk on that feed it is doubtful if she will give much milk until she gets on grass; in fact, a large milk yield cannot be expected this lactation. Good care and liberal feeding may build up her system.



Make your plans for a new Silo NOW

If you had a silo right now you would be getting 25% more milk at a good deal lower feeding cost.

Just figure out what that would mean to you at the present prices of milk and cream, and send today for our big silo catalogue. All about silos and silage.

THE DE LAVAL COMPANY, Ltd.

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

MONTREAL PETERBORO WINNIPEG VANCOUVER

Give Your Crops a Better Start

A Peter Hamilton Spring Tooth Cultivator will work your soil into a perfect seed-bed. It is designed to cut every inch of the ground and cultivate it thoroughly to an even depth.

Peter Hamilton Cultivators

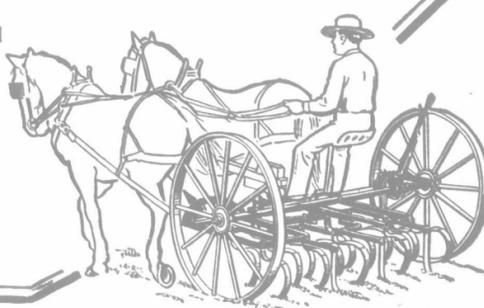
have specially constructed sections that give the teeth great freedom of action. They are so flexible that a ridge and furrow can be thoroughly cultivated at the same time, and hard, rough soil seldom jerks more than two teeth out of the ground at once. The teeth are made of high-grade steel with reversible points. The frame is strong, well-braced and properly trussed.

Send for our free illustrated booklet and post yourself on the merits of this cultivator.

Dealers wanted in open territory.

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

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

FEBRUARY

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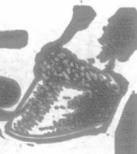
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Ring-Bone



There is no case so old or bad that we will not guarantee

Fleming's Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a lameness, write for a free copy of

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Ninety-six pages of veterinary information, with special attention to the treatment of lamenesses. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists
75 Church St. Toronto, Ont.

AUCTION SALE

HORSES - CATTLE HOGS

J. K. MOORE, 5 miles North of Peterboro

FEBRUARY 20, 1918

At 1 p.m.

6 HEAD YOUNG HORSES
35 HEAD HOLSTEINS—Nearly all Young
6 BROOD SOWS IN PIG
FARM MACHINERY

—At usual terms of credit.

Great Sale of World-Famed Clydesdales

The Montgomerys, of Netherhall, Kirkcudbright, Scotland, having dissolved partnership, William Montgomery, the senior partner, who is retiring from business, will sell at

Lanark, Scotland, March 5

all the stallions, three years old and upwards, falling to his share after equal division. Purchasers of horses hired for current season must fulfill these engagements. Get catalogue from Laurie & Symington, Auctioneers, Lanark, Scotland.

Mutual Life companies have no rivals in respect of security and among the best of mutual companies is the

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5% INSTEAD OF 3%

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

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Baled Shavings FOR SALE

We have a limited quantity of baled shavings to offer at 15c. per bale, f.o.b. our yard. Place your order while they are going at this price. All orders promptly cared for.

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MESSRS. A. J. HICKMAN & CO., (late Hickman & Scruby), Court Lodge, Egerton Kent, England, Exporters of

PEDIGREED LIVE STOCK

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

MORE HORSEPOWER if your teams are equipped with



These pads prevent Sore Shoulders and cure Gall Sores. Your dealer will supply you, or write:

BURLINGTON BLANKET CO., LIMITED
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Dr. Bell's Veterinary Medical Wonder. 10,000 \$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, and etc. Agents wanted. Write address plainly.

Dr. Bell, V. S., Kingston, Ont.

Questions and Answers. Miscellaneous.

Feed for Calves—Size of Pulley

I wish to make a dry meal ration consisting of flaxseed meal, cornmeal and bran for feeding calves that are getting skim-milk twice daily. In what proportions should these feeds be mixed to give best results?

2. I have a 5 H. P. gasoline engine which I used on a 10-inch silo filler last fall for filling my 12 x 30 feet silo. It did not seem to speed the cutting box fast enough to give very good satisfaction. Engine has a speed of 435 R. P. M. and a 16-inch pulley, pulley on the cutting box is 10 inches. I use an 18-ft. belt, six inches wide. Could I not get better results by using a smaller pulley on the cutting box, or should I use a larger pulley on the engine? What size should I use? R. N.

Ans.—1. Two parts cornmeal, two parts bran and one part flaxseed meal would be satisfactory proportions. Ground oats could be used in place of bran or to displace part of the bran in the ration.

2. With the size pulley used and speed of engine the cutting box would be run at near 700 revolutions. If the pulley on the cutting box were reduced to six inches in diameter it would give a speed of around 1,000 revolutions. We would favor a reduction in size of pulley on the cutting box to increasing the size of pulley on the engine.

Installing Bath-Room Fixtures.

I am thinking of installing a bath and fixtures in my house. Owing to the difficulty in securing a plumber, I thought I might do a good deal of the work myself. I would like some information regarding a septic tank, pipe connections, size of pipe for hot and cold water, and a hot water tank. Also the size of connections for basin, bath, etc. W. J. P.

Ans.—If a person has the proper tools and is more or less of a mechanic there is no reason why he could not make a very neat job of installing bath-room fixtures. The material could be purchased and the piping, etc., cut in the required lengths at the house. There are different methods of building a septic tank. Some use a single-compartment tank while others have two compartments. A 4-inch concrete wall, banked on the outside, would be strong enough and a concrete bottom and roof could be put in. For the average sized family a tank 4 by 4 feet and 4 or 5 feet deep is large enough for the first compartment. The affluent flows from this tank into one which should be the same height and width, but only about 2½ feet long. A valve is placed in this compartment which allows the water to escape through a tile drain when it reaches a certain height. This prevents a continual small stream of water from running into the tile and tends to offset the difficulty of roots of whatever crop is grown penetrating the tile. It is advisable to use sewer tile and cement the joints for 25 or 30 feet out from the house, and farther than this from a well. Ordinary clay tile will prove quite satisfactory from there on and should be laid pretty much on the level, as the affluent is supposed to seep from the joints into the soil. By the action of bacteria the waste is practically destroyed in the large compartment of the tank. Septic tanks of the kind outlined have been in use for a number of years giving good satisfaction. Some are using a tank of one compartment and the material is siphoned off without a valve being used. A 4-inch pipe should be extended to nearly the bottom of the tank, pass out through the wall near the top and there connect with the tile. Lead pipes are frequently used leading from the bath-tub and sink. There should be a trap in each. These and a 3 or 4-inch pipe from the commode connect with the 4-inch main leading to the septic tank. By having the main extend up through the roof, ventilation which is necessary is provided. Half to three-quarter-inch piping would be large enough for supplying hot and cold water to the bath and basin. A 25 or 30-gallon galvanized tank can be connected with stove or furnace by zinc piping. We believe it would be advisable for you to have a look through some house where these things are installed, as it will give you a better idea of how the work is done.

REGISTERED, PRIZE-WINNING

CLYDESDALES

AT AUCTION

Wednesday, February 20th, 1918

I have sold my farm and will offer my prize-winning Registered Clydesdale Horses, Mares, etc., to the highest bidder at auction.

For Full Particulars, Catalogue, etc., Write to

Neil McElheron, Grenville Farm, Chatsworth, Ont. (Grey Co.)

Imported and Canadian Bred Clydesdales

COLUMBUS STABLES

We have on hand at present one of the strongest selections of imported and Canadian bred stallions we have had in the stables in years. A strong combination of size, quality and breeding. We also have 15 in-foal mares, all to the service of horses we are offering.

Smith & Richardson, Myrtle, C.P.R., Oshawa, C.N.R.; Oshawa, G.T.R., Columbus, Ont.

Sundrum Clydesdales

Several choice imported and Canadian-bred mares, safe in foal. Also several prize-winning fillies and stallions, and a few show geldings, 2 and 3 years of age.

W. A. McNIVEN, R. R. No. 4, HAMILTON, ONTARIO

Aberdeen-Angus

We have a splendid selection of last spring's bull calves to offer, sired by our noted herd bulls and from our choice home-bred and imported cows. Inspection invited. Berkshire Boars and Sows.

LARKIN FARMS (MENTION FARMER'S ADVOCATE) QUEENSTON, ONTARIO

BROOKDALE FARM HEREFORDS

Herd headed by Bonnie Ingleside 7th, the Canadian-bred champion bull at Toronto, 1914-1915. We are offering several young bulls that were Toronto and Ottawa winners this year, all sired by the herd bull, as well as a few females in calf to him. Come and see our herd or write us for anything in Herefords.

W. READHEAD BROOKDALE FARM MILTON, ONT.

BURNFOOT STOCK FARM

A rare opportunity to secure a great dual-purpose Shorthorn bull, whose dam, Bonnie Jean, gave 8,175 lbs. milk, testing 4.18, in 227 days, and brother, on dam's side, to Jean Lassie, who has a two-yr.-old R.O.P. of 8,939 lbs. milk, testing 4.14, and who, at present in test, is giving up to 65 lbs. per day. Sired by our herd-header, Burnfoot Chieftain, whose dam has an R.O.P. of 13,535 lbs. milk, testing 3.99. He is 7 months old, and a smooth, thick fellow.

S. A. MOORE, CALEDONIA, ONTARIO

THE MANOR STOCK FARM---SHORTHORNS

Present Offering—A choice young red bull, fit for service in any herd. Write or come and see.

JOHN T. GIBSON, DENFIELD, ONTARIO

NICHOLSON'S SHORTHORNS

Herd headed by "Best Boy" =85552 =, and "Brown-dale Winner" =106217 =. Bulls and females for sale. Visitors always welcome to this herd of long-established reputation.

R. & S. NICHOLSON, PARKHILL, R. NO. 2, ONTARIO.

THE HAWTHORNE SHORTHORNS

5 young bulls, and several females bred to the herd sire, Royal Choice "79804," a Toronto winner. Both milk and beef strains. A few Leicester rams and Yorkshire sows. Everything priced to sell.

"THE HAWTHORNES"—ALLAN B. MANN, R. R. 4, PETERBORO, ONT. G.T.R., C.P.R.

HIGH-CLASS SHORTHORN BULLS

We have a number of choice young bulls on hand, ready for service. Some are straight Scotch and others are bred for milk production. Also offering the four-year-old Duchess-bred bull, Duchess Herd.

GEO. MORDEN & SON, OAKVILLE, ONTARIO

FLETCHER'S SHORTHORNS

Our herd of Scotch Shorthorns represents Orange Blossoms, Kiblean beauties, Matchless, Mysias, Missies, Clementina's, etc., and is headed by the Watt-Stamford bull, Victor Stamford =93844 =, a Toronto winner. Present offering, two young bulls (show animals) also several heifers and cows.

GEO. D. FLETCHER, ERIN, R. R. 1, ONT. Erin Station, C.P.R., L.-D. Phone

GERRIE BROS' SHORTHORNS

Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladies, 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.

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 Ayr.)

MAPLEHURST SHORTHORN BULLS

We are offering two young bulls, one, ten months old, and the other one year old; both out of big, thick, roan cows, tracing to Lavinia (imp.). One sired by the Jilt bull, Jilt's Victor =93844 =, and the other by Plumside Victor =100462 =, a grandson of Baron's Pride =72491 =.

PETER L. GRAHAM, R. R. No. 2, ILBERTON, ONTARIO.

WELLAND DISTRICT SHORTHORN BREEDERS' CLUB

New sales list out: cows, heifers bred, young bulls, also stock bull Morrison Pride =102330 =.

Chas. Gainer, Secretary, Box 607, Welland, Ontario. A. E. Howell, President, Fenwick, Ont.

The Safest Matches in the World, also the Cheapest, are

Eddy's "Silent 500's"

SAFEST because they are impregnated with a chemical solution which renders the stick "dead" immediately the match is extinguished.

CHEAPEST because there are more perfect matches to the sized box than in any other box on the market.

War-time economy and your own good sense will urge the necessity of buying none but **EDDY'S MATCHES.**

The E. B. EDDY CO., Limited
HULL, CANADA

Some Reasons Why

Aberdeen-Angus Cattle are Growing Popular

At Guelph Winter Fair and Toronto Fat Stock Show, 1915 and 1916, the grand champions were Aberdeen Angus. At Chicago International, out of 15 grand championships and 15 reserves, the Aberdeen-Angus have won 10 grand championships and 9 reserves. Out of 15 grand championships for carloads, Aberdeen-Angus have won 12 times. Out of 15 grand championships for Carcass Contest, Aberdeen-Angus won 14 times.

For free information, write:

W. I. Smale, Secretary,
Aberdeen-Angus Association,
BRANDON, MANITOBA
Jas. D. McGregor, President, Brandon, Manitoba

SUNNY ACRES
ABERDEEN-ANGUS
Bulls of serviceable age and females not akin.

WM. CHANNON & SON
P. O. and Phone - - Oakwood, Ont.
Stations—Lindsay, G.T.R. and C.P.R.

Alloway Lodge Stock Farm

Angus - Southdowns - Collies
SHOW FLOCKS

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

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



SUNNY SIDE HEREFORDS

Big values in young cows and heifers. If in need of a good bull, or a carload, look ours over before buying.

ARTHUR F. O'NEILL & SONS
R. R. No. 2 . . DENFIELD, ONT.

Kennelworth Farm Aberdeen-Angus

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

PETER A. THOMPSON HILLSBURG, ONT.

Beaver Hill ABERDEEN-ANGUS

Cows with calves at foot. Bulls of serviceable age and females all ages.

ALEX MCKINNEY, R. R. No. 1, Erin, Ontario.

ABERDEEN-ANGUS

Alonzo Matthews, Manager, Forest, Ontario.

H. Fraleigh, Proprietor, Forest, Ontario.

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

Plaster Hill Shorthorns

Two 2-year-old bulls, one yearling bull, one bull calf. Heavy milking families.

F. Martindale & Son, Caledonia, R.R. 3, Ont.

Questions and Answers. Miscellaneous.

Ice Boat—Seed Beans.

I wish to make an ice boat and would like to know the dimensions of an ordinary sized boat and also directions for sailing it.

2. Could you give the names of reliable firms that buy beans for seed?

B. J. E.

Ans.—1.—We are not familiar with the size of ice boats and would advise you to consult some boat manufacturer or sailor, as they would be able to give you the information first hand.

2. A small advertisement in The Farmer's Advocate would no doubt furnish you with a purchaser for your seed. The seed firms advertising in our columns are reliable.

Over-fat Sow.

I have three young sows which I am keeping for breeding purposes. I am feeding boiled potatoes, turnips and cabbage, mixed with shorts. One of them is becoming very fat and makes a noise in her throat while eating. Sometimes she goes a little lame but she is all right one day and seems off her feed the next. The other two are all right. Pigs are four months old.

G. R.

Ans.—From the symptoms given we believe the trouble is due to high feeding and lack of exercise, which has caused the pig to become over-fat. Plenty of exercise should be given, and care taken not to get the breeding stock over-fat. We would advise feeding this pig by herself and forcing it to take exercise. Give a purgative and feed lightly for a time. The other two sows should also be forced to take plenty of exercise in order to ward off similar trouble. The symptoms indicate apoplexy.

School Fair.

1. Has the County of Perth got a District Representative? If so, who is he?

2. What are the first steps necessary to start a School Fair in a rural district?

3. Will the Experimental Farm at Guelph send seed for plots to school pupils?

4. Could you give me the address of some breeder of Golden Campine hens?

5. What is the best preparation to put on linoleum to keep it from wearing?

J. J. H.

Ans.—1. Not that we know of.

2. So far the School Fairs have been started through the efforts of the District Representative. When a number of schools are grouped together it is necessary to have some organization. However, one school can hold a School Fair, and it could be worked out by the teacher in charge. A large number of individual schools are holding their own fair. The grains and vegetables are grown at home from seed which the teacher or pupil secures, and then the products from these plots are brought to the school on a specified date in the fall. Prizes are usually offered for the best exhibit in the various classes. This money is frequently donated by the trustees and other interested parties in the section. Besides an exhibit of grains, roots and vegetables, there may be classes for flowers, cooking, sewing, drawing, essays, etc. Sports are usually run off during the afternoon and a contest in public speaking, weed naming, stock judging, etc., may be conducted. As to starting a Fair in the spring, it is first necessary to find out if the pupils are sufficiently interested to grow and look after certain crops which they wish to prepare for the Fair. If they are, then we would advise a committee, composed of the older boys and girls, being appointed to secure seeds, make out a prize list, secure prize money, and be generally responsible for the carrying on of the Fair. Of course, the teacher would give what assistance she could to the committee. Where there is a District Representative, eight to ten schools are organized in one district and have an executive composed of representatives from the different schools.

3. We do not believe that the Experimental Farm sends out samples of seeds to be grown in school plots. It is possible that they may be secured, however, by writing Dr. Dandeno, Director of Elementary Agricultural Education, Parliament Buildings, Toronto.

4. We cannot give the address of a breeder of Campines at present, but undoubtedly you will see names of the breeders advertising eggs or breeding stock in our columns this spring.

5. Applying oil, or wax will tend to prolong the life of the linoleum, or at least it keeps it looking fresh.

Two Extra Cans of Milk

Royal Purple Stock Specific will increase the daily flow of milk per cow, two to five pounds per day while in the stable. You simply mix this pure conditioner with the other meals you are feeding. Its action aids digestion, purifies the blood and improves the condition of stock.



Royal Purple Stock Specific

will put flesh on the poorest, most run-down animal on your farm. We stand back of this guarantee to the extent that we will refund your money if it does not give the desired results when directions are followed.

PUT ROYAL PURPLE STOCK SPECIFIC TO THESE

TESTS: See if it will increase your milk flow. See if it will improve the condition of run down animals.

See if it enables you to market pigs a month earlier.

We know it does all these things. We ask you to try it—and benefit by its use. Sold by dealers everywhere in large and small packages.

Made only by

W. A. Jenkins Mfg. Co., Limited

London, Canada



CLEARING CREDIT SALE OF Pure-Bred Milking Shorthorns AND YORKSHIRE SWINE

THE ENTIRE HERD OF A. STEVENSON, TO BE SOLD AT THE FARM, NEAR Atwood, Ont., Wednesday, February 20, 1918

This herd of Shorthorns is one of the smaller, select herds of Western Ontario, and includes 14 cows, all near calving, or with calves at foot. Several have qualified in the R.O.P., with records up as high as 9,040 lbs. of milk for mature cows, and 5694 lbs. as two-year-olds. There are also several good young heifers from these dams, as well as five young bulls, from eight to fifteen months old, and also the herd sire, General 96407, a thick, dark red fellow, rising 4 years.

Besides the Yorkshires, which include a lot of young stuff and several sows with young litters, there will also be sold the Clydesdale stallion, Prince Gammar 19365, a nice pleasing bay, rising 3 years.

TERMS:—Eight months' credit will be given on bankable paper without interest. 5% off for cash.

G.T.R. TRAINS will stop at farm on day of sale, 10.50 a.m. and 4 p.m. Buy tickets to Henfryn. Sale will be held between the noon and evening trains.

A. STEVENSON - Henfryn Station, G.T.R. - ATWOOD, ONT.

\$500 Bull for \$325

Meadow Lawn Major is a big, growthy, 12-months-old red bull, of the Claret family. Dam, Nora 101660; sire, Escana Ringleader 95963. We are offering one red and two roan two-year-old heifers, bred in July, priced at \$250. F. W. EWING, R. R. No. 1, ELORA, ONT.

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

PURE SCOTCH SHORTHORN BULLS

Our present offering of young bulls, sired by our herd sire Broadhooks Star, a son of the great Newton Ringleader, Imp., are the best lot of bulls we ever had on the farm. Come and see them, or write for particulars. We also have females of the richest breeding and highest individuality.

GORDON SMITH Woodslee Sta., M. C. R., Essex County. SOUTH WOODSLEE, ONT

Robert Miller, Stouffville, Ont.

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.

Write for anything in Shorthorns. One hour from Toronto

FAIRVIEW SHORTHORNS AND CLYDESDALES

In Shorthorns we can offer you a choice, from 60 head, including both bulls and females, of Lavender, Missie, Agusta, Duchess of Gloster, Village Girl, Miss Ramsden and Clara breeding—the best of cattle and the best of pedigrees. In Clydesdales, write for our list of winnings at Toronto, London and Guelph 1917 shows, Canadian-bred classes. We also have a nice offering in Shropshires.

ROBERT DUFF & SONS, Myrtle Station, C.P.R. and G.T.R. MYRTLE, ONTARIO

OAKLAND 60 SHORTHORNS

Present offering is 7 bulls from 10 to 20 months of age; also a few cows with calves at foot, all choicely bred dual-purpose animals, and priced below their value. Crown Jewel 42nd still heads this herd.

JOHN ELDER & SONS, HENSALL, ONTARIO

SALEM SHORTHORNS

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

J. A. WATT, ELORA, ONTARIO

SHORTHORNS—T. L. Mercer, Markdale, Ont.

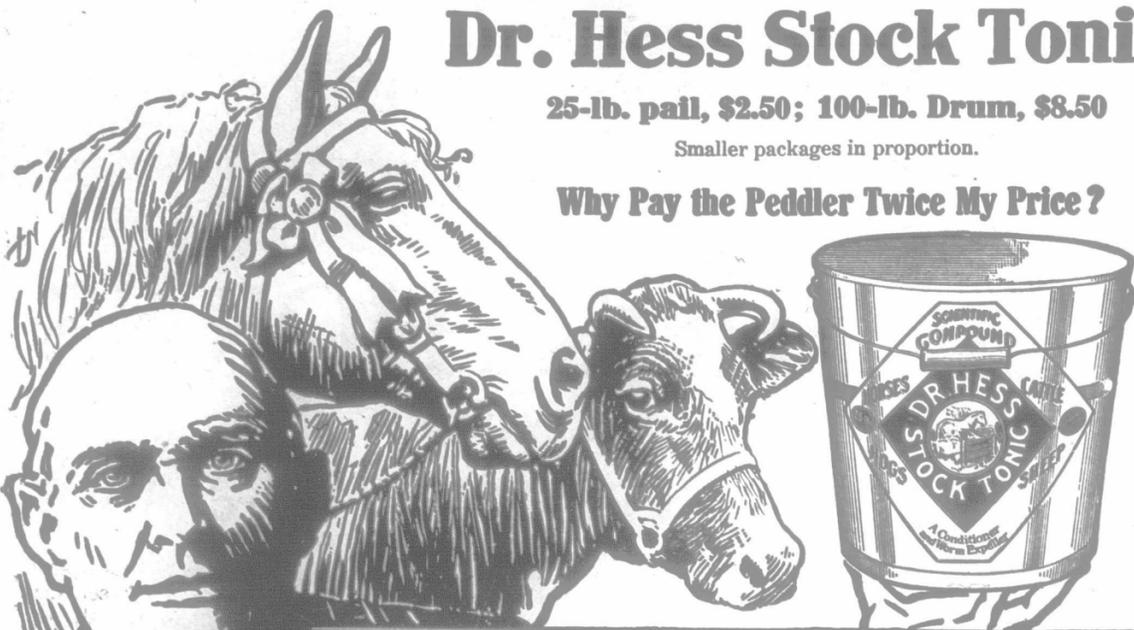
ROSEWOOD CHAMPION, by Nonpareil Archer, Imp., at the head of the herd. I have almost 100 Shorthorns in my stables at present. Marr Missies, Campbell-bred Clarets, Nonpareils, Minas, Rosemarys, etc.—the best of breeding and the best of cattle; bulls or females; also have a few Herefords.

Dr. Hess Stock Tonic

25-lb. pail, \$2.50; 100-lb. Drum, \$8.50

Smaller packages in proportion.

Why Pay the Peddler Twice My Price?



Condition Your Stock Drive Out the Worms

Spring is here—your animals have long been on dry feed and as grain, hay and fodder do not contain the laxatives so abundantly supplied by grass, they are apt to be out of fix.

Now's the time to feed Dr. Hess Stock Tonic to **your horses**, to condition them for spring work, so that when the sun shines they will be rid of their old coat, full of stamina and ready for business.

And don't overlook the spring **pig crop**—the money-makers. Start them off free from disease—free from worms, by a course of Dr. Hess Stock Tonic.

Your cows will be benefited by Dr. Hess Stock Tonic, and it will keep your **feeding cattle** right up on their appetites during the finishing period.

Excellent for **ewes** at lambing time.

Dr. Hess Stock Tonic contains laxatives to regulate the bowels, diuretics to remove dropsical swellings, tonics to improve the appetite and increase digestion, and vermifuges to expel worms.

There's a dealer in your town that will supply you with Dr. Hess Stock Tonic and guarantee it to do these things.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry PAN-A-CE-A
will help make your hens lay now

Remember:

I have no peddler's wagon and horses expenses to pay; that's why I can sell you my Stock Tonic through a local dealer in your town—a man with whom you trade every week—at rock-bottom prices.



Dr. Hess Instant Louse Killer Kills Lice

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.

For Sale The following Scotch Shorthorns. 3-year-old Imp. Augustus bull, Augustine = 107804 =, two good cows with their calves and two heifers; also five bulls ready for service. Will be sold rightaway. Inspection invited. **John Senn & Son, Caledonia R. R. No. 3, Haldimand Co.**

Glenfoyle Dual-Purpose Shorthorns

Herd bull College Duke 4th, 95430, big, thick young cows and heifers for sale; 8 young bulls, some herd headers. Also a yearling Clyde, stallion. **STEWART M. GRAHAM, LINDSAY, ONT.**

R. O. P. SHORTHORNS

THE EVERGREEN HILL HERD
Present Offering—four young bulls from R. O. P. dams, and each tracing to three R. O. P. sires. Could also spare a couple of R. O. P. cows. **S. W. Jackson R. R. 4, Woodstock, Ont.**

PURE SCOTCH SHORTHORNS

of exceptional merit. The young things we are offering this year are something extra, especially the bulls. Come and see them if you want something choice. **GEO GIER & SON, WALDEMAR, ONT.**

Blairgowrie Shorthorns and Shropshires

20 imported cattle, cows and heifers; all have calves at foot or are in calf to British service. Bulls for breeders wanting herd headers. Also home-bred bulls and females. Prices right. Rams and ewes in any numbers. **JOHN MILLER, Myrtle Station, C. P. R., G. T. R. ASHBURN, ONTARIO**

IRVINEDALE SHORTHORNS

Herd headed by Marquis Supreme 116022. For sale at present, 9 granddaughters of (Imp.) Right Sort and a good lot they are; also 2 bulls (roans), 15 months old, by Gainford Select.

JOHN WATT & SON, R. R. No. 3, Elora, Ont. G. T. R. and C. P. R.

SHORTHORN BULLS Will. A. Dryden

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

A. G. Farrow, Oakville, SHORTHORNS

Herd headed by Proud Lancer (Imp.) and Pride of Escana, a great son of the great Right Sort Imp. I have a few bull calves of the better sort. Three imported ones left. Prices right. Farms one mile from station. Trains every couple of hours each way.

Questions and Answers.

Miscellaneous.

Widow's Share.

If a man dies without a will what portion of property does the law allow his widow, they not having any children, but he (deceased) having parents and brothers and sisters still living? F. A. R., Ontario.

Ans.—She is entitled to \$1,000 after payment of debts of deceased and funeral and testamentary expenses and succession duty (if any), and to one half of the residue of the estate.

Stunting a Pup.

What would you give a pup to stunt its growth? A. W.

Ans.—Most people like to get all the size they can and therefore feed the pup to keep it thrifty and growing. We doubt if administering drugs will keep a Collie-bred pup the size of a poodle. Withholding feed would tend to make it lank and scrawny and thus undersized. We have heard that giving the pup a large dose of alcohol in the form of whiskey would tend to have the effect desired. We cannot vouch for the success of this treatment. If a small dog is wanted we would advise the securing of a breed that is naturally small.

Feeding Pigs.

We keep a large herd of pigs and would like to have advice on the system of feeding them from 8 weeks of age up to seven months, so they will be kept healthy and make the most economical gains, what feeds would you advise for young breeding sows? We have plenty of roots, cabbage, oats, bran and barley dust. J. H.

Ans.—By having a trough in a corner of the pen the young pigs can be taught to eat before they are weaned. After they are weaned, skim-milk and middlings make the best feeds. Using one-half middlings and one-half finely ground oats also gives good results. Feed only a small quantity at each meal, taking care that the trough is clean each time. Over-feeding gives the pigs a set back from which it takes them some time to recover. A few roots are helpful in keeping the young pigs healthy during the winter, and green feed of any kind will answer the purpose in the summer. A variety of feeds and plenty of exercise are essential to stimulate growth and general vigor. During the early stages of growth the aim should be to develop bone and muscle. After the pigs are about 3½ months old, one part ground barley might be mixed with the oats and middlings. As they grow older the proportion of barley or corn could be increased. One of the secrets in making good returns is to keep just within the appetite of the animals. If this is done on the feeds mentioned, and the pigs are given green feed and exercise, economical gains should be made.

Leaky Chimney.

When the fire is going our chimney produces a dark liquid about the same as varnish. It doesn't matter whether I use a short or long string of pipes. There has been both dry and green wood burned but it doesn't make much difference. The chimney is clean. This liquid soaks through the chimney and runs down the wall. It has been doing this for years but is worse this winter. What is the cause and remedy for same? D. K. D.

Ans.—You do not state whether the chimney is on an other or inside wall, or whether it has a pipe running up through the centre. One trouble is that the chimney is too cold which allows a condensation to take place. If there is only one thickness of brick between the chimney and the weather, or if it is unlined, there would be a tendency of the bad effects mentioned being produced. The building of a protection to the chimney has been recommended where it is impossible to build the chimney on a centre wall. The idea is to keep the cold from striking the chimney. Faulty construction is very often the direct cause of trouble of this nature. We have seen the trouble remedied a good deal by having an opening in one section of the pipe just above the stove or furnace. This opening is opened or closed by having another pipe with an opening in it on the outside. By sliding this around the opening in the main pipe is closed to give the fire a start and then it can be opened and this tends to prevent condensation.

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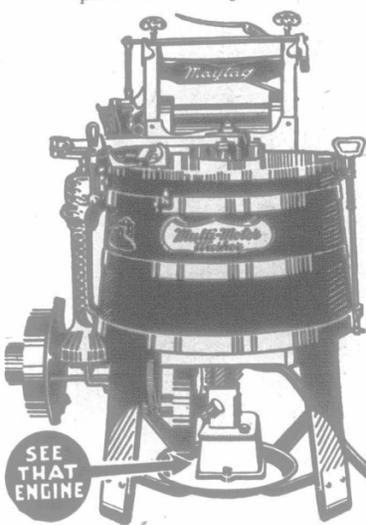
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A machine that will do your washing and wringing; drive your churn and cream separator has surely solved your Labor Problems.

Buy a Maytag Multi-Motor

A postcard will bring you full particulars and prices.



WHITES LIMITED
COLLINGWOOD, ONT.

CLOVER SEEDS

(Government Standard)

	Per Bus.
No. 1 Red Clover.....	\$23.00
No. 2 Red Clover.....	22.00
No. 1 Alsike.....	17.00
No. 2 Alsike.....	16.00
No. 1 Alfalfa (Northern grown).....	17.00
No. 2 Timothy (this seed grades No. 1 purity).....	5.50
No. 3 Timothy.....	5.00
Mixed Timothy and Alsike....	9.00
White Blossom Sweet Clover	18.00
O. A. C. No. 72 Oats.....	1.75
Marquis Spring Wheat.....	3.00

Terms, cash with order. Bags extra, at 45c. each. On all orders east of Manitoba of \$25.00 or over we pay the freight.

We guarantee seeds to satisfy or ship back at our expense.

Ask for samples if necessary.

TODD & COOK

Seed Merchants
Stouffville Ontario

F E E D S

Cotton Seed Meal, Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed, Digestive Tankage, Vim or Oat Feed, Bran, Shorts, Corn, Cracked Corn, Corn Meal, Feed Wheat, Scratch Feed, Laying Mash, Fattening Mash, Beef and Bone Scrap, Oyster Shell, Poultry Grit, Alfalfa Meal, Charcoal, etc.

If it is in the Feed Line, we have it. Write or phone for prices.

We are also buyers of Buckwheat, Oats, Goose Wheat, Barley, Peas, Beans, etc., both for feed and seed. Also Hay, Straw, Potatoes, Cabbages, Onions, Shallots, and Dutch Sets, etc.

SEND SAMPLE AND STATE QUANTITY
CRAMPSEY AND KELLY
DOVERCOURT ROAD, TORONTO

FISH NETS



GUNS, TRAPS, SPORTING GOODS
JOHN HALLAM, Limited
752 BELLAM BUILDING, - TORONTO

Successful Short Course at Truro.

The short course at the College of Agriculture, Truro, was completed on Thursday, January 10th. The enrolled attendance was 180 and in addition there were several one or two-day conventions and a very considerable intermittent attendance which would bring the total number who took advantage of the educational work up to about 350. The attendance would have been at least 100 larger had it not been for the blockade on the railways which held up practically all of the Eastern delegation.

From the standpoint of the work done, and of the interest taken, the staff are unanimous in considering the 1918 short course to have been the best yet given at the College. Special attention was given to the matter of the using of the best kind of seed, and the improvement of the live stock of the country. At the conclusion of the course, two boxes in which oats had been grown were exhibited to the class. One box was seeded with a certain amount of common feed oats, and the other box with a like amount of selected seed oats. The result was nearly double the number of plants in the second box, and a very considerable better growth. From this illustration the importance of buying, if need be, a lesser quantity of high-class seed oats instead of a larger quantity of a low-class feed oats was urged on every student present and the lesson was applied to every other kind of seed.

Similar demonstrations were given in regard to live stock and many other phases of agriculture. The result was that practically every student left the course having adopted the suggested New Year's Short Course resolution of "No Food Shortage if we can Help it."

This is the fourteenth short course which has been held at the College of Agriculture, Truro. The beginning in 1905 was small, but since that time the course has grown in popularity and influence until to-day it is doubtful if any other single factor contributes more to the advancement of Nova Scotia agriculture than the Truro Short Course.

Questions and Answers.

Miscellaneous.

Unthrifty Calves.

I have calves which are eating at the the lumber in the stable, but have a poor appetite for feed and consequently have become very thin. Several have died. They get milk. What treatment do you advise? The calves are one and a half to three months old. J. A. Q.

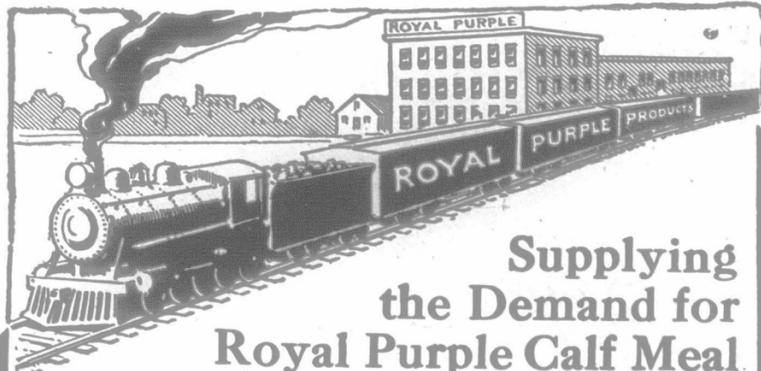
Ans.—Eating of lumber would indicate lack of mineral matter in their feed, and they may also be troubled with indigestion. Feed the milk at blood temperature and add a little lime water to it. Always feed the calves in clean pails and keep their pens as clean as possible. Let them have good clover hay to pick at and feed a few whole or rolled oats in a trough. If any grain or hay is left over, clean the manger at each feeding, as the feed soon becomes stale and distasteful to the calves.

Unthrifty Colt.

I have a four-year-old colt that is unthrifty. He eats all right and is greedy for hay. He gets one quart of oats three times a day.

1. What would be a good tonic for him?
2. What is a cure for worms in horses?

Ans.—1. Have the teeth examined. It is possible that the food is not being properly masticated. Feeding a little bran and flaxseed, along with the oats and giving a feed of boiled oats occasionally may help some. If you have roots, give him a few every day. Equal parts powdered sulphate of iron, gentian, ginger and nux vomica mixed together make a very good condition powder. Feed a tablespoonful three times a day.
2. Take 1 1/2 ounces each sulphate of iron, sulphate of copper, and 1 ounce of calomel. Mix and make into 12 powders. Give a powder night and morning in damp feed, or if not eaten in this way mix with a little water and give as a drench. Starve for ten hours after the last powder and then give 8 drams aloes and 2 drams ginger. Avoid giving a purgative to a pregnant mare.



Supplying the Demand for Royal Purple Calf Meal

This baby food for young animals is partially pre-digested, and can be fed to the youngest animals with perfect safety. It WILL NOT cause stomach or bowel trouble, which are serious ailments in young animals. Royal Purple is a sure preventive for scouring.

Calves Gain Rapidly Without Milk

When the calves are 3 or 4 days old they can be fed Royal Purple Calf Meal and raised just as well without one drop of milk. What prominent breeders remark: Mr. Geo. W. Collins, Plainfield, Ont., writes: "Gentlemen,—In regard to your Calf Meal, I think you have the best on the market, as people who have bought it give it great praise. Some have taken their calves off sweet milk, and feed them nothing but your Calf Meal and water, and say they are doing as well on it as they did on the whole milk."

To Whom It May Concern: This is to certify that I have secured your "Royal Purple" Calf Meal from our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves."—Stanley W. Coxall.

Note—The above Mr. Coxall keeps a large herd of pure-bred Holstein cattle, and is an excellent authority on Calf Foods.

Royal Purple Calf Meal is equally good for young colts, lambs and young pigs. Put up in 25-lb., 50-lb. and 100-lb. bags. Secure it from our dealer in your town.

W. A. Jenkins Mfg. Co., Ltd., London, Can. 35

FREE BOOK

Send for our 80-page book which describes the common diseases of stock and poultry; also methods of feeding and our many products. Get a copy to-day.

SIR LYONS SEGIS

Now Has Thirty Tested Daughters

Standing fifth in number for any sire in Canada to-day. At present we have fifty of his daughters (including calves) in our stables. We also have ten granddaughters of King Segis Pontiac Alcartra (the \$50,000 sire), as well as a few others, by a brother to the world's record milk cow, May Echo Sylvia. We are overstocked—away overstocked. If you want a few select females of the strongest blood in Canada, write at once about these, or better still, come and see them.

WE ALSO HAVE YOUNG BULLS

ALLISON STOCK FARMS

CHESTERVILLE, ONT.

LLENROC STOCK FARM

On the Boulevard of the Beautiful Niagara River
A few well-bred young Holstein bulls for sale; also a Belgian stallion, weight about a ton. Address: W. C. HOUCK, R. R. No. 1, CHIPPAWA, ONT.

RECORD OF PERFORMANCE HOLSTEINS

Present Offering—One bull, 3 years old, large, strong, and a fine individual. Sire, King Lyons Colantha, whose six nearest dams average 30.10 lbs. butter in 7 days. Dam, a 487.5-lb. 2-year-old in R.O.P., her dam at 4 years made 825.8 lbs. butter from 17,474 lbs. milk. Write at once if interested. Priced reasonable. We also have several bull calves to offer. Write us your wants, or better come and see them. J. Mogk & Son, R. R. No. 1, Tavistock, Ontario.

DUMFRIES FARM HOLSTEINS

Present Offering—A few bull calves.

S. G. & ERLE KITCHEN ST. GEORGE, ONT.

HOMESTEAD HOLSTEIN STOCK FARM

I must sell 12 or 15 young cows, due to freshen in March or April in order to make room for young stock, also a few young bulls. For further particulars, write B. R. BARR Harrietsville Station, C.P.R. Phone Connection. MOSSLEY, R. 1

A HOLSTEIN HERD YOU SHOULD KNOW

WM. STOCK & SONS, TAVISTOCK, ONT.

Home of the great Baroness Madoline, 34.48 lbs. in 7 days, 1,043.35 lbs. in 335 days. Write at once for a list of the good record bulls they are now offering, and plan now to spend a day this winter at the farm. It will be a day worth while and here there is always a welcome. Mention the Advocate.

WALNUT GROVE STOCK FARM

Holstein-Friesian Cattle, Tamworth Swine. We are offering a choice lot of 5 months' sows and boars and also have several nice young litters. Must clear a number quick to make room. We are also offering White Wyandotte Cockerels at \$3 each. Satisfaction guaranteed. C. R. JAMES, R. R. No. 1, Richmond Hill, Ont. Take Yonge Street Radial car from Toronto—stop Thornhill.

Guaranteed Genuine Everlasting Grimm Alfalfa

Most economical and profitable to sow as it produces plants which do not winterkill like other varieties; larger yield, higher feeding value. Booklet, "How I Discovered The Grimm Alfalfa", with testimonials and seed sample free. A. B. LYMAN, Grimm Alfalfa Introducer, Alfalfedale Farm, Excelsior, Minn.



Strawberry Plants, etc. We have a full line of first-class Strawberries, Raspberries, Currants, Gooseberries, Grapes, Asparagus Roots, Fruit Trees, Ornamentals, Roses, Seed Potatoes, etc. Write for free catalogue.

H. L. McConnell & Son, Port Burwell, Ont.



Crushes the Clods

cuts, levels, and turns the soil twice—all in one operation. That's the way "the coulters do the work" when you use the "Acme" Pulverizing Harrow. Works deep into the soil leaving it compact below and with a nice mulch on top. Light draft and comfortable seat. Endorsed by Experiment Stations. Size 3 ft. to 17 1/2 ft. wide. Send today for our new free book, "The Acme" Way to Crops That Pay.

Bateman-Wilkinson Co., Limited

201 Symington Avenue Toronto, Ontario

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61-2 ft. Wide



LIFT YOUR CORNS OFF WITH FINGERS

Tells How to Loosen a Tender Corn or Callus so it Lifts Out Without Pain.

A noted Cincinnati chemist discovered a new ether compound and called it Freezone, and it now can be had in tiny bottles as hereshown for a few cents from any drug store.



You simply apply a few drops of Freezone upon a tender corn or painful callus and instantly the soreness disappears, then shortly you will find the corn or callus so loose that you can just lift it off with the fingers.

No pain, not a bit of soreness, either when applying Freezone or afterward, and it doesn't even irritate the skin. Hard corns, soft corns, or corns between the toes, also toughened calluses, just shrivel up and lift off so easy. It is wonderful! Seems magical! It works like a charm! Your druggist has Freezone. Ask him!

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"Maple Leaf" Brand

The best supplementary feed for live stock, and the "Veterinarian," the best book on the treatment of Diseases in Cattle. This book sent free with a trial ton order of Oil Cake. Write to-day for lowest prices.

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For Milk, Butter, Cheese, Veal, Holstein Cows Stand Supreme

If you try just one animal you will very soon want more.

WRITE THE

HOLSTEIN-FRIESIAN ASSOCIATION W. A. Clemons, Sec'y, St. George, Ont.

Sunnyhill Offering:

Holstein bulls and heifers. Shropshire ram lambs. Yorkshire pigs, both sexes, all ages.

WRITE TO

WM. MANNING & SONS WOODVILLE, ONT.

Holstein Bulls

of serviceable age and younger; from dams with records of 30 lbs. down.

Write for prices.

R. M. HOLTBY, R. R. 4, Port Perry, Ont.

KING SEGIS PONTIAC DUPLICATE
A 3/4 brother to the \$50,000 bull is the sire of our young bulls offered at present. Two of these are ready for service. Write us also for females.
R. W. Walker & Sons, Manchester Station, G.T.R., Port Perry, Ontario

Sunny Acres Holsteins
Special offering: Two beautiful young sons of Canary Starlight (Clancy), 25 lb. bull, better 70 lbs; sired by King Walker Prince, sired by King Walker and the show cow, Prills (Hershey), 14 months, 20 lb. bull, better 70 lbs. Price 200 lbs. for truck sale. Jas. A. Root, Bell Phone, Humberstone, Ont. R. R. No. 1.

Top Dressing Winter Wheat.

At the Baltimore salesmen's meetings one of those in attendance spoke of an experience of a neighbor in top-dressing winter wheat. The wheat had been sown late in the fall of 1916, because the farmer, in common with thousands of others, had insufficient labor. It had started, but when the winter's snows came it hardly covered the ground. The winter injured it severely, and in the spring of 1917 it was spotty and patchy, and promised anything but a full crop. The question then arose, as it did on farms all over the country, as to whether to plow up and put the field to corn, or to "take a chance" on the crop coming through and giving a worth-while yield.

The neighbor decided to take the chance; and to help matters along sowed 350 pounds of top-dressing wheat fertilizer per acre, using a formula with three per cent. ammonia. This was put on early, very shortly after growth started, and about as soon as probable failure of the field was apparent.

The first effect of the fertilizer was to cause the wheat to "stool out" and cover the ground. This changed the patchy field to one of fairly even growth. The next effect was the greater number of head-bearing stalks produced, which, of course, was caused by the stooling out; and the final effect, as measured at harvest time, was a yield of forty bushels per acre.

The practice of top-dressing wheat is not common, partly because the crop is almost universally fertilized in the fall, at the time of seeding. Yet last fall many acres were put in with insufficient fertilizer, chiefly because orders were given too late, and fertilizer was simply not to be had. Eastern experiment stations are almost a unit in advising spring top-dressing with fertilizer, under these conditions; or winter top-dressing with manure. Very few of these experiment stations, however, have any long-continued experiments on the effect of this top-dressing, when and how applied, and the like.

In the West the Kansas Experiment Station reports the result of six year's work in top-dressing. Roughly speaking, 100 pounds of a complete fertilizer produced about two and a half bushels of wheat, almost exactly the same amount as produced by a ton of manure. With between two and three hundred pounds applied per acre, the profit is evident.

While we need more information on this subject, there are two or three facts which seem established:

1. The fertilizer should contain a fairly high percentage of ammonia. No other plant food element is as effective as ammonia in causing the plant to tiller out and cover the ground.
2. It must be applied very early, almost as soon as growth starts. At this time the plant is still in the tillering stage, and the first effect, that of increasing tillers, will be at its maximum.
3. Late applications, applied after the plant approaches the heading stage, are ineffective.—Soil Improvement Committee Bulletin.

Questions and Answers. Miscellaneous.

Objectionable Wagon.

I bought a wagon last summer, and it treads too narrow; that is, from front wheel to front wheel and same from hind wheel to hind wheel.

1. What is the standard width of tread to a wagon from wheel to wheel?
 2. What is the proper way to measure—is it from inside of one tire to outside of the other tire?
 3. Should the front of the wheel be the same as the back part of the wheel for width?
 4. Can I sue for damage as the wagon is paid for?
 5. If so, whom will I look to, the agent who sold the wagon or the company?
- Ans. 1, 2 and 3. These are matters for regulation by urban municipalities (cities, towns and villages) by by-laws passed pursuant to the Municipal Act, (R. S. O. 1914) chapter 192, section 400, sub-sec. 49, and it will, accordingly, be necessary for you to see such by-laws, if any.
4. We doubt very much your being able to sue successfully at this late date.
 5. The company, if either.



MANOR FARM HOLSTEINS

AS GOOD AS VICTORY BONDS. Bull Calves Ready for Service.

No. 1.—Born April 2nd, 1917.
Dam, Manor P. H. Vincent..... 5 years 22.87
Half Sister to Manor P. H. Flower..... 30.59
Grandam Lady Vincent..... 11 years 29.57
(World's record when made)

No. 2.—Born May 13th, 1917.
Dam, Manor P. H. Tensen..... 2 years 14.22
Half Sister to Manor P. H. Flower..... 30.59
Grandam Tensen of Elmwood..... 5 years 22.45

Both sired by King Segis Pontiac Posch

I have got to make room so these attractive young fellows are priced way below value, and will more than bring you 5 1/4% on your investment. DON'T DELAY BUT WRITE AT ONCE.

GORDON S. GOODERHAM, CLARKSON, ONT.

20,177 lbs. milk, 782 lbs. butter in 1 year as a four-year-old, is the record of

Burkeyje Hengerveld (9906)

1st 20,000-lb. 4-year-old in Canada. Let us send you particulars about a beautiful young son of this great cow. He is sired by "May Echo Prince", a 3/4 brother of the world's champion "May Echo Sylvia". We have pleased dozens of others and we can suit you too, in both price and breeding. Write us and see.

O'Reilly Stock Farms, Peterboro, Ont, R. R. No. 9. J. O'Reilly, Prop.

Hospital for Insane, Hamilton, Ont.

ONLY THREE BULLS LEFT

- (1) A splendid fellow, more white than black, born May 1917. He is a grandson of Dutchland Sir Mona, and his dam is a half sister of the famous Totilla of Riverside.
- (2) Born September and December, 1917, of A. I. R.O.P. dams.

APPLY TO SUPERINTENDENT.

HIGHLAND LAKE FARMS

Herd sire, AVONDALE PONTIAC ECHO, (under lease), a son of MAY ECHO SYLVIA, the world's record cow. Only one other 41-lb. bull in Canada.

We have young bulls for sale whose two nearest dams (both Canadian champions) average as high as 35.62 lbs. butter in seven days; another whose two nearest dams are both 100-lb cows; and one ready for service, from a 41-lb. sire and an 18,000-lb. two-year-old dam. SEND FOR OUR BOOK OF BULLS. A few females for sale. Satisfaction guaranteed.

R. W. E. BURNABY (Farm at Stop, 55, Yonge St. Radial) JEFFERSON, ONT.

Roycroft Farm Holstein-Friesians

Our 30-lb. bulls have all been sold, but we still have several sons of Pontiac Korndyke of Het Loo, that are just nearing serviceable age. Get one of these for your next herd sire, have a brother of Het Loo, Loo Pietertje, the world's greatest junior two-year-old at the head of your herd. We also have a 9 Mona. See them at once or write early.

W. L. Shaw, Roycroft Farm (Take Yonge Street Radial Cars from N. Toronto) Newmarket, Ont

SUMMER HILL HOLSTEINS

A number of choicely-bred bulls. One a real show bull, beautifully marked, dam a 30.76 junior four-year-old; sire's dam 34.60. The three nearest dams average over 100 lbs. milk a day. Can spare a few good heifers and cows.

D. C. FLATT & SON, R. R. 2, HAMILTON, ONT.

MAPLE SOIL STOCK FARM OF HOLSTEINS

I am offering a few choice heifers sired by King Segis Pietertje that have just been bred to FINDERNE King May Payne; also some heifers and cows due to freshen all the way from February until April. All bred to FINDERNE King May Payne, a few heifer calves sired by FINDERNE King; get some good ones.

H. C. HOLTBY, R.R. No. 1, GLANWORTH, ONTARIO

KING SEGIS WALKER'S DAUGHTERS

STILL MAKING LARGE RECORDS

If you want a young bull let me send you some photos and pedigrees. A few females left.

A. A. FAREWELL, OSHAWA, ONT

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We are now offering a number of young bulls, sired by our senior herd-header, Francy 3rd's Hartog 2nd, the noted son of the famous old Francy 3rd and Canary Mercedes Hartog; also a few females.

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Ayrshire Cows

are easy feeders — and thrive well.

WRITE W.F. STEPHEN, Secretary

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 Box 513, Huntingdon, Que.

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Young bulls for sale (out of R.O.P. dams) from one to fifteen months old; tracing closely to the world's champions, Garclaugh May Mischief and Jean Armour.

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A choice selection of young bulls for sale from Record of Performance dams imported and Canadian bred.

SIRE: Auchenbrain Sea Foam (Imp) 35758 many times grand champion. Fairfield Mains Triumph (Imp) 51137, a son of the noted Hobland Perfect Piece. Write for catalogue.

Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. McArthur, Manager, Philipsburg, Que.

D. M. WATT

For imported or Canadian-bred Ayrshires, bulls or females, get my prices. My importations win wherever shown. Write me for one animal or a carload. St. Louis Station, Que.

JAS. B. ROSS, MEADOWVALE, ONTARIO for high-producing, show-yard AYRSHIRES. Herd headed by SNOW KING 47376, first-prize two-year bull at Toronto, 1917. Write me also for anything in Yorkshires. Meadowvale P.O., Streetsville Station

SUNNYSIDE AYRSHIRES

We have at present the strongest lot of young bulls we ever offered — one by Hobland Masterpiece, one by Sunnyside Matchless, and the others by our present herd sire, Sunnyside Masterpiece. John W. Logan, Howick Station, Que.

Kelso Farm R. O. P. Ayrshires. Herd headed by Palmerston Speculation Imp. We never had a stronger line-up of R. O. P. producers than we have at present. Our 1917-1918 young bulls are sure to please. D. A. MacFarlane, Cars Cross-Ing, G. T. R., Athelstan N. Y. C.; Kelso, Que.

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30 Yearling Rams—12 Yearling Ewes. W. H. PUGH, MYRTLE STATION, R. R. 1 Farm 2 miles from Claremont

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

Relief Fund for Farmers in Devastated Areas.

EDITOR "THE FARMER'S ADVOCATE":

Our country, with its allies, is waging a great war for justice, for the protection of small nations in the enjoyment of their rights, for continued and growing freedom and for the maintenance of its pledged word of honor. Much destruction and desolation have been caused. The peasant farmers of Belgium, France, Serbia, Roumania and Italy, whose farms were in the immediate areas of battle, have lost everything and in some cases even the land itself. A British Empire Fund is being raised by voluntary contributions to render first-aid in the restoration of agriculture on such farms in the devastated regions of France, Belgium, Serbia, Roumania and Italy. The object of the Fund is to help in reinstating the peasant farmers in the invaded countries of our Allies. This will be done by gifts of seed, live stock, implements, etc., to enable them to make a fresh start. His Excellency the Duke of Devonshire, Governor-General of Canada, who was a member of the Executive Committee in England is Patron of the Canadian Branch. His Excellency invited the Lieutenant-Governor of each Province to become Patron of a Committee for his Province. After a visit to all the Provinces of Canada I can report that they are in hearty sympathy with the proposal that Canadian farmers should participate in contributing to the relief of their brother farmers, on whom have fallen such terrible losses because their farms and homes were in the invaded districts. The Ministers of Agriculture and the leaders of the agricultural organizations in the several Provinces have expressed themselves as entirely in sympathy with the effort to provide an opportunity in each Province through which farmers may extend practical financial aid to their brother farmers who have suffered so greatly. The general plan is for each Provincial Committee to invite the co-operation of existing organizations of farmers, such as Farmers' Institutes, Women's Institutes, Farmers' Clubs, the United Farmers, the Grain Growers' Associations and similar bodies in all the Provinces, to arrange for their officers, in each place, to become a local Committee to disseminate information, to receive contributions and to forward them to the Provincial Honorary Secretary-Treasurer for the Province. Farmers are being invited to regard February as the relief month. Local committees and individuals will arrange to receive donations on behalf of the Fund and remit the proceeds to their respective Provincial headquarters. Farmers of our Allies, in the devastated regions have lost everything in the war. In some places the land itself is torn beyond any possible recovery into use for growing crops. Farmers of the whole British Empire want to help them to get on their feet as soon as they get back possession of their farms. Their houses and machinery have been destroyed. They have nothing left with which to begin farming again. It would be a good thing in our international relations, to have it known that the dairymen of Canada gave something, a good thing to have it known that our graingrowers gave something, a good thing to have it known that our live stock men gave something, that our poultrymen and fruit-growers have given something, and above all that out country women have remembered their sisters whose farm-homes have to be re-established out of ruins. We want for Canada a place among the nations, on behalf of our farmers, which will be in keeping with what our sons and brothers have done and won on the fields of battle.

For all these reasons may I suggest to your readers that we think kindly of giving some aid to the Fund for these peasant farmers who have suffered.

J. W. ROBERTSON,
 Chairman, Dominion Executive Committee.

"I forgot myself and spoke angrily to my wife," remarked Mr. Meckton.
 "Did she resent it?"
 "For a moment. But Henrietta is a fair-minded woman. After she thought it over she shook hands with me and congratulated me on my bravery." —Kansas City Star.

He turns pretty slow—but he gets all the cream!

—owing to the wonderful Suction-feed, which insures just as clean a skim when you turn the Sharples Separator slow, as when you turn it fast! The boy might turn the crank only 35 to 40 turns per minute, but he would get just as clean a skim as if his dad were speeding the crank around at 50 turns per minute.



SHARPLES SUCTION-FEED CREAM SEPARATOR

- the only separator that will skim clean at widely-varying speeds
- the only separator that gives cream of unchanging thickness—all speeds
- the only separator that will skim your milk quicker when you turn faster
- the only separator with just one piece in bowl—no discs, easiest to clean
- the only separator with knee-low supply tank and once-a-month oiling

The hired man, especially at the end of a hard day's work, will but seldom turn a separator up to regulation speed. And you, yourself, are often "dead-tired" and slacken down unconsciously. All fixed-feed separators when turned below speed lose cream —from 7 to 13 lbs. per cow per year. This loss totals 80 million lbs. of butter yearly in the North America alone—Sharples can save it all!

Discard your old fixed-feed separator. Get a new Sharples Suction-feed—the only separator that feeds the milk into the bowl in direct proportion to the separating force, thus getting cream now wasted by all other separators. Write for catalog today, addressing Dept. 78, and see your dealer as well.

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Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

Gladden Hill Ayrshires Winners wherever shown—Herd headed by Fairview Milkmaid; sire Hobland Stumpies Heir, Imp.; dam, Milkmaid 7th, a 166.96-lb. R. O. P. cow with 729 lbs. of fat; average test 4.36 per cent. We have three 12-month bulls that were winners at Toronto and London. All are by herd sire. Come and see our females. We also have two three-year-old Clydesdale stallions, one by Surname Imp., and one by Cairndale Imp. Good quality and sure breeders. Will sell one. Price reasonable. LAURIE BROS. C.P.R., G.T.R., C.N.R., Shipping Stations, AGINCOURT, ONTARIO

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Herd Sires: Netherton King Theodore Imp., and Humeshaugh Invincible. Grand Champion, London, 1917. Our herd at present holds the Canadian records for both milk and butter in the two-year, the three-year and the mature classes. Let us tell you about the daughters of Netherton King Theodore. We have sons of both bulls for sale—all have R. O. P. dams. Visitors met at Hamilton by appointment. A. S. TURNER & SON (3 miles from Hamilton) RYCKMAN'S CORNERS, ONT.

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Choice Bulls and Females. We have six young bulls of serviceable age, all from R.O.P. dams. Three are by our senior sire, Brampton Dairy Farmer, and three are by our Junior sire, Brampton Bright Togo. Write for records. We also have females. R. & A. H. BAIRD (G.T.R. Stations—New Hamburg, Bright.) NEW HAMBURG, ONT.

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Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's Champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times. James Bagg & Sons. (Woodbridge, C.P.R., Concord, G.T.R.) Edgeley, Ont

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THE DON JERSEY HERD—

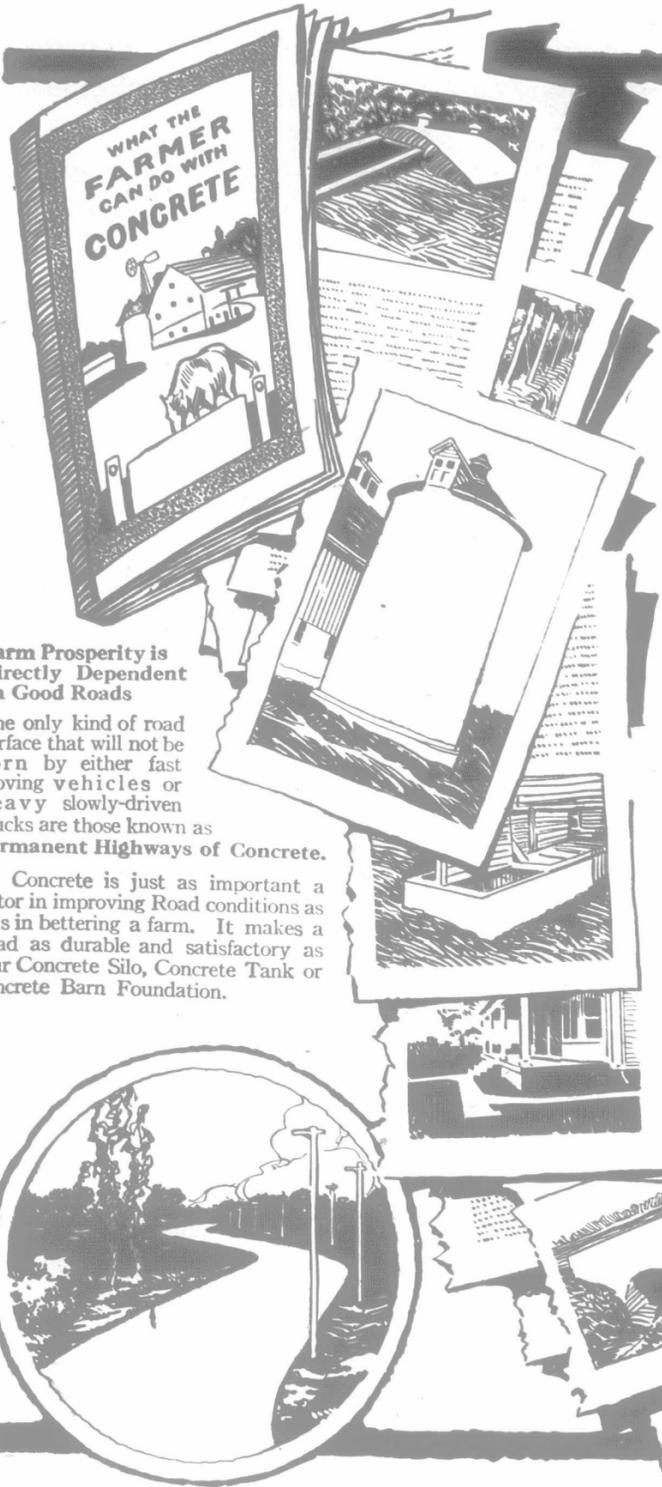
OFFERS:—Several young bulls, all of serviceable age, and all from R. O. P. dams. These are priced right. Interested parties should write or see these at once. We also have females of breeding age. D. DUNCAN & SON, Todmorden P.O., Duncan Station, C.N.O.

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Canada's Most Beautiful Jersey Herd

IMPORTED CHAMPION ROWER at its head. This bull, with his get, won first prize on the Island of Jersey, 1914, second in 1916, and again first in 1917. Present Offering: A few yearling heifers in calf to our great young bull, Woodview Bright Prince (7788), and bred from imported sire and dams. We show our work cows and work our show cows.



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BERKSHIRE PIGS, all ages and sexes, headed by Successor's Double II, bred by Hood Farm, Lowell, Mass., U.S.A. **SHORTHORN CATTLE,** dual-purpose strains, headed by Golden Duke (Imported), bred by Lord Lucas, West Park, England. Address:—J. B. Pearson, Manager, Credit Grange Farm, Meadowvale, Ont.

Meadow Brook Yorkshires Fifty young pigs, from five litters, weaned and ready to wean. Pairs not akin. Also a large choice of young sows, near breeding age—priced to sell. G. W. MINERS, R. R. No. 3, EXETER, ONT.

Cloverdale Shropshires and Berkshires—40 shearing rams, 70 shearing ewes, an exceptionally choice lot; true to type and well grown, nearly all sired by the show ram, Nock 16 Imp. In Berkshires, the usual strong offering, including sows just bred. C. J. Lang, Burketon, Ont.

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CHOICE YORKSHIRES All ages and both sexes, at right prices. A few bred sows and several young litters an extra special. All varieties, Turkeys, Geese and Ducks, S.C. White Lechons. T. A. KING, Milton, Ont.

Inverugie Tamworths From a fine winning stock of the choicest breeding. A few sows bred. Boars ready for service. Also a choice lot of young stuff. Postures furnished on application. All orders promptly attended to. Leslie Hadden, R. R. No. 2, Pefferlaw, Ont.

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If you have a gasoline engine—if you have electric power—then no longer need you even work the lever of a hand-operated power washing machine. Let "power" help your work as it does your husband's!

Of course you realize that a washing machine, even run by hand, is quicker, easier, better than washing by muscle-power. But here's a washer that does everything—all you have to do is "turn on the juice."

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—will do the washing while you do other work! No need to watch it, it can't go wrong. It will do the wringing too. Easy to operate—simple and strong in construction—perfect in mechanism. Made in one-, two-, or three-tub size; operated equally well by 1/6 h.p. electric motor, or any gasoline engine. Write us to-day for full particulars—it will be time well-spent.

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We have a large selection of extra-good boars and sows of different ages. We are selling at prices that make it attractive for the purchaser. Write for what you want.

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BEAVER MEDI CHESTER WHITES won over 75% of the prize money at Toronto this year with three herds showing. Write us for bred sows or young boars. We guarantee satisfaction. We also have Percherons. Wm. Roberts & Sons, Peterboro, Ontario

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ELMHURST LARGE ENGLISH BERKSHIRES From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO Langford Station on Brantford and Hamilton Radial

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

Canada's 1917 Crops.

The Census and Statistics Office has issued its annual estimate of the yield, quality and value of the principal grain crops of Canada for the season of 1917, as compared with 1916. For the provinces of Quebec, Saskatchewan, Alberta and British Columbia, the agricultural statistics of 1917 were collected in co-operation with the Provincial Governments, and consequently for those four provinces the reports of both the Dominion and Provincial statistical authorities will record identical results.

The total yield of wheat for Canada is returned as 233,742,850 bushels from 14,755,850 acres, as compared with 262,781,000 bushels from 15,369,709 acres in 1916. Of oats the total yield is 403,009,800 bushels from 13,313,400 acres, as compared with 410,211,000 bushels from 10,996,487 acres in 1916. The yield of barley is 55,057,750 bushels from 2,392,200 acres as against 42,770,000 bushels from 1,802,996 acres in 1916. The average yields per acre of these crops are, in bushels, as follows, the corresponding figures of 1916 being placed within brackets: Wheat 15.75 (17.10); oats 30.25 (37.30); barley 23 (23.72). The total yields in 1917 of the remaining crops are as follows: rye, 3,857,200 bushels; peas 3,026,340 bushels; beans 1,274,000 bushels buckwheat 7,149,400 bushels; mixed grains 16,157,080 bushels; flaxseed 5,934,900 bushels; corn for husking 7,762,700 bushels.

The quality of the grain crops of 1917, as indicated by the average weight in lbs. per measured bushel, is as follows: Fall wheat 59.37 lb., as compared with 59.52 lb. in 1916; spring wheat 59.48 lb. as against 56.51 lb.; all wheat 59.46 lb. as against 57.10 lb.; oats 33.55 lb. as against 33.86 lb.; barley 46.97 lb. as against 45.66 lb.; rye 53.44 lb. against 54.95 lb.; peas 59.81 lb. against 59.88 lb.; beans 59.70 lb. against 60 lb.; buckwheat 46.49 lb. against 46.35 lb.; mixed grains 44.41 lb. against 43.13 lb.; flaxseed 54.73 lb. against 54.99 lb., and corn for husking 56.18 against 56.51 lb.

The average values per bushel of grain crops for all Canada in 1917, according to the prices returned by the crop-reporting correspondents of the Census and Statistics Office, are higher than in any previous year. They are as follows: Fall wheat, \$2.08 as compared with \$1.54 in 1916; spring wheat \$1.93 against \$1.29; all wheat \$1.94 against \$1.31; oats 69 cents against 51 cents; barley \$1.08 against 82 cents; rye \$1.62 against \$1.11; peas \$3.54 against \$2.22; beans \$7.45 against \$5.40; buckwheat \$1.46 against \$1.07; mixed grains \$1.16 against 88 cents; flax \$2.65 against \$2.04; and corn for husking \$1.84 against \$1.07.

The total farm values of the principal grain crops of 1917 are estimated to be as follows: Wheat \$453,038,600 as against \$344,096,400 in 1916; oats \$277,065,300 as against \$210,957,500; barley \$59,654,400 as against \$35,024,000; rye \$6,267,200 as against \$3,196,000; peas \$10,724,100 as against \$4,819,000; beans \$9,493,400 as against \$2,228,000; buckwheat \$10,443,400 as against \$6,375,000; mixed grains \$18,801,750 as against \$9,300,900; flaxseed \$15,737,000 as against \$16,889,900 and corn for husking \$14,307,200 as against \$6,747,000. Adding the value of the root and fodder crops, which was published last November, the total value of the field crops of Canada is estimated at \$1,144,636,450 with \$886,494,900 in 1916 and \$825,370,600 in 1915. The totals comprise grain crops \$875,532,350, compared with \$639,733,700 in 1916 and \$601,093,300 in 1915; potatoes and sugar beets \$81,598,200, compared with \$51,422,300 in 1916 and \$37,235,300 in 1915 and fodder crops \$187,505,900, compared with \$195,338,900 in 1916 and \$187,042,000 in 1915. The total value of \$1,144,636,450 for 1917 is the highest on record, and this is the first time that the value of the field crops of Canada has exceeded one billion dollars.

A farm hand who had worked every day in the week from dawn till late at night, finishing his duties by lantern light, went to the farmer at the end of the month and said: "I'm going to quit. You promised me a steady job of work." "Well, haven't you one?" was the astonished reply. "No," said the worker. "There are three or four hours every night I don't have anything to do except fool away my time sleeping!"

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