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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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LIV.

LONDON, ONTARIO, OCTOBER 9, 1919.

No. 1411

As good as McClary's

That is the measure of a stove or furnace in Canada.

That is the best that is ever said of the *unknown* article—It is as good as *McClary's*.

Then, what safer course could you follow than to buy the thing you *know*—*McClary's*.

The McClary's reputation for quality was not earned in a day. The McClary's institution, the largest of its kind in the British Empire, has

been over seventy years in the making. McClary's stands high among the great names in Canadian industry because it was never attached to an inferior article.

Whatever fuel you may wish to use, whatever type of stove, range or heater you may desire, you will find one bearing the McClary's name-plate. Isn't it worth your while to seek it? Isn't it worth your while to consult McClary's on the subject?

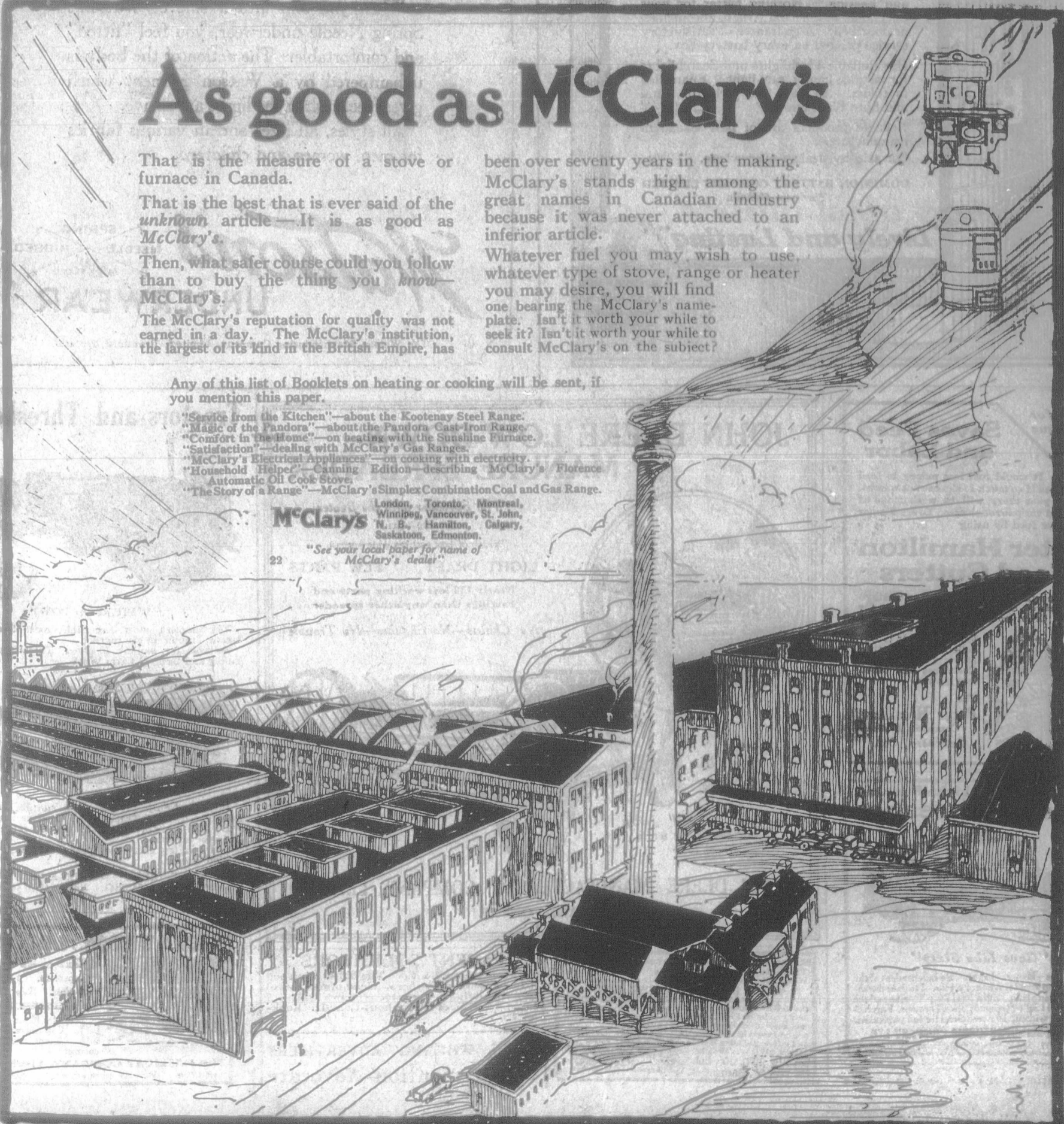
Any of this list of Booklets on heating or cooking will be sent, if you mention this paper.

- "Service from the Kitchen"—about the Kootenay Steel Range.
- "Magic of the Pandora"—about the Pandora Cast-Iron Range.
- "Comfort in the Home"—on heating with the Sunshine Furnace.
- "Satisfaction"—dealing with McClary's Gas Ranges.
- "McClary's Electrical Appliances"—on cooking with electricity.
- "Household Helper"—Canning Edition—describing McClary's Florence Automatic Oil Cook Stove.
- "The Story of a Range"—McClary's Simplex Combination Coal and Gas Range.

McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N. B., Hamilton, Calgary, Saskatoon, Edmonton.

"See your local paper for name of McClary's dealer."



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WE ARE OUR FACTOR PARTS

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SMITH GRAIN BROKER

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Your home electric light plant demands best Ignition Batteries for satisfactory service. Reliable Ignition Batteries are a guarantee of utmost battery efficiency. Made as a battery should be made. Each one a reservoir of energy that is "Lively and Lasting." Nothing better for your telephone, motor boat, truck, automobile, or door bell. A guarantee of satisfactory service printed on every battery box.

Use Reliable Flashlights and Searchlights for instant, handy, safe light. Enamelled in colors. All sizes and styles of metal and fibre Flashlights.

Reliable products are of best Canadian manufacture.

For sale by dealers everywhere.

DOMINION BATTERY COMPANY LIMITED
Toronto, Canada

"Lively and Lasting"



A Snug, Comfortable Suit.

When you slip into a suit of Watson's Spring Needle underwear, you feel "fitted" and comfortable. The action of the body is unhampered by a Watson garment which gives freely when the limbs are active.

All styles, all sizes and in various fabrics for men, women and children.

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UNDERWEAR
Mfg. Co.

The Watson Manufacturing Company, Limited, Brantford, Ontario

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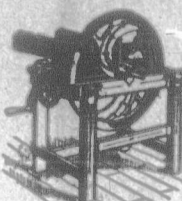
Saves Feed and Labor

It would cost less money to feed stock if so much feed were not wasted. This year there will be a shortage of hay and various roughages. Every farmer can save feed by using

Peter Hamilton Feed Cutters

There will be no "left overs" or wastage when heavy, coarse fodders are cut up for stock. Order your feed cutter now and have it in a convenient place. It is excellent for cutting straw for bedding. Costs less and takes less power.

The Peter Hamilton Company, Limited, Peterboro, Ont.



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.

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Width of box assures wide spread.

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No Chains—No Clutches—No Trouble


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There is big money this winter sawing wood. Coal is high. Wood will be scarce. Now is the time to clean up. The GILSON HEAVY-DUTY SAWING OUTFIT is the machine to do it with. Makes its own spark without the aid of batteries. You cannot afford to buy any engine until you know all about the Gilson Heavy-Duty. When you know about it, you will not buy any other. Catalog and information free if you act quickly. Write to-day.

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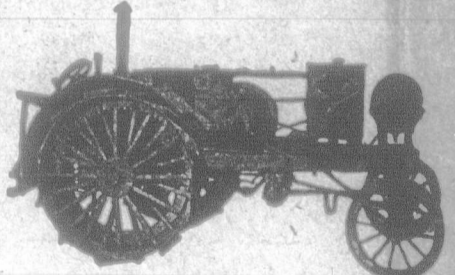


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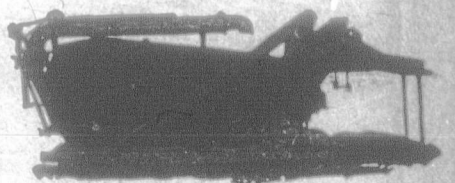
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Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense.

Write for free catalogue, prices and any information wanted.

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

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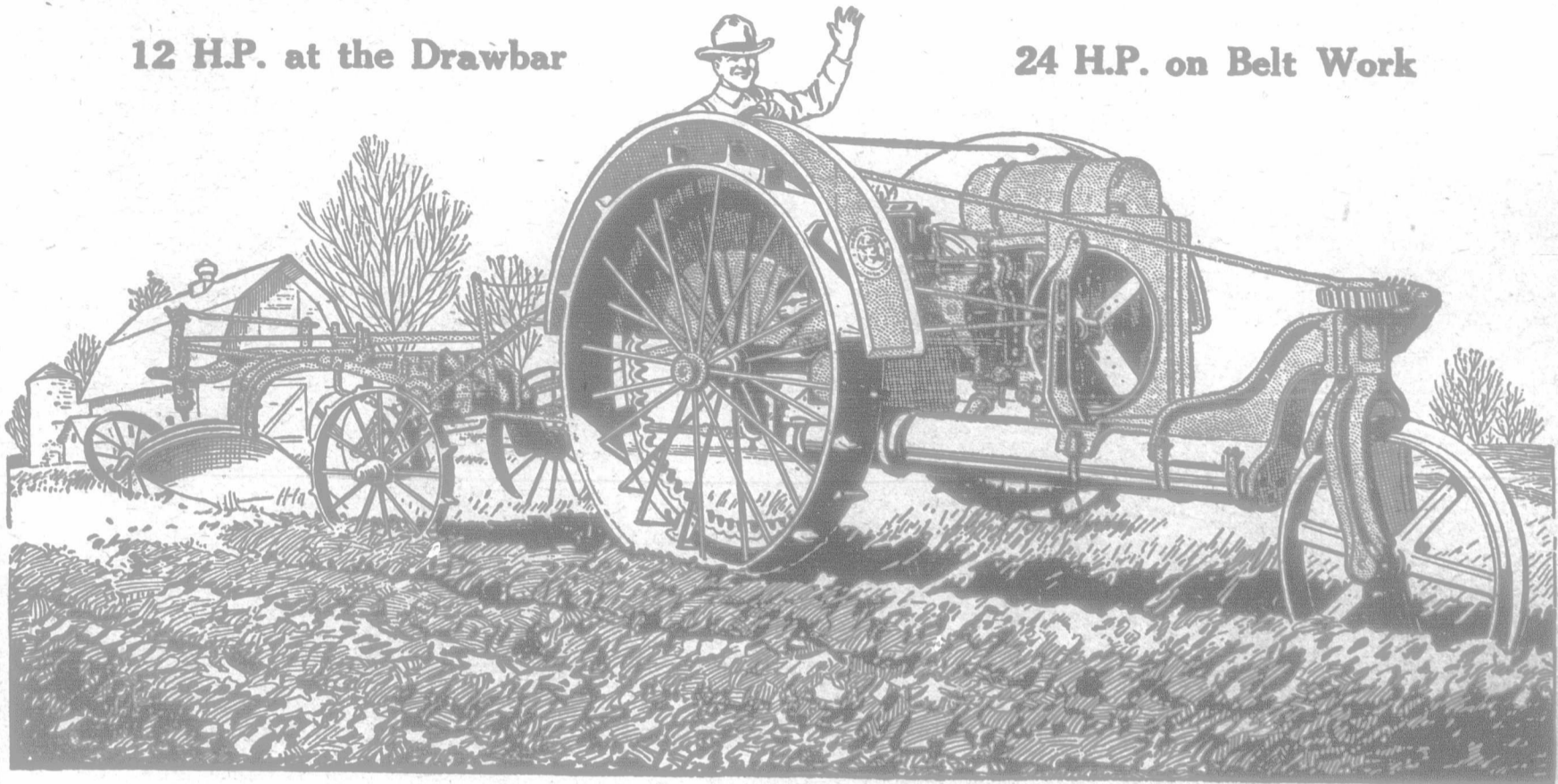
SIZES to suit your openings. Fitted with glass. Safe delivery guaranteed.

Write for Price List (B). Cut down fuel bills. Insure winter comfort.

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HAMILTON FACTORY DISTRIBUTORS CANADA

12 H.P. at the Drawbar

24 H.P. on Belt Work



More Horsepower

for your money both in first cost and up-keep cost

THE price of the Happy Farmer Tractor is less than that of any other standard machine of 12-24 horse-power. This is due to light

weight and simple construction. But at the same time, it delivers *more power on the drawbar* than other tractors with a similar sized motor and speed. The

Happy Farmer Tractor

does all the work any other machine can do with greater ease, and less attention is needed to keep it in order. That is the beauty of having the light weight, powerful and scientifically designed Happy Farmer Tractor.

Kerosene Motor—The Happy Farmer motor is designed not only specially for kerosene, but to get the last ounce of power. Our short intake manifold permits not a bit of condensation. So perfectly is the engine designed that, after starting, it runs like a watch without smoke or carbon.

Gears and transmission run in a bath of oil, thus wasting least power between the motor and

the final drive, and giving more power at the drawbar. The up-keep for parts is economical. As there are fewer wearing parts there are fewer parts to replace.

Can you afford to go on sowing five acres of horse feed per horse for your animal power when the Happy Farmer will save you this expense, and do your work quicker, better, easier and cheaper? Write for free literature.

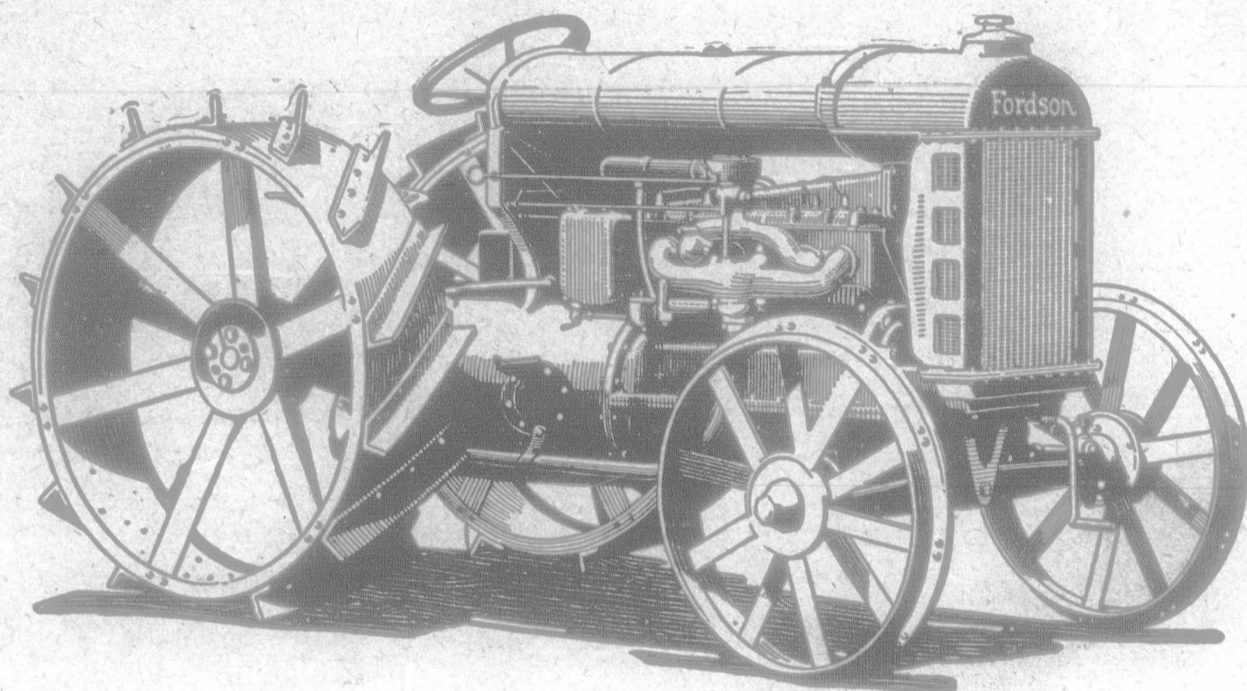
The Renfrew Machinery Co., Limited

Head Office and Works, Renfrew, Ontario

Agencies Almost Everywhere in Canada

The Fordson Tractor

As Canadian Farmers See It



There is no better way to tell what the Fordson will do for you than to repeat what other practical men have learned about it in actual service.

Out of 287 statements made by a few Fordson owners comes information that every farmer should heed.

Here are ten Fordson advantages pointed out—not by us—but by the owners of Fordson Tractors:

1. It is a time-saver; faster than horse; best for rush season.
2. Longer hours possible with a Fordson; capable of doing heavier work than horse.
3. More economical than horse; no expense while idle; cheaper to operate.
4. Hot weather and flies do not affect Fordson as they do a horse.
5. More freedom for farmer; no chores; no attention needed when idle; always ready for work.
6. Dispenses with labor.
7. Does better work than horse; better and deeper plowing; better and more frequent cultivation.
8. Easier to handle than horse; boys and women can handle it.
9. Less shed space required than for horse.
10. Saving in actual cost as compared with horse (no harness, etc.).

Does the Fordson actually replace horses on the farm?

Here is the answer from the farmers themselves—not on a "test"—not on a day's work—but on actual month-in-and-month-out work on their own farms:

34 farmers said it replaced two horses.

69 said it replaced 4 horses.

71 said it replaced 6 horses.

27 said it replaced 8 horses.

These men work farms of different acreages, but all were able to replace expensive work horses with Fordson Tractors.

On 480-acre farm Fordson replaced 12 horses!

J. W. M., of Major, Sask., (full name will be given on request) by an investment of \$750 in a Fordson Tractor stopped an expense of \$3,000, the cost of keeping 12 horses.

Works 100-acre Farm Alone With Fordson.

O. F. M., Dundas, Ont.—The Fordson is giving splendid satisfaction. I am working the 100 acres alone because men are so scarce, and find the Fordson of great help in a lot of things where I would need a man and an extra team of horses.

Bert Kennedy, Agincourt, Ontario.—We used the Tractor on Massey-Harris "Blizzard" Cutting Box, cutting corn and blowing it into a 31-foot silo, and it handled the corn as fast as four men could get it into the box. The Tractor had plenty of power, running with throttle $1\frac{1}{4}$ inches open. We cut a stack of wheat straw and blew it into the barn in 9 hours. It had taken 10 hours to thresh same. We have used it on a grinder with 8-inch plates, grinding wheat and oats, and it took them through at the rate of 42 bushels per hour.

Fast Work on This Ontario Farm.

C. E. S., Scotland, Ont.—Cultivated 36 acres in 12 hours. Harrowed 15 acres in 2 hours. Often used 6 sections. Used 10-foot roller and three-section harrow combined. Cut 85 acres grain on 8-foot binder. Cut 25 acres oats in 15 hours.

Safer Than a Team—Does Everything.

E. C. G., St. Thomas, Ont.—I have plowed, harrowed, rolled, spread manure, cut grain, cut corn, loaded hay, drawn hay to barns, in fact, most everything on the farm. My boys, 10, 12 and 13, have handled it on all these except the plow. It is much safer than a team, as the flies never bother, and it is not very apt to run away.

Ford Branch and Dealer Organization great Advantage to Fordson Owners.

To be able to get repair parts for any machine, and get them quickly is sometimes of vital importance to the farmer. It is always a convenience. The Ford Company through its remarkable Canadian organization, offers farmers in every locality a very efficient and prompt service on the Fordson Tractor.

Parts are stocked at central points in every province. They are also held on hand by all Fordson Dealers, and nearly all Ford dealers are Fordson dealers. Any Fordson dealer can obtain parts very promptly.

When we asked Fordson owners about this point, 136 said that they had not the slightest difficulty in getting parts while 49 replied that they had never required any repairs. Complete information about the Fordson Tractor may be had at any Ford Branch from Fordson Dealers, or by writing direct to this office. Surely, you will want to investigate fully a Tractor that is giving such thorough satisfaction in actual service in Canada.

Ford Motor Company of Canada, Ltd., Ford, Ont.

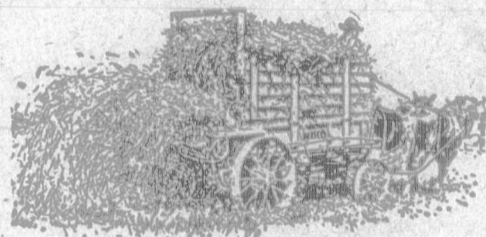
Look Ahead to Next Year's Harvest —and the harvests of years to come

HARVESTS measure the health of your land. The farmer who uses wasteful methods of manuring robs himself of from five to fifteen bushels per acre. And more, he robs his soil of fertility which even proper manuring cannot restore for years.

PROPER manuring means light applications. It means applying manure while it is fresh. It means thin, but thorough, applications to every square foot of soil.

Your farm paper editor, county agent, or experiment station men will tell you that light applications the year around pay best. For government tests show that six months storage means an actual loss of one-half the valuable nitrogen, potash and phosphoric acid plant-food properties of manure—a loss that any farmer can ill afford to stand.

So begin right now—and through every week of the winter continue—to spread manure direct from your stable onto your fields. Neither cold weather nor snow will stop this good work if you use a



THE NISCO Straw Spreading Attachment

NEXT to your manure pile, straw is your biggest, most valuable by-product. Burn it, and you burn fertilizer that is worth, at the very lowest, \$8.00 per ton. Burn it, and you burn the greatest protection you can give your wheat against winter killing. For adding humus to your soil, preventing soil washing and blowing, **straw is almost invaluable!**

The NISCO Straw Spreading Attachment—for old machines or new—shreds the straw and spreads it evenly 8 to 10 feet wide. Easy to put on or take off —a one-man machine. Your dealer will show you. Or write direct for literature.

NISCO The Original Wide Spreading Spreader

(Known as the NEW IDEA in the East)

The time to buy your NISCO is NOW! No other investment will pay for itself so quickly. No other labor will show up so big on your next year's profits. And in no other way will you save so much disagreeable, dirty work in handling your manure.

Just look at the illustration. See how the NISCO spreads—a full seven feet wide—laying a thin, uniform blanket of finely shredded manure on every square foot of your ground covered.

Loads High—Hauls Easily

The NISCO is built low down—it is easy to load. Pile it a full 30 inches high, and your team will handle it on any ground—spreading 3, 6, 9, 12 or 15 loads to the acre as you wish.

No gears on the NISCO to break in cold weather. Strong chains drive the pulverizing cylinders and the big steel distributor paddles that spread the manure in an even stream well outside the wheel tracks.

Simple in construction, extra strong, yet light-draft —this is unquestionably the spreader you need.

See Your Dealer

If you don't know the exact money value of your stable manure—used right—ask your NISCO dealer. Let him explain how the farmers of this country are actually losing \$700,000,000 each year through failure to get the most from their manure. And then let him show you just how the NISCO will change your share of this loss to profit.

We have prepared a mighty interesting and valuable booklet, "Feeding the Farm". It is packed with facts and figures about the money your manure pile can make. Sent, with a copy of the latest NISCO catalog, on request. Use the coupon below.

THE GILSON MFG. CO., LTD.,
Guelph, Ontario.



THE GILSON MFG. CO., LTD.,
Guelph, Ontario.

Gentlemen—

Please tell me the name of your nearest dealer. Also send me free a copy of your booklet "Feeding The Farm."

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The New Overland 4 With Three-Point Cantilever Springs, the Greatest Improvement in Riding Comfort Since Pneumatic Tires

THIS new Overland 4 has a spring-base of 130 inches—yet its wheel-base is only 100 inches.

It is a brand new type of car with an entirely new standard of riding comfort.

The springs are Three-Point Cantilever Springs of Chrome Vanadium Steel.

They give the Overland 4, with its light weight and ease of driving, the riding-comfort and road-steadiness formerly confined to heavy, expensive cars of long wheelbase.

The Three-Point Springs protect the mechanism from road injuries and prolong the life of the car.

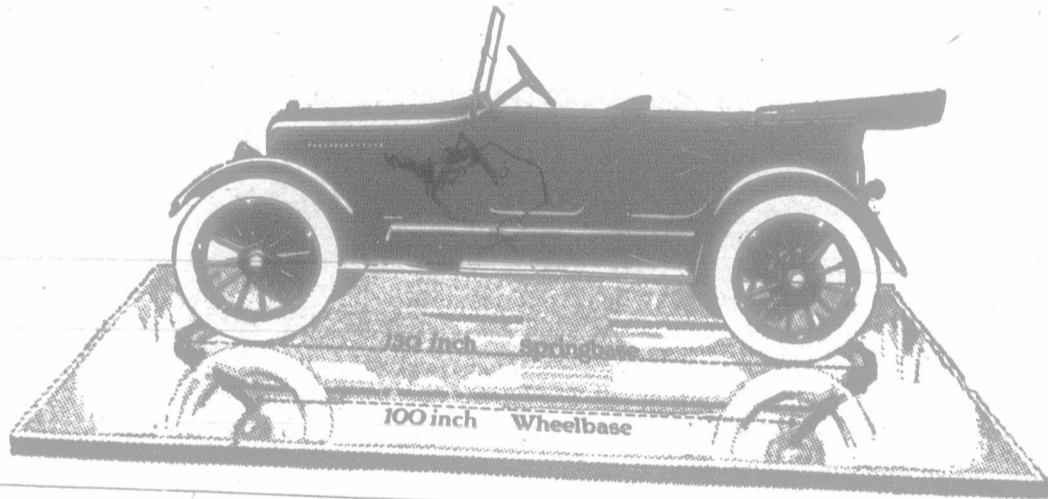
Light weight brings great economy of tires and gasoline.

High quality materials and workmanship are used in Overland 4 throughout. Its equipment is like that of expensive cars, complete from Auto-Lite Starting and Lighting to its Demountable Rims.

Ask the Overland dealer to show you this new motor car which has been tested more than 250,000 miles, let him explain to you its exclusive Three-Point Cantilever Springs, then—

Select rough roads that you formerly dreaded to ride over and see what it means to ride in Overland 4.

Overland 4 Touring, \$1195; Roadster, \$1195; Coupe, \$1845 Sedan, \$1995—f. o. b. Factory, Toronto, War Tax included



WILLYS-OVERLAND LIMITED

Sedans, Coupes, Touring Cars and Roadsters
Head Office and Works, Toronto, Canada. Branches: Montreal, Winnipeg and Regina

Money In Hogs. Yes, and all other live stock too—Canada is fast becoming a live stock producing country. Pasture and yards must be well fenced.

Peerless Perfection Fencing
THE FENCE THAT'S LOCKED TOGETHER

Made in Canada. Quality worthy of the name and nation. A fence of defense. The attacks and onslaughts of animals can't face it. It's strong, yet springy. Manufactured from Open Hearth steel galvanized wire. When made by this process, impurities are burned out of the metal, removing one of the chief causes of rapid corrosion or rusting. If you are considering the fence question, let us estimate on your job—and advise with you as to the best way to build—we will put you in touch with our nearest agent. Send for our latest catalog. Ask about our poultry fencing, ornamental fencing and farm gates. Catalog mailed free on request.

THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
Winnipeg, Man. Hamilton, Ont.

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In time and labor saved—in increased production—in work done better as well as faster—a Toronto Farm Engine pays for itself.

No matter what size your farm you need a gasoline engine—and a good gasoline engine. Toronto Farm Engines are specially designed for hard farm service—strong, simple in operation, efficient and economical. Run on kerosene or gasoline. Operate all the machinery around the farm.

You should have a Toronto Grain Grinder and a Toronto Saw, too. Both are money-makers. Both are strongly and simply built.

Find out more about effective Toronto Farm Machinery. Get our illustrated literature. Sent free on request.

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FREE SAMPLE of Hallam's Paste Animal Bait

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

Also Hallam's Trappers and Sportsmen's Supply Catalog—48 pages, English and French—showing Animal Traps, Guns, Ammunition, Fish Nets, etc. All at moderate prices.

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

Address in full as below

when you ship your **RAW FURS**

John Hallam Limited
506 HALLAM BUILDING, TORONTO.

RAMSAY'S

Waggon and Implements PAINTS

Will protect your waggons and implements from summer rain and heat or winter storms

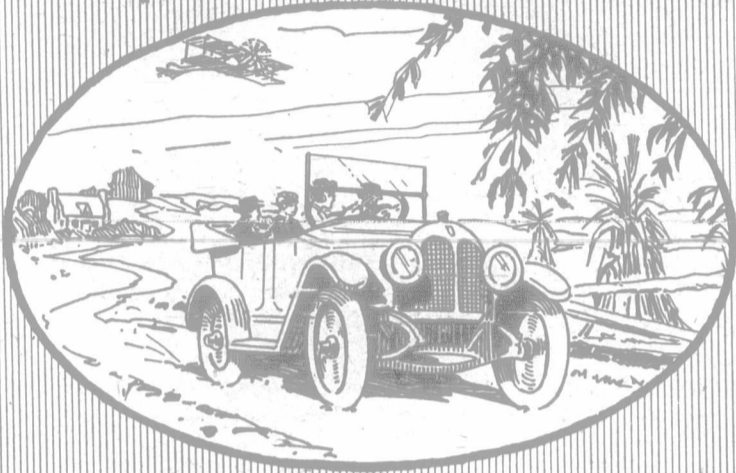
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En-ar-co National Motor Oil

For Every Motor Use



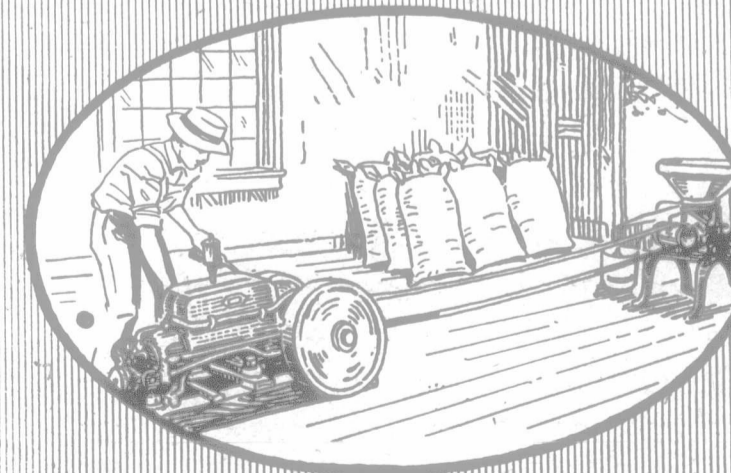
Lubricate your automobile and aeroplanes with En-ar-co National Motor Oil.



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Scientifically Refined By Graduate Workmen

The high quality of En-ar-co Motor Oil is unvarying. This has been accomplished not only by the use of the best materials, the most perfect equipment, exact formulas, and rigid tests, but also by the highly specialized training each En-ar-co workman receives.

Each must pass through many steps of refining instruction. And not until he has received his master degree is a workman entrusted with responsible tasks.



Thus we have developed Scientific Refining. And thus we have produced an oil that is uniform — that never fluctuates in its perfect quality.

On the road, in the field, on the water or in the air, En-ar-co National Motor Oil conquers the resisting force of friction, and lightens the load. It increases the power, and by a soft, velvety cushion or film — strong and tenacious — it reduces the wear on parts.

All En-ar-co Products Excel

As En-ar-co National Motor Oil is extra dependable, so are all other En-ar-co products.

White Rose Gasoline for greater power.

National Light Oil for Tractor fuel. Also best for lamps, oil stoves, and incubators.

En-ar-co Motor Grease for every lubrication point around the motor car or tractor.

Black Beauty Axle Grease for wagons.

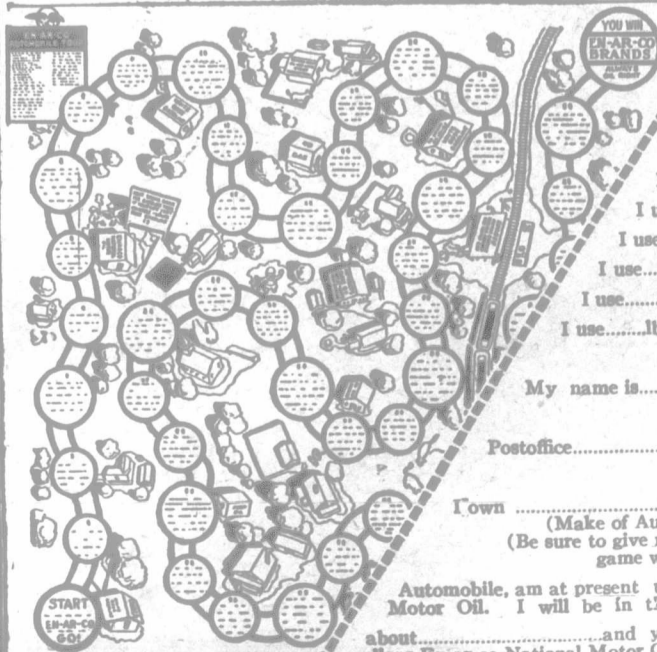
Tell your dealer you want to try En-ar-co National Motor Oil and other products bearing the En-ar-co label. If he cannot supply you, write us.

Canadian Oil Companies, Limited

1362 Excelsior Life Building,
Toronto, Ont.

En-ar-co Auto Game FREE

A fascinating game in which autos compete in a cross country race. Two, three or four can play. Get this game for the children. Grown folk, too, will like it. Sent free only to auto, tractor, motor boat or engine owners.



CANADIAN OIL COMPANIES LIMITED, 1362 Excelsior Life Bldg., Toronto, Ont.

Send me your En-ar-co Auto Game free. Enclosed find three-cent stamp to partially cover postage and packing.

Also give nearest shipping point and quote prices on the items I have marked.

- I use.....gals. Gasoline per year
- I use.....gals. Motor Oil per year
- I use.....gals. Kerosene per year
- I use.....gals. Tractor Oil per year
- I use.....lbs. Motor Grease per year
- I use.....lbs. Axle Grease per year

My name is.....

Postoffice..... Province.....

Town..... (Make of Automobile or Tractor) (Be sure to give make of auto or tractor or game will not be sent)

Automobile, am at present using..... Motor Oil. I will be in the market for more oil again about..... and you may quote me on..... gallons En-ar-co National Motor Oil.

The Why? of Another Victory Loan

WHEN, on the morning of November 11th, 1918, the guns were hushed and glad tidings flashed across the world, there followed with the Nation's Prayer of Thanksgiving, one yearning query, which found echo in the faster-beating hearts of wives, mothers, fathers, brothers, sisters and sweethearts.

THAT query was, "How soon will our boy be home?"

AND, from France and Flanders, from Italy and Egypt, from Palestine and from far-off Siberia, there came an answering echo, "How soon, how soon, may we go home?"

CANADA caught the spirit of these longings, and at once resolved to satisfy them.

IT was an appalling task. Shipping was tragically scarce. The composition of the Army of Occupation had not then been settled. And other parts of the Empire as well as Canada were looking for the speedy return of their men.

THE problem was this. The half-million men that Canada had overseas had taken more than four years to transport to the field of battle.

TO bring them home in a few months was a gigantic undertaking—one to tax all Canada's ingenuity and resources.

CANADA solved the problem, but it meant crowding into a few short months, an expense for demobilization which it was impossible to foresee.

THEN, too, besides the sentimental aspect of the necessity for bringing the men home quickly, the economic side could not be overlooked.

THAT was, to transform efficiently and speedily the nation's army of fighters into a national army of workers.

NEED DIVIDES ITSELF IN TWO PARTS.

The answer to the question "Why does Canada need another Victory Loan?" divides itself into two parts.

(a) To finish paying the expenses of demobilization, and the obligations we still owe to our soldiers.

(b) To provide national working capital.

OBLIGATIONS TO SOLDIERS.

The obligations to soldiers include:
That already incurred cost of bringing home troops from overseas.

The payment of all soldiers still undemobilized. This includes more than 20,000 sick and wounded who are still in hospital, and who, of course, remain on the Army payroll till discharged.

The upkeep of hospitals, and their medical and nursing staffs, until the need for them is ended.

These three items alone will use up at least \$200,000,000 of the Victory Loan 1919.

GRATUITIES.

There is also the gratuity which has been authorized, and has been and is being paid to assist soldiers to tide over the period between discharge and their re-adjustment to civil life. For this purpose alone, \$61,000,000 must be provided out of the Victory Loan 1919, in addition to the \$59,000,000 already paid out of the proceeds of the Victory Loan 1918.

LAND SETTLEMENT.

Furthermore, soldiers who desire to become farmers may, under the Soldiers' Land Settlement Act, be loaned money by Canada with which to purchase land, stock and implements. The money so advanced will be paid back; meantime each loan is secured by a first mortgage. Up to August 15th, 29,495 soldiers had applied for land under the terms of this Act; and 22,281 applications had been investigated, and the qualifications of the applicant approved. For this purpose Canada this year requires \$24,000,000.

VOCATIONAL TRAINING.

For this work which, with the Vocational Training and Soldiers' Service Departments, embraces the major activities of the Department of Soldiers' Civil Re-establishment, an appropriation of \$57,000,000 is necessary.

These national expenditures are war expenses. They will be accepted readily by every citizen who gives thought to the task which Canada faced following the Armistice, and to the success with which she has met it.

NATIONAL WORKING CAPITAL

Canada needs national working capital, so that she may be able to sell on credit to Great Britain and our Allies the products of our farms, forests, fisheries, mines and factories.

You may ask, "Why sell to them if they can't pay cash?" The answer is, "Their orders are absolutely essential to the continuance of our agricultural and industrial prosperity."

The magnitude of these orders and the amount of employment thus created, will depend upon the success of the Victory Loan 1919.

THE "WHY" OF CREDIT LOANS.

Farmers and manufacturers (and that includes the workers on these orders) must be paid cash for their products. Therefore, Canada must borrow money from her citizens to give credit, temporarily, to Great Britain and our Allies. Actually, no money will pass out of Canada.

If Canada does not give credit, other countries will; and they will get the trade, and have the employment that should be ours, to distribute amongst their workers. And remember, we absolutely need these orders to maintain employment. If we don't finance them business will feel the depression, employment will not be as plentiful, and conditions everywhere will be adversely affected.

POOR TRANSPORTATION.

Money must also be available to carry on the nation's shipbuilding programme, and other transportation development work.

For loans to Provincial Housing Commissions who are building moderate priced houses.

These, then, are some of the things for which Canada needs national working capital. She is in the position of a great trading company, and her citizens who buy Victory Bonds are the shareholders.

Those who give thought to our outstanding obligations to soldiers, and to our need for national working capital, cannot fail to be impressed with the absolute necessity for the

Victory Loan 1919

"Every Dollar Spent in Canada"

Issued by Canada's Victory Loan Committee
in co-operation with the Minister of
Finance of the Dominion of Canada.

The Farmer's Advocate and Home Magazine

PERSEVERE
AND
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LIV.

LONDON, ONTARIO, OCTOBER 9, 1919.

1411

EDITORIAL.

Don't forget the next Victory Loan.

Think twice before you dispose of a good brood sow.

Regularity is one of the fundamentals of good feeding; start the season right.

This is no time for partisanship. Forget the party and vote for the best man.

October is a good month for plowing. Don't put off till spring what can be done this fall.

The political anvil in Ontario is now red hot, and sparks are flying in all directions. Fortunately the contest will soon be over.

There seems to be some doubt in Ontario as to which is the temperance party. Fortunately, the Referendum Ballot is distinct from both.

At last we are learning that it is good citizenship to have an interest in whose name goes on the ballot as well as to mark the ballot on election day.

It seems exceedingly ridiculous that a Board should be necessary to keep down the price of farm produce. Circumstances, economic and otherwise, have always kept it far too low.

Weak markets at this time should not be allowed to influence farmers into a wholesale disposal of their live stock. It is easier to get out of than get into live stock. Stay with the game.

When the Board of Commerce starts in to limit the price of farm produce they should not cease until they run the whole gamut of machinery, feed, labor and the many other factors contributing to the cost of production.

History is repeating itself this fall in the number of good brood sows going to the shambles. Ever in the past such action preceded a shortage of hogs and high prices. History will repeat itself again, and inside of a year many will regret the sale of their breeding stock.

It is given us the privilege to live in the most momentous days of the world's history. Never were the possibilities greater, never were the responsibilities heavier. Are we going to prove ourselves of such calibre as to meet civilization's demands and mark still further progress.

If it is necessary to sell some cattle this fall that is breeding stuff, then sell the culls. Don't let the best stuff go because you are offered more money for it. It will be worth as much to you for breeding purposes as to the other fellow. You may depend upon it that he is buying your best stuff cheap.

Across the line, in the United States, the Holstein Friesian Association has a scandal on its hands over unscrupulous methods used to deceive inspectors who are supervising official milk tests. There is only one or two men involved, but the position of these men in the Holstein world and the number of tests that have been made by them makes the matter of no ordinary importance. It indicates that the men engaged in breeding pure-bred cattle must place about the official milk and butter-fat tests such safeguards that will make these tests irreproachable.

A Training For Soldier Farmers.

It is the people rather than the Government who will ultimately re-establish the soldier in civilian life. The Soldier Settlement Board is doing good work, but without the sympathetic support of employers and civilians at large this Government organization would be terribly handicapped. The Board has placed thousands of returned men on land where they are making a noble effort to establish a home and acquire property of their own. There are some, however, who have made application that are not sufficiently equipped to take up land and obligate themselves for large amounts of money. They require more training and experience. There is no better place to obtain this experience than with successful farmers, and if the men, who are in a position to do so, accept the services of these apprentices they will be rendering a slight service in return for the sacrifice which has been already made by many soldiers. Unfortunately, the majority of farmers have been obliged to adapt themselves and their operations to a one-man system of farming, and after the transformation has been made and the worst over they will feel some reluctance toward engaging men who, in a short time, will be launching out for themselves. However, the man who has a desire to learn and who contemplates putting into practice the methods which govern his work ought to be a satisfactory helper and an apt student who will take an interest in his employer's business. Others, of course, will find the life and work un congenial; every one will not be a success, but many farmers will be in a position to give them a "try-out" and, at the same time, help in the re-establishment of the returned man.

Prevent Fire Losses.

A forest is not made in less than half a century, but the time required for fire to destroy it is only a matter of hours. A house and home, in many cases, represents the efforts of a life-time for an honest toiling couple, but in a brief period of time, indicated even by minutes, it may be reduced to a smouldering mass of embers. Property and life alike melt away before the demon fire, and the handiwork of man and nature are only food for the hungry flame. Every day in the year should be Fire Prevention Day, but so far public sentiment seems to justify the setting aside of only one day out of 365 for the purpose of awakening a keen interest in fire prevention and urging caution on the part of citizens at large. While October 9 is the date set for everyone to give particular attention to the removal of anything that might create or feed a flame and occasion for bringing fire prevention before the public mind, it seems extremely essential that the danger should be constantly guarded against, for fire breaks out when least expected, and the consequences are always bad enough.

Owing to the nature of farm buildings and their contents the farmer is perhaps more subject to fire losses than any other class of property owners. More than that, the facilities for fighting fire on the farm are few and meagre. Lightning and lantern have been responsible for innumerable conflagrations; sparks at threshing or silo filling time have started many a blaze; matches in the hands of children have been the means of starting serious fires, and since the advent of the gasoline engine not a few fires could be traced, no doubt, to oily rags thrown carelessly into a corner. As a rule, farmers are cautious in regard to fire; nevertheless, prevention should receive more emphasis than it does. Only rarely is an effective fire extinguisher to be found around farm buildings. Several extinguishers located at different spots about the premises would not cost a great deal, and yet if kept in convenient places and always ready they would prevent a blaze developing into a conflagration. Lightning rods, too,

would save many buildings which are annually destroyed by electrical storms. It is seldom, indeed, that a building, properly rodded, is struck by lightning. Oily rags and waste of this kind ought to be destroyed at once or kept in a safe metal container. Machinery is becoming more common about farm buildings, and the fire danger is increasing on this account. Another safe practice is to absolutely forbid smoking in the barn or stable, and make the rule apply to visitors who are sometimes careless in this regard. Keep matches away from children or irresponsible persons, and have a water supply available that will extinguish a small blaze at least. Prevention is the only practical means of fighting fire on the farm and should be constantly practiced. Insurance, however, should not be neglected. The risk is too great for the individual to carry alone.

An Educational Conference.

On October 20 to 22 there is being held in Winnipeg a National Educational Conference. It is Dominion wide; it is for all classes and for all individuals who have an interest in developing a higher type of citizenship. Professional educationalists from all provinces and from the United States will be in attendance. What we would like to see is a still greater attendance of non-professional educationalists, men and women interested not in education for education's sake but for the purpose of developing a better citizenship, through the keener intellects that may be the outgrowth of a better educational system.

Times and ideas have changed wonderfully since the stern old schoolmaster crammed Latin and Greek into the unwilling youth. One's education is not measured now by the knowledge he may have of the dead languages, but by his acquaintance with living things. Education for education's sake is a beautiful thing but unpractical and inconsequential. A higher, nobler aim is a life of usefulness and service to mankind, and only with this object in view can our educationalists prepare a course that will meet modern requirements. The aesthetic should not be submerged or over-shadowed by too much materialism; there should be a blending of the two in the proper proportions to make for citizenship of the highest type. Rural schools and rural education is the big problem before the country to-day. Not that country folk are backward in this regard or country children less apt, but in order to give the rural children equal advantages with urban pupils there must be some improvement in the course and the facilities for teaching. This subject should engage the attention of the Conference and rural educational organizations should transmit their ideas to the representatives who will convene on that occasion.

Live Stock and Dairy Councils.

As the majority of stockmen and dairymen are already aware, we have two National Councils which were conceived for the purpose of fostering the live-stock industry and the dairy industry of Canada. It is during the winter that impetus is given to such organizations, and their future, to a very large extent, depends upon the attitude adopted toward them by stockmen and dairymen during the next six months. Lukewarmness will kill them both; enthusiasm and moral, as well as some financial support, will make them strong and potent factors in the development of the agricultural industry.

The National Dairy Council has several accomplishments to its credit, and is calling an annual meeting at Ottawa, on October 14, to outline a more progressive program and discuss ways and means of financing the projects in mind. The National Dairy Council is still young, but it must soon begin a campaign to educate the consuming public regarding the value of milk and

The Farmer's Advocate and Home Magazine.

THE LEADING AGRICULTURAL JOURNAL IN THE
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milk products. The Council should invade the towns and cities with advertisements, and an exhibit of dairy products similar in character to that erected by the Provincial Dairy Branch at the last Canadian National. Literature prepared by the Council ought to find its way into urban homes where it would enlighten people as to the food value of dairy products, and how a more generous consumption of them would mean household economy.

The Canadian National Live-Stock Council has had a more troubled career. It sprang into being with fair promise of a life of usefulness, but exception was taken to the way in which it was organized, with the result that it was rebuilt last spring, and since that time nothing has been heard of it. The stockmen assembled at the annual meetings last February seemingly gave it little thought, the eastern representation on the Council does not include the best men in this part of Canada, and the Council sustained another serious loss when its President, Dr. S. F. Tolmie, became Minister of Agriculture. The very fact that two prominent members of the Council, Dr. S. F. Tolmie and Dr. J. G. Rutherford, have been elevated to important public positions is a compliment to the organization, but on these grounds alone it cannot appeal to the stockmen at their next annual meeting in Toronto. Of course, an organization must have funds in order to make itself heard and felt, and this is where both the National Dairy Council and the Canadian National Live-Stock Council have been handicapped. There is room for a live-stock council, and if the present organization cannot get under way it might as well relinquish all rights to the field and make room for another.

"What Shall We Hae to Drink?"

BY SANDY FRASER.

Like maist everybody else that I've seen lately I hae been takin' mair or less interest in the scrap that's gaein' on just noo between the twa parties in this Province that hae developed a difference o' opinion on that vera important question; "what shall we hae to drink?"

Different men hae different thirsts an' what will satisfy one chap will only remind the ither o' something better. Force o' circumstances hae pit me in the position o' not bein' able to sympathize to any great extent wi' the mon that hae acquired the thirst that canna be drowned out wi' onything short o' a gallon or so o' the real Scotch extract that oor auld ancestors used to be

takin' to keep off the blues an' pit them in the best trim for fightin'. But, gin I dinna inherit an inclination to be drinkin' onything stronger than the black tea that the auld wumman mak's sometimes, still I hae always had an interest in the subject o' drinkin' in general an' if we hae the time there might not be ony harm in lookin' intae the matter an' seein' how this custom o' drinkin' got started, onway.

About the first case that we hae on record o' a mon takin' mair than wis guid for him in the way o' drink is the story o' auld Noah tauld in the Bible. It seems that pretty nearly the first thing that Noah did after gettin' oot o' the ark wis to plant a vine-yard. Na doot he had seen sae muckle water while the flood wis on that he made up his mind to quit drinkin' it an' try a wee drap o' grape-juice an' see how that wad go. Or maybe gettin' on to dry territory again had the same effect on him that it seems to hae on some o' his descendants doon to this vera day. It pits ye in the notion, a'richt.

But they say that there is twa sides to ony question an' na doot there may be some honest men that stand up for the freedom an' liberty that goes wi' drinkin' all that one thinks is guid for him, or all he can hauld, for the matter o' that. I mind o' one chap sayin' that he wouldna believe that hard drinkin' had ever killed a man yet. "Na, na," he said, "I never kenned o' onybody bein' killed by drinkin', but of coorse I've known some that died in the training." This man was one o' these "liberty" advocates an' there's plenty like him. There was a time when I used to be talkin' that way myself. "What's the guid o' a person if they hae to be fence! in like a coo in a pasture when ye're afraid she may get intae the corn-field an' eat mair than is guid for her," I used to say. "A mon is supposed to hae reason an' judgement an' he should hae freedom to exercise an' develop these qualities gin they are ever to be o' ony service to him. When ye tak' every kind o' temptation awa' from mankind and mak' it impossible for him to do wrang, ye are, at the same time, makin' it just as impossible for him to doe right. There's na backbone developed that way," says I.

But, as I said, there's twa sides to ilka story an' I got the ither side o' this one. I had been all taken up wi' the man in the case an' what might be the best in the lang rin for him, but I had forgotten his wife an' the bairns. It never occurred to me that, maybe, they ought to hae a chance for the best development o' their characters, as well as the auld man. In fact, as it was a case o' four or five o' them to one o' him, it struck me that, perhaps, they had a right to be conseedered first. I couldna mak' mysel' believe that a drinkin' father an' husband had a tendency to elevate the moral tone o' the family circle, sae, gin that were the case, he was the kind o' man that needed to be taken in hand by society and his habits regulated for the guid o' the country at large. It's a guid while noo since people began forming organizations for the purpose o' tryin' to straighten oot this problem o' how to handle the chap that drank his wages an' let his family dae the best they could wi' oot his help. It's over a hundred years noo since they formed the first temperance society in the State o' New York, they tell me. An' one o' the by-laws in the constitution went like this: "Any member of this association who shall be convicted of intoxication shall be fined a quarter of a dollar, except such act of intoxication shall take place on the Fourth of July, or any other regularly appointed holiday."

Things hae been movin' some since that, ye'll say. We canna deny that it looks as though whiskey had to go, discipline or no discipline for the individual. The hame is gaein' to be looked after first. And it's right. I hae made up my mind to that. If the auld boozers are bound tae go ahead an' drink as lang as the supply lasts we will have to let them dae it. But it's up to us to look after the best interests o' the rising generation, an' the mither's in oor homes, by seeing that the supply soon rins oot.

I'm reminded here o' something I read the ither day. It was what a shoe dealer in Toronto had said about the way his trade had picked up after the Temperance Act had come intae force. He said that he sold more children's shoes the first Saturday night after prohibition cam' in than he did the night before Christmas, which up to this, had always been his harvest time. Sae what dae ye mak' o' that? Naething else but that the wee lads an' lassies hadna been gettin' the shoes to their feet that they needed, an' all because their fathers had spent sae muckle o' the days' wages in drink. An' if they cam' short on shoes it's mair than likely that they had to dae wi'oot ither things as weel. Stockings an' dresses an' hats wad be as scarce as everytthing else. And when there is no money for these things there's never too much for bread an' meat an' milk. It's no' hard to size up the situation. The drink has been in-terferin' wi' the bringin' up o' the boys an' girls in this country and when we ken that what's the use o' botherin' wi' ony mair arguments for or against the business.

The fact that one wee lad or lassie missed their chance for a useful an' happy life because we neglected to interfere wi' their father's "liberty" ought to be enough tae spoil a few nights sleep on us. At ony rate I'll tak' no chances, for one, on makin' my conscience mair o' a nuisance than it is the noo. An when the returnin' officer comes to count my ballot on the night o' the twentieth, I'm thinkin' he'll find Sandy Fraser's mark opposite every "No" on the paper, an' it's little to what I would dae, gin I were able. One o' oor boys or one o' oor girls may be worth mair to this country than all the money that was ever invested in the business that is just noo makin' a last desperate attempt to get on its feet again. Gie the bairns their chance.

Nature's Diary.

A. B. KLUCK, M.A.

Of the many animals which are peculiar to the sea one of the commonest and most typical is the Starfish. There are many kinds of Starfish on our coasts, the Common Starfish, Forbe's Starfish, the Sun-Star, the Leather Star, the Purple Star, etc., and all of them, together with the Sea Urchins, Sea Cucumbers, Crinoids, and Sand-dollars, belong to a group known as the Echinodermata, meaning spiny-skinned animals. This group has many peculiar features, the most unique being the water-vascular system, which is a system of vessels containing water and which acts as a respiratory and circulatory system as well as functioning in locomotion. A part of this system consists of the so-called "tube-feet"—soft-walled tubes with free ends which act as suckers and which can be extended or contracted according as water is forced into, or withdrawn from, them.

The Common Starfish of our Atlantic Coast is found from high-water mark to a depth of over two hundred fathoms. Its method of locomotion is by crawling along on the tube-feet, and it is able to travel over the softest silt or the smoothest hard surfaces with ease, while the suppleness of its body enables it to pass through very small crevices.



Young Starfish.

A, 6 weeks old. B, 9 weeks old. (Natural size.)

The food of the Starfish consists of mussels, clams, oysters, sea-snails, barnacles, worms and small crustacea. The mouth of the Starfish is in the centre of the disk on the lower side of the body. Small pieces of food are swallowed whole and the indigestible parts ejected through the mouth. But since the mouth is small, (about 1/4 inch in diameter in a good-sized specimen) and is surrounded by stiff calcareous plates, large animals cannot be swallowed, and in devouring such animals the stomach is turned inside out, wrapped about the animal until it is digested and withdrawn. In view of the fact that the main food of the Starfish consists of such shellfish as oysters, clams and mussels, which are protected by a hard shell, capable of being tightly closed, the manner in which the Starfish succeeded in getting at the soft parts within the shell was a mystery for a long time, and it is only in comparatively recent years that it has been solved. The method is as follows: The Starfish settles down on the shellfish, applies the tube-feet of some of its arms to one valve of the shell and the tube-feet of the remaining arms to the other valve, and pulls outward on the valves. Now a clam, mussel or oyster can resist a very strong pull for a short time, but after a little while the adductor muscle, which holds the valves together becomes fatigued, and the valves gape open. It has been shown that a Starfish can exert a pull of 1350 grammes, and that a pull of 900 grammes, if continued for half an hour is sufficient to open a good-sized clam.

The eggs of the Starfish are deposited early in June. The ripe eggs are minute spherical objects about one-tenth the diameter of the head of a small pin. They are discharged from the female through minute pores near the base of each arm, and are fertilized after extrusion. During the first stages of development there is little or no increase in size, and the egg rests like a minute grain of sand, on the bottom. In the course of a few hours, however, the internal changes which have been taking place manifest themselves. Waving cilia appear in certain areas on the surfaces of the egg, which now begins to rotate and soon rises from the bottom as a free-swimming larva. Soon after this the mouth and the stomach are developed, and the animal takes in food and grows. The growth is rapid, and during the next three weeks the larva increases in diameter about fifty times. Meanwhile various internal organs and several long arms are developed. The animal swims by means of the motile cilia which are arranged in bands. When the larva is mature it appears as in Fig. 1, and the rudiment of the developing Starfish can be seen through the transparent body. When the larva reaches this stage it attaches itself to some object, such as the branch of a sea-weed, and a rapid transformation takes place. The whole superstructure above the disk collapses and is absorbed and in a few hours there is left a complete, miniature, starfish.

For about a month the young Starfish remain upon the sea-weed, feeding upon the young of worms, snails, etc. They then drop to the bottom and feed mainly upon young clams, oysters and mussels. They are extremely voracious, and a young Starfish has been found to eat over fifty young clams in six days.

They grow rapidly, as may be seen from Fig. 2, which shows a young Starfish at the ages of six and nine weeks from the egg. By the beginning of November they average about two and a quarter inches in diameter.

THE HORSE.

Line-Breeding Versus In-Breeding.

Some breeders use the terms in-breeding and line-breeding interchangeably. There is considerable difference in the application of these two practices and while in-breeding is sometimes practiced in connection with cattle, sheep, swine and poultry it is seldom that horse-men are so courageous as to resort to it.

Line-breeding means the mating of animals which belong to a certain strain. The Clydesdale stallion, Baron's Pride, produced many notable sons and daughters. The majority of the offspring of this famous horse were related to one another through their sire only. Gradually a large family of Baron's Pride horses came into existence, and the second generation made it possible to cross offspring of Baron's Pride, which were not closely related. Finally a strain of horses was produced which carried the blood of Baron's Pride, though no close in-breeding had been practiced. Baron's Pride produced Baron O'Buchlyvie, and this horse produced Bonnie Buchlyvie and Dunure Footprint and these horses in turn produced an enormous number of notable horses. The Baron's Pride family therefore, grew so large, and had so many branches, that it is possible to-day to have purely-bred Baron's Pride descendants without having recourse to in-breeding. This is line-breeding. It is not so dangerous as in-breeding, and it permits a breeder to keep his animals pure in blood. In other words, the blood is kept constant, which reduces the probability of variations.

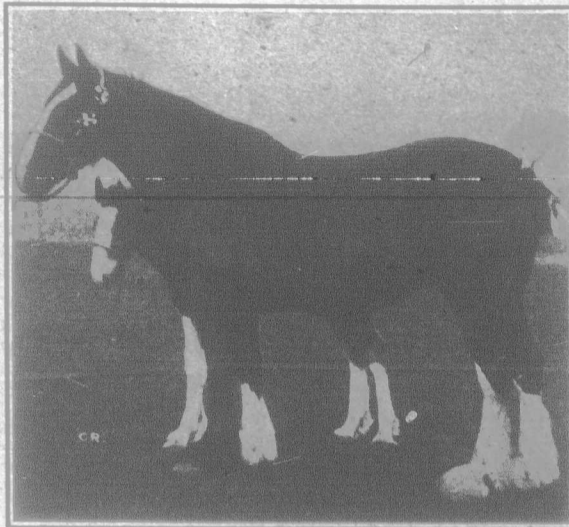
In-breeding means the breeding of closely related animals, such as brother and sister. Very often a sire is bred to his own daughter; this is in-breeding. The latter union, however, is not so close or so dangerous as breeding brothers and sisters to each other. Occasionally an experienced breeder practices in-breeding to fix certain characteristics, the union of closely related blood naturally emphasizing the characteristics possessed by both parents. In-breeding, is therefore, very useful, but it is dangerous because bad qualities are likewise transmitted in accentuated form. The famous Shorthorn bull, Foljambe, for instance, in the careful hands of Charles Collings, sired the bull, Bolingbroke, and the cow Phoenix. Bolingbroke and Phoenix were mated producing the bull Favorite. Favorite himself closely in-bred, was mated with his mother, producing the heifer Young Phoenix. Favorite was mated to this heifer, and the famous bull Comet, which brought \$5,000 in 1810, was the result of this classic example of in-breeding.

Conditioning Horses.

Fattening horses and getting them into condition are two different things. "Fat" is often the very opposite of "condition" for a well-conditioned horse has muscle, stamina and good wind. A horse which is fat only usually is found lacking in these three. In the Live-Stock Journal is found the following short discussion of conditioning horses.

"Condition" in horses is not fat—far from it—it is hard, tough, elastic muscle which may be actively worked without tiring the horse, without sweating, and without exhaustion of the vital forces, unless the exercise is utterly excessive. A horse out of condition is exhausted by a half mile or a mile trot, comes in puffing and breaks out in a sweat, while one in condition returns all the fresher in appearance for having his blood stirred. What makes the difference? Proper feeding, good grooming, and regular work or exercise, and enough of it. All exercise tires the muscles brought into play—a tired muscle needs feeding. The feed for the muscle is digested food. After any muscle has been taxed it is for some time in a condition to appropriate from the blood the proper elements to build itself up and increase its strength. When a horse is fed immediately before labor the food remains undigested until labor ceases, and then it is liable to do harm. All horsemen know that a horse should not have a feed of grain when warm or until he has cooled off; yet, when they start a horse off to any kind of hard work, or road work, before his food has time to digest he is liable to be injured by it. After labor, as soon as a horse cools off and is rested, the blood, which the use of the muscles drew to the extremities, returns and is ready to take active part in the work of digestion. Then is the time to feed.

To get a horse rapidly into condition, he should be well worked or exercised according to his strength; when brought in, vigorously rubbed off and down and when dry, cool, and rested, fed. His feed should be good hay, when his appetite is sharpest, followed by grain (oats), which in quality should be unexceptionable, and in quantity gauged according to the work he does. Fat will sweat off, muscle will not. A fat horse is liable to indigestion, sunstroke, cold, flatulence (colic), and ever so many other ills, which a horse in condition is not only free from, but if properly fed and cleaned and worked, is not liable to get. It is usually poor economy to reduce either food or exercise.



Wells Lady Ray.

Champion female Clydesdale at the Highland Show, Edinburgh.

LIVE STOCK.

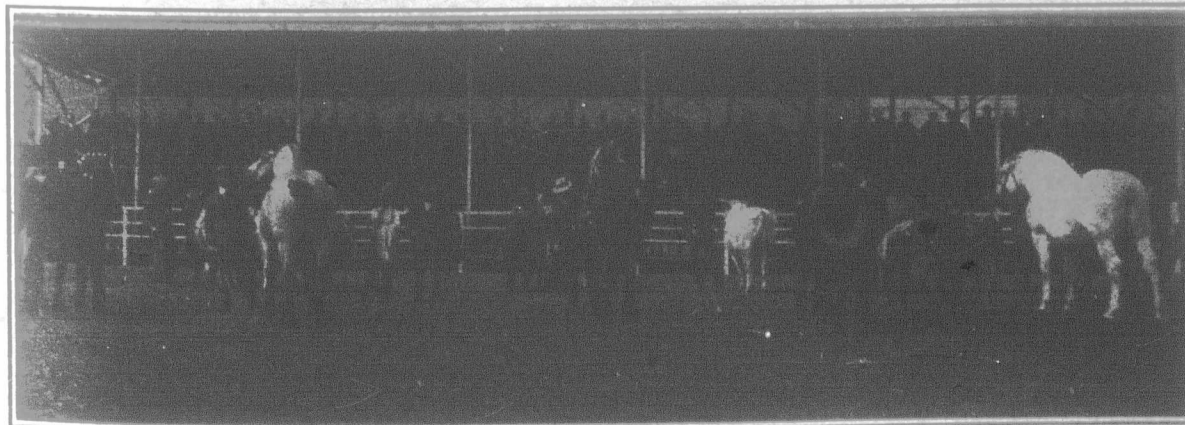
If all the live stock marketed was as good as the best the feeder's returns would be considerably greater. Aim at breeding, rearing and feeding the best. To have a lower ideal is not worthy of Canadian farmers.

In some prize lists of fall fairs we notice the word "Thoroughbred" used in connection with all classes of stock and Shorthorns are called "Durhams". Many people are still slightly astray on these words. When meaning Shorthorns the word "Durham" is obsolete and "Thoroughbred" applies to one breed of horses only. A registered or pedigreed animal is termed a pure-bred.

A tempting offer has been made for certain animals in the herd and the owner must decide whether to sell or hold. When considering the question it is well to take into account the future of the herd. If the best things are sold how is the herd to compete with that of the purchase in the future. The constructive breeder looking ahead believes the good animals are as valuable to him as to any one else and unless the price is very high holds in order not to weaken his own herd.

From many centres a number of choice breeding sows are included in weekly shipments of hogs. This is not a good sign but with the present feed prices and an uncertain hog market feeders cannot be seriously criticized for reducing the stock. However, the in-and-outs in live stock seldom come out as well in the end as the man who stays with the business through thick and thin. An old saying "when others run it is time to walk", might be applied to the live-stock business. When breeding stock is being disposed of in large numbers the past has proven it to be a good time to go a little stronger into stock.

All high-priced stock does not have a show-ring winner for a dam but it usually has a sure outstanding individuality and good pedigrees. An Ontario breeder recently sold a heifer, which might well have won in a large class at Toronto, for over two thousand dollars. The dam is a breedy little cow which was picked up at less than ordinary grade prices because she



The Five Winners of the Aged Percheron Stallion Class, Toronto, 1919.

was very thin at time of purchase. Not only has she produced a heifer of renown but now has a bull calf at her side, which unless all signs fail, will be heard from later. While not a show cow herself she produces winning stock when mated with the bull of character and form.

The Bacon Situation.

The sudden drop of over \$6 in the price of hogs has caused no little concern among farmers generally. The price of feeds and lack of confidence in the future have sealed the fate of many a good brood sow which should be retained to produce feeding stock when conditions right themselves. The whole disturbance is unquestionably caused by the arrival in England of product which must be consumed at once, and the system of control that has been adopted for the winter at least. The Live-Stock Commissioner for Canada has explained the situation, though not too clearly, in the following statement:

"It will be understood that the decision of the Ministry of Food to again regulate the marketing of bacon places Canada completely under the control of the British Purchasing Commission as regards outlet for its product, reduces to a minimum the premium of from ten to twenty shillings per cwt. over American bacon which Canada has been able to command under free trading, and subjects our markets to the decision of the British Government to get bacon prices down to lower levels."

The London Grocer (England) early in September made the following comment on the bacon trade:

"This article is under complete official control at regulated prices to all sections of the trade. The market has not yet settled down to the new conditions imposed, continued difficulties arising from the official arrangements. The situation is unsatisfactory by reason of the heavy arrivals of American reaching this country, and the circumstance that the great bulk of the offerings require prompt handling. They consist almost entirely of the inferior description of classes B and C, for which there is little requirement on the part of buyers. No improvement in the demand can be anticipated until the offerings consist of more reliable quality, which are mostly withheld from the market, only very small quantities of A class being offered. An abundance of C class goods is being released, which find little off-take from buyers, owing to the bad condition. Some of the B class bacon is fairly good, where the authorities have not been so particular over the grading, as the cold stores are filled up, and it is difficult to find a home for all of the arrivals. Despite the lower terms on which out-of-condition parcels are offered, they meet with little response from buyers. American advices as to movements in prices of live hogs are very irregular. Very little Irish bacon is forthcoming, supplies being reduced to a minimum, and the outlook is not promising, a further reduction in the killings in Ireland being notified. All of the Danish bacon recently bought by the Government has been shipped to this country."

In regard to Liverpool, the paper mentioned comments thus: "The position continues to be very unsatisfactory, the demand being very restricted, and the market quite unaffected by the upward movement on the other side. The Ministry are allocating only good which need to go into immediate consumption, holding up the better grades that will keep in store. There is a certain amount of diversity of opinion in the trade as to the wisdom of refusing to allocate a proportion of the better grade goods with those requiring immediate disposition. The poorer stuff, although subject to allowances in prices, is proving very unacceptable to wholesalers and retailers alike. The congestion at the docks and slow discharge of the steamers, coupled with the warm weather, has increased the existing difficulties, but it is expected that matters will rectify themselves in a few weeks' time and that the position will gradually right itself. Wholesalers are now tied up to dispose of their stocks to those retailers who were registered with them at the close of the previous control in March. The full maximum control prices are paid for everything except bellies, for which less money is being accepted. The maximum rates are as follows: Wiltshires, 192s. (about 42 cents per pound); Cumberland-cut, 189s. 6d.; English-cut bellies, short rib and short clear backs, 217s.; long clears, 207s.; American bellies and short clear backs, 196s. Irish bacon continues very difficult to obtain."

The Food Controller has had his difficulties and misfortunes. Large stores of bacon were permitted to spoil even before the serious strike of railway men took place, and for this he was severely criticized. What has happened to the product that should have gone into immediate consumption it is impossible at this time to say, but with transportation disorganized large quantities must have spoiled. At any rate, it appears that the control system is not popular with the trade, and when conditions permit there will, no doubt, be a swing back to open merchandizing. Evidence seems to indicate that the Government control of food stuffs will not continue after the causes which make it necessary are removed; but, of course, no one knows when that will be.

While the price of hogs may decline still further in this country during the next two-months, there is good reason for believing that next summer will see stable prices and fair returns above cost of production. This seems to be the safest interpretation for a stock farmer to put on the situation, and experienced farmers agree

that when hogs are dropping is the proper time to increase the breeding stock and get ready to meet a keen demand which is sure to exist later on.

Clean Up For Winter.

On the best regulated farms the stables, sheep and pig pens become untidy and somewhat out of repair during the summer months. When stables are not in common use, there is a tendency to leave them to pretty much take care of themselves. It will not be long now before the stock will have to be housed at night at least. If repairs are not made before the stables are in use they may not be made during the winter. Although the fall is a busy season it is advisable to plan on a day or two for putting the stable in order, and giving it a general cleaning. There are broken boards in the floor that are dangerous, some mangers are rotted out and the feed rack is out of order. Of course, the most permanent floor is concrete and many use this material, but there are stables where the wood floor is in fair condition and will do for a few years yet by doing a little repairing. Where the mangers have rotted it is well to put in a concrete bottom. A load of gritty sand or fine gravel and a barrel of cement will put bottoms in a good number of mangers. Have the bottom slightly rounding so as to avoid corners in which feed may lodge and decay. Almost invariably some of the stanchions or tie chains become broken during the summer and there is no time like the present to fix them. When winter comes it usually does so with a rush and it is well to have everything in readiness.

If the light is not good an extra window or two may be put in. A mechanic is not needed to do this. A hole can be knocked in the wall by means of stone hammer and pick and any handy man can set a window frame. Concrete may be used to fill in around the frame. Sunshine is a good disinfectant and plenty of it should be allowed to enter the stable. True some of the best herds the country has produced have been reared in low, dark stables, but what might these herds have been under conditions giving more light and ventilation. A good many stables would be a lot lighter than they usually are if the windows were cleaned occasionally. Let in the light.

It is rather uncanny how cobwebs will collect in corners and on joists and windows during the summer. Go into every corner and crevice after the dirt. Sweep over the entire stable and then bring the spray pump and disinfectant into action. There is nothing like a coating of whitewash to freshen up a stable, but it is well to add to it crude carbolic, zenoleum, creolin or other disinfectant to destroy vermin. The following is a recipe for whitewash which is satisfactory. Slake a half bushel of lime and strain it through a fine sieve. Then add a peck of salt previously dissolved in warm water, three pounds of ground rice boiled to a thin paste and stirred in boiling hot. One half pound of powdered Spanish whiting and a pound of glue that has been dissolved over a slow fire and add five gallons of hot water to the mixture. This material may stand for a few days before using but should be applied hot. This wash is suitable for either inside or outside work. Using a spray pump the wash can be driven into the cracks and crevices giving the entire surface of stable a clean, fresh, white appearance. Fix up and clean up in time for the stabling of the stock when the mercury drops and the cold winds come out of the North.

What is a Pedigree Worth?

A pedigree is an official record of the breeding of a pure-bred animal. This observation, of course, does not tell a breeder anything he did not know before but we shall begin this article with it, nevertheless, and we shall also close this discussion with it. Every breeder knows what a pedigree is, but not every breeder, unfortunately, knows how to appraise one correctly.

Throughout Canada, a great many farmers are joining, for the first time, the swelling ranks of the breeders of pure-bred cattle, horses, sheep and swine. A large number of these new recruits are not familiar with the ordinary laws of animal breeding, and they do not know how to place a valuation on the pedigrees of animals which they purchase. It is distinctly in the interests of the pure-bred stock-breeding industry that every breeder should know how to measure the worth of an animal's pedigree. The possession of this knowledge would put a premium on really well-bred stock and would gradually reduce the number of inferior animals.

The extended pedigree is the most illuminating record of an animal's breeding. It shows the entire ancestry of the animal, and by referring to herd books, or other sources, one may learn the breeding of these ancestors.

The accompanying pedigree illustrates this. The number of all the animals in this pedigree should be given to make the pedigree complete. It is quite easy, however, to put a valuation on this interesting pedigree, because the entire ancestry of Surbiton Sultan is shown. A breeder familiar with Shorthorn families and their show-ring and breeding records would place a valuation on the pedigree after one glance at it. The inexperienced Shorthorn breeder could easily find out all

about the bulls and females mentioned. He would find out that Surbiton Sultan was a very choicely-bred bull, with the blood of some historic bulls and females coursing through his veins. Further investigation would show him that Surbiton Sultan was descended on his dam's side from such families as the Lavenders and Princess Royal, and in looking at the dam's breeding, he would see that she was the product of a Bate's foundation, reinforced by Scotch-bred tops.

But some breeders would completely misread this pedigree. The prospective buyer of this bull—if the animal were offered for sale by some breeders—would be shown the name of the great sire Whitehall Sultan. "This bull is a descendant of the great Whitehall Sultan," the assiduous seller would say. "Whitehall Sultan was one of the greatest sires ever produced, and here's a bull descended from him directly. He is worth \$500 more for having Whitehall Sultan in his pedigree." Sad to relate, more than one beginner in the business of breeding pure-bred cattle succumbs to this selling talk. The ancestry of an animal is potent, but this potency decreases with each receding generation. Biologists, whose scientific deductions are accepted by all intelligent breeders, labored for years to determine how much influence the various ancestors of an animal exert on the individuality of that animal. The celebrated scientist Galton, after years of investigation and experimentation, laid down the law of ancestral heredity. This law, in brief, states that the two immediate parents of an animal contribute between them one-half of the characteristics of their son or daughter. An animal, therefore, gets approximately one-quarter of his characteristics from his sire, and another quarter, approximately, of his characteristics from his dam. An animal gets another quarter of his characteristics from his grand-parents, and as there are four grand-parents, he gets approximately one-sixteenth of his characteristics from each of his four grand-parents. He gets one-eighth of his characteristics from his great-grand-parents, and as there are eight grand-parents he gets, approximately one-sixty-fourth of his characteristics from each. From his great-great-grand-parents he gets one-sixteenth of his characteristics, and as there are sixteen great-great-grand-parents, he gets, approximately, one-third of one per cent. of his characteristics from each great-great-grand-parent—an almost inconsequential heritage. This law, of course, is varied by the individual prepotency of the animals appearing in the different generations, but if we accept it—and there is none other to accept—we see instantly that an animal's characteristics are determined largely by its parents and grand-parents. Galton's law also indicates the value of good breeding. A bad top cross would, according to its dictations, spoil an otherwise good pedigree—and every intelligent breeder knows how true this is in the actual practice of breeding.

Then what is signified by the oft-repeated "family" jargon? Just this: An animal may be descended from a certain family. The remote ancestors of this family may have been illustrious, and careful breeding may have kept the family pure and vigorous. The family may have been improved steadily; members of it winning high honors in the show-rings. If an animal belongs to this family and if its parents and grand-parents are show-ring celebrities, one may be tolerably certain that it belongs to a good family. On the other hand, a bull may be descendant, through one of his parents, of a noted family. But his connection with the family may be away back in the fourth generation, and the second and third generations may be undermined with the blood of inferior animals. A family is good or bad according to the breeding and show-ring records of its members—particularly its most immediate members. The whole history of animal breeding bears out the truth of this assertion. New families are founded every once in a while, and these families are good families if the members of them are outstanding individuals. Amos Cruickshanks, the Darwin of the Shorthorn world, created many families that became popular, because the members of them were good individuals. Bates

created a family, too—and the most fashionable family that Shorthornism has ever known—but it was no longer fashionable when the individual members of it began to deteriorate in individual excellence. If a beginner turns a deaf ear to "family" nomenclature, and selects an animal whose parents and grand-parents are notable in the breeding yard—and in the show-ring, he is dealing with the family problem in the most intelligent manner possible. It is also the simplest method of estimating the real value of an animal's breeding.

This discussion leads us straight to the short pedigree. The short pedigree, as every one knows, is an abbreviated form of the extended pedigree. One hears little criticism of this form of presenting information apropos an animal's breeding. Yet, an analysis of a short pedigree shows that it is woefully lacking in information. The short pedigree, as a rule, traces an animal back through the dam to the imported dam, and this imported dam usually provides, as in the Shorthorns, the family name. As a rule, too, the female that provides the family name has but a small influence on the animal carrying the pedigree.

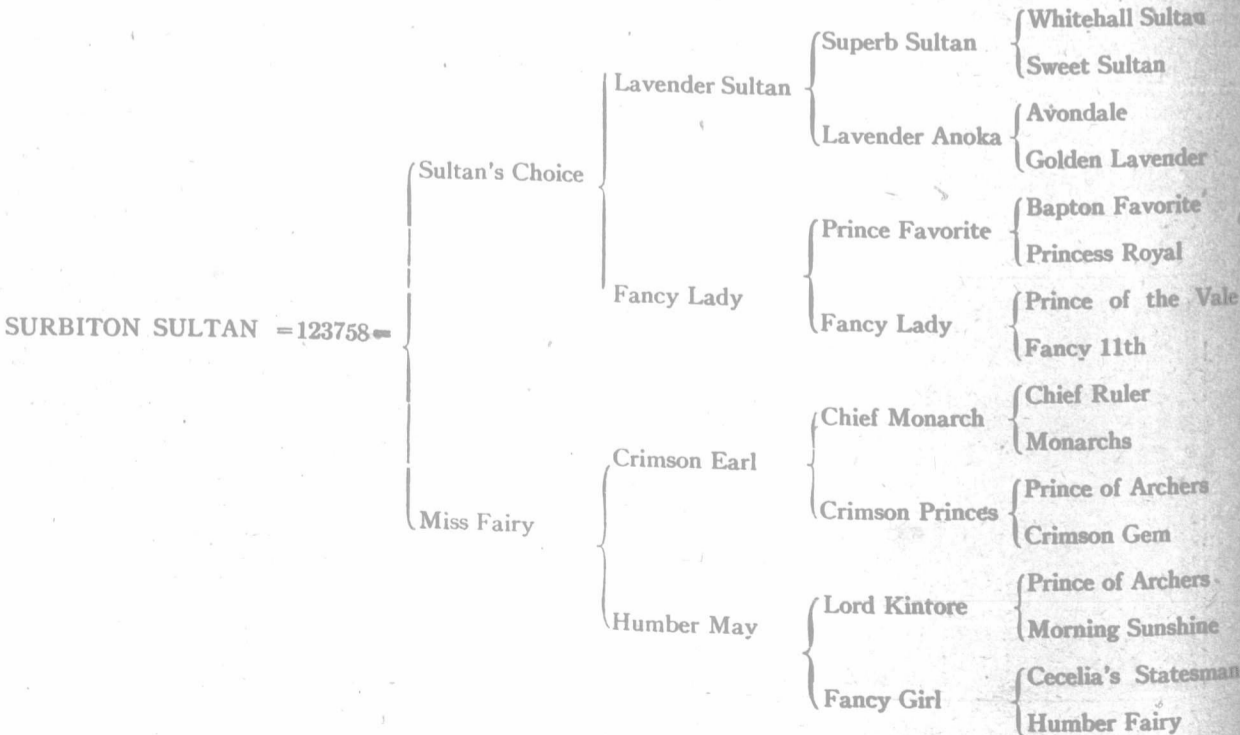
Take the short pedigree of Surbiton Sultan, the choicely-bred bull, whose extended pedigree is herewith reproduced. It would read as follows:

Surbiton Sultan.	
DAM	SIRE
Miss Fairy.....	Sultan's Choice
Humber May.....	Crimson Earl
Fancy Girl.....	Lord Kintore
Humber Fairy	Cecelia's Statesman

The extended pedigree mentions thirty ancestors; the short pedigree mentions just seven. The extended pedigree shows the rich blood inherited by Surbiton Sultan through his sire's side of the pedigree. It shows a great array of celebrated bulls—Sultan's Choice, Lavender Sultan, Superb Sultan, the great Whitehall Sultan and his illustrious son Avondale. The short pedigree mentions none of these great bulls. The extended pedigree would show instantly if any of the ancestors of Surbiton Sultan had been inbred; the short pedigree gives no such information. There is too much information eliminated from the pedigree to make it as instructive as a breeder should desire.

Some men glorify pedigrees. Men have paid huge sums to buy fashionable pedigrees. Such men do not consider the individual excellence of the animal which carries the pedigree, and it is safe to say that they do not know either the practice or principles of animal breeding.

A pedigree is the record of an animal's breeding. It can never be anything else, and the record may be worthy of talking about, or it may be so bad that it cannot be discussed by the owner with profit to himself. The paper a pedigree is printed on or the official seal does not make the pedigree valuable. The pedigree is made valuable or worthless by the animals whose names appear on it. If the animals are all good ones—or if the first three generations are composed of meritorious animals, the pedigree is worth having—if one owns the bull, or cow that goes with it. "Like 'tends to beget like," is a breeding axiom as old as animal husbandry, and a record of the breeding of good animals tells us that this ancestry will produce good stock. Likewise, a breeding record of poor animals tells us that such an ancestry cannot help but produce poor animals. Keeping these facts in mind, what more pathetic spectacle than an uninformed owner of a scalawag pure-bred proudly acclaiming the fact that his pedigreed mongrel is a Bluenose, or a Bumblebee. Or what is more fatuous than the pedigree linguist, who is forever linking up modern degenerated pure-bred rubbish with celebrated ancestors, long since dead and buried. Truly, many celebrated old bulls and females have had their reputations badly smirched because of their present-day forty-second cousins claiming kindred with them.



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SIRE
Sultan's Choice
.....Crimson Earl
.....Lord Kintore
.....Cecelia's Statesman

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Whitehall Sultan
Sweet Sultan
Avondale
Golden Lavender
Bapton Favorite
Princess Royal
Prince of the Vale
Fancy 11th
Chief Ruler
Monarchs
Prince of Archers
Crimson Gem
Prince of Archers
Morning Sunshine
Cecelia's Statesman
Humber Fairy



Get of E. P. Beauty's Prince.

Winners of the Angus class—three, get of one sire—at Toronto, for J. D. Larkin, Queenston.

Parturient Troubles in Cows.—Con.
Metritis or Inflammation of the Womb.

Inflammation of the uterus or womb (metritis) may be limited to one or both of the internal layers of the organ, or it may extend to the outer covering—the peritoneum, when it is known as "metro-peritonitis," and produce certain symptoms, while the introduction of septic matters into the blood, which is often a result of this inflammation, will give rise to symptoms of pyaemia (blood poisoning). The latter complication, from the febrile indications which accompany it, is called "parturient fever." There are many cases of metritis and metro-peritonitis without being complicated with pyaemia, at least to any marked degree; but the symptoms of fever which accompany the former are generally more or less apparent, and it is often hard to discover where septic infection has taken place, the high temperature and accelerated condition of the pulse being the first symptoms observed, and these usually appear at an early stage of metritis.

Symptoms.—The symptoms may be apparent very soon after birth, but seldom appear before the second or third day or after the seventh or eighth day.

After parturition the animal generally appears to have quite recovered from the effects of the act, eats and drinks well, yields a normal quantity of milk, cares for her offspring, and there is nothing to indicate the presence of disturbance. The temperature of the rectum is about normal, except in cases where birth has been difficult and the genital canal has been injured or roughly handled. Then the rectal temperature may be high. Well-marked increase of temperature is the first indication of the disease. At the commencement of this rise in temperature, there is well-marked rigors (striving) which often takes place at night, hence is not noticed. The patient becomes dull, does not care to move, appetite and rumination cease, the pulse is small, hard and frequent; secretion of milk decreases, and soon almost entirely ceases, the udder diminishes in size and becomes flaccid; the respirations are hurried and shallow, the mouth hot and pasty, the usable mucous membranes are highly infected, while the ears and horns are usually warm. The patient grinds her teeth, and shows symptoms of colicky pains, she may lie down, but seldom retains the recumbent position for any length of time, as the pressure thereby caused upon the uterus doubtless increases distress.

The lips of the vulva become tumified and parted and discharge a fluid, at first serous, and either transparent or having a yellow, chocolate or reddish tinge, then it gradually becomes thicker and more abundant. Manual exploration of the vagina discovers it to be hot and sensitive. Pressure upon the right side of the abdomen usually causes pain. Defecation is painful and the faeces are hard. After a time the patient may persist in lying, which is probably due to partial paralysis of the hind quarters. The rumen is usually more or less distended with gas, and there are usually eructations of gas or even regurgitations.

Treatment.—As the disease, whether complicated or not, is always serious and generally rapid in progress, hence prompt, rational and energetic treatment is necessary.

The vagina and womb should be well flushed with warm water introduced by the use of a veterinarian injection pump, a large syringe with a long nozzle, or a couple of feet of soft rubber hose with a funnel inserted at one end. When the latter is used, the free end of the hose is introduced into the womb, the funnel end elevated and the fluid poured into the funnel. Any visible wounds or wounds detectable by the hand when introduced into the canal should be dressed 3 times daily with 1 part carbolic acid to 20 parts sweet oil. After the uterus has been cleansed with warm water

about a gallon of a warm 1 per cent. solution of one of the coal-tar antiseptics or a solution of boracic acid 1 oz. to a quart of warm water should be injected into it daily.

When pain is acute it should be combatted by the administration of 2 drams of the solid extract of belladonna in a quart of warm water as a drench, as the symptoms indicate its use. Opium in any form should be avoided as it increases the tendency to constipation. Internal antiseptics should be given as 50 to 60 drops of carbolic acid in a pint of cold water as a drench 3 times daily, or 6 to 8 drams of hyposulphite of soda given in the same way. As there is always a tendency to constipation, a laxative of 1½ pints of raw linseed oil should be given as the condition of the bowels indicate. To reduce temperature the administration of quinine in dram doses usually gives good results. The administration of aconite for this purpose should be avoided, especially where the pulse becomes rather weak. In cases where the patient should be kept up by drenching with boiled flax-seed or oatmeal gruel. When the patient shows well-marked weakness she should be given stimulants as 2 to 3 oz. sweet spirits of nitre or aromated spirits of ammonia, or a cupful of whisky or other liquor every 5 or 6 hours. When the patient shows symptoms of recovery she should be given tonics, as a heaped tablespoonful of equal parts of powdered sulphate of iron, gentian, ginger, nux vomica and bicarbonate of soda 3 times daily, and be fed on good feed and kept as comfortable as possible.

Vaginitis.

Vaginitis or inflammation of the vagina occurs as an accompaniment of inflammation of the womb (metritis), but is frequently met with as a primary disease, due to protracted and laborious delivery, which necessitates manipulatory efforts, the use of instruments, etc., the passage of a very voluminous foetus or other conditions which may irritate, bruise or

wound the lining membrane of the organ. The inflammation may lead to, or be complicated with, ulceration, gangrene or mortification more or less well marked. The lips and lining membrane of the vulva become more or less swollen, the latter being of a deep or bright red, brown or livid hue; there also may be patches of congestion with wounds or abrasions. The local temperature of the vagina is generally greatly increased, while, in the earlier stages its walls are usually dry and sometimes adhesive. Urination is generally painful and difficult, constipation is often present, and there is sometimes well-marked itchiness in the region of the vulva, which is indicated by the continued attempts the animal makes to rub the part. If the inflammation is severe and extensive the general temperature will be increased.

When the inflammation has existed for two or three days, the mucous secreted and expelled is greatly increased in quantity. It is at first a serous limped fluid, sometimes streaked with blood; then it gradually becomes thicker and somewhat purulent, soiling the tail, thighs and hocks, and sometimes becoming so acrid as to cause the falling out of the hair and excoriation of the skin.

Simple vaginitis, of itself, is not a serious affection, and the inflammation often subsides spontaneously in the course of a few days, or readily yields to treatment. In some cases, however, it assumes a troublesome, if not a serious character. When gangrene ensues there may be infective inflammation of the surrounding parts, and large portions of the serous membrane, or even the skin of the lips of the vulva, may slough, while the discharge is plentiful and fetid.

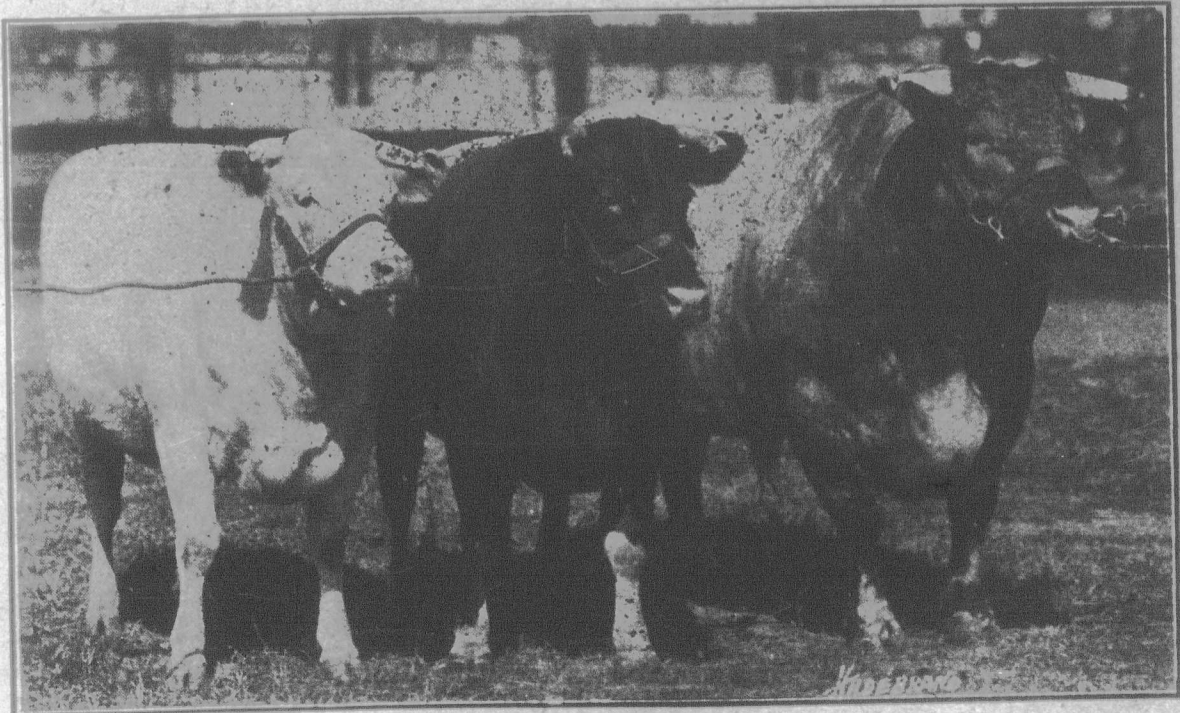
Treatment of simple vaginitis consists in cleanliness, attention to diet, as feeding on laxative, easily-digested feed, and providing all the pure water the patient will drink, also injecting into the vagina 3 times daily a mild astringent and antiseptic as a solution of sulphate of zinc 1 oz. to a quart of warm water. When there is a tendency to acute inflammation and gangrene, or ulceration, sloughing or even abrasions exist, disinfecting and antiseptic treatment must be given. The patient should be given 40 to 60 drops of carbolic acid in a pint of cold water 3 times daily, and the vagina flushed out as often with a 5-per-cent. solution of one of the coal-tar antiseptics.

Leucorrhoea or Whites.

Leucorrhoea is that condition in which there is a discharge (generally irregular) of a fluid usually of a white, glutinous and odorless character, from the vulva; or it may be purulent, muco-purulent or even chocolate-colored and sour-smelling. It consists in chronic inflammation of the mucous membrane of the womb, and sometimes also of the vagina.

Symptoms.—The patient does not exhibit any well-marked constitutional disturbance. The appetite, yield of milk, general health and thriftiness are not usually impaired, at least for a considerable time. The discharge is usually irregular, none may be noticed for several days or even longer, and then a large quantity will escape, especially when the animal is lying, at other times there will be discharge of less quantities and more frequent when she is in motion or during micturition, while in other cases the discharge is more regular and in less quantities. In cases where the decrease is of long duration and the discharge copious, there is more or less loss of appetite, condition, yield of milk, and general thriftiness. Symptoms of oestrus are often more frequent than normal, but conception does not readily occur, and if it does occur, there is a strong probability that its period of pregnancy will not reach its full term. The mucous membrane of the genital canal is pale, relaxed and insensible in most cases, while in others it may be roughened by granulations. In rare cases the tissues lining the canal become enlarged and hardened.

Treatment.—When treatment is given in the early stages, cleanliness and injections of astringents, as in



Get of Gainford Marquis.

Winners of the Shorthorn class—three, get of one sire—at Toronto, for J. A. Watt, Elora, Ont.

cases of vaginitis, are usually effective. When it has been in existence for a long time however (it may continue for months or even years) it is generally very obstinate, tedious and hard to treat. The uterus or vagina, or both if affected, should be thoroughly flushed out twice or three times daily with a warm, two-per-cent. solution of one of the coal-tar antiseptics. This can best be done by the use of a veterinarian's injection pump, but a large syringe with a long nozzle may be used, or about 3 feet of rubber hose with a funnel inserted into one end. The free end of the hose is passed into the womb, the other end elevated and the fluid poured into the funnel, when it will gravitate into the womb.

In addition to this the patient should be given internal antiseptics as 6 drams of hyposulphite of soda or 40 to 60 drops carbolic acid in a pint of cold water given as a drench 3 times daily, until the discharge ceases. If the patient shows constitutional symptoms, tonics as a tablespoonful 3 times daily of equal parts powdered sulphate of iron, gentian, ginger and nux-vomica should be given, and she should be well fed.

WHIP.

Fall and Winter Sales.

It is customary for a large number of auction sales to be held during the fall and winter months. Some are complete dispersion sales, and others are the selling of surplus stock. Already this season a considerable number of live-stock sales are announced in the agricultural press, and no doubt a number of breeders are planning on holding a sale sometime during the winter. It should be borne in mind by all anticipating holding a sale that the first impression that prospective purchasers get of the stock has a good deal to do with the price which will be paid. When an animal comes into the sale-ring in a thin, rough condition, it gives a poor impression, and consequently bidding is less spirited than when the animal is in sale-ring fit. It pays well to have the stock in condition and well halter-broken. A difference in price will, as a rule, pay for feed and extra attention necessary in fitting the animal. The breeder who places his stock in the market in poor condition is the loser, but what is his loss is the purchaser's gain.

Whether grade or pure-bred stock is to be sold, the date of sale should be set a number of weeks in advance, and then every effort made to make the animals appear to the best possible advantage. This entails having them in good flesh, keeping them well-groomed, and training them to lead and stand. When an animal is so ill-mannered as to drag its attendant around the sale-ring, and possibly make a drive at some of the sale-ring spectators, the prospective purchaser concludes that the animal is vicious and he is not very particular whether he buys or not, and certainly will not pay a big price. A month or five weeks of good care and feeding will make a vast difference in the appearance of the animal. However, it will pay to have more time devoted to the fitting. At some of the large pure-bred sales one is impressed with the evidence of care taken in conditioning the animals; not a particle of dirt is to be found on the body, the horns are polished, and the hair is combed to show the animal to the best advantage; high prices predominate at such sales, this being the case, will it not pay the breeder holding a small sale of possibly, not specially fashionably-bred stock, to copy the big breeders in the method of bringing out his own. Conditioning and training count in the grade as well as the pure-bred sale-ring, with the small herd as well as the large one.

Commence in plenty of time and feed a common-sense ration, it is not necessary nor advisable to pamper the animals. Besides the ordinary roughage and coarse grain grown on the farm, it is well to feed a little oil-cake or cotton-seed as both these feeds help to give the animal a sleek appearance. Silage or roots are excellent feeds for all kinds of stock, and especially for fitting animals. Roots are preferred to silage by some feeders, they are a feed and a conditioner as well. Of course silage also adds succulency to the ration, and is a valuable feed for ruminant animals of all ages. It does not pay to crowd the animal unduly just the week or two before the sale, as there is a danger of having them off their feed by sale-day; both ends of the animal should be watched, at all times, more especially when feeding heavily on grain.

When planning the sale-date, it is well to arrange it so that the majority of the cows will be about due to freshen or at least well advanced in calf. It is seldom that a cow bred but a few weeks previous to sale will bring her value. The purchaser will not take the risk of the cow turning out to be a non-breeder. In many instances it pays to sell a newly-freshened cow with calf at foot.

It pays to have a good sale-ring, this is where many fall down; they do not provide for the comfort of the prospective purchaser. Having the bidders standing around the barnyard with their backs against the chill north wind is not advantageous to the holder of a grade or pure-bred sale. Have the sale under cover if possible; if this is known, inclement weather does not deter breeders from attending. Where a building is not available, a tent can be rented for a small sum. Do not allow the crowd to press in upon the animals, have a large ring roped off, beyond which no one but those engaged in the selling of the animal can pass; this will give a larger number an opportunity of viewing the animal in the ring. At small expense elevated seats can be arranged around the ring. If this is done, it makes it possible for a good many more people to get a view of the animals being sold.

With pure-bred stock it is necessary that catalogues giving the breeding and show-ring or milk records of the

animals should be published. This gives the purchasers an opportunity of studying the breeding. Care should be taken that the ages of the animals, date of breeding or freshening, are accurately printed. If a number of corrections have to be made on sale day it has a tendency to give a bad impression. All animals catalogued or advertised to be sold should be disposed of; this buying in of animals which the breeder does not think are selling as high as they should, does not do the breeder any good, especially if he plans on holding an annual sale. The public soon get wise to such a practice, and are not particular about attending such sales. In order to secure the highest price at auction sales, it is important that the animals be in a condition to attract the eye, that they are well trained, and that they have good breed type and conformation.



Suffolk Ram.

Champion at Toronto for Jas. Bowman, Guelph.

Increasing Ontario's Flocks.

Compared with some countries not so favorably situated, Ontario is woefully short in sheep. During the past three or four years the flock has been as profitable a branch of farm as any, mutton has been selling at a fair price, and wool has been particularly high. That these prices will continue no one can say, but if they do decrease somewhat there should still be money from sheep when investment, labor and equipment are considered. The present flocks might be increased and many new flocks founded. The damage to flocks by dogs is one reason given why more do not keep sheep. Only recently we heard of several flocks which have been mutilated by the ravages of stray curs, this is something which the sheepmen will have to contend with even though Ontario has as good a sheep law as there is in the world.

At this time of year surplus stock is being disposed of, and there is an opportunity for new breeders to pick up foundation stock. A lamb, shearling or two shear is possibly the best to buy, although a three-shear ewe in many cases will be a profitable investment. Always look at the mouth of a ewe and if the teeth are going, do not buy. Ewes without teeth, those which are poor milkers or vicious with their lambs should be culled out and sent to the butcher rather than sold to a breeder. The flock should be culled every year, and thrifty young stuff kept in the place of the old or unprofitable stock discarded. It is not necessary to start with a large flock, it is better to buy a few good head of young stuff and mate them with the best sire obtainable. In a very few years the increase will make a large, select flock, especially if culling is systematically done. A breeder is penny-wise and pound-foolish to purchase a second-grade ram just because he is cheap. A poor ram is dear at any price, as his influence on the flock extends over several years. The ordinary flock can soon be turned into an extraordinary one, especially from a quality standpoint, by the breeder exercising care in the choice of a flock header.

THE FARM.

Seed Control Act Revised.

A revision of the Seed Control Act recently became effective, which alters several features of the regulations and renders new ones operative. This revision is chiefly in regard to the definition of noxious weeds and standards for seed grains. The regulations now in force are given herewith:

NOXIOUS WEEDS.

1. The species of farm weeds which shall for the purpose of the above-mentioned Act be included within the meaning of the term "Noxious Weeds" shall be as follows: Wild oats, twitch or quack grass, docks, Russian thistle, purple cockle, campions (including white cockle, night-flowering catchfly, and bladder campion), cow cockle, stinkweed, false flax, ball mustard, wild radish, wild mustard and other wild Brassica species, hare's-ear mustard, tumbling mustard, wild carrot, field bindweed, dodder, blue bur or stickseed, blue weed, ribgrass, ragweed, ox-eye daisy, Canada thistle and perennial sow thistle.

TOLERANCE WITHIN MEANING OF "FREE."

2. The maximum proportion of seeds of noxious

weeds that may be tolerated in any seeds without affecting their character as being free from the seeds of the said weeds within the meaning of section 6 of the said Act, shall be as follows:

(a) For seeds of oats, barley, wheat, rye, buckwheat, mangels, vetches or beets and other seeds approximately similar in size, one weed seed in one pound avoirdupois.

(b) For seeds of flax, millet or other seeds approximately similar in size, one weed seed in one ounce avoirdupois.

(c) For seeds of sweet clover, white clover, crimson clover and grasses, five weed seeds in one ounce avoirdupois.

3. The maximum proportion of seeds of noxious weeds that may be tolerated in any seeds without affecting their character as being free from the said seeds within the meaning of grade Extra No. 1 as defined in paragraph (a) Section 8 of the said Act and Clause 4 hereof shall be one noxious weed seed in one ounce avoirdupois, provided, however, that the weed seeds tolerated in this proportion shall not include those of twitch or couch grass, bladder campion, wild mustard, wild carrot, ox-eye daisy or perennial sow thistle.

SEEDS WHICH MAY BE SOLD UNDER SPECIAL GRADES.

4. The seeds of sweet clover, white clover, grasses and millet may be merchandised under the regulations and grade designations defined for timothy, red clover and alfalfa seed in sections 7 and 8 of the said Act.

5. Cereal grain, flaxseed and corn for seeding purposes may be merchandised under the grade standards and regulations defined in clauses 6, 7, 8, 9, 10, 11 and 12 of these regulations, and any grain so merchandised which contains more noxious weed seeds or is of lower germination than is defined by the standard of the grain designated shall be deemed to be sold, offered, exposed or had in possession for sale in violation of sections 6 and 10 of this Act.

SEED GRADE STANDARDS FOR WHEAT, OATS, BARLEY AND RYE.

6. Extra No. 1 seed wheat, seed oats, seed barley or seed rye shall consist of a correctly named and approved variety, shall be practically free from other varieties, shall contain not more than 50 kernels per pound of other grain, including black or domestic oats or yellow varieties of oats, shall be free from noxious weed seeds, shall be well cleaned and graded to remove light and small kernels, common weed seeds and other foreign matter; shall be sound and of good color; shall weigh not less than two pounds per measured bushel more than the standard weight for grain of the kind, and shall be capable of germinating at least 90 per cent.

7. No. 1 seed wheat, seed oats, seed barley and seed rye shall consist of at least 95 per cent. of one variety or type distinguishable from an examination of the threshed grain; shall be reasonably free from other kinds of grain; shall be free from noxious weed seeds within the meaning of the said Act (see paragraph (a) clause 2 of these regulations); shall be well cleaned and graded to remove light and small kernels, common weed seeds and other foreign matter; shall be sound and of good color, shall weigh not less than the standard weight per measured bushel of grain of the kind and shall be capable of germinating at least 80 per cent.

8. No. 2 seed oats and seed barley shall be the same as No. 1 in all respects except that it may contain slightly more foreign matter than is permitted in grade No. 1, but not including any excess of noxious weed seeds, excepting wild oats which may be tolerated in a proportion not exceeding ten in one pound of grain.

GRADE STANDARDS FOR FLAX-SEED.

9. No. 1 flax-seed for seeding purposes shall be mature, sound, dry and sweet; shall be practically free from seeds of other cultivated plants; shall be free from noxious weed seeds within the meaning of the said Act (see paragraph (b) clause 2 of these regulations); shall be well cleaned and graded to remove light and damaged kernels, common weed seeds and other foreign matter, and shall be capable of germinating at least 90 per cent. Certificates for this grade may be issued for Canadian fibre flaxseed, provided that the seed is accompanied by an affidavit of pedigree or certificate of registration that is satisfactory to the Chief Inspector of Seeds.

10. No. 2 flax-seed or Canadian fibre flax-seed shall be the same as No. 1 in all respects, except that it may contain noxious weed seeds in a proportion not exceeding five in one ounce of flaxseed.

GRADE STANDARDS FOR NO. 1 SEED CORN.

11. No. 1 seed corn, whether on the cob or shelled, when sold, offered, exposed or held in possession for sale, for seeding in Canada, shall be plainly marked with:

- the correct variety name, and
- the province or state where grown.

No. 1 seed corn on the cob shall consist of sound, well-developed ears that are reasonably uniform and typical specimens of the variety named, shall be well cured and shall be capable of germinating at least 95 per cent.

No. 1 seed corn shelled shall consist of sound, reasonably uniform and typical kernels of the variety named, shall be well cleaned and graded, shall contain not more than 16 per cent. moisture, and shall be capable of germinating at least 95 per cent.

In the Fall of the Year.



"When the Frost is on the Pumpkins and the Corn is in the Shock."



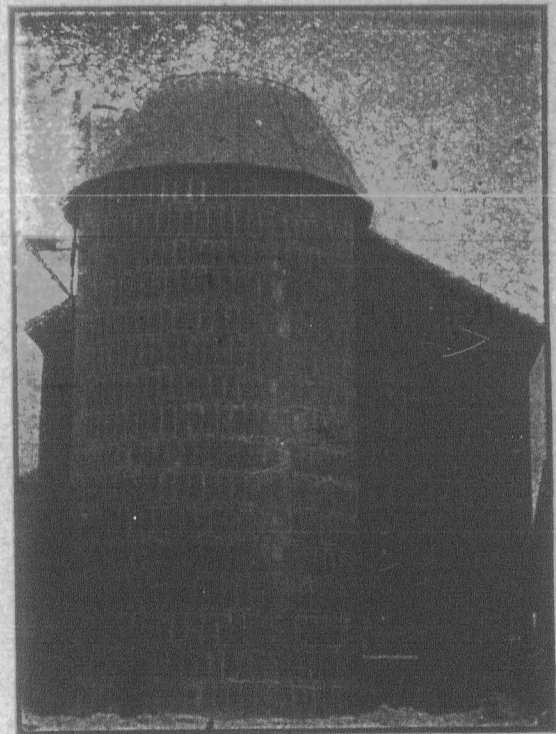
The Winner at a Past Plowing Match.



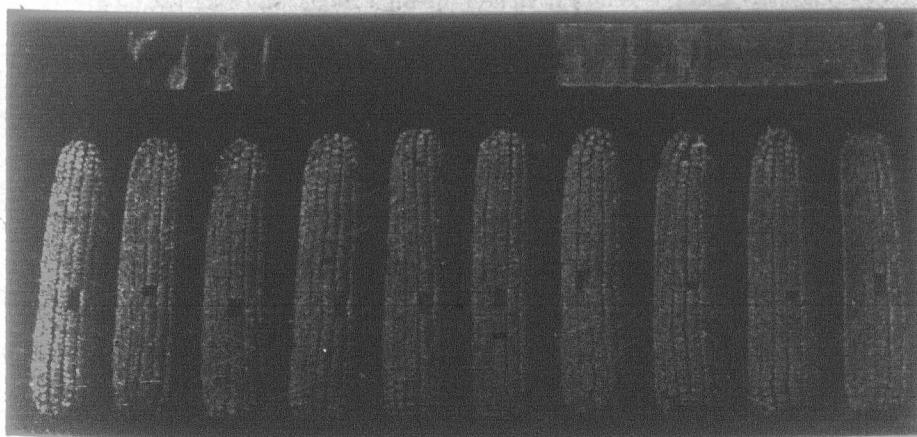
The Golden Hoofs Following Their Leader to New Pastures.



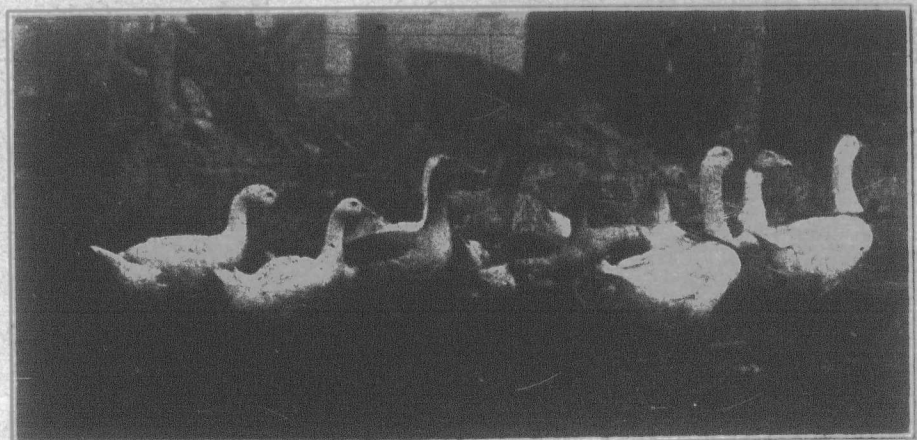
Harvesting Potatoes in the East.



Full of Canned Corn for the Cattle.



A Good Standard to Adopt When Selecting Seed Corn.



Little They Know How Near is Thanksgiving Day.

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The Mangel Crop.

Although the past season has not been particularly favorable for roots there are many fair fields of mangels. This class of roots are especially prized by dairymen and hog feeders. They do not taint milk as do turnips and hogs relish them more than turnips, possible because they are not so firm and contain more sugar. Although they are a watery feed containing only about 9.5 per cent of dry matter they produce an abundance of feed per acre owing to the heavy yield. At one time the long red growing principally into, instead of out, of the ground was grown. While the yield was large the task of harvesting was arduous indeed. The sugar mangel is now grown to a greater extent. It not only is a little higher in dry matter content but is much easier to harvest.

Mangels are good for all classes of stock, but should not be fed for too long a time to rams or wethers, as there is danger of producing stones in the urinary organs. They are an excellent feed for cows, and experiments have proven one pound of dry matter in mangels to be equal in feeding value to one pound of grain or eleven pounds of mangels equal a pound of grain. Thus with the present price of grain the value of a ton of mangels can be estimated. However, they are a conditioner which gives them a higher value than would be arrived at when beginning the basis of grain prices. Practically all the dry matter in roots is available. Results of Experiments given in "Feeds and Feeding" by Henry and Morrison show seven and one-half pounds of mangels to be equal in feeding value to a pound of barley meal. On a basis of the present price of grain, an acre of mangels of average yield would be worth nearly one hundred dollars.

Considering their value care should be taken to lift and store mangels with the least possible loss. Some top with a hoe and harrow out, but while this is the easiest method it is not necessarily the best. Mangels blend considerably when cut and for this reason it is advisable to pull by hand and twist the tops off. If done before a severe frost this is not a difficult task as the leaves snap off fairly easily. A convenient method is for a man to top and throw four rows into one. This saves time in gathering. Mangels are more easily injured by frost than turnips, consequently should be given the preference in the root cellar. They will also keep fairly well in a properly covered pit. Whenever stored it is essential that there be ventilation without frost.

About Farmers' Clubs.

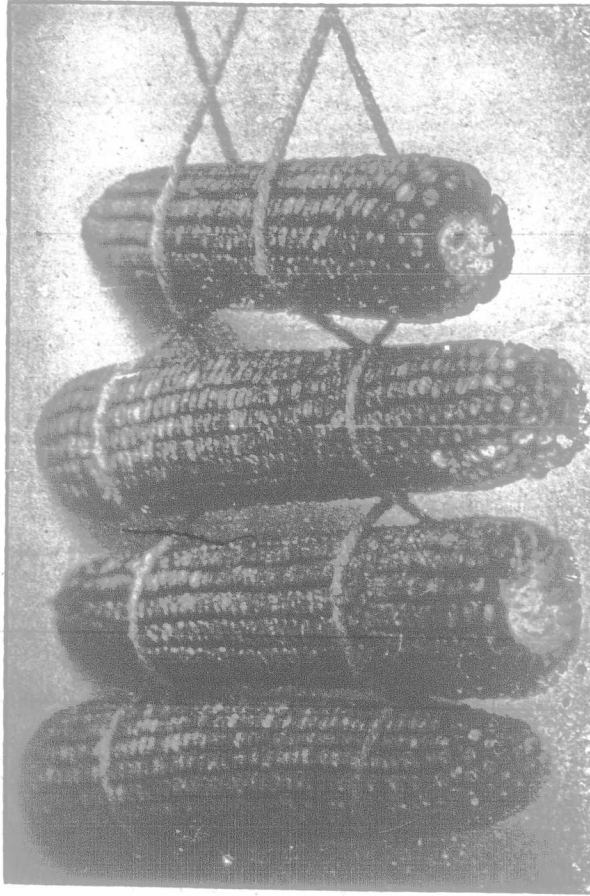
EDITOR "THE FARMER'S ADVOCATE":

When the Farmers' Club was being introduced throughout this county it was my privilege to be appointed Secretary-Treasurer of a newly organized club in the vicinity where I then lived and consequently I was in a position to get a look at the inside machinery of this agricultural dreadnaught. The representative who addressed us that evening and who was Father to the little club born that night seemed very anxious to impress upon us all that this was to be no aggressive movement and care should be taken to in no wise interfere with our local merchants in their lines of business and livelihood. A good child does as it is told and in consequence we soon found that little else was left for us to do, for no matter what lines we took up we found experienced rivals already in the field and consequently, for lack of exercise, our little club perished.

To-day, looking at farmers' clubs as a bystander, I notice a great change in their constitution. Where they once feared to tread now they are dancing the war dance and shouting their battle cry of "Down with the Profiteers." I glory in their ambition and am truly glad that they have dug up the hatchet and made ready the scalping knife for the top-not of the middleman and the manipulators. I do not pretend in this brief article to go into the details of the conflict but want to touch upon some points where I think the clubs fall down sadly. I am speaking, mind you, only of those clubs whereof I know. None of these have so matured as to assume the responsibility of shipping their products past the middleman's door but they are trying to do their own buying, or at least their representatives are endeavoring to do it for them, and it looks to me as though they are making a sorry mess of it. I want to say right here that I would like to see the farmers make a success of this squeezing out of unnecessary middlemen but I don't believe it can ever be accomplished under the present system. And it isn't the farmers' fault either. Around here it is marvellous how loyal they are to the cause. How they stand for the service given by "Headquarters" is beyond the patience of Job. I know how long they would put up with such catering from a storekeeper. It has been my pleasure, or rather sorrow, for several years to be counter-hopper to the fastidious public and unless one is Jonnie-on-the-spot with the goods and the prices o.k. there is not much business coming. Therefore, knowing how erratic and impatient is the public, I say it is no wonder to me that the farmers' club is not a marvellous success from a buying standpoint, and that is the angle from which I am talking.

When sugar is on the want list heads are counted and the order goes to headquarters, prices to be \$11.15, subject to "change without notice", and consequently a week, ten days, or two weeks later, at some inconvenient season, when sugar has been purchased at town in order to save the over-ripened fruit, and obtained at \$11 trade, the 'phone rings and the Secretary's voice tells you that the sugar has come. You just catch him in time to ask the price and bang up the receiver as the vibrations of \$11.25 reiterate against your ear drums.

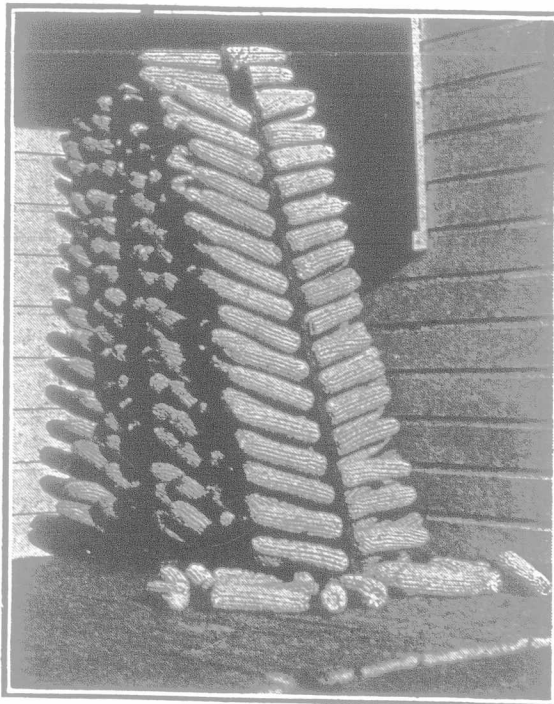
Last winter certain members thought they were getting stalled on baker's bread. Others condemned the flour from the local mill and when quotations were read out at the next meeting of the Club a rush order for two tons went in. The patrons of Jones the baker became more and more dissatisfied and the users of home flour all but perished with indigestion long ere the new flour arrived. First came an acknowledgement from the milling company of their order; later an apology saying "orders were behind" and finally the shipping bill. Then a few days later along come the flour invoiced at prevailing prices and the raise.



The String Method of Hanging Corn.

I could tell you of a dozen such disappointments, delays, and annoyances that are being handed out to members of the farmers' clubs in this vicinity under the present system of autocratic buying. I have talked with not a few members and they admit the conditions most unsystematic and unbusinesslike.

Truly "in unity lies strength" and I agree that it is very essential for the farmers' clubs to be held together by some central representative organization, but the business of such I contend should be purely executive.



Corn Impaled on Nails for Drying.

If the Farmers' Clubs want to cut out the middleman, if they want to get actual and efficient as well as independent service and get down to buying and doing business on the rock bottom then there is only the short cut and simple way to it by having central stores of their own with a competent, experienced and trustworthy man therein to handle their business and meet competition.

The grain growers out West have given this a try out, and they have found that they not only get their goods much cheaper but that the stores are a going concern, pay not only all their own expenses but have a satisfactory dividend each year to the credit of the stockholders.

For instance near here is a depot at which several clubs, I understand, have been represented by headquarters with a convenient warehouse. What I suggest is that those clubs concerned get together, raise stock, and open up a general store, handling such staple lines of goods as their wants, day from day, shall dictate. They could get their requirements for the asking at first prices, their store would catch a lot of floating trade and would eventually become the pride of the community and instead of members falling away from the clubs there would be a stampede for membership for where there is anything that looks like a hand-out humanity scrambles to be in it.

Lambton Co., Ont.

W. A. EDWARDS.

Selecting and Storing Seed Corn.

It has been a good many years since corn in Ontario had such a splendid opportunity to harden and mature. Up to the time of writing, over a large section of Ontario, there has been no frost to affect the crop, and all the time the ears have been hardening, the germ has been storing up life and vitality, and the whole kernel has become replete with food material, either for live stock or to feed the little corn plant within when it awakens from its long sleep in the spring. Throughout many districts where silos are the rule, much corn has been ensiled that was amply fit for husking and, in a great many cases, sufficiently matured for seed. It has been a long time indeed, since there were so many loose cobs to gather from the field after the rush of filling was over, and the quality of silage to be fed this winter ought to be superior, to say the least. The crop, as a rule, has not been a heavy one; a little less rain in the spring and a little more during summer would have made a better season, which, however, has been particularly favorable in one regard—a great quantity of corn has matured sufficiently for seed, and there should be no dearth of this commodity throughout the country next spring if this year's product is properly selected and stored. A great many have already provided for next season by preserving the best cobs, but unless these are properly dried and safely stored for the winter it will be hazardous to plant the seed in the spring. In regard to corn it is better to make a rigid selection and then give the chosen sample every possible care and attention. A bushel of corn will plant in the neighborhood of three to five acres, depending upon whether it is planted in hills or drills, and the thickness of sowing. The quantity of seed required to plant ten acres is, therefore, not large, and quality is more essential than quantity.

In selecting corn for seed, it is well to give attention to certain fundamental principles which apply generally. While it is not possible to state the exact length and circumference of an ear of corn for all varieties, experts are fairly well agreed that the best length for an ear of dent corn is from 7½ to 9½ inches, and the circumference, measured at one third the distance from butt to tip, 5½ to 7½ inches. In dent corn there is a certain ratio between circumference and length which is best; the circumference should be three-quarters of the length.

The rows on an ear of corn should be regular, there should not be an extra number at the butt, nor a few rows dropped towards the tip; this is not a fancy point merely. Regular rows mean more corn. The kernels should be fairly uniform throughout, the kernels toward the tip are always smaller than the others, and show less dent, and those near the butt are also less dented, but are thicker and heavier than the average. However, an accentuation of these differences is to be avoided.

The most important part of the ear is the central portion, that is where most of the grain is found, and it should be full and strong. Shapes to avoid are the cylindrical (those of the same thickness from butt to tip) allowable in flint corn but not in dent. The too tapering (in these the yield is diminished) and those with enlarged butts. The ideal ear is strong in the centre, tapers slightly towards the tip for about three inches, has full rounded butt and full tip. Too much attention in selecting seed ears, to having butts and tips well covered, without due regard also for proper length of ear, has resulted in some cases in shortening the ear unduly.

The best shape of kernel is one that is broadly rounding and wedge-shaped; such is best for either seed or feed. The very wide, with much rounded edges are to be avoided, and on the other hand those of the shoe-peg type are also undesirable. The sides of the kernel should be slightly rounded with width carried well up to a square shoulder; the point should be plump. The germ is towards the point, and is the part of the grain richest in oil. Some of these features may not have their full force when corn is grown for silage instead of for grain; however, if one looks for these features in seed corn he will obtain stock full of strength, vitality, and the promise of a good corn crop. There should be added to this, however, the point that it is always well to grow corn suitable to the locality. This has been an open fall in which large-growing, late-maturing corn has a good chance. One year with another, outside of the recognized corn belt, it might be better to sacrifice a little in yield in order to get more maturity. The majority of farmers are inclined to grown corn that is slightly too large and late.

The storing of corn after it has been selected, is very important. It is the moisture in the kernel which does the damage, if dried and kept dry, corn will not be injured by frost. It sometimes happens, however, that corn which has been dried properly may afterwards gather moisture sufficient to cause it to be injured during zero weather. It is important not only to dry

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W. A. EDWARDS.

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the sample, but to keep it dry. The loft of a barn is, in most cases, suitable for storing seed corn, the granary is also good, but perhaps the best preserved corn under ordinary farm conditions is that which is put away in the attic or some unused room in the house. The ears should not be allowed to touch each other, and, of course, mice or rats will soon ruin a good sample of seed corn.

A suitable way of preserving cobs of corn is to impale them on nails driven into a piece of 2 x 2 scantling, or an ordinary board. This can be suspended from the rafters in the attic, or from the loft in the granary or barn. When any quantity is to be put away in this manner, it is better to use only two sides of the scantling, for in this way so much space is not required as when four sides of the scantling are used. Finishing nails are very appropriate for this purpose, as the heads are small.

Another method of suspending corn is to take a long cord and tie the two loose ends together. The two strings thus paralleling each other are placed about three inches apart, a cob of corn is placed in the centre of the string, the two ends are then brought over the top of the cob, and another ear of corn is placed in the crotch thus made; this goes on until the full length of the string is utilized. Then the entire bundle of corn is suspended from a rafter or stringer. This method also makes it possible to keep the corn out of reach of vermin, and it prevents the ears touching each other.

There are various ways of preserving seed corn, but the principle is the same in any case, that is, to keep it dry, prevent the cobs from touching each other, and to keep it out of the reach of vermin.

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Clean the furnace pipes before starting the winter fire.

Tractors are not fool proof machines. Common-sense must be used in running them.

That riding plow requires oil. Don't wait for that screech which sets the teeth on edge; oil the wheels at least twice a day.

When plowing with horses or tractor, start the furrow straight and endeavor to keep it straight. The old time pride in a nicely-set, straight furrow seems to be diminishing. Now it is speed to get the work done.

Gasoline and kerosene engines sometimes contract the habit of stopping on the slightest provocation and refuse to again start for a time. Over heating may be one cause; dirty connections or spark plugs may also be the seat of trouble.

Some makes of combination drills are not built heavy enough for their work. Fertilizer is a heavy material which requires strong, firmly built parts to carry and feed it. When the grain and fertilizer attachment are together extra heavy parts are needed.

Did it ever occur to you that many breaks with attendant loss of time could be avoided by keeping nuts tightened, boxings fitting snugly and using oil? Too many drive the machine along thoughtlessly until something goes wrong. Go over the machine at least once a day and see that everything is right.

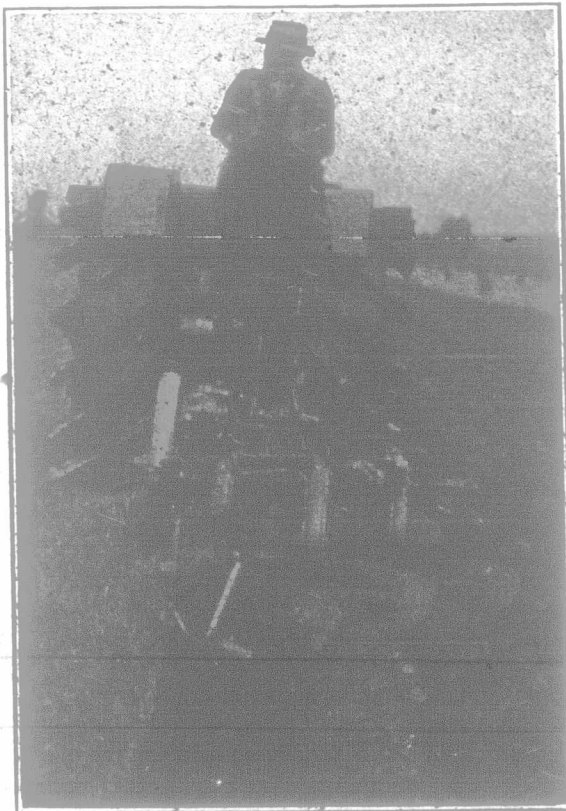
This summer we saw a binder which had been left in the field a year ago. The owner cultivated and seeded around it this spring. The loss incurred through failure to house this expensive machine would amount to many dollars a year. The elements play havoc with iron as well as with wooden parts. House the implements if possible.

The loss through fire is very heavy in Canada. Help lessen this loss by not allowing rubbish to lie round; being careful in the use of matches; not overheating the stoves; guarding bonfires, etc. Over seventeen thousand fires occurred in Canada last year many of which could have been prevented. Clean up the waste and rubbish.

Plan on attending one of the plowing matches, tractor and farm machinery demonstrations to be held this fall. The Interprovincial match is held at Central Experimental and Booth Farms, Ottawa, on October 14, 15 and 16. The International match is held at Chatham, October 21, 22 and 23. Different makes of tractors will be in operation at both places and will give prospective purchasers an opportunity of comparing the work done by the different types.

The Tractor on the Farm.

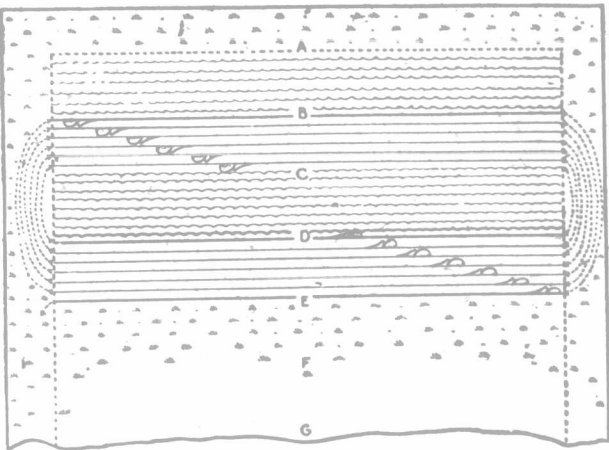
During the past few years the tractor has taken the place of the horse in doing much of the heavy work. Each year sees an increasing number of tractors in use on the ordinary farm. At one time it was thought that the tractor was practicable only on a prairie, or where the furrow was a half-mile or more in length, however, to-day the tractor is to be found working satisfactorily in the ten-, fifteen-, and twenty-acre field. While the large tractor pulling six or eight bottoms may be suitable for some sections, the smaller machines



The Tractor Speeds the Plowing.

pulling a two or three bottom plow is more adaptable to Ontario conditions. The scarcity of labor and the increased cost of horse feeding and equipment are factors which have led and are leading to an increased use of tractors. Not only are they adaptable to the pulling of plows, but are used on the cultivators, discs and harrows for preparing the seed-bed and for after-harvest cultivation. They are not affected by high temperature, and may be driven a whole day without having to be winded, as is the case with the team during hot, sultry weather. The tractor is being used to draw the binder, mower, wagon and hay-loader, etc., in fact, there are a multiplicity of jobs which can be done with it; they are used to drive the threshing machine, silo-filler and grinder. Some are fed on gasoline and others on kerosene.

At first it was thought that there would be too much waste of time in turning, and too large a headland



Laying Out a Field for Tractor Plowing.

needed for turning on in a small field; these objections can largely be overcome by laying out the field properly for tractor plowing; where wide lands are used, there is considerable time lost in going around the ends unless the machine is turned to the right for part of the land and to the left for the remainder. With small lands the short turns bother some, it takes a little practice to be able to drive so that the plow will start in at the proper place, in fact, some men have difficulty in handling their horses so that the plow will cut the full width and no more when starting in off the headland.

Some tractors will make short turns more easily than others. In order to avoid waste of time in making the turns, the U. S. Dept. of Agriculture, has issued a bulletin, written by H. R. Tolley, on the laying out of fields for tractor plowing. He gives several alternatives which might advisably be borne in mind by tractor owners when laying out fields for plowing. With too many there is a tendency to sacrifice quality of work for speed, this should never be condoned, either with tractor or team. Plowing is one of the most important

tillage operations, and careless work done results in a diminishing of the crop yield and an increase in noxious weeds. In regard to laying out the field, Mr. Tolley writes as follows:

"Making short turns is awkward work for most tractors, and where such turns are necessary the operator often has more or less difficulty in getting the outfit in the correct position for starting into the furrow at the right point. The type and size of the tractor will have much to do with the ease in making short turns, but short turns are always troublesome. The plowman should decide before he starts work on the field to what extent he can afford to drive the outfit with the plows idle, so as to make a long, sweeping turn instead of a short one, or just how much he can sacrifice in the quality of his work to avoid awkward turns. While it may pay to make some effort to avoid short turns with a large, cumbersome outfit, it should be borne in mind that the loss of time and fuel due to making long, idle runs across the ends of the field with an outfit pulling several plows is just as serious as it is with the small, easily-handled tractors. From the standpoint of time lost in idle running, the size of the tractor and the number of plows pulled should be considered only with reference to relative difficulty in making the short turns in starting or finishing the lands. For instance, it might pay to lay out in five lands for a 4-plow outfit a field that would have been plowed in six lands with a 2-plow outfit, but it would rarely, if ever, pay to lay it out in only three lands for the big outfit. Some tractors turn more easily in one direction than another, and with an outfit of which this is true it may pay to lay out the fields accordingly. If the outfit is not equipped with self-lift plows, a certain amount of time must be taken to stop the tractor and lift the plows out by hand, and this time may be so great as to make it more profitable to adopt a method by which the plows will have to be lifted a very few times, if at all. In deciding how wide the lands are to be, the ease of handling the tractor and plows may not always be the most important thing to consider. In regions of heavy rainfall, it may be best to make narrow lands with frequent furrows and back furrows as an aid to drainage, while in more arid regions or drained soil the reverse will be true. The contour of the ground or the shape of the field may be such as to determine almost entirely the method that must be followed in the plowing. In short, many circumstances must be considered before deciding just what method would be best for a particular field with a particular outfit. Every job of plowing presents a problem of its own, and there can be no one best method for all cases.

The methods in general use can be divided into two general classes: (1) those in which the plows are lifted and no plowing is done across the ends; and (2) those in which the plows are left in the ground while going across the ends. The advantages of plowing by the methods of the first class are that the short, awkward turns are eliminated, except in some cases at the beginning and ending of the lands, and usually less space will be left at the corners to be plowed out with horses. It is generally possible also to do a little higher quality of plowing if the plows are lifted at the end. The advantages of the methods of the second class are that little or no time is lost in travelling with the plows out of the ground, and that ordinarily the number of dead furrows and back furrows will be considerably less. However, the turn at each corner must be made as short as possible if the space left to be plowed by horses is to be reduced to a minimum, and the land at the turning points, lying in diagonal lines extending from the corners of the field into the ends of the dead furrows or back furrows, is likely to be poorly plowed. Taking the country as a whole, the methods by which the plows are idle across the ends are the more popular, but a large number of farmers have a decided preference for those by which the plows are kept in the ground continuously.

Width of Lands.

If a method in which the plows will be out of the ground in going across the ends is chosen, the first things to determine are how wide to make the various lands, and how wide to leave the headlands on which to turn. The wider the lands are made the fewer will be the dead furrows and back furrows, but the greater will be the time consumed in idle running across the ends. Some idea of the distance travelled with the plows out of the ground can be obtained by considering a specific case. Suppose a field 40 rods wide is to be plowed in this manner, one land at a time, and that it is laid off into six lands. Each land will be 110 feet wide. If the tractor is pulling three 14-inch plows, it will take 32 trips across the field to plow out each land. If we ignore the extra distances that the tractor must cover in swinging out of the furrow and back into it again, and in making the short or figure-eight turns in starting a back-furrow land or finishing a dead furrow, the average length of travel across the ends—that is, the average distance in a straight line from where the plows are taken out of the ground to where they enter it again—is half the width of the land, or 55 feet. This makes 1,760 feet, or one-third mile for each land, or 2 miles of idle travelling in plowing the entire field. If the field were laid out into 12 lands, each 55 feet wide, the total empty travel would be 1 mile, while if the field were laid out in three lands, it would be 4 miles. The longer time necessary to make the difficult turns at each back furrow or dead furrow, which must be added to the time to travel these straight-line distances, will reduce the advantage of the narrow lands in this respect to a certain degree; but ordinarily a three-plow tractor, which has a comparatively short turning radius, and with which the making of short turns does not take a great deal of time, will plow a strip of 40 rods

wide laid out in six lands in about an hour's less time than if it were laid out in three lands. A 2-plow tractor will have to make one and one-half times as many trips across the field to plow a strip of a given width, and consequently the time lost in idle running will be about 50 per cent. greater than with the 3-plow outfit. A 4-plow outfit will have to make only half as many trips as the 2-plow outfit, and so will lose only half as much time. Each farmer must balance for himself this saving in time in making narrow lands, against the extra dead furrows and back furrows and the difficulties of short turns, and decide on the width of the lands accordingly. The most popular width seems to be from 100 to 200 feet. However, if the field has no irregularities, its entire width should be measured and divided up so that all the lands will be of the same width or nearly so.

Headlands.

If the field is fenced on all sides, it will usually be better to leave an unplowed strip of uniform width clear around the field, to be finished after the body of the field is plowed out, than to have the lands extend to the fences on the sides. A headland extending clear around the field can be plowed by going repeatedly around the field until it is finished without having to make any short, awkward turns. If one end of the field is unfenced and the outfit can be pulled out into a road or lane or an adjoining field for turning, it may be preferable to plow up to the fences on the two sides, as the body of the field is being plowed, and leave a headland only across the end of the field which is fenced. Such a headland must be plowed with either a dead furrow or back furrow through the centre, and more space will have to be left in the corners at the ends of the headland for turning the tractor. The width of the headland will depend largely on the turning radius of the tractor with attached plows, and some farmers with very-easily handled outfits do not leave over 15 or 20 feet; but any extra ground in the headland will be plowed just as quickly as if it were plowed with the body of the field, and plenty of room should always be left to allow easy turning and to get the outfit headed in exact direction on entering the furrows. Also the wider the headland, the less is the tendency to go over the same ground repeatedly in turning at the ends when plowing out the body of the field, and consequently the ends will be packed less seriously. Headlands 50 or even 100 feet in width will usually be preferable to very narrow ones. With most tractors, the width of the headlands should be at least twice as great as the length of the outfit with the plows attached. Some farmers plow once around the field along the line of the headland, before starting on the body of the field. This gives a good guide for lifting the plows and letting them into the ground again at the ends.

Setting Stakes and Markers.

If the field is to be finished up in the best manner, with no irregular unplowed strips between the lands or at the edges, it is essential that care be taken to have the headland of the same width clear around the field, to have the distance measured exactly when starting new lands, and to have the first furrows as nearly straight as possible. A little extra time taken in measuring all the necessary distances and setting plenty of stakes for guides will nearly always be more than returned in saving time at the finish. Most farmers will prefer to "step off" the distances rather than use any more precise measure, and, as far as accuracy is concerned, this will usually be satisfactory; but if the tractor pulls three or more plows, cutting a total width of 3 or 3½ feet or more, some effort should be made to have each distance an exact multiple of the total width of the plow, so that the last trip across the field will exactly cut out the land or finish it to the fence. This will do away with the necessity of making a trip across the field, probably over the plowed ground, to turn over a narrow strip possibly only a few inches in width. It is usually hard to handle the tractor in finishing out such a strip, and it takes at least as much time as it would to plow one of full width. Some recommend that an A frame of the same width as the total width of the plows be used for measuring all distances. Then whatever the total width of the land is, the last trip will exactly finish it."

Even with the walking or riding plow it is important that care be taken in measuring off the lands. Carelessness has crept into the method of plowing and, as a result, back furrows are not so neatly made, and dead furrows are not properly cleaned out. How can they be when one end of the land is a few feet wider than the other. While the back furrows may be turned with the tractor, many prefer to use the team and walking plow for striking out lands, finishing the lands, and in plowing the corners.

The accompanying illustration shows one method of driving to avoid short turns. The first furrow is struck at D, and left hand turns are made until the space from B to C equals the space from A to B, then right hand turns are made from C to D until the space B to C is plowed, leaving a dead furrow at B. The remainder of the lands are plowed in a similar manner. It will be noted that the headland has been marked and equal distance left unplowed above A so that in doing the

headlands the plow is drawn around the field. This will leave a small strip in each corner unturned. For short turns the figure eight may be made by going from the left hand furrow to the right on the headland, then turning to the left and circling to the right, or vice versa. Some commence at the outside and plow around the field, finishing in the centre. When this is done it is necessary to plow out to the four corners. Even though the plow is left in the ground at the circular turn, it does not properly turn the furrow for a few feet.

By using a tractor the plowing or cultivating can be done more quickly than by horse-power, if everything works properly. Some have had difficulty with the tractors, but in many cases it was due to lack of knowledge of running the machine. Some who understand the engine part know little or nothing about plowing. The tractor is a comparatively new power in Ontario and, as might be expected, they have not given satisfaction under all conditions. At the most inopportune time they have refused to work; parts have worn or broken and, repair service not being fully established, have occasioned delays of a week or more. However, there are a number of makes of tractors which have stood the initiation and now give good service. It must be remembered that the operator is to a certain extent responsible for a machine not being up to its reputation. All men are not good horsemen, neither are all men mechanics. Some do not use good common sense in running machinery, and as a result the particular machine they are working with falls down in its work.

There are big tractors and little ones, those that pull six and eight plows, and those pulling but two; some must be guided, others are self-steering. There are four-wheeled, three-wheeled and caterpillar-wheel machines. Some burn gasoline, some kerosene, and others burn both. See them in operation in the field at Chatham and Ottawa this month and learn the merits and demerits of the different makes.

A Hundred Million Dollar Junk Pile.

A writer in *Farm Machinery—Farm Power*, in an article entitled: "The Farmers' \$100,000,000 Junk Pile," states in part "that this is the worth of valuable farm implements gone to ruin by needless exposure to



Tractor Power Aids in Soil Cultivation.

all kinds of weather." The writer goes on to say in introducing his subject:

A hundred million dollar junk pile! Money enough rotting and rusting away in neglected implements on American farms to buy machinery to harvest the whole wheat crop! All this and more is the American farmers' item in the country's profit and loss column. Accident lies on the loss.

Consider what this means. Every neglected farm implement lying in barnyard or fence corner means cold cash out of the farmer's pocket.

This is how it figures out. With proper care a farm implement can be made to last fifteen or twenty years—often longer. Take for proof the case of C. S. Johnson. He writes that he has used his plow every season for thirty-five years. It's a safe bet that he knows the value of taking care of the machinery he makes his living with.

Now consider the other side of the question—the neglect side. How long would Mr. Johnson's plow have lasted if he left it in the field he was last plowing whenever he got through with it? Perhaps four or five years. By that time it would have rusted and checked and rotted beyond the point of usefulness.

That is precisely what happens hundreds of times a year. The farmer neglects his tools. In a few years they go into the discard. Pretty soon up drives the junk man and off goes the plow, or rake or whatever it may be—a sad monument of neglect as it rattles disconsolately down the road in the junk man's cart.

Here are four suggestions for stopping this waste in junking farm implements before their appointed period of usefulness has run its course:

1. Paint every farm implement after every season's use.
2. Protect all bright metal parts with heavy grease.
3. Keep all implements under cover.
4. Keep a supply of spare parts on hand and keep every implement in repair.

There is a good reason for the bright and shiny coat of paint on every new farm implement. It is not there merely to dazzle the eye of the beholder. Nor is its purpose to add an aesthetic touch to an otherwise drab landscape over which farmer plowman homeward plods his weary way. It is there because the manufacturer knows that paint is the best preservative for

his machinery. He knows, too, that if a coat or two of paint were applied every season to the once bright and shiny wooden parts, and if the metal parts were cleaned and greased at the same time, there would be a far more contented owner of the implement and a more satisfied dealer.

To save a few dollars on a single plow, or harrow, or cultivator, may not seem a big return for the labor of dragging home every implement and taking proper care of it. But the time to paint and care for every piece of farm machinery on the place is during the weeks when outdoor work is slack—when the plowing and planting are done, or the crops are in. Any dealer in paints of standard quality can advise the farmer as to the grades of paint best suited for use on different kinds of farm implements.

One of the large tractor manufacturing companies thinks the subject of caring for farm implements is so important that they are directing part of their advertising toward making the farmers see the dangers of neglect. Blue sky and a wire fence, they tell the farmers, is no adequate protection for a piece of machinery. They are right!

How will my taking better care of the implements I have help the whole country any?" the farmer may ask.

The answer is this: If every farmer will do his share in taking care of his own farm implements; if he will clean and paint and protect them after every season's use, he will be doing his part in one of the biggest tasks the farmer can do for the country.

He will redeem the hundred million dollar junk pile; he will help put thousands of dollars into the farmers' pockets; money that is thrown away in the shape of discarded, dilapidated, useless tools that should be at work; he will help save hundreds of years of farm implement life for the country's use every season.

Consider this item of added years of implement life. A plow, for example, can do a certain amount of work a year. If neglected, its contribution is only four or five years of work. Every year's work beyond this that proper care will make it yield, is the same as the contribution of a year's work by an extra plow.

Effects of neglecting farm machinery are more far-reaching than at first appears. First comes the harm to the machine itself—shortened life and wasted investment. Then there is the lessened efficiency in the use of the machine—a loss of both time and effectiveness through trying to get along with damaged implements.

THE DAIRY.

Bacteria, Yeasts and Molds in Dairy Products.

This article is the major part of an address delivered by T. H. Lund, Bacteriologist, O.A.C., Guelph. The question of micro-organisms and their relation to the production of first-rate dairy products is important and closely bound up with the future development of the creamery industry. In his report of the season's instructive work, it will be recalled that F. Hens, Chief Instructor for Western Ontario, asked for special consideration of this matter by the dairymen, and that the other speakers were emphatic in advocating careful pasteurization as one of the means of improving the quality of Ontario butter. This matter is not of importance to Ontario dairymen alone however; it affects every producer and creamery man whose product is sold as Canadian.

"When the average person thinks of bacteria, germs or microbes, it is usually in connection with disease. Fortunately for us, disease-producing, or pathogenic bacteria, as they are called, form a very small proportion of the organisms at work around us, yet these few have gained unenviable notoriety through the manner in which they manifest their activities, namely, in attacking and frequently killing both animals and man. Agricultural bacteriology, and the application of its findings to certain agricultural industries on this continent, is a development of the last 20 years. In dairy operations, bacteria and other microscopic organisms play an all important part, and no cheese or butter-maker is considered properly equipped for his business nowadays, unless he has studied the elements of this science, learning something of what bacteria are, where they come from, how they live and die, and what they do."

"In the field of dairy investigation and research, something has already been accomplished, but much yet remains to be done. Our knowledge of certain processes is still obscure, and we need more light in these dark corners to show us the way and to explain things which, at the present time, we do not fully understand. As in the field of medicine, it is only by applying brains and money to scientific research work that the dairymen may expect to get their own particular problems solved. Never was there a greater need for this than at the present time, when efficiency and economy are so necessary to enable us to meet competition and at the same time to make our business pay.

"Another pressing necessity is the more general application of scientific findings, already well established, to every-day operations in and around our creameries, cheese factories and dairy farms. Take for example, the cooling of cream. It is a well-known fact that a better quality of butter can be made from properly-cooled cream than from cream not so cooled, yet the average temperatures of cream reported last year by the instructors were 66.1° F. for 1st grade cream and 72.7° F. for 2nd grade cream, showing to what a small extent cream is properly cooled.

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is the more general already well estab- in and around our dairy farms. Take . It is a well-known er can be made from cream not so cooled, cream reported last 1.° F. for 1st grade le cream, showing to perly cooled.

"It is only quite recently that creamerymen have begun to take any interest in laboratory control of the processes carried on by them. Especially in plants where pasteurization is practiced, butter-makers are beginning to ask themselves whether the work is being efficiently done. As the chief aim and object of pasteurization is the destruction of germ life in the cream, it stands to reason that if the process is to be effective the majority of the germs must be destroyed. In so far as this is not accomplished, the process is inefficient; we are wasting time and money only half doing a job which to be effective must be thoroughly done, and fooling ourselves and the public besides.

"The question of re-struction of pasteurized cream has also to be taken into serious consideration. It may occur in a number of different ways, neutralizing to a greater or less extent the beneficial effect of pasteurization, at least so far as the germ life in the cream is concerned. If it is important that the cream should be pasteurized thoroughly, it is just as important to see that recontamination does not occur. It is only by making cultural tests of the cream for bacteria, yeasts and molds at different stages of its journey from the farmer's can to, and in the churn, and of the finished butter, that one can find out the efficiency in regard to these points with which the plant is being run.

"While bacteriology is the science which deals with bacteria, there are other microscopic organisms that are of considerable interest and importance in dairy work, namely, the yeasts and molds. These are studied by much the same methods as are used in the study of bacteria, and so it happens that the bacteriologist has taken them to some extent under his wing. It has been suggested that the term "Microbiology" be used to describe the science now known as "Bacteriology," that is to say, the science which deals with microscopic life; this would include the yeasts and molds as well as the bacteria, all three being classified as plants.

"Let us now learn something of the numbers in which bacteria, yeasts and molds are found in cream and butter, what they do, and to what extent they can

chiefly the quality of the cream, and cream quality and butter quality go hand in hand, hence the introduction of cream grading to encourage the production of clean, sweet and well-cooled cream, that is to say, cream in which bacterial development has not occurred to any marked degree. The butter-maker no longer has control of the fermentation as of old; he has to take what he gets as he gets it, and patch up the damage as best he can. Some day, perhaps, cream will be delivered to the creameries sweet and clean. The fact that 41 creameries in Iowa during the past season, in making butter for the U. S. Navy, have handled only cream of this kind, proves that it can be done.

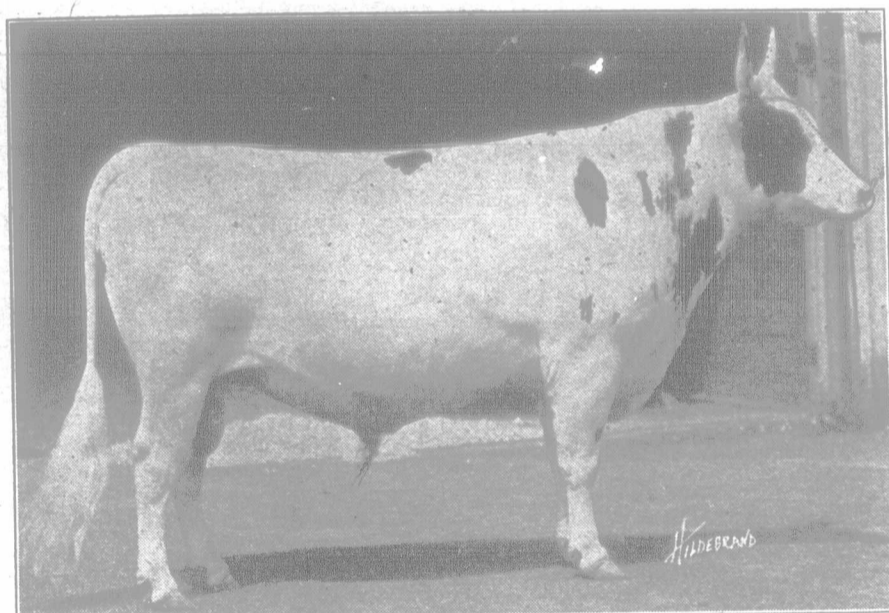
"When we come to consider pasteurization we must look at it from several points of view. First, there is the question of transmission of disease germs, to human beings through the butter, and to the live stock on the farm through the skim-milk and buttermilk. To many people the chief advantage of pasteurization is the elimination of such dangers as these. The tubercle bacillus has been repeatedly isolated from butter, ven after storage at low temperatures for as long as six months. Little is known about definite infections due to the consumption of butter containing tuberculosis germs. To safeguard the public against danger from this source, the U. S. Department of Agriculture requires that dairy products used in the manufacture of oleo-margarine shall be effectively pasteurized; automatic temperature control with reliable recording thermometer is required, and temperature charts for inspection have to be filed.

"With regard to the transmission of disease through creamery by-products, tuberculosis is again our chief concern. Dr. Torrance, Veterinary Director-General, has lately called attention to the marked increase during recent years of tuberculosis among swine, particularly among those coming from the dairy districts, due undoubtedly to a large extent to the feeding of infected dairy by-products, including buttermilk from unpasteurized cream. He recommends that the pasteurization of all dairy by-products should be made com-

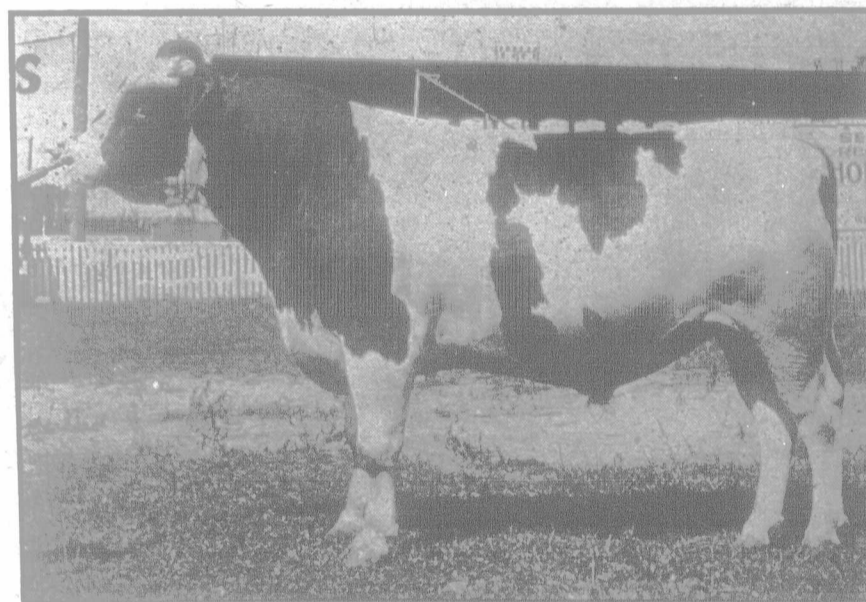
destroyed by pasteurization, and undoubtedly they are important factors in many cases of poor flavor and keeping quality, due to conditions obtaining in the cream. If we would seek to improve the quality of Ontario butter to any marked extent, while the more general adoption of pasteurization will undoubtedly help, eventually we shall have to go to the source of the trouble and take steps to improve the quality of the general run of cream.

"Whether pasteurization of cream improves the flavor of butter or not is a matter of controversy. The different qualities of cream handled and methods of pasteurization and ripening employed may easily account for the differences of opinion on this point that we find recorded from time to time. With regard to the deterioration in storage of butter made from pasteurized cream as compared with that made from raw cream, it is generally recognized now that the keeping quality of butter is considerably improved by pasteurizing the cream. Just how to account for this we do not know, but it is probable that, besides germ destruction, other factors are involved. Butter made from cream pasteurized by the holding process at the lower temperatures, even when the efficiency is high, does not keep as well in storage, according to the experience of numerous observers as butter made from pasteurized cream where temperatures from 170° F. to 185° F. have been used. This is explained by some on the basis of enzyme action, the enzymes present in the cream being unaffected at the lower temperatures, while at the higher temperatures the great majority of them are destroyed.

"There has been considerable discussion of enzymes lately, so it may be well to say a little about them now. Enzymes, or ferments as they are sometimes called, are a complex class of substances, widely distributed in nature, and essential to vital activity in a number of different ways. While it is difficult to define an enzyme, their general properties are pretty well known. In the first place they are able to produce, even when present in very small amounts, very large effects without themselves undergoing any permanent change, o-



Nancy's Mintmaster.
Sold for \$5,200 at Ayrshire sale at Springfield, Mass.



Avondale Segis Pontiac Korndyke.
Champion Holstein bull at Ottawa for Gordon S. Gooderham, Manor Farms, Clarkston, Ont.

be controlled. With regard to cream we note at once the high numbers of organisms present per cubic centimeter, very many more than would be found in the milk from which this cream came. The bacterial content of good milk will run from 5,000 to 50,000 per cubic centimeter, milk of medium quality from 50,000 to 500,000 per cubic centimeter, dirty, old and improperly cooled milk will show several million per cubic centimeter, while here we have an average of 215 million bacteria per cubic centimeter, and 3 1/2 million yeasts and molds. How do we account for this enormous increase, and what does it mean? It means that some of the organisms originally present in the cream have found themselves in an environment so much to their liking that they have grown and multiplied rapidly, producing in a short time numbers such as these. This is known as a fermentation, and it is fermented or partly fermented cream which we are receiving at our cream-collecting creameries to-day, that is to say, cream in which bacterial development has progressed to a marked degree.

"What we are chiefly interested in, however, is not so much the numbers of organisms present as it is the question of what they do. If they bring about any changes in the cream, we want to know whether these changes are beneficial or injurious, and whether it is advisable to encourage the growth of the organisms causing them, or whether it is better that they should be controlled or destroyed. Unfortunately, in collected cream the fermentation is usually well advanced when it reaches the creamery, and what is more, it is usually a mixed fermentation, that is to say, other bacteria besides the beneficial lactic acid bacteria have been taking a hand and these frequently have produced changes in the cream of an undesirable kind. Dirty cows, dirty hands, unclean utensils, dust, flies, etc., all add their quota of injurious bacteria to milk and cream, and lack of prompt and thorough cooling aggravates the trouble by causing them to grow and multiply rapidly. The extent of the changes produced by the growth of these undesirable organisms determines

pulsory. If this recommendation is adopted, all cream-collecting creameries will have to pasteurize their cream. Pasteurization is also beneficial in driving off, to some extent at least, taints absorbed from undesirable surroundings, and volatile substances produced by germ activity. It is impossible to measure the extent to which this takes place, but there is little doubt that the lower grades of cream are benefited in this way.

"The chief aim and object of pasteurization is the destruction of germ life in cream. Pasteurization at 145° F. for 20 minutes, in the case of 33 lots of cream showed an efficiency of between 99.8% and 99.9%, that is to say, that 998 to 999 germs out of every 1,000 were destroyed. At 185° F. flash, the efficiency figures out at 98.9% to 99.0%, while at 165° F. flash, it runs from 86.2% for yeasts and molds, and 89.8% for total count. While efficiency percentages do not tell us the whole story, this test has demonstrated that germ destruction is very complete in the case of cream pasteurized for 20 minutes at 145° F., and only slightly less so when "flashed" at 185° F. It also shows that 165° F. flash, is unsatisfactory from a germ-killing standpoint as about 10% of the germs present in the cream survive; if the cream were held at this temperature for 10 minutes it is probable that the germicidal efficiency would work out about the same as in the other-two cases.

"The study of the relation of microbial activity to butter flavor and keeping quality divides itself naturally into two parts; we concern ourselves with what goes on in the butter on the one hand, and on the other, with the nature and extent of the changes which take place in the cream. We have already referred to acid formation by the desirable lactic acid bacteria, but even this is frequently allowed to proceed too far, and fishy and metallic flavors are likely to develop in the butter made from high acid or over-ripe cream. The work of Rogers at Washington has demonstrated the superior keeping quality of butter made from sweet pasteurized cream. Injurious flavors and other by-products of undesirable organisms are not necessarily

having their own matter disappear. In the second place they are very sensitive to physical and chemical conditions, losing their activity rapidly at temperatures above 160° F. Their other properties we need not refer to here. Enzymes are formed by living organisms; in some cases they are retained in the animal or plant cell where formed, whilst in others they are passed out into the surrounding mediums as required. The former were at one time known as "organized" ferments and the latter as "unorganized" ferments, this, however, was an artificial distinction which further knowledge of them has broken down. Rennet and pepsin, both engaged in digestive processes, are two enzymes which are well known to all.

"Milk contains certain enzymes, for example, peroxidase, reductase, catalase, etc., and it is to substances such as these that people refer when they speak of there being "life" in milk. Besides these enzymes at times we have others, possibly in considerable quantity in cream and so in unpasteurized cream butter, produced by the activities of bacteria, yeasts and molds. Their determination is a matter of difficulty, and we know less about them than about the living cells from which they come. We know that the higher pasteurizing temperatures destroy most of them and that a temperature of 145° F. for 20 minutes does not. Their relation to keeping quality has already been hinted at, also the desirability of handling cream in which they have not been generated to any large extent, that is to say, fresh, clean, sweet cream.

"Once the butter is made, the bacteria, yeasts and molds usually find conditions much less favorable to their activities and even to their existence than was the case when they were in the cream. They usually die off fairly rapidly, although at times certain species may grow and multiply. When the cell dies and disintegrates, enclosed enzymes are liberated; this fact may have some connection with butter spoilage, particularly in the case of raw cream butter where the bacterial content as we have noted is high. Occasionally, particularly in the case of unsalted butter, we find an

active mold growth in progress, usually working inwards from the outside. Destruction of mold spores is part of every butter-maker's business, as the butter or its immediate surroundings must be infected with living spores before molding can occur.

"As to the possibility of using the yeast and mold count as a test for effective pasteurization, the figures obtained seem to indicate it may be of use for this purpose. Possibly in whole-milk creameries low counts would indicate pasteurization when the process has not been employed, but unfortunately, whole-milk creameries are conspicuous by their absence in Ontario to-day. On the other hand, high counts might indicate non-pasteurization where the cream had in reality been pasteurized, but due to inefficient operation, numerous germs had survived, or else by recontamination, the mold and yeast content of even effectively pasteurized cream had been increased considerably before the butter was made. Butter made from cream handled in such a way is not entitled to be classed as pasteurized cream butter; the line has to be drawn somewhere and the interests of the consumer have to be considered besides.

"Not much is known concerning the relation of yeasts and molds to butter flavor and keeping quality, although Combs and Eckles of the Missouri Station have recently shown the injurious effect produced by the growth of *Oidium lactis* and other molds in the cream. While butter containing numerous yeasts and molds may give good commercial satisfaction at times, as some of our work has shown, nevertheless, the larger creameries are coming to recognize the fact that butter with a low mold and yeast content, indicating efficient pasteurization and use of sanitary methods preventing recontamination, is a better risk on the whole than butter made in a less efficient way."

The Dairy Herd.

To possess a fine herd of cows is, or should be, the aim and end of every farmer who goes in for dairying. It goes without saying that a herd perfect in every respect, and with none of the shortcomings of the average one, is not got together in a day nor yet a year, but when this end has been finally attained it constitutes an ample return for the time and trouble expended.

A dairy is kept for profit; it should therefore be the effort of every farmer keeping cows to know how much profit each cow is making for him. It is a matter of common occurrence to hear a farmer say, pointing out at the same time an individual member of his herd, "That one cow is worth any two of the others." Hearing this, a practical man is apt to ask himself the question, "Why not have the entire herd up to the one cow's level?"

A good cow costs no more to keep than a poor one; indeed, if the extra output of milk given by her is considered, not nearly so much, and yet in many dairy herds numbering two or more score animals, it is by no means an unusual thing to find ten or a dozen indifferent milkers.

In building up a good dairy herd such cows should be rigorously weeded out, and the heifer calves from the best milkers carefully reared. By this means and the use of a pure-bred bull, sound, and from a good milking strain, an improvement will soon be effected at a minimum of cost, and a profitable herd built up, with careful treatment, with judicious additions from time to time and periodical weeding out whenever necessary, will maintain. It has been rightly said that a good bull is half the herd, and this highly important point must not be lost sight of.

"Feed is half the breed" runs an old adage, and there is a considerable amount of truth in it. The dairy cow is an animated machine, by whose agency food is turned into milk. She should never be pinched for food, which must combine quality with quantity, for a badly-fed cow cannot produce good milk. According to experts, the ration for a milking cow should contain five parts of heat-giving material to one part of nitrogenous or flesh-forming matter. Proper feeding is as necessary to her as suitable fuel is to run a specially constructed engine; the best stock cannot be kept up to a high standard without proper management in this respect.

As good feeding tends to increase milk production, so does good milking. Rapid but gentle milking makes a wonderful difference in the quantity got from a cow. To a practised hand the task is a pleasant one to the cow no less than the milker; and a milker who cannot milk properly and quickly should not be permitted to spoil good cows, for this is the ultimate outcome of bad and careless milking. When cows are not milked clean, and milk is left in the udder, the milk glands imperceptibly, but none the less surely, begin to diminish in secretory activity; whereas, by the removal of the last drop of milk in the udder, the glands are stimulated to perform their function, and the supply of milk is increased. The strippings, as the last drawn milk of a cow are commonly termed, are much richer in cream than any of the other milk, so that there is a double advantage in milking clean. When milking, the teat should be grasped in the hand, emptied of milk, then relaxed, and an upward jerk or dunch given to the udder, similar to the motion made by a calf when sucking. This excites the glands, and induces a more copious flow of milk.

Too much stress cannot be laid upon the need of quiet and gentle treatment for the cow. It is a well-known fact that a nervous or frightened cow, or one subjected to rough treatment, will frequently "hold" her milk, giving it sparingly if at all, while no such trouble is experienced with a cow who is treated kindly

and has no fear that her milker or anyone else will hurt her. A regular hour should be fixed for milking, and, if possible, always adhered to.

The water for the cow's drinking, and also for washing the dairy utensils, should be absolutely pure, as the quality affects both the health of the cow and the wholesomeness of the milk. A good milker needs 11 to 12 gallons per day. In winter, if the cows are given all their drinking water in the cowhouse or yard, it is as well to take the chill off, to prevent the animal heat from being temporarily lowered. It is essential that the cowhouse, especially in winter, should be warm, clean and comfortable. The cow appreciates and requires comfort if she is to do her best. There are at least four cardinal points to be observed, then, in dealing with the dairy cow:—Good food in sufficient quantity, pure water, comfortable housing, gentle treatment. It is well to give an occasional brush down to keep the hides of the animals clean and in nice condition. The practice of wiping the udder with a clean cloth before beginning to milk should invariably be followed, as also washing of the hands on the part of the milker. Sanitary science is a thing that the owner of a successful dairy cannot afford to neglect.—Live Stock Journal.

Handling Cream and Milk.

Cooling milk and cream on the farm promptly and properly would prevent to a large extent the enormous waste which occurs every year. Creameries often may be obliged to return to the farmer any milk or cream that is about to sour. Part of the returned milk is fed to live stock, and frequently the remainder is a total loss. In addition, some of the cream that is accepted by creameries is in poor condition and cannot be manufactured into the best grades of butter.

More than 85 per cent. of all the milk and cream sold from farms is produced in sections where natural ice can be had for the harvesting. Therefore with the proper use of ice at least 85 per cent. of the milk and cream can be cooled on the farm to a temperature so low that they will reach the dealer and the consumer in good condition. To bring about a general improvement of the milk and cream supply it must be cooled promptly and efficiently every day. The most advantageous use of the cooling facilities which are available on every farm would result in great improvement in the quality of milk and cream and at little if any additional cost.

DEVELOPMENT OF BACTERIA IN MILK.

Milk as it leaves the udder of the healthy cow contains only a few bacteria, but others are added by careless handling and improper methods. Bacteria multiply rapidly in warm milk and soon cause souring or other undesirable fermentation. No matter how clean, and healthy the cows, or how sanitary the method or how clean the utensils, milk will soon deteriorate in quality and soon contain many thousands of bacteria, if it is not effectively cooled. Bacteria may get into milk from the stable air, but by far the greater number come from unclean and unsterilized utensils, and the dust and dirt that fall from the flanks and udder of the cow during milking. Even though produced under the best conditions, milk just drawn always contains a few bacteria.

Bacteria grow and multiply rapidly much more slowly in cold than in warm milk. When drawn from the cow milk has a temperature a little above 90 degrees Fahr., a temperature at which bacteria grow rapidly. The effect of temperature upon the development of bacteria is well illustrated by two samples of milk, one of which had 280,000 and the other 16,400 bacteria per cubic centimetre at the beginning. Each sample was divided into four parts, and the eight parts were set away at certain temperatures to determine what length of time would elapse before the milk soured. The high-bacteria sample set at a temperature of 100 degrees Fahr. soured in 12 hours, while the low-bacteria sample at the same temperature kept sweet 36 hours. When kept at 40 degrees Fahr. the high-bacteria sample soured in 180 hours, while the low-bacteria sample soured in 396 hours. The high-bacteria sample represented milk of ordinary quality, while that containing the smaller number was representative of milk of a higher quality. The effect of low temperature in checking bacterial growth and multiplication is very evident.

If cooling is delayed bacteria may develop rapidly and be present in large numbers, even though the milk is eventually cooled to a low temperature. On dairy farms where only a few men are employed, milk is often kept in the barn for an hour or more before being cooled. Under such conditions it may be several hours after the milk is drawn before it is cold enough to check the growth of bacteria. This condition is especially true when the water used for cooling is at a temperature of 55 degrees Fahr. or higher and ice is not used. Cooling should be begun immediately after the milk is drawn from the cow if best results are to be obtained. Prompt cooling necessitates the immediate removal of milk from barn to the place of cooling, which also is good practice because it shortens the time that milk is exposed to the air of the barn. Since, in general, bacteria multiply more slowly as the temperature is lowered, the more rapid the drop in temperature the less time for their multiplication and growth.

KEEPING MILK COLD DURING SHIPMENT.

In order to be kept sweet, milk should be protected at all times from high temperatures. A large percentage of the milk supply for cities is delivered at the railroad station by producers although some is hauled direct to the city. Even under the best conditions milk that is transported during hot weather is usually several degrees warmer by the time it reaches the railroad station. On

the railroad it is held from a few hours to all day, and unless shipped in cars especially equipped to maintain low temperatures, there is a further rise in temperature. That is the case when milk is shipped in baggage cars or in milk cars unprovided with ice. To make sure that milk reaches the city consumer in the very best condition it should not only be promptly cooled to 50 degrees Fahr., or below on the farm, but also should be protected during shipment. Precautions that prevent milk from becoming warmer during the summer also protect it from freezing during excessive cold during the winter. In the latest types of refrigerator cars milk is maintained at temperatures of about 40 degrees Fahr., when pre-cooled to about that temperature before shipping in carload lots. If the cars are opened at several stations to receive milk, it is more difficult to maintain a low temperature. Even in special milk cars, where cracked ice is placed on the cans, the temperature of the milk is lowered very little in transit. When a car is iced in the manner stated, a large part of the cooling effect escapes into the air and is lost when the car is opened to receive milk.

SPECIAL CANS AND JACKETS.

To illustrate the importance of protecting milk in transit during hot weather, four 10-gallon cans of milk cooled to 44 degrees Fahr. were hauled a distance of 13 miles from a farm to the railroad station. No. 1 was an insulated can, No. 2 was an ordinary unprotected can covered with a one-inch felt jacket, No. 3 was covered with a half-inch felt jacket, and No. 4 was an ordinary unprotected can. During the trip the milk in the insulated can rose one degree, the milk in the cans protected with jackets rose 6 degrees, and the milk in the unprotected can rose 20 degrees. The cans were then shipped by rail in an ordinary baggage car for more than 1,000 miles at an average air temperature of about 80 degrees Fahr., in order to study the effect on the milk. In the unprotected can the milk had reached a temperature of 60 degrees Fahr., when it had travelled about 10 miles from the farm (before reaching the railroad,) the milk in the can covered with the half-inch jacket reached 60 degrees Fahr. after about 268 miles of travel; the can covered with the one-inch jacket travelled about 332 miles before reaching 60 degrees Fahr., and the milk in the insulated can did not reach 60 degrees Fahr. until after 650 miles of travel. By the use of a half-inch jacket it was possible to ship an individual can of milk 26 times as far as in the ordinary can before the temperature rose to 60 degrees Fahr., the one-inch jacket increased the shipping distance 33 times, and the insulated can 65 times that of the ordinary can.

Milk sours very rapidly at temperatures above 60 degrees Fahr., and therefore should be kept below that temperature and preferably below 50 degrees Fahr. until used.—JOHN H. MOHLER.

POULTRY.

Poultry Pointers.

The Dominion Poultry Husbandman, F. C. Elford, gives the following pointers re the marketing of poultry.

Poultry produce should be marketed as soon as it is ready. The sale of eggs conforms to this rule better than does the sale of meat, for the bulk of poultry meat is sold within a few weeks in the fall. One of the reasons for the regular slump in prices in the fall is because so many hold all the poultry they have for sale until that season, whereas it would be better if sold when ready any time during the year.

Though the summer months may not be the months in which there is the greatest proportion of poultry meat for sale, there is considerable which can be disposed of between July and October. Among these may be enumerated the following, coming largely in order of readiness—Cock birds, hens, broilers, green ducks and roasters.

As a rule where one is situated near a good market, be that of a city or a summer tourist trade, broilers will bring a better price than the same birds might bring in the fall as roasters, and the feed, room and trouble are saved during the summer months. The only time to sell Leghorn cockerels is when they reach about two pounds each in weight.

The only time to sell ducks profitably is when they are from ten to twelve weeks old. That covers the period of cheapest production. Usually a green duck will bring as much per bird as a duck in the fall, and the expense is very small in proportion.

The bulk of young cockerels will, no doubt, still be kept until fall and sold as roasters, and it is not supposed that every person is in a position to dispose of them as broilers.

Make the rule that none goes off the place without special crate feeding. The finishing touches pay best and the farmer who markets poor cockerels is deliberately throwing away a large percentage of his profits. Crate feed for three or four weeks before killing, and in the killing and marketing, follow directions given in Bulletin No. 88, Experimental Farm series, which may be had on application.

The time for culling is always now. Whenever you see a bird that is not doing well, pick it up and put it into a crate. Make sure that it is fleshed, and then kill it for your own use or for sale. Start culling as soon as the chicks are out and cull every day, or whenever you see anything that needs culling. Keep the birds growing throughout the summer. Give them plenty of feed, shade and water and plenty of milk.

Look out for lice and mites. Spray often with a good disinfectant.

Give the hen-house its annual house-cleaning and white-washing now.

Balancing the Poultry Ration.

The best results from the feeding of any kind of live stock are obtained where good care is given and the feeds well selected, both for variety and nourishment. Many people who keep hens for egg production seem to think that if the hens are fed some wheat once or twice a day and given a drink of water, they will pick up the rest of the feed they need. Those who are successful in getting good results know better than this, and they know too, that particularly in the winter season when eggs are high in price and difficult to produce at a profit, a great deal depends upon how a bird is fed as well as upon how it is bred. In the summer, when the flock is running at large, the birds can certainly pick up a great deal of feed of the kinds that they need, but in winter they are cut off from this supply, and opportunity must be provided for them to get it.

The necessary kinds of feed for laying hens are: grain, meat, mineral matter, green feed and water. In addition, there are certain well-known accessories to economical production, such as variety of feed, exercise, grit and good judgment as regards the selection, quantity and form of feeds. It must be remembered first that good laying hens never have an excessive amount of body fat, but that a certain amount of body fat is necessary. Many flocks do not lay because they are underfed, and a hen that is thin requires about all the feed she is likely to get in order to keep alive and healthy. Naturally, therefore, there will not be much left over for the production of eggs, the yolk of which is about 60 per cent. fat. At the same time the hens must get plenty of exercise or they become too fat and cease laying. A hen that lays well is invariably a worker. She is continually scratching; she is up early and late; and the heavy work she is doing in feeding and exercising, is all necessary in order to provide the raw materials for the heavy work her organs are performing in egg production. At the same time she is keeping in good health and in trim for the heavy strain upon her vitality.

Then, too, the working hen needs plenty of grit. She has no teeth, and her food must be ground up in the gizzard by means of muscular action and such gritty substances as she can get. Therefore, real sharp and hard grit is an absolute necessity to good digestion. The feed must all be ground up in the gizzard before it can be digested, or else it must remain in the gizzard until it becomes soft and this is a very slow process and not by any means efficient when one considers that egg production depends upon the quick and thorough digestion of large amounts of feed. A good quality of grit should be before the birds all the time.

Variety and fresh water in abundance are further essentials to the proper use of feed, and must be well looked after. The hen's body is 55 per cent. water and 65 per cent. of the egg is water, so that, in addition to what moisture there is in the feed itself, the hen should be liberally supplied with fresh water. A flock of 100 good laying hens will drink as much as a twelve-quart pailful of water every day. Variety is no less important, because it adds palatability to the ration and enables the birds to do a certain amount of picking and choosing. By increasing palatability, digestion is also helped.

Of the different kinds of feed, grain is probably the most important, since a hen could probably live longer on a ration made up solely of grain than of any other material. Grain is a natural food and as a result, therefore, the bulk of the ration should be of grain. Corn, wheat, oats, barley, peas and buckwheat are each used successfully for feeding poultry, but their use depends somewhat upon the purpose for which the birds are being fed. Corn is fed largely, but is very fattening and, therefore, should not be the sole grain fed for egg production. All classes of poultry are fond of corn and will eat it very readily. Wheat, however, is a somewhat better feed for poultry, since it provides in itself a more perfectly balanced ration. For this reason wheat and its products provide one of the most satisfactory groups of feeding stuffs for poultry. Oats can be fed economically if the percentage of hull is not too large. Birds will eat oats with considerable relish. Barley is fairly satisfactory and usually economical, but buckwheat and peas are generally too expensive. However, peas are a rich feed and desirable if they can be fed economically. Buckwheat is rather fattening and must be used with discretion. Generally speaking, ground grains are preferable to whole grains for poultry, and actual experiments have shown that the product of birds fed ground grains is worth about one-third more than the product of birds fed whole grains. Moreover, the difference between the value of the product and the cost of feed is considerably greater where ground grains are fed than where grain is fed whole. The difference is largely in the fact that ground grains require less energy for digestion, but one must not forget, at the same time, that if birds are fed too liberally of ground grains and are not forced to take sufficient exercise, ill health will result from a too-highly concentrated ration. Good judgment must be used in this matter as in everything else, and it is usually found to be good practice to feed grain both ground and whole or cracked, the former in the form of a dry mash fed from a feeding hopper, and the latter thrown in the litter. Where extra effort in egg production is desired, a wet mash fed two or three times per week will be found advantageous.

Meat or animal feed is essential, and can be provided either in the form of sour milk, if this is available, or in the form of meat scrap. Meat is a natural feed for poultry, since on the range they will pick up worms and insects in large numbers. Meat scrap may form as much as 5 or 10 per cent. of the total feed, and may readily be fed mixed with the dry mash.

Different feeds contain varying amounts of ash or mineral matter, and at different ages birds require different quantities of this material. Eight per cent. of the egg consists of shell, so that considerable amounts of mineral matter are necessary if soft-shelled eggs are to be prevented. Oyster shell, or ground bone should, therefore, be constantly available to the hens. Egg eating is a natural result of soft-shelled eggs.

Green feed in some form is quite essential for laying hens; otherwise they will get out of condition and egg production will decrease. Sprouted oats, mangels, silage, cabbage, rape and beets are all good. Onions are also good if fed sparingly so that they will not taint the eggs.

HORTICULTURE.

Are Apples a Success in Eastern Ontario?

Several conditions warrant the conclusion that Ontario apple growing is at present in a rather chaotic state. Chief of these is, perhaps, the fact that during the war years—and 1919 may fairly be counted as one of them so far as the conditions affecting production are concerned—the whole fruit industry has been very seriously deranged. To some extent, but not entirely contributory to this condition of unrest, is the additional fact that for years the labor situation on our farms has been steadily growing worse; with the natural result that upon our mixed farms, where the bulk of Ontario apples are produced, there has been evidenced a steadily increasing tendency toward neglect. The tide of neglect was for some years successfully stemmed by a campaign on orchard education backed by a policy of demonstrations to show the possibility of securing handsome profits from efforts expended on the care of the farm orchard. Some good crops coming simultaneously with this campaign and the rapid spread of co-operative marketing, each served to make farm orcharding more attractive than it had hitherto been and, for a while, so far as apples were concerned, the Ontario fruit industry was in a promising condition. Whether,

greenish yellow in color, with white Fameuse flesh and Fameuse texture, and with the ability to resist scab very successfully. But he reckoned without the market and the discriminating eye-taste of the consumer who fills his stomach by sight and frequently buys Ben Davis for dessert purposes, thus proving the rule that the joys of anticipation are greater than those of realization. Despite their handicap for commercial and economical production, both Fameuse and McIntosh have easily won the market and now belong in the foremost rank of apple varieties grown anywhere in the world.

But here, another factor enters. These splendid varieties Nature has admirably gifted with abundant hardiness for natural conditions of growth, even in such cold parts of Canada as Eastern Ontario and Quebec. But when the commercial grower takes them out of their natural conditions and substitutes modern methods of tillage, fertilization and pruning, the margin of safety from cold is often reduced to nothing and winter injury results. Many old orchards of Fameuse and McIntosh are gone or going from this and other causes and they are not being replaced.

Only a few days ago a representative of "The Farmer's Advocate" was able to visit the farm of Harold Jones, in the county of Grenville, and fronting the River St. Lawrence. For many years Mr. Jones conducted, and, in fact, still does conduct, although on a much reduced scale, a variety test station for the Ontario Department of Agriculture. While he has 260 acres of land and maintains a herd of 17 cows, the orchards are still his favorite care. The writer was informed that for 35 years Mr. Jones himself has held the nozzles at spraying time, without a miss. He began spraying in 1884 and has gone through the whole long experimental stage of spraying. He has used salt and water, lime and water, flour and Paris green, Bordeaux mixture and more recently, lime and sulphur. Bordeaux was first used in 1886. Of late years lime and sulphur have been used and are giving good results although Mr. Jones told us that he lost between \$200 and \$300 this year, on a small crop, because of insufficient power from his sprayer during spraying time.

Naturally we were interested in knowing the opinion of this veteran grower as to the future of apple growing in Eastern Ontario, and particularly with reference to



Many Ontario Farm Orchards Have Suffered from Neglect.

at the present time, a strong effort put forward by organized fruit growers could again be successful in transforming neglect into improvement and progress is a debatable subject, about which we would feel safer not to venture too strong an opinion. But we do feel that it is necessary for fruit growers to take some decided stand with respect to the development of the industry. Growers who are straight commercial fruit growers should have the welfare of the industry most at heart and it is sometimes necessary to back up government officers by plain statements of policy on the part of the organizations interested.

So far as the Eastern part of the Province is concerned, Nature and chance have both blessed, as well as frowned upon, the fruit industry there. It is conceded by all, we believe, that nowhere in Canada can Fameuse and McIntosh be so well grown as in Eastern Ontario and Quebec. Nature has decreed that at least the McIntosh shall have been brought to light therein, and that the Fameuse should shed its brightness and quality for many, many years from the banks of the St. Lawrence, before its general introduction into other fruit-growing areas as a commercial variety. Furthermore, the season in Eastern Ontario is of almost exactly the right length for the highest development of the Fameuse and McIntosh. Still another factor is the fact that both varieties are very hardy. Man's ingenuity and intelligence have been severely taxed, however, in order to overcome the severity of the winters' cold and the vagaries of the growing season. Both of these native varieties have one serious defect (for defect it is despite the oft repeated and justifiable claim that it is a spur to improved methods) and that is their susceptibility to scab. Many years ago, when modern fruit growing was but beginning, the late Professor John Craig, became much enamoured of a certain variety belonging to the Fameuse family, the name of which we cannot recall now, but which was

the production of McIntosh and Fameuse. He is still confident and proves it by pointing to young trees of these varieties that he is setting out. On one orchard of four acres now being pulled out gradually, Mr. Jones told us that for twenty years this orchard returned him an average of \$200 per acre for his labor and investment after deducting the cost of fertilizers, spray materials, barrels, freight, commissions and all such items. As mentioned above, this orchard is gradually being pulled out, but in 1915 young McIntosh were planted in vacant places and between the remaining old trees so that when the last of the old trees are removed he hopes to have a young orchard beginning bearing. Records have been kept of the cost of planting the young trees and the cost of caring for the orchard, as well as of the revenue from the old trees from the time the young ones were set out, with the idea of finding out whether the crops from the old trees will pay for the cost of rearing the younger ones to bearing age. Both are growing in sod and are being fertilized at the rate of a load of barnyard manure to every ten trees in order to bring the soil into good fertility by the time the young trees come into bearing. Not a single McIntosh tree was lost as a result of the extremely severe winter of 1917-18, but from the fact that a little second growth is evident this year, even in a sod orchard, it is natural to conclude that a little less manure would be better.

We believe that as a commercial proposition, both McIntosh and Fameuse can be grown to good size and free from scab in Eastern Ontario and also that they can be secured, by judicious feeding and cultural methods from abnormal winter killing. Certainly they can be grown with the best of flavor and color. So far as other varieties are concerned the same applies, but no other varieties suitable for the district can boast of the same quality. It is possible, however, to select several of the hardier kinds that are worth a place in a commercial orchard.

October Fruit Conditions.

The tender fruit season is now practically over, with the exception of possibly a few late varieties of peaches, pears and grapes. The October fruit crop report issued by the Fruit Commissioners' Office, Department of Agriculture, Ottawa, says that earlier estimates for plums and peaches were very nearly correct. With regard to tender fruits the report says: "The grape crop will probably be a record one in the Niagara Peninsula. About half the crop was harvested by the end of September, and the balance will be all moved within a very short time. There appears to be a fairly good crop of pears in Western Ontario and also in Niagara; Kieffers are about the only important variety yet to move. In British Columbia the commercial pear crop is excellent, and reports are about as favorable as those covering the apple situation."

With regard to apple prospects, the report summarizes conditions as follows: "The principal change to be noted since the publication of our last report, is the improvement in prospects, both in the Annapolis Valley of Nova Scotia and in the Okanagan Valley of British Columbia. The latter district will produce a record crop, and the yield in Nova Scotia will about equal the record crop of 1911. So far as quality is concerned, conditions in Nova Scotia are none too good, apple scab being quite prevalent throughout the Valley. The percentage of low-grade fruit that will be marketed has, however, been appreciably lessened by heavy purchases for evaporating purposes. No material change has taken place in Ontario during the past month. Frequent rains have been of great benefit in sizing up the fruit, and in all districts apples are reported to be coloring well. Apple scab, codling moth and side worm have affected the quality of the fruit in many districts, and grades are running largely to domestic and No. 3."

Regarding the increase in prospects for the Nova Scotia crop the report says: "Estimates of the apple crop in the Annapolis Valley have varied greatly, and it is very difficult to arrive at even an approximate figure. It seems, however, that our September figure of 1,250,000 barrels for export is now too low, and that the total crop will almost equal that produced in 1911. Allowing for local consumption and for fruit used by evaporators, canning factories and cider mills, there is probably sufficient fruit on the trees to warrant our estimating the surplus available for shipment out of the Province, at almost 1,500,000 barrels. This increase during the past few weeks has been due to the remarkable growth of the fruit, encouraged by favorable weather conditions."

With control prices in effect in Great Britain Nova Scotia growers will need to do some careful marketing this year. Evaporators have taken large quantities at prices ranging from \$1.50 to \$2.25 per hundred pounds, and export prices must be at least \$7 per barrel to equal this price, since it costs at least \$4.50 per barrel to get a barrel of apples across the ocean. Growers so far have shown a tendency to hold their fruit, evidently in the hope of a better market, but transportation is a factor that must be considered, and no boat with available space should be allowed to sail without that space being filled, for fear of a shortage later on.

With regard to the new 100-quart apple barrel, in use this year for the first time, the report quotes a statement from J. Forsyth Smith, Canadian Fruit Trade Commissioner, Liverpool, who says as follows: "It is satisfactory to learn that very few of the old Nova Scotia barrels may be expected on the market this season, as it would be much more difficult to get buyers to give practical monetary effect to the fact that they are now receiving a heavier barrel, if any large proportion of arrivals were packed in the old barrel. It would be greatly to the advantage of the shippers generally, if all small barrels could be used for packing potatoes or for the home market. During this season of transition from a small barrel to a large one, it would also help greatly if all standard barrels were so marked in conspicuous letters. On this side, steps will be taken by circular and otherwise, to impress upon buyers the fact of the greater value now offered them."

The following observations are made with reference to conditions in the Okanagan Valley, B.C.: "It seems certain that the Okanagan Valley will produce the largest apple crop in its history. The serious shortage of water earlier in the season was relieved at the critical moment by rains, which saved the situation. At the present time general conditions are all that could be desired. The fruit is practically free from scab, and of good size and color generally."

The following interesting summary of the potato situation is also given: "The latest report of the Dominion Bureau of Statistics showing the condition of potatoes by provinces on August 31, 1919, has just been received. For comparative purposes it places the average yield for the past ten years at 100. Estimates for this year are as follows: Prince Edward Island, 100; Nova Scotia, 99; New Brunswick, 101; Quebec, 98; Ontario, 76; Manitoba, 90; Saskatchewan, 87; Alberta, 89; British Columbia, 86; and for the whole Dominion, 91."

"It will be noted from the foregoing that there is a very light crop in the Province of Ontario. This has been substantiated by numerous reports received from our correspondents during the past few days. Decreases are noted in practically every district, and so far as

early potatoes are concerned, the crop has been practically a failure. Estimates of the Provincial Department of Agriculture placed the acreage at 154,820 acres, as compared with 166,203 acres in 1918, so that the actual production in the Province promises to be curtailed both by a smaller acreage and a lower yield per acre.

"In New Brunswick the crop in the St. John River section has been quite seriously affected by late blight, and some fields are not worth digging. This condition has been brought about by wet weather during the earlier part of September. Yields in the Woodstock district (N. B.) vary greatly, some farmers reporting 120 barrels to the acre, and others practically none. It is claimed that crop failures in this district were caused by the use of a poor grade of fertilizer. Some late blight has developed but not to a serious extent."

FARM BULLETIN.

The Session of Parliament Nears an End.

Unless the unexpected happens, Parliament should prorogue this week, probably on Friday or Saturday. Most of the business of the House can be disposed of quite easily, with the exception perhaps of the Civil Service Re-classification Bill, which was just introduced last week, and will, in its present form, prove by no means satisfactory, in our judgment. The Government for some time now has been endeavoring to introduce some reform in the Civil Service, and seem to be sincere in their efforts to abolish political patronage. Not so long ago a Civil Service Commission was appointed to take charge of all appointments and other matters relating to the filling of vacancies within the Civil Service. The number of civil servants in the employ of the Dominion Government is estimated at from 60,000 to 90,000, and it can readily be seen that to bring about any greater degree of efficiency among such a very large number of employees requires a long time and a great deal of work. There were, and still are, a very large number of cases where two employees doing similar or comparable work were receiving salaries that are altogether unlike, and for this reason it was deemed advisable to reclassify the Civil Service so as to bring down the salaries of certain employees who are overpaid, and bring up to a more reasonable standard the salaries of others who are now underpaid.

A firm of efficiency experts were employed to get this matter in hand, and as a result a very much garbled report was presented at the last session of Parliament. It was entirely unsatisfactory and particularly so from the standpoint of agriculture, where, in a very great many cases, salaries were much too low to induce men of the necessary ability and training to take service within the Department. The whole service, however, was in an uproar over the manifest unfairness and inconsistency shown by this report, with the result that it was easily seen before the close of the last session that the report would never be approved by the House of Commons in the form in which it then was. In the meantime some effort has been made by the Government to make some improvement in the re-classification so as to smooth out the inconsistencies and raise the salaries for certain positions. We are not prepared to speak with reference to other Departments, but so far as the Department of Agriculture is concerned, knowing as we do a great many of the agricultural officers of the Dominion Government, and knowing also the difficulty which the Dominion Government must experience in securing men of the proper calibre for any responsible position that may now or hereafter be open, we feel that in a great many cases the salary should be more generous and that it is doubtful if the re-classification is even now satisfactory in spite of the work that has been put on it since the last session.

The idea is too prevalent that men in Government positions draw large salaries for doing nothing. This is an unfortunate and by no means a correct impression. Government salaries, as a rule, are lower than those paid by private or commercial firms, and while Government employees need not work hard unless they are interested in their work and choose to do so, we have found that most of them do all that could be expected under the circumstances, and many of them a great deal more. It is perfectly true that there are certain employees of the Government who were placed in their present positions by political influence, and who do little else but draw their pay. There are indeed several such persons in the Department of Agriculture at the present time—a few of them in very responsible positions—but we have it on the very best of authority that they have not been replaced by better men simply because it was impossible to fire them. These men do great harm to the service, and are almost entirely responsible for the common impression referred to above.

In view of these things, therefore, it is somewhat disgusting to know that certain members of the House of Commons still argue strongly against the abolition of patronage. Such men as Foster of East York,

Edwards of Frontenac, Hocken of Toronto, Burnham of Peterboro, Crothers of West Elgin, all came out more or less flatly in the debate, damning Civil Service reform and eulogizing the old patronage system with equal fervor. Such men very evidently know little of the service except as the power to make an appointment gives them prestige within the limits of their own ridings. Honorable A. K. McLean, who is piloting the Bill through the House now, said that the principal feature of the Bill was the request through Parliament to ratify the classification of Civil Service as prepared by the Civil Service Commission in pursuance of the Act of 1918. Whatever may be done with the Bill by the House, it is provided that the Civil Service Commission can amend the classification if necessary, subject only to the approval of the Governor-in-Council.

Early in the week there was some discussion on the Bill to amend the By-Election Act passed last summer. Serious complaints have been received from British Columbia in connection with the recent registration under the terms of the Act passed last session. The difficulty arose from the fact that under the laws of British Columbia, Orientals are not entitled to vote, and there was much indignation at the thought that the federal laws would override the wishes of the people of the Province. Honorable Hugh Guthrie, therefore, introduced a Bill to the House of Commons amending the Act of last session so that it would not interfere with any Provincial Act now in effect. A few of the Opposition defended the Orientals, but there was not a great deal of discussion. Sir Sam Hughes managed to take up some time of the House airing his complaint that there was a conspiracy to destroy him. He made various and sundry charges against members of the Cabinet and Sir Arthur Currie, but as he continued to speak the House gave him fewer and fewer listeners. Sir Sam's spirit was in no wise daunted, and from the standpoint of pure excitement it is too bad that he is such a poor speaker. It was very difficult to hear him, and he speaks in a most tiresome monotone.

D. D. McKenzie's motion for an investigation into the charges of ballot switching and fraudulent winning of elections in 1917 was again resumed. Hon. Jacques Bureau, Three Rivers, delivered a slashing political attack on Hon. Arthur Meighen, Minister of the Interior, during this debate, and made some startling allegations with regard to ballot switching in Nova Scotia, particularly in the constituency of Cumberland, the riding represented by Speaker Rhodes. He stated, for instance, that 240 men in the 208th Battalion of Toronto voted in constituencies where they were not entitled to vote. There were several disagreeable incidents in connection with this debate, but on a vote which finally was taken early Saturday morning, the McKenzie motion for investigation was defeated by 79 to 56, which, after all is a comparatively small vote, and shows that the issue was not regarded as one of tremendous importance even by all members of the Opposition.

The Bill introduced by Donald Sutherland, South Oxford, to add bran and shorts to the list of foods and feeding stuffs included in the Adulteration Act, was given its second reading on Wednesday, October 1. Mr. Sutherland stated that the Government had been very lax in dealing with the adulteration of these feeding stuffs in as much as very few or no prosecutions had resulted to date. The Bill is very simple in effect, but nevertheless important in as much as by providing that to adulterate bran and shorts in any way shall be unlawful and contrary to the provisions of the Adulteration Act, farmers can be certain that these two important feeds will not contain anything but the products of the wheat plant. There is no reason whatever why this Bill should not be given its third reading and put into effect immediately. As we have intimated before, there is a great deal still to be done in the way of improving legislation with regard to animal feeding stuffs. Farmers are now complaining that bran is ground up and added to the shorts, thereby reducing the available quantity of the former feed and reducing the quality of the latter. The Bill just referred to will not be able to prevent this action on the part of the millers, and it is necessary that the Feeding Standards Act now in existence be revised and turned over to the Department of Agriculture for enforcement. At the present time the feeding standards for bran and shorts are open to a great deal of criticism. This, in addition to the fact that the standards are enforced by the Department of Trade and Commerce, where a knowledge of agriculture and agricultural necessities is as scarce as hen's teeth, tends to make these standards very unsatisfactory for the farmer. The enforcement of revised standards as well as of the recently passed fertilizer legislation should be turned over immediately to the Department of Agriculture, where there ought to be somebody who knows something about the subject. As a matter of fact, there is now in one of the branches of the Department of Agriculture an Act drawn up and ready for introduction to the House of Commons dealing with the control of feeding stuffs. It is time that farmers were protected by some such Act as this appears to be, and our agricultural officials would do good work for the farmer if they were to introduce this or a better Act into the House.

There will be a meeting of the National Dairy Council of Canada in the City Hall, Ottawa, at 10 a.m. on Tuesday, October 14. It is an open meeting and all interested in the dairy industry should endeavor to attend. The date has been fixed so as to blend with the Interprovincial Plowing Match for which special rates have been advertised.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending October 2.. 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	
	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25
Toronto (U. S. Y.)	7,562	10,554	6,940	\$12.75	\$14.25	\$12.50	1,044	650	889	\$22.00	\$17.50	\$22.00
Montreal (Pt. St. Charles)	2,508	2,126	1,956	13.00	13.00	10.75	1,327	986	1,225	17.00	16.00	17.00
Montreal (East End)	2,287	2,603	2,998	13.00	13.00	10.75	1,117	655	1,815	17.00	16.00	17.00
Winnipeg	7,815	17,227	8,405	12.50	14.00	11.25	671	576	763	13.00	12.00	12.00
Calgary	3,730		6,535	10.00	14.00	9.75	918			9.00		9.25
Edmonton	1,515	2,753	1,316	10.00	13.25	9.50	163	137	81	10.50	9.00	10.00

	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	
	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25	Oct. 2	1918	Sept. 25
Toronto (U. S. Y.)	6,375	6,824	6,831	\$18.00	\$19.75	\$18.25	13,620	8,244	12,082	\$14.60	\$16.75	\$14.00
Montreal (Pt. St. Charles)	1,458	2,697	1,563	17.75	19.75	18.25	7,524	3,633	7,052	13.00	16.00	13.00
Montreal (East End)	909	1,506	1,189	17.75	19.75	18.25	4,282	2,469	5,309	13.00	16.00	13.00
Winnipeg	1,133	1,657	1,032	17.50	19.00	17.50	2,404	2,864	2,022	13.00	17.00	12.50
Calgary	618		488	17.00	19.50	17.25	1,475		983	12.00	14.00	12.00
Edmonton	149	440	186	16.75	18.75	17.25	316	789	322	12.50	17.00	12.50

Market Comments.

Toronto (Union Stock Yards.)

Cattle receipts for the week totalled eight thousand five hundred head. The offering was of very uneven quality being made up for the most part of common light unfinished cattle. Despite the low quality of the stock offered the condition of trading was considerably better than during the two previous weeks and the offerings were picked up on active markets at an advance of twenty-five cents on Monday, and a further appreciation of twenty-five to fifty cents on Wednesday. There was a limited supply of heavy cattle and for that class of stock demand was keen, agents of the Belgium Government being competitive buyers, and absorbing practically the entire offering, along with a number of cows, heifers and bulls. A shipment of one hundred and fifty head of mixed stock was made on Belgia account on Monday, and a further shipment will follow in a few days. A few heavy steers averaging twelve hundred pounds sold as high as \$13 per hundred, twenty-one head averaging twelve hundred and sixty pounds at \$12.85, twenty head averaging twelve hundred and thirty pounds at \$12.75, and several other good loads from \$12 to \$12.75. Of steers weighing from ten hundred to twelve hundred pounds, a few head averaging eleven hundred and fifty pounds sold at \$13; twenty head averaging eleven hundred and forty pounds at \$12.75, twenty-five head averaging eleven hundred and sixteen pounds at \$12.75, while most of the good cattle within these weights moved from \$11.50 to \$12.25, and medium quality stock found an outlet from \$9.50 to \$10.50 per hundred. An equally good call existed for choice handy-weight steers and heifers. One pair of choice heifers averaging ten hundred and eighty pounds sold at \$13.50 per hundred, a price slightly above the market. A straight load of steers averaging nine hundred and ninety pounds sold at \$12.20 while numerous loads of good quality stock were weighed up from \$11 to \$11.75 per hundred, medium butchers from \$9 to \$10, and common light cattle from \$6 to \$8.50 per hundred. Cows and bulls were in equally good demand, and \$11 per hundred was reached in several instances; good cows and bulls were quoted from \$9.75 to \$10.50, and common cows from \$6 to \$8. Bologna bulls sold from \$6 to \$7.50. The canner and cutter trade was unchanged within a range of \$5 to \$6 per hundred. Stockers and feeders continued to have but a light call from Ontario points, but speculators again bought liberally for shipment to American points, and the market advanced slightly on that account in sympathy with the strength in the market for good cattle. The veal calf trade was unchanged. A few choice calves were sold at \$22 per hundred, medium calves from \$15 to \$18, and common and heavy calves from \$8 to \$13.

While fourteen thousand lambs were on sale, trade ruled stronger for the first three markets of the week, although a trifle easier on Thursday. Lambs sold at from \$13.25 to \$13.75 on Monday, and advanced to a range of \$13.75 to \$14.60 on Wednesday. The top figure on

CLASSIFICATION	No.	Avg. Price	TORONTO		Top Price	MONTREAL (Pt. St. Charles)		Top Price	
			Price Range	Bulk Sales		Price Range	Bulk Sales		
STEERS									
heavy finished	156	\$12.54	\$11.75-\$12.75		\$13.25				
good	594	11.55	11.00-12.50		12.75	85	12.50	10.75-13.00	13.00
1,000-1,200 common	278	9.76	9.25-10.75		10.75				
STEERS									
good	442	10.49	9.50-11.25		12.25	79	10.25	9.00-10.75	10.75
700-1,000 common	903	7.11	6.50-8.00		10.00	429	7.75	7.00-8.50	9.00
HEIFERS									
good	513	10.41	9.50-11.25		12.50	18	9.50	9.00-10.00	10.50
fair	561	8.51	7.75-9.50		10.00	41	8.00	7.50-8.75	8.75
common	419	6.80	6.00-8.00		8.00	349	7.00	6.00-7.50	7.50
COWS									
good	315	9.84	9.25-10.50		11.00	45	9.00	8.50-10.00	10.50
common	1,086	7.08	6.50-8.00		8.50	243	7.00	6.00-7.75	8.25
BULLS									
good	28	9.77	9.25-10.50		11.00	4	8.00	8.00	8.00
common	143	6.55	6.00-8.00		9.50	807	6.00	5.75-6.50	7.50
CANNERS & CUTTERS	558	5.41	5.00-6.00		6.00	391	5.35	5.00-6.00	6.00
OXEN									
CALVES									
veal	1,044	16.36	15.00-19.00		22.00	70	14.00	12.00-16.00	17.00
grass						1,257	7.10	7.00-7.50	7.50
STOCKERS									
good	591	8.42	7.50-9.25		9.25				
fair	615	7.24	6.50-7.50		8.50				
FEEDERS									
good	285	10.00	9.75-10.50		10.50				
fair	76	9.50	9.00-9.75		9.75				
HOGS									
selects	6,162	17.76	17.75-18.00		18.00	1,163	17.50	17.25-17.75	17.75
heavy									
(fed and watered)									
lights	109	15.66	14.75-15.75		15.75	272	16.50	15.75-17.25	17.25
sows	103	14.89	14.75-15.75		16.75	22	12.25	10.75-12.75	12.75
stags	1								
LAMBS									
good	11,503	13.81	13.00-14.50		14.60	2,382	12.65	12.50-13.00	13.00
common	987	11.50	10.00-13.00		13.00	4,325	11.50	10.00-11.75	11.75
SHEEP									
heavy	212	7.85	7.00-8.50		8.50				
light	620	9.01	8.00-9.50		10.00	172	8.00	8.00	8.00
common	298	6.00	5.00-7.00		7.00	645	7.50	7.50	7.75

Thursday was \$14.15. Sheep were unchanged from \$7.50 to \$9.50 per hundred. The hog market held steady at the closing quotation of the previous week, and looked a trifle firmer on Wednesday and Thursday, when a few decks of selects sold at \$18 per hundred, and the balance at \$17.75.

Of the disposition from the Yards for the week ending September 25, Canadian packing houses purchased 425 calves, 4,372 butcher cattle, 8,245 hogs and 10,119 lambs. Local butchers purchased 258 calves, 317 butcher cattle, 295 hogs and 1,533 lambs. Canadian shipments were made up of 2 calves, 462 stockers, 241 feeders, 322 sheep and 139 lambs. Shipments to United States points consisted of 141 calves, 89 canners and cutters, 56 bulls, 1,130 butcher cattle, 346 stockers, 315 feeders and 191 lambs.

The total receipts from January 1 to September 25, inclusive, were 240,216 cattle, 52,432 calves, 272,979 hogs and 117,087 sheep; compared with 198,938 cattle, 46,588 calves, 247,800 hogs and 63,969 sheep, received during the corresponding period of 1918.

Montreal.

The combined offerings on the two markets during the week amounted to forty-seven hundred and ninety-five

cattle, twenty-four hundred and forty four calves, eleven thousand and eight hundred sheep and lambs, and twenty-three hundred and sixty-five hogs. Trading in medium grade butcher cattle was slow until bulls and common cattle had been disposed of. The best cattle offered averaged about twelve hundred pounds and were sold at \$13 per hundred, while cattle of slightly lower grading sold mostly at \$10.75 per hundred, good light steers weighing ten hundred pounds and over being weighed up at the latter figure. Common steers sold in many cases from \$7.50 to \$8.50, a number of good quality heifers sold at \$10.50, while common stock was weighed up around \$6. Good cows sold up to \$10.50, and those of fairly good quality around \$8.50; cows of medium quality were not as high as on the previous market. Cattle for boning and canning sold readily at prices equal to or a little stronger than those of the previous week. Two or three good bulls were sold for \$8 per hundred, and common bulls from \$5.75 to \$7. Good veal calves sold at a top of \$17. Grass calves were poor sellers realizing from \$6.75 to 7.50 per hundred with the majority of sales at \$7.

Despite the fact that there were nearly twelve thousand sheep and lambs offered during the week, the feeling was slightly

stronger, compared with the previous week's market. Top lambs sold at \$13, and most of the fair to good lambs at \$12.50. One lot of very common light lambs sold for \$10. Sheep changed hands at \$7.50 to \$8.

The best lots of select hogs sold at \$18, off cars. Many of the hogs offered averaged on the light side, and for these, \$17 to \$17.50 was the ruling price. Sows sold at prices \$5 per hundred lower than those for selects. Packers were insisting on a cut of \$2 per hundred from select prices on hogs weighing less than one hundred and fifty pounds, off-cars, Montreal.

Pt. St. Charles.—Of the disposition from the Yards for the week ending September 25, Canadian packing houses and local butchers purchased 1,024 calves, 216 canners and cutters, 713 bulls, 1,017 lambs, butcher cattle, 1,563 hogs and 4,920 lambs. Shipments to United States points consisted of 201 calves and 2,132 lambs.

The total receipts from January 1 to September 25, inclusive, were 34,180 cattle, 61,167 calves, 61,834 hogs and 45,071 sheep; compared with 35,018 cattle, 55,681 calves, 52,638 hogs and 31,344 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from

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the Yards for the week ending September 25, Canadian packing houses and local butchers purchased 1,268 calves, 2,870 butcher cattle, 664 hogs and 2,696 lambs. Canadian shipments were made up of 525 hogs. Shipments to United States points consisted of 547 calves, 28 butcher cattle and 2,613 lambs.

The total receipts from January 1 to September 25, inclusive, were: 38,684 cattle, 45,225 calves, 42,991 hogs and 35,084 sheep; compared with 33,249 cattle, 42,228 calves, 33,464 hogs and 24,723 sheep, received during the corresponding period of 1918.

Live Stock Notes.

Under instructions from the Honorable Dr. Tolmie, the Live-Stock Commissioner, and Mr. C. M. MacRae investigated the possibilities last week of securing boat space for live-stock movement to European countries. Interviews were obtained with the Managements of the most important ocean services operating from Montreal and with two of the most representative operating from New York. The Canadian Companies have a few cattle carrying boats in commission but space on these is fully booked. All of the companies, however, recognized the European demand for live stock, acknowledged the advantage of Canada's active participation in this trade and agreed to take the necessary steps to furnish space, provided firm assurance were given that business would offer. They indicated their willingness to make their rates competitive with those charged in the United States.

One of the Companies interviewed in New York has seven cattle carrying steamers in its service. The Manager stated that he was now in a position to book space for sailings during October, charges being \$80 per head for cattle and \$100 for horses. He indicated these prices could be shaded somewhat on the basis of contracts covering two or more sailings. The interview with the other company suggested the possibility of cattle being carried to Holland on Dutch boats taking coal from Sidney, Nova Scotia. This is being investigated.

Under the supervision of Mr. P. E. Light, statistician of the Branch, a survey has been taken of hog production in all the Provinces of the Dominion. An analysis of this survey shows clearly that there has been a distinct falling off in sows farrowed this spring and in sows bred this summer. The conclusion which the Branch has reached as regards this survey, together with certain disquieting incidents which have been brought to light in connection therewith, have been brought to the attention of Mr. O'Connor. We give it as our opinion that lower prices can be permanently obtained only on the basis of increased production. Increased production can never be realized except when the business of the producer steadily remains both profitable and attractive. High feed cost together with the shortage and high cost of farm labor are already endangering the future of the hog industry in this country and preventing the expansion of an export trade, the development of which is so important at the present time, in view of the financial condition of the Dominion. The logic of the situation should be clear that the causes of under production must be removed before there can be any permanent reduction, on an economic basis, of the present high cost of living. Until this is done, any arbitrary reduction in price must inevitably result in prices being forced up again by actual shortage in supply. Meanwhile, as would be the case with a Miner's strike in Britain, a vital blow would be dealt at the life of the country.

The following cable was received this week from the office of the Canadian Commissioner in France: "Law passed fifteenth granting credit to Minister of War three million for purchase young horses." The Department promptly cabled Paris with the view of ascertaining Canada's opportunity to secure a part of this trade.

Cheese Markets.

St. Hyacinthe, 25c.; Cornwall, 25 3/4c.; Belleville, 25 11-16c.; Montreal, finest Easterns, 25c.; New York, flats, specials, 30 1/4c. to 31 1/4c.; average run, 30c. to 30 1/2c.; twins, specials, 30c. to 30 1/2c.; average run, 29 1/2c. to 29 3/4c.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, October 6, numbered 239 cars, 6,063 cattle, 625 calves, 2,601 hogs, 6,306 sheep and lambs. Trade opened slow but soon became active, all classes selling at steady prices. Best load of heavy steers unsold at time of wiring, \$14 asked, \$13 bid; others selling at \$11.50 to \$12.40 per hundred. Cows steady, choice at \$10 to \$10.50. Bulls steady, top \$11.65. Lambs stronger, bulk at \$13.50; few up to \$14.50. Sheep and calves steady. Hogs, \$18, fed and watered.

Breadstuffs.

Wheat—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, \$2 to \$2.06; No. 2 winter, per car lot, \$1.97 to \$2.03; No. 3 winter, per car lot, \$1.93 to \$1.99; No. 1 spring, per car lot, \$2.02 to \$2.03; No. 2 spring, per car lot, \$1.99 to \$2.05. No. 3 spring, per car lot, \$1.95 to \$2.01. Manitoba, No. 1 northern, \$2.30; No. 2 northern, \$2.27; No. 3 northern, \$2.23.

Oats—Manitoba (In store, Ft. William) No. 2 C. W. 83 1/4c.; No. 3 C. W., 82 1/4c.; Extra No. 1 feed, 82 1/4c.; No. 1 feed, 81 1/4c.; No. 2 feed, 79 1/4c.

Manitoba Barley—(In store, Ft. William), No. 3, \$1.27 1/4c.; No. 4 C. W., \$1.24 1/2c.; rejected, \$1.13; feed, \$1.13.

Oats—Ontario, (according to freights outside) No. 3, white, 86c. to 88c.

Barley, (according to freights outside), malting, \$1.27 to \$1.30.

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

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

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

Flour—Manitoba, Government standard, \$11, (Toronto); Ontario; (in jute bags, prompt shipment). Government standard, \$9.40 to \$9.60, Montreal and Toronto.

Millfeed—Car lots delivered, Montreal freights, bags included.—Bran, per ton, \$45; shorts, per ton, \$55; good feed flour, bag, \$3.50.

Hay—(Track, Toronto), No. 1 per ton, \$24 to \$26; mixed, per ton, \$15 to \$20.

Straw—(Track, Toronto), car lots per ton, \$10 to \$11.

Hides and Wool.

Prices delivered in Toronto: City Hides—City butcher hides, green, flats, 35c.; calf skins, green, flats, 65c.; veal kip, 45c.; horse hides, city take-off, \$15 to \$17; sheep, \$3 to \$4; lamb skins, and shearlings, \$2 to \$3.

Country Markets.—Beef hides, flat cure, 35c.; green, 20c. to 32c.; deacon bob calf, \$2.50 to \$3; horse hides, country take-off, No. 1, \$10 to \$11; No. 2, \$7 to \$8; No. 1 sheep skins, \$2.50 to \$3.50 horse hair, farmers' stock, 35c. to 40c.

Tallow.—City rendered, solids, in barrels, 9c. to 10c.; country solids, in barrels, No. 1, 11c. to 12c.; cakes, No. 1, 12c. to 13c.

Wool.—Unwashed fleece wool as to quality, fine 59c. to 60c. Medium coarse, 50c.; coarse, 42c. Wool, washed, fine, 75c.; medium, 70c.; coarse, 65c.

Country Produce.

Butter.—The market for butter showed a slightly weaker tendency at practically stationary prices: choice creamery pound prints selling at 56c. to 58c.; cut solids at 53c. to 55c. per lb.; and best dairy at 50c. to 52c. per lb., (wholesale).

Eggs.—Trade in eggs was active, and prices ranged somewhat higher; strictly new-laid selling at 65c. per dozen, and No. 1's at 57c. per dozen.

Pure lard was easier in price, wholesale, selling at 32 1/2c. per lb. in tierces; 33c. per lb. in 20-lb. pails, and 34 1/2c. per lb. prints.

Honey.—Choice comb, \$5 to \$6 per dozen; strained, 24c. to 26c. per lb.

Poultry—Receipts of chickens and hens were heavy with prices on all classes keeping steady. The following quotations are for live weight, delivered, Toronto: Spring chickens, 20c. to 23c. per lb.; old hens, over 6 lbs., 26c. per lb.; old hens, over 5 lbs., 25c. per lb.; old hens, 3 1/2 to 5 lbs., 25c. per lb.; old roosters 18c. per lb.; spring ducks, 4 to 5 lbs., 18c. per lb.; turkeys, 35 cents per lb.

Wholesale Fruits and Vegetables.

Receipts of home-grown fruits are rapidly diminishing, with the exception of grapes which are still arriving freely. Potatoes materially declined; both Ontarios and New Brunswick Delawares selling at \$2 to \$2.15 per bag.

Wholesale Quotations.

Apples—25c. to 65c. per 11-qt. basket; \$4 to \$7 per bbl.

Peaches—50c. to \$1.25 per 6 qts.; 60c. to \$2 per 11 qts.

Pears.—30c. to 75c. per 6 qts.; 50c. to \$1.25 per 11 qts.

Corn—10c. to 25c. per dozen.

Celery—25c. to 75c. per dozen.

Cucumbers—Large, 25c. to 40c. per 11 qts.; choice 40c. to 60c. per 11 qts.

Gerkins.—60c. to \$1.25 per 6 qts.; \$1 to \$2 per 11 qts.

Egg Plant. 50c. to 75c. per 11 qts.

Onions.—\$4.75 to \$5 per 100 lbs.; \$3.75 per 75 lbs.

Parsley—30c. to 40c. per 11 qts.

Peppers—Sweet, 75c. to \$1 per 11 qts.

Potatoes—Ontarios, \$2 to \$2.15 per bag; New Brunswick Delawares, \$2 to \$2.15 per bag.

Carrots.—\$1.25 to \$1.50 per bag.

Beets.—\$1.50 per bag.

Turnips.—\$1 to \$1.25 per bag.

Montreal.

Horses.—Lumbermen have been buying a few horses and a few have been going into the hands of carters, while there has also been some enquiry from farmers for the fall plowing. Prices continued at about the former range, being \$250 to \$300 each for heavy draft, weighing from 1,500 to 1,600 lbs.; \$200 to \$250 each for light draft, weighing from 1,400 to 1,500 lbs.; light horses, \$125 to \$175; culls, \$50 to \$75 and saddle and carriage animals, \$150 to \$250 each.

Dressed Hogs.—The market for dressed hogs was a little below prices quoted a week ago. Sales of abattoir dressed hogs took place at 25c. to 26c. per lb., no country dressed being yet offered.

Poultry.—The time is approaching when supplies will commence to move into storage. Meantime, live poultry was quoted as follows: Chickens, broilers, 22c. to 26c.; heavy fowl, 25c. to 28c. and 5c. less for light; roosters, 15c. to 17c.; old ducks about the same price as roosters and young ducks about 2c. more; geese 15c. to 20c. and turkeys around 35c. per lb.

Potatoes.—Supplies are as yet mostly from local sources and prices were showing very little change, being, however, inclined to decline. Quebec stock, ex-store, was quoted at \$2 to \$2.25 per 90 lbs., ex-store, while 35c. per peck was still the price quoted for delivery to houses.

Honey and Maple Syrup.—White clover comb honey was selling in small lots at around 25c. per lb., while buckwheat honey was 20c.; maple syrup was quoted at \$1.75 per gallon tin.

Eggs.—It was said that there have been receipts of American eggs in the Canadian market and it is possible that these have kept prices from advancing. Prices at country stores were reported to be in the vicinity of 52c. per doz. Locally, strictly fresh stock was steady at 68c. per dozen, selects were 64c., No. 1 eggs, 57c. and No. 2, 52c. to 54c. per dozen.

Butter.—Receipts are falling off and the market was firm and practically unchanged, at 54 1/2c. to 54 3/4c. for pasteurized creamery, with 1/2c. less for finest; fine, 53 1/4c. to 53 3/4c. and finest dairy, 50c. to 51c.

Grain.—Sales of No. 4 Canadian western barley were taking place at \$1.43 for No. 3 Canadian western, \$1.40 for No. 4, and \$1.32 for feed barley, per bushel, ex-store. Car lots of oats were quoted at 97c. per bushel for No. 2 Canadian western, 96c. for No. 3 C. W., and extra No. 1 feed; 95c. for No. 1 feed and 94c. for sample oats, ex-store.

Flour.—No change took place during the week. Manitoba spring wheat flour was \$11 per bbl., in jute, ex-track, Montreal freights and to city bakers, with 10c. off for spot cash. Ontario winter wheat flour was \$10.50 to \$10.60 per bbl., in cotton bags. White corn flour \$10.90 in jute bags, and rye flour, \$8.25 to \$8.50, delivered to the trade.

Millfeed.—There was no change in the market for mill feed during the week, prices being \$45 per ton for bran and \$55 for shorts, in bags, ex-track. Broken lots were \$1 to \$2 above these prices, delivered, a reduction of 25c. being allowed for cash.

Hay.—The market for hay was nominal, being, however, in the vicinity of \$20 per ton to \$22, ex-track, for No. 2 timothy.

Hides and Skins.—Dealers reported the market steady, at 39c. per lb. for steer

and cow hides and 28c. for bull hides, 75c. per lb. for veal skins and 50c. for kips. Lambskins were steady at \$2 to \$2.25 each, and clipped lambs, \$1.25 to \$1.50 each, horsehides being \$12.50 each.

Chicago.

Hogs.—Heavy, \$15.25 to \$16.60; medium, \$15.40 to \$16.60; light, \$15.75 to \$16.85; light lights, \$15.25 to \$16.50; heavy packing sows, smooth, \$14.25 to \$15; do rough, \$13.75 to \$14.25; pigs, \$15 to \$16.

Cattle.—Compared with week ago native beef steers 25c. to 75c. higher. She stock steady to strong. Feeders and range cattle, 25c. higher. Veal calves \$1 lower.

Sheep.—Compared with week ago market for fat and good lambs mostly 85c. to \$1.25 higher. Sheep and yearlings 25c. to 75c. higher. Breeding ewes steady.

Victory Bonds.

Following were the values of Victory Bonds on the Toronto market, Saturday October 4: Victory Bond maturing 1922, 100 1/4 to 100 3/4; Victory Bond maturing 1923, 100 1/4 to 100 3/4; Victory Bonds maturing 1927, 102 1/4 to 102 3/4; Victory Bonds maturing 1933, 103 1/4 to 103 3/4; Victory Bond maturing 1937, 104 1/4 to 104 3/4.

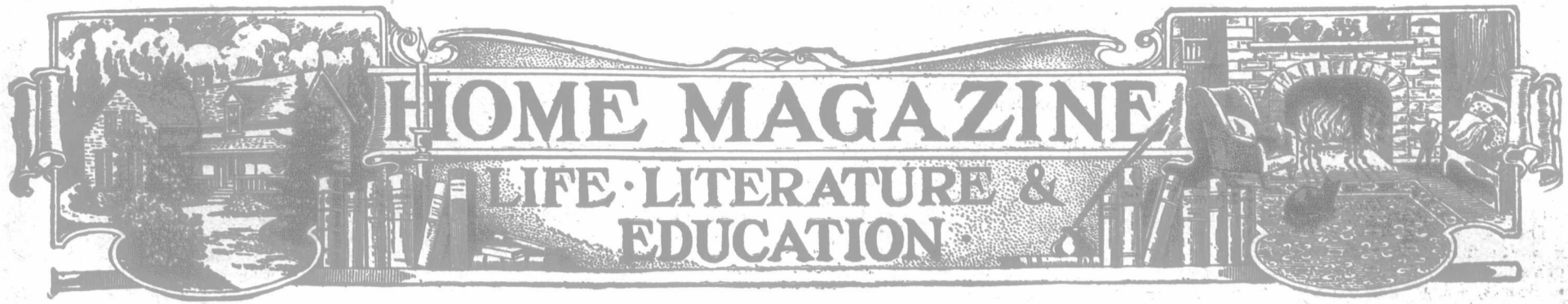
Gossip.

Attention is again drawn to C. J. Stock's Shorthorn sale, to be held on October 15, at his farm near Tavistock. Remember that C. P. R. trains connect with the Buffalo & Goderich at Drumbo, and G. T. R. trains connect with the same at Paris, arriving at Tavistock at 11 o'clock a.m. Mr. Stock is offering to the public the result of many years of careful breeding and selecting. Particular care has been taken in the quality of sires used. Plan on attending the sale on Wednesday, October 15, at Tavistock.

Sale Dates.

- Oct. 16, 1919.—Geo. H. Montgomery, K. C., Montreal, Que.—Ayrshires.
Oct. 22, 1919.—Adam A. Armstrong, Fergus.—Oxfords.
Oct. 22, 1919.—Robt. Mitchell, Ilderton.—Shorthorns and Clydesdales.
Oct. 30, 1919.—Ontario Agricultural College, Guelph.—Pure-bred live stock.
Nov. 4, 1919.—Western Ontario Consignment Sale, London.—Shorthorns.
Nov. 5, 1919.—West Elgin Breeders' Shorthorn Sale, St. Thomas, Ont.
Nov. 6, 1919.—J. C. Bricker, Elmira.—Shorthorns.
Nov. 12, 1919.—Estate T. C. Hodgkinson, Beaverton.—Percherons, Shorthorns and Shropshires.
Dec. 2, 1919.—David Caughell, R. 8, St. Thomas.—Holsteins, farm stock, etc.
Dec. 3, 1919.—Niagara Peninsula Holstein-Friesian Association, Dunnville, Ont.
Dec. 17, 1919.—Oxford Holstein Breeders' Club will hold their semi-annual sale at Woodstock, Ont.

A state of society where the sense of financial responsibility is weak, where debtors are in the habit of dodging their obligations, where the general sentiment of the community sympathizes with and encourages them in their dishonesty, where lenders and so-called "moneyed men" are unpopular and cannot get justice, there we have an invariably backward community. Such a community is an unfavorable location for an honest and capable farmer, because money and credit are invariably scarce, interest rates high, and prices low. Men with capital to invest, men of enterprise and forethought, who make the prosperity of a community, will avoid such surroundings. When such men are lacking, and there remain only those without any sense of financial responsibility, men who hate everyone more prosperous and progressive than themselves,—such a community is doomed to remain, for a period at least, unprosperous, unprogressive, a reproach and a byword among more enlightened neighborhoods.



and 28c. for bull hides, veal skins and 50c. for skins were steady at \$2 and clipped lambs, \$1.25 to \$1.50 each.

Chicago. \$15.25 to \$16.60; to \$16.60; light, \$15.75; lights, \$15.25 to \$16.50; cows, smooth, \$14.25 to \$13.75 to \$14.25; pigs,

compared with week ago 25c. to 75c. higher. Feeder cattle, 25c. higher. Veal

compared with week ago and good lambs mostly higher. Sheep and yearlings higher. Breeding ewes steady.

Bonds.

The values of Victory Toronto market, Saturday Victory Bond maturing 1922, 100%; Victory Bonds maturing 1923, 102 3/8 to 102 1/4; Victory Bonds maturing 1933, 103 3/4 to 103 3/8; maturing 1937, 104 3/4 to

Gossip.

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ety where the sense of bility is weak, where habit of dodging their the general sentiment sympathizes with and in their dishonesty, and so-called "moneymen" are popular and cannot get have an invariably nity. Such a com- favorable location for an able farmer, because are invariably scarce, and prices low. Men vest, men of enterprise who make the prosperity ill avoid such surround- men are lacking, and those without any sense sibility, men who hate prosperous and pro- mselves,—such a com- to remain, for a period ous, unprogressive, a yword among more en- hoods.

Thanksgiving Day.

BY CLINTON SCOLLARD.

Upon this day, long sanctified,
O Father, be our guard and guide!

For all the brooding mother-love,—
The yearning tenderness thereof,—
For the soft light in children's eyes,
Than springtime skies more fair to see,
For kindness in every guise,
Thanksgiving be!

On this dear day, O gracious Lord,
Be thou our watch, be thou our ward!

For the sweet charities that spring
From out the heart of suffering,
For the divine in man that leads
By thorny paths that none may flee
To saintly, sacrificial deeds,
Thanksgiving be!

O Giver, on this hallowed day,
Be thou a beacon o'er our way!

Motherhood.

BY "ELIZA."

"Eliza" is the wife of a doctor. She has brought up a family of fine children, hence speaks from all kinds of experience. We bespeak a welcome for her articles, which will appear once a month until she has said all she wishes to say to young mothers. Certainly the subject, "Children," in everything that pertains to it, is the most important subject in the torn world to-day. Children are the warp and woof of the fabric of the future. We grown folk—the mothers, fathers, teachers and other influencers—are the machines which weave the warp and woof into that fabric. Surely it is ours to see that it shall be clear, and clean and beautiful. To this end "Eliza" writes.—Ed.]

"To Mothers Everywhere—I kiss the heart of the Maternal and say to The God of All—It is all in all to be a mother"—
The Twentieth Plane.

FROM time immemorial the subject of Mother-love has been the theme of poets and many a panegyric has been written on the same, by writers both ancient and modern.

It has been said that a woman is only partly developed until she has borne a child, so surely the crowning glory of womanhood is wifehood and motherhood. As motherhood is, then, one of the most important events of a woman's life, it should be prepared for intelligently, and some slight knowledge of how to care for a child, (or children) would be of great help to the young woman who for the first time finds herself with a wee mite of humanity to care for. I often wonder why a course of nursing, or more especially in the care of young children could not be given with the course of studies in our High Schools and Collegiate Institutes. I believe a beginning has been made in this connection in some schools (perhaps only one) in the United States, where a baby is borrowed every morning for the school term, and the girls, under a qualified instructress, are taught to bathe, dress, feed and put the baby to rest, each girl in the class taking her turn till they have all had the experience.

A woman is supposed to know by instinct, how to care for a child if it be her own, but a little practical preparation might at least supplement instinct and be of great value to both the young mother and her baby. It has been said that to make certain that a child shall be well-born one must begin by training his grandparents, but as that seems to be rather out of the question for present purposes, let us try to give a few hints that may be of service to the young wife who for the first time realizes "Somewhere

upon the ocean, there is a ship bringing to her a little baby."

Just as soon as she knows a baby is coming she should place herself under the care of a reliable physician and follow his directions exactly. Most young women are acquainted with the first symptoms of pregnancy, such as the stopping of the monthly periods, slight changes in the breasts and, most unpleasant of all, the morning nausea (which, however, generally becomes less distressing after the fourth or fifth month. If one can have a cup of tea or even hot water with a little salt or soda in it before rising this will be found to be a great help in controlling the nausea. Rising in a leisurely manner is better than getting up hurriedly; also care in the diet. Plenty of good plain nourishing food should be taken, and it is better to take a smaller quantity often than to overload the stomach at any one time: meat once a day and *not oftener*; plenty of milk to drink, lessening the quantity of tea and coffee; eggs, bread and butter, fruit and vegetables.

The most dangerous complication of pregnancy is disorder or disease of the kidneys and this is an imperative reason for placing oneself in the care of a reliable physician from the very beginning, so that should any such disorder make its appearance the condition may be recognized at once and measures taken to correct the disorder before it becomes serious. It is well to drink plenty of water so that the kidneys may act freely. If you have severe headaches or swelling of the lower limbs take warning and see your doctor.

Plenty of fresh air is very important, and the windows should be open as much as possible not only when you sleep but also when you are going about doing your housework. Exercise in the open air and housework with the windows open are better than medicine, but over fatigue or any great strain either physical or mental should be avoided; especially

avoid the lifting of anything very heavy (such as a tub of water) or stretching too high above the head. Wear loose comfortable clothing with no tight bands. There are maternity corsets advertised which some women have found to be a help towards comfort in the wearing of clothing, but they must be worn loosely enough to allow of the proper development of the child. Some doctors advise the discarding of corsets altogether and the wearing of clothing supported from the shoulders.

The teeth sometimes decay during pregnancy and it would be well to have them examined by a dentist and put in order about the fifth month. The hair also may begin to deteriorate during this period, but massage with some good hair tonic will materially help to preserve it in good condition. Gentle massage of the breasts and frequent washing of the nipples with castile soap and warm water is good, and a mixture of one teaspoon of carbonate of bismuth in one ounce of castor oil will help to toughen the nipples and should be applied on retiring.

As far as possible the normal life should be carried on as usual, though an extra amount of sleep is very beneficial. A mid-day rest of an hour or so can be managed by most housekeepers just after the dinner or noontime meal is got out of the way. Often one can accomplish more work and do it more satisfactorily by taking this little rest than by trying to keep going without it. Even if sleep does not come the relaxation quiets the nerves and rests the body so that the remainder of the day is pleasant for the person who takes the rest, as well as for those around her. For the sake of both the expectant mother and the coming baby this daytime rest is very important. If you want your baby to be a good sleeper, take plenty of sleep yourself.

Now because you are breathing, eating, sleeping, in fact, living for two people

instead of one (yourself and the coming stranger) you will realize that you should conserve your strength as much as possible. There are many ways in which the housework might be made easier. Ironing may be lighter if the sheets, plain towels, night gowns, dusters and even on occasion the pillow slips be folded neatly when taken from the line and laid away right out of the sunshine and fresh air. The wind has generally blown them out smooth and straight, so that if they really must be pressed with the hot iron the work is not hard when these plain articles are not damped and rolled down.

A tablespoonful of coal-oil in the soapy water in which you wash your clothes will materially help to loosen the dirt and not the least trace of the odor of the coal-oil will be detected when the clothes are brought in off the line. A tablespoonful of coal-oil in the starch will help to keep the iron from sticking. Of course if you are able to find some woman willing to help with the heavy work your difficulties will be lessened, but help is very scarce these days. In some communities they have what is called a community nurse who has the health of the district in her care and may be called on in case of sickness, but I do not see why a central bureau could not be established in every community, where those in need of help in any emergency might apply and get assistance. Last winter during the influenza epidemic patriotic women and girls were organized into bands of voluntary helpers, and what noble work they did, going into homes where the "Flu" had entered, helping the doctors as voluntary nurses, providing or cooking food where whole families were afflicted, taking care of children, and in fact, turning in and doing everything a woman can do, at such a time to preserve the lives of and save from anxiety those who were ill. Those in need applied at some central point, stating what was particularly needed, whether nurse, doctor, or food and from the one centre all kinds of help were sent out. If it is a patriotic act in time of epidemic to help those in need, why should it not be just as patriotic at all times to be ready to serve? From the lips of the beloved Man of Nazareth fell these words: "Let him that is greatest among you be your servant," and as He went about "Doing good," He said, "I am among you as one Who serveth." There is a very mistaken idea abroad these days that in some way a stigma rests on the young woman who enters another home as "help" for the woman of the house. This certainly should not be. Good, honest, efficient, willing service is always honorable and praiseworthy whether it be given in house or factory, or store. Kindness and consideration on the part of both employed and employer will make things run smoothly and it seems to me that help for our, at times, overburdened housewives is as patriotic a service as one can render to one's country. If those young women of the community who have part of their time unemployed, and who would be willing to help a neighbor in an emergency, with half a day or a whole day's work, could register at some central point as "Community helpers", and then go where and when the call seems most pressing, what a wonderful help it would be to the busy, overburdened mother to be able to call up this central point and get relief for the extra strain that somehow seems too great to meet alone!



The Edge of a Garden.

One glance at the above picture is enough to convince the home framer of the wisdom of placing a house and its garden, if possible, at the edge of a ready-grown grove. If the grove is lacking, plant a clump of trees.

A very useful thing to have in the kitchen is a high stool such as are used in offices. It can be used while ironing and doing many different things at the table, even washing dishes, and a housewife has to be so much on her feet, that it is wise for her to save herself in this way as much as possible. Another

useful article is a footstool (any small wooden box will do) to rest the feet on while sitting and do remember to save yourself by sitting while getting the vegetables ready for dinner and any other chance you can make for yourself. The old saying "Never stand when you can sit" is a good one for those engaged in housework to follow.

There are a few necessary things which you will want to have on hand when baby comes such as:

Three or 4 tiny undershirts, 3 strips of white flannel, 5 inches wide and 18 inches long, 3 flannel or flannelette petticoats, 4 night dresses of flannelette, 4 cotton slips or dresses for day wear, 3 or 4 dozen diapers made of diaper cloth or flannelette, 1 box talcum powder, 1 box boric acid, castile soap, 2 dozen safety pins, both large and small. Nice sets of little patterns such as you will need for these things can be bought at any store where patterns are sold. For yourself you will need a square of oilcloth or rubber-sheeting 1½ yards square, absorbent cotton and plenty of old clean cotton rags. There should be a warm soft blanket to receive the baby. As this paper is quite long enough we will close here but hope to continue some time soon on the care of the young baby and also the mother.

Home-Framing in October.

THE crops are all off, the corn in the silo, the potatoes up. Are there not a few days "between," before root-time comes on, which may be set apart for "framing" the home? For frame it must have if it is to make up the harmonious picture that every home ought to present. As well leave a picture without a frame as leave a home without its frame of lawn, trees, vines and shrubbery.

It is worth while to have a beautiful home—however, inexpensive. One loves it more. One can be thankfully proud of it. It makes a break in the drudgery of the daily work. All unnoticed it helps to create more sweetness and gentleness in everyone connected with it.

The best of it is that real beauty of setting may be obtained—not without a little work, it is true, but with comparatively little outlay of money. Even the work is scarcely appreciable after the first few days of grading, fertilizing and planting. Indeed, when it is all over the marvel can only be that one did not make the improvement sooner. It is almost incomprehensible that there should be so many bare, uninteresting-looking homes everywhere, when so comparatively insignificant an expenditure of time and money would suffice to make them beautiful and interesting,—two or three days' work in the first place, a little attention at odds and ends of time afterwards.

Try it if you don't believe.

How to Begin.

The very first step is to make a plan, —but you can do that some night when all are sitting about the table and everyone's opinion can be enlisted. Draw two or three plans,—marking the buildings, roadway, and projected positions for paths, drivers, trees and shrubbery—then choose the one that seems most pleasing.

In that plan remember a few rules that have been set down by the consensus of opinion of the best landscape gardeners, and that are incorporated in the following.

In the first place remember that the house, whether cottage or palace, must be, by very nature of it, the center of interest, therefore it must occupy the most important place in the completed picture. To it the eye must be directly led. With it ever in mind all planting must be done. About it all ideas of proportion must be directly centered; for proportion is as necessary in this house "framing" as in house-building in the first place. For instance: If the house is small and low it must not be made look absolutely insignificant by being submerged in a forest of huge trees. If, on the other hand, it is a tall and stately building it must not be made look bare and awkward by a surrounding of insignificant shrubbery. The small, low house needs above all things, apples trees as its accompaniment, with shrubbery and vines directly about it. The tall stately house needs Lom-

bardy poplar, tall oaks, well-grown maples and beeches, to reconcile it with the landscape and give it all the charm which it should possess. Apple trees there may be too, but there should be enough taller varieties to soften the hard gables and roof-lines.

It will be seen, then, that each house calls for its own individual setting. Also this setting must bear relation not only to the size of the house, but to its form, outlook, etc., as well. It is delightful that this is so, for it would be ghastly if there were but two rules for planting—one for the large house and one for the small. Continuous diversity is the secret of unending delight as well as the opportunity for expression of individuality. —That last phrase is worth noting: Always a house and its surroundings should be an index of the taste and character of the folk who live there; indeed, perhaps, cannot well escape being so.

There are, however, a few broad fundamentals of good arrangement that everyone can follow without sacrificing the details that lend personality to the place. Generally speaking, the best background for any house is trees; the best setting to the front a more or less spacious lawn—with even more commodious lawn-space at the sides, because of the additional privacy there secured.

This granted there is left endless room for diversity of planting. A considerable grove may run along one, or both sides of the lawn. There may be no grove at all, but "group" planting instead, with perhaps, a tree-lined drive. The drive may be curved or straight; the paths also. Upon a fairly small lawn one or two beech or maple trees, well-placed so they can expand, may be all the trees required. The tall "background" may be of dark pines, or tall oaks or a clump of aspiring Lombardy poplars.

So the variations go. But remember this: That trees, not shrubs, should form the bulk of every planting. The shrubs are secondary, and may be considered later. Also trees may be made to accent any point of interest. Put the tallest ones, as a rule, behind the house—or anywhere else that needs accent. But don't have too many accents, especially high accents, or the interest will be too much divided and the effect one of confusion and distraction rather than of rest and harmony.

Plant to hide every disagreeable object (barns, stables, etc.), and to leave every beautiful view open. Plan that the most charming outlook shall be from the living-room windows. Leave space for plenty of sunshine about the house—although a cozy old apple or crab-apple tree may be left to rub and purr against one corner of the house; and don't forget to place one fine tree by itself somewhere on the lawn, where it can spread out on every hand and throw its shadow now here, now there, following the sun. The beauty of trees does not consist altogether in their foliage, but in their shadows also. Besides the shadow of the big tree is likely to be a favorite spot for lounging or for the children's play. There is more dryness of ground and more freedom of air there than in the deeper thickness of the grove.

A last point or two: Be very chary about admitting trees of foliage other than green. Blue spruces, bronze birches and golden-leaved cedars may be very effective, if exceedingly well placed, but they may be a gross mistake if badly placed.

Time and Method of Planting.

Planting may be done either in fall or in spring. Spring is the best time for tender trees and shrubs, which are thus spared the rigors of winter until fully established; but the hardy trees and shrubs of our native woods—and they are as good as any—may be set at any time in late fall. . . . May it be repeated they are as good as any. The most beautiful home imaginable may be created by the use of young growth from one's own woods, without the expenditure of a single cent other than that allowed for time. Maples, beeches, elms (when properly placed), pines, spruce and cedar trees, sumachs, dogberry bushes, high cranberry, elderberry and wild roses may be arranged to form home surroundings of surpassing beauty both in winter and summer. The majority

of people, however, prefer to add to the shrubbery, because of the flowers, species that are not indigenous to this country—the forsythias, lilacs, syringas, snow-berries, garden hydrangeas, etc., that keep up so splendid a succession of bloom from snow-melting until snow-falling.

When planting either trees or shrubs, a good, deep, rich root-bed should be prepared, quite wide enough to spread out all the roots without bending back or crumpling. After setting the tree the soil should be firmly packed, plenty of water poured about, and a dust mulch provided over the top to keep down the moisture. As a tree should not sway until it is firmly established, it should be staked and wired, a bit of old leather or old rubber tire being bound about the wire at the point where it touches the tree to prevent rubbing.

Evergreen trees need no trimming back, but deciduous trees and shrubs may require cutting back about one-third, although care should be taken not to remove the leader (top bud) in hardwooded trees like oaks, beeches, etc. Shrubs usually need, more than trees, to be cut back, to make them branch out well. When planting trees it is well to remember that small ones are more likely to do well than big ones. A man who has a beautiful old place and has experimented a great deal with planting says he finds that invariably the small trees that he planted caught up to and passed, in an incredibly short time, large ones set out at the same time.



King Albert of Belgium.
Who, with Queen Elizabeth, is now in America.

During the first year young trees and shrubs should be watered right down to the roots once or twice a week during very dry weather.

The Lawn.

It goes without saying that the lawn about any farm-house, to present the most beautiful picture, should be large. That is not saying, however, that it must be such as will have to be smooth as velvet and perpetually shaven over its whole area to keep it presentable. It will be sufficient to have it smooth about the house, letting it gradually merge off into more irregularity towards the outside where eventually it runs into orchard or grove. The sort of lawn that can be managed, for the greater part, with a mower, and the grass used for feeding is best for a farm. If, however, a closely shaven sward is desired, two or three sheep or goats may be pastured on the grass, precaution being taken to protect flower-borders, etc. with wire netting. This plan is now adopted on many beautiful suburban and country homes in the United States. There are many good lawn-grass-seed mixtures on the market, hence no difficulty need be experienced about selection.

Walks and Drives.

Walks and drives may be straight or curved, depending upon the character of the place, but too much curving should be guarded against, one or two gentle "bends" usually being sufficient; ostensibly a path or drive-way that presents curve after curve in close suc-

cession loses dignity because it suggests scallops or wriggles. Another point to remember is that always where there is a curve there should be some evident reason for the diversion—a tree, a clump of shrubbery, etc.; there is nothing that exasperates one more than to have to follow the curves of a path that winds unreasonably over a plain grass sward. One has an exasperated desire to "short-cut" over the grass, and usually does so.

Paths of gravel or flag-stones laid close together are more picturesque than cement ones, and if further individuality seems to be needed it can be given by an arbor at the entrance or elsewhere, a pergola, clumps of shrubbery, or perhaps, if the path follows the edge of the lawn, a well-built stone fence covered with vines, or with its crevices planted with thyme, stonecrop, and other quaint plants.

To conclude may it be said that always, whether in consideration of planting, walks or buildings, the best results are obtained when there is nothing conspicuously prominent, but when everything blends in a proportioned harmony. Because "The beauty of the whole is greater than the beauty of any part."

Hope's Quiet Hour.

Be Not Afraid.

He saith unto them, It is I; be not afraid.—S. John 6:20.

I say to thee, do thou repeat
To the first man thou mayest meet
In lane, highway, or open street—
That he and we and all men move
Under a canopy of love,
As broad as the blue sky above.

And we, on divers shores now cast,
Shall meet, our perilous voyage past,
All in our Father's house at last.
—R. C. TRENCH.

The disciples of Christ had been struggling through the dark and stormy night, fighting a desperate battle against wind and sea. They were toiling alone, trying to obey their Master's orders and row to the other side of the lake. He was on a mountain apart, and they were in the midst of the lake, tossed with the waves and making little headway against the contrary wind. Three of the Evangelists have described that journey, with its wonderful ending; but it is St. John who says: "it was now dark, and Jesus was not come to them." The beloved disciple felt lonely and heartsick in the absence of his Lord.

They struggled on bravely until, in the fourth watch of the night,—when it was nearly morning and they must have given up any expectation of seeing Him that night, He suddenly appeared, walking calmly on the tossing waves. They were afraid, thinking that they saw a ghostly apparition, but He said: "It is I; be not afraid!" and then they willingly received Him into the ship. Then their hard fight against winds and waves was suddenly ended in victory, for "immediately the ship was at the land whither they went." They were very near the end of the journey, though they did not know it.

They had been afraid in the stormy darkness, but they would not have feared anything if they had only known that their Master "saw them toiling in rowing" (S. Mark 4:48)—and was ready to come to their assistance instantly, if any real need should arise.

Our Lord has again gone "up into a mountain apart to pray," leaving His disciples to fight against contrary winds and a heavy sea of trouble and difficulty. But those who are struggling bravely know that His eyes are upon them, that He ever liveth to make intercession for them, and that He will certainly be ready to give help the moment it is needed—man's extremity is still God's opportunity. His banner over us is Love, as broad as the blue sky above—and who can measure the length, breadth and height of that expanse which we call the sky?

People are apt to talk carelessly and ignorantly about the various religions in the East, speaking as if they were almost on a level with Christianity. But

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what other religion can cast out fear
by pointing to perfect, infinite Love?
Think of the black horror of unbelief,
described by the famous Omar, who says
that we are helpless pieces of the Game,
played by the Master of the Show upon
this Checker-board of nights and days.
He declares that no piety can cancel
half a line of what we have written,
nor all our tears wash out a word of it.
In hopeless fatalism he groans:

"And that inverted Bowl they call the Sky
Whereunder crawling coop'd we live
and die,
Lift not your hands to It for help—for it
As impotently rolls as you or I."

Compare such hopeless pessimism as
that with the reiterated promises of
God in the Bible. There we read of Love
that is unending and that did not shrink
from the Cross for our sakes. We are
offered free forgiveness which can wash
out the stains of sin and make us whiter
than snow. Over and over again we
are encouraged to be fearless and glad,
because the God Who is Father, Lover,
Brother and Friend is always near.
No matter how dark the outlook may
be, we can hear the Lord—Who has all
power in heaven and earth—say: "It
is I; be not afraid." He is always closer
than breathing and nearer than hands
and feet. God has linked Himself with
us by the Incarnation—can His purpose
of love fail?

Of course He does not clear away all
difficulties from life, or allow us to sail
always over an untroubled sea. Too
great ease would be disastrous to our
higher selves. We must perfect our
trust in hours of darkness—clinging to
the God we cannot see, as Jesus did on the
Cross when He felt forsaken. We must
learn patience by enduring suffering;
for even the Captain of our salvation
was perfected "through sufferings."—
Heb. 2:10. We must run our earthly
race, looking unto Jesus; and must watch
for the Vision of His Face in the darkness.
Our ears must recognize the still small
voice of the Master through all the
turmoil of earth's noises.

If your faith in Him fails sometimes,
go and tell Him about it. "Speak to
Him, thou, for He hears"—though
you may not always hear Him. No
real prayer can ever lose its way, for it
flashes instantly from the heart of a
child to the Heart of the Father. God
knows what we want before we think
of asking Him, but He also knows what
we need. We can trust His wisdom
to answer our foolish prayers wisely,
with love that never fails to give us
better things than we ever thought of
asking. St. John may have felt desolate
when he was exiled in his old age to the
barren, rocky island Patmos. Yet it
was there he heard the Voice like the
sound of many waters, and saw the
shining face of the Lord he loved. It
was there he saw a door opened into
heaven, and gazed in wondering joy on
the white-robed multitude of the victors,
who had suffered and died with their eyes
on Christ. It was there he saw that glorious
City of God—the Kingdom of heaven,
where the Prince of Peace is loyally
obeyed. Ask St. John, at the close of
his long life, whether he would have been
better pleased if God had interfered to
save him from being banished to that
bare rock from which he was able to
look straight into heaven! Only when we
are able to look back, seeing life's journey
as a whole in the clear light beyond
death, shall we be able to see how wonder-
ful and splendidly our prayers have been
answered. In the meantime, let us
accept each day's lessons, duties and
pleasures with fearless joy, knowing that
each moment is planned out for us by
the One Who knows what we need.
St. John wanted to preach Christ, and
he was sent where it seemed as if he
could help no one; yet out of that time
of earthly loneliness came the great
book of the "Revelation of Jesus Christ."
Rev. 1:1. God always knows where to
place His witnesses—in city or country,
in kitchen or palace, on a sick bed or
far from neighbors on a wide prairie.

Many people are afraid in the storms
which rage round the ship of the Church.
That ship has weathered many terrible
storms, but they fear that this will be
too much for her. When the war began
there was a faithless cry that Christianity
had failed, yet now Christians of all com-
munities are roused to a great "Forward
Movement"—a movement which was
born in the storm of war. Even there

we heard that Voice above the roar of
the guns: "It is I; be not afraid!" and
now we can trust Him in this day of
seething unrest. He has been with His
disciples for many hundred of years—
is it possible that He can fail them now?

"O changeless One, Thou only
Art life's Guide and spiritual Goal,
Thou the Light across the dark vale
lonely,—
Thou the eternal Haven of the soul."
DORA FARNCOMB.

The Windrow.

Chinese women are forming "Unions"
which deal with political questions.

Anatole France, France's chief man of
letters, is contending for an out-and-out
pacifism and against militaristic educa-
tion.

Sir Rabindranath Tagore, the Hindu
poet, has given back the knighthood
conferred upon him by the British
Government, as a protest against the
flogging of rioters by military order in
India.

Women in New York, members of
community councils, are inquiring into
the prices of commodities in neighboring
groceries, and reporting cases of profiteer-
ing to the food administrator. They
intend carrying out a spirited campaign
for fair prices.

October's Bright Blue Weather.

It's quite the conventional thing for
folk to call autumn the saddest time of
the year—the season when all of nature
is dying pitifully; when last leaves, sear
and brown, cling upon withered boughs.
And yet a poet once wrote a verse about
autumn that sang itself into my heart:

"Oh, sun and skies and clouds of June,
And flowers of June together;
Ye cannot rival for one hour
October's bright blue weather."

It may be the conventional thing to
speak of autumn as a sad season—but
let's be unconventional. Let's go back
into the country and wander through
woods gloriously splashed in rich scarlet
and gold. Let's go down the winding
road banked with wild asters and glowing
goldenrod. Let's peep into the apple
orchard and the cornfield, where the
pumpkins are round and yellow. Let's
look up into the sky above—so bright
it is that it seems to reflect the very
soul of heaven—and breathe in the keen
freshness of the air. Is autumn the
season of dying? Autumn, with its
blaze of color and its riot of perfume?

Of course, the gold and the scarlet and
the purple will have to go some day.
But then, in the nature of things, nothing
lasts past an appointed time. And
isn't there something wonderful in the
vital beauty of the last months before
winter? Isn't there a promise of beauty
to come?

That's what autumn means to us.
It is a promise, a bright blue "promise
of a springtime to come in its own time.
It's the goodnight hymn of Nature as she
goes to sleep—a sleep that is quiet and
restful under the snow. Autumn is not
a tearful farewell—it's a smile that says
'au revoir'—till we meet again."

That is what autumn really means.
What does it mean to you?—Christian
Herald.

The youngest came crying to his
mother.

"Why, dearie!" she exclaimed, "What
is the matter?"

"Dad was lifting a big box and it
fell on his toes," explained the child
between sobs.

"But," continued the mother, "that is
hardly anything to cry about. You
should have laughed at it."

"I did," said the boy.—"Harper's
Magazine."

"Father, who was Shylock?" asked the
small boy.

"Goodness, boy!" exclaimed the father.
"You attend the finest Sunday School
in the district and don't know who Shy-
lock was? Go and read your Bible, sir!"

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the place of expensive joints. It saves
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goodness of the best beef—so strong that it cannot possibly
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oven—such exhausting exertion adds baking to
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than with other brands because the leaven-
ing action of Egg-O only ceases when your
cakes are properly baked—No matter if
you do have to wait several hours for your
oven.

And don't worry if your oven does cool
off. Egg-O will leaven your baking with
less heat than most other brands.

And above all, don't worry about fallen
cakes, follow the directions on the label.
You will use less Baking Powder, and
have better baking.

**Egg-O Baking Powder Co.
Limited
Hamilton, Canada**

the Quiet Hour.

Not Afraid.

to them, It is I; be not
6:20.

thou repeat
n thou mayest meet
, or open street—
and all men move
of love,
blue sky above.

ers shores now cast,
r perilous voyage past,
s house at last.
—R. C. TRENCH.

of Christ had been strug-
e dark and stormy night,
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were toiling alone, trying
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of the lake. He was on a
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Three of the Evangelists
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moment it is needed—
still God's opportunity.
is is Love," as broad
above"—and who can
n, breadth and height
ich we call the sky?
to talk carelessly and
the various religions
king as if they were
ith Christianity. But

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START THE DAY RIGHT

with a cup of this delicious Cocoa for breakfast. It makes a splendid foundation for the day's work.

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Post Office.....
County.....
Province.....
Number of Pattern.....
Age (child or misses' pattern).....
Measurement—Waist..... Bust.....
Date of issue in which pattern appeared.....

2999. Ladies Dress.
Cut in 6 Sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 requires 5½ yards of 44-inch material. Dress measures about 2 yards at the foot. Price 10 cents.

2998. Girls' Dress.
Cut in 4 Sizes: 6, 8, 10 and 12 years. Size 10 will require 2¾ yards of 44-inch material. Price, 10 cents.

2991. Ladies' House Dress.
Cut in 7 Sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 36-inch material. Width at lower edge, is about 2¼ yards. Price, 10 cents.

2979. A New Coat for the little Little Miss.
Cut in 4 Sizes: 6, 8, 10 and 12 years. Size 10 requires 3½ yards of 44-inch material. Price, 10 cents.

2973-2975. A Pretty Costume.
Waist 2973 Cut in 7 Sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 2975 Cut in 7 Sizes: 22, 24, 26, 28, 30, 32, and 34 inches waist measure. A medium size will require 6 yards of 36-inch material. The skirt measures 17½ yard at the foot, with plaits extended. TWO separate patterns 10 cents FOR EACH pattern.

2988. Girl's Dress.
Cut in 4 Sizes: 8, 10, 12 and 14 years. Size 10 will require 3¼ yards of 44-inch material. Price, 10 cents.

2994. Ladies' Combination Garment.
Cut in 4 Sizes: Small, 32-34; Medium, 36-38; Large, 40-42; and Extra Large, 44-46 inches bust measure. Size Medium requires 3¾ yards of 36 inch material, with ¾ yard for the ruffle. Price, 10 cents.

2666. Girls' Dress.
Cut in 4 Sizes: 8, 10, 12 and 14 years. Size 12 will require 3½ yards of 44-inch material. Price, 10 cents.

2978. A new One Piece Model.
Cut in 3 Sizes: 16, 18 and 20 years. Size 18 will require 5½ yards of 42-inch material. Price, 10 cents.

2983. A Trim One Piece Dress for Mother's Girl.
Cut in 4 Sizes: 6, 8, 10 and 12 years. Size 8 will require 3¾ yards of 44-inch material. Price 10 cents.

2971. An Attractive Negligee.
Cut in 4 Sizes: Small, 32-34; Medium, 36-38; Large, 40-42 and Extra Large, 44-46 inches bust measure. Size Medium



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Coat for the little Little
6, 8, 10 and 12 years.
3 1/2 yards of 44-inch
10 cents.
Pretty Costume.
Cut in 7 Sizes: 34, 36, 38,
6 inches bust measure.
7 Sizes: 22, 24, 26, 28,
inches waist measure.
All require 6 yards of 36-
inch skirt measures 17 1/2
inches, with plaits extended.
Patterns 10 cents FOR

ress.
8, 10, 12 and 14 years.
3 1/2 yards of 44-inch
10 cents.
Combination Garment.
Small, 32-34; Medium,
36-42; and Extra Large,
44-46 inches bust measure.
Size Medium
of 36 inch material,
with the ruffle. Price, 10

ress.
8, 10, 12 and 14 years.
3 1/2 yards of 44-inch
10 cents.
One Piece Model.
Size 16, 18 and 20 years.
5 1/2 yards of 42-inch
10 cents.
One Piece Dress for

6, 8, 10 and 12 years.
3 1/2 yards of 44-inch
10 cents.
Active Negligee.
Small, 32-34; Medium,
36-42 and Extra Large,
44-46 inches bust measure.
Size Medium

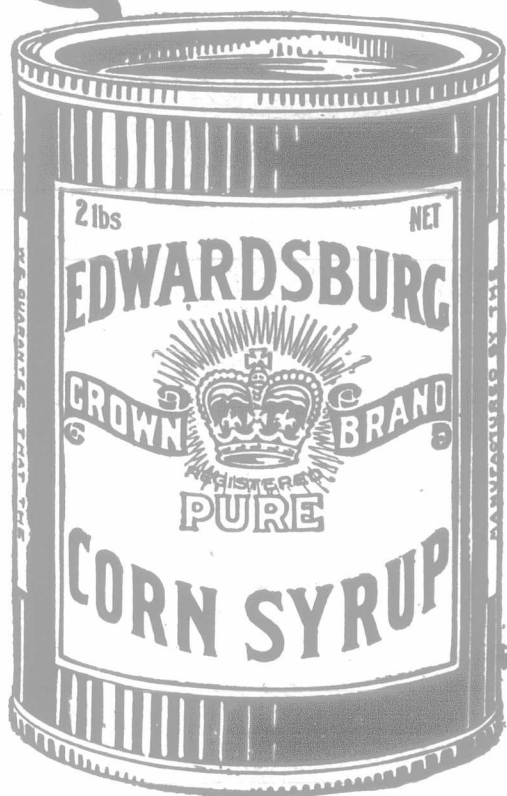
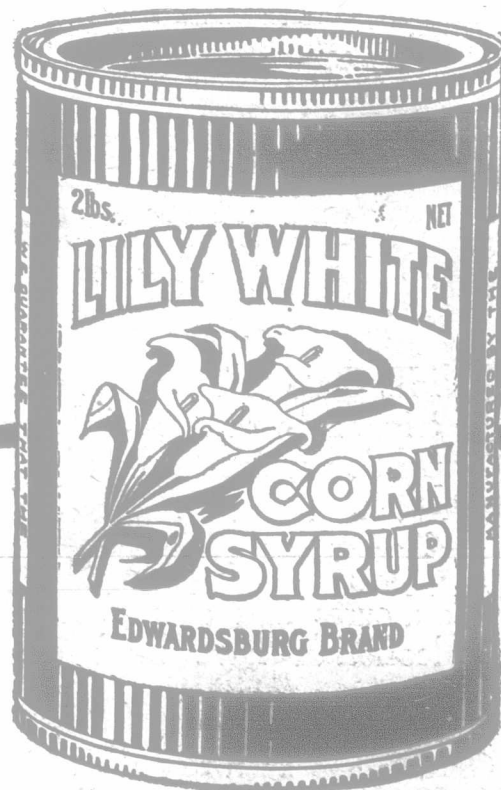


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2645. Child's Play Dress.
Cut in 5 Sizes: 1, 2, 3, 4 and 5 years.
Size 4 will require 2 3/4 yards of 36-inch material. Price, 10 cents.

A couple of old rounders were sitting in a bar-room imbibing cocktails. Presently one of them remarked, "Do you know, Bill, I think I'll buy this hotel?" "Wait till we've had a few more drinks," said Bill, "and I'll sell it to you."—Boston Transcript.

The Ingle Nook

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An Old Story.

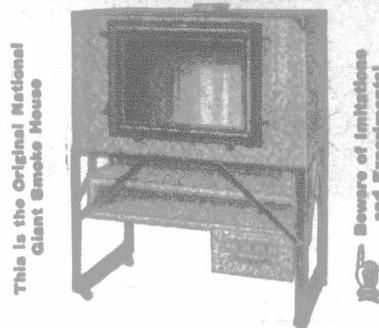
I found the following true story the other day, quoted in an old book written upwards of one hundred years ago. I give it with no further preface than to say that the narrator of the incident was a travelling school-master who lived in Canada in those early days:

"In the winter of 1832," he says, "I was led, partly by business and partly by the novelty of the enterprise, to walk from the Indian Establishment of Coldwater to the Sault Ste. Marie, a distance of nearly 400 miles.

"The lake was well frozen, and the ice moderately covered with snow; with the assistance of snow-shoes we were enabled to travel a distance of 50 miles in a day; but my business not requiring any expedition, I was tempted to linger among the thousand isles of Lake Huron.

"Near the close of a long fatiguing day, my Indian guide came on the recent track of a single Indian, and, anxious to please me, pursued it to the head of a very deep bay. At a very short distance from the shore, the track led us past the remains of a wigwam, adjoining to which we observed a large canoe and a small hunting canoe, both carefully laid up for the winter. After a

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Don't sell all your hogs and pay big butcher bills. Save enough for your own use and smoke hams, bacon, sausages and fish in the National Giant Smoke House. This wonderful smoke house is portable. Can be operated in and out-doors. Runs on sawdust, cobs and little bark for seasoning. The

NATIONAL GIANT PORTABLE SMOKE HOUSE AND SANITARY STORE HOUSE

is a great success. Thousands in use in U. S. and foreign countries. Operates perfectly in every climate. Made in 5 sizes. Fireproof. Guaranteed. After smoking meats, use for store house. Absolutely bug and mite proof. Keeps meat sweet all summer. Worth its price many times for this feature alone. Investigate!

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which tells when to butcher, about storage, how smoke house operates, etc. Book contains prize-winning recipes for curing Hams, Bacon, Sausages and fish at home. Write for book, get low prices today, sure.

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Get the original National Giant Portable Smoke House. Beware of Imitations or Experiments.

Has Done Good Work Ontario Temperance Act A Great Benefit to Province

THE Ontario Temperance Act has reduced crime by over one-third and drunkenness in public has practically disappeared.

Alcoholic insanity has disappeared.

Gold cures and alcoholic institutes for treating alcoholism have been closed for lack of patients.

Ontario has been saved an annual drink bill of \$36,000,000, enough to pay our share of interest on the War Debt.

Many victims of alcohol three years ago, thank God to-day for the Ontario Temperance Act.

To repeal the Ontario Temperance Act would be a calamity. The amendments would make it practically worthless. To every question on the Referendum vote NO.



Abraham Lincoln

"The Liquor traffic is a cancer in society, eating out the vitals and threatening destruction, and all attempts to regulate it will not only prove abortive but will aggravate the evil. It must be eradicated—not a root must be left behind."

Drink is a Cancer

Doctors, Alienists, Criminologists, Insurance Actuaries, Statesmen, Generals, Big Business Men, and Social Workers agree that alcohol as a beverage is a racial poison and a national curse.

British Columbia, Alberta, Saskatchewan, Manitoba, Quebec (excepting beer and wine), New Brunswick, Nova Scotia, Prince

Edward Island and Newfoundland have enacted prohibition.

The United States is permanently "dry."

France has abolished absinthe, Scotland has now a local option law, England is initiating a great campaign for temperance reform. The movement is world wide.

Ontario must go forward, or be left behind, but be careful

Mark Four X's (One X under each NO)

Ontario Referendum Committee

JOHN MACDONALD;
Chairman.

D. A. DUNLAP,
Treasurer.

ANDREW S. GRANT,
Vice-Chairman and Secretary,
(1001 Excelsior Life Bldg., Toronto.)

56

considerable ascent, a narrow winding path brought us into a deep hollow, about 400 yards from the bay. Here, surrounded on every side by hills, on the margin of one of the smallest inland lakes, we came to a wigwam, the smoke from which showed us that it was occupied. The path for a considerable distance was lined on both sides by billets of firewood, and a blanket, cleaner than usual, suspended before the entrance, gave me at the very first a favorable opinion of the inmates. I noticed on the right hand a dog-train, and on the left two pairs of snowshoes, and two barrels of salt fish. The wigwam was of the square form, and so large that I was surprised to find it occupied by two Indians only—a young man and his wife.

"We were soon made welcome, and I had leisure to look around me in admiration of the comforts displayed in the

arrangement of the interior. A covering of fresh branches of the young hemlock-pine was neatly spread all round. In the centre of the right hand side, as we entered, the master of the lodge was seated on a large mat; his wife occupied the station at the left hand; good and clean mats were spread for myself and my guide. . . . Three dogs, well-conditioned and of a large breed, lay before the fire. So much for the live stock. At the back of the wife, I saw, suspended near the door, a tin can full of water, with a small tin cup; next to it, a mat bag filled with tin dishes, and wooden spoons of Indian manufacture, above that were several portions of female dress, —ornamented leggings, two showy shawls, etc. A small chest and bag were behind her on the ground. At the back of the Indian were suspended two spear-heads, of three prongs each;

an American rifle, an English fowling-piece, and an Indian chief piece, with shot and bullet pouches and two powder horns; there were also a highly ornamented capuchin, and a pair of new blanket leggings. The corner was occupied by a small red-painted chest, a makkuk of sugar was placed in the corner on my right hand, and a barrel of flour, half empty, on the right hand of my Indian; and between that and the door were hanging three large salmon trout and several pieces of dried deer flesh. In the centre, as usual, we had a bright blazing fire, over which three kettles gave promise of one of the comforts of weary travellers. Our host had arrived but a few minutes before us, and was busy in pulling off his moccasins and blankets when we entered. We had scarcely time to remove our leggings and change our moccasins, when the

Indian's wife was prepared to set before us a plentiful mess of boiled fish; this was followed in a short space by soup made of deer flesh and Indian corn, and our repast terminated with hot cakes baked in the ashes, in addition to the tea supplied from my own stores.

"Before daylight on the following morning we were about to set out, but could not be allowed to depart without again partaking of refreshment. Boiled and broiled fish were set before us, and to my surprise, the young Indian, before partaking of it, knelt to pray aloud. His prayer was short and fervent, and without that whining tone in which I had been accustomed to hear the Indians address the Deity. It appeared to combine the manliness and humility which one would naturally expect to find in an address spoken from the heart.

"On taking our departure, I tried to scan the countenance of our host, and I flatter myself I could not mistake the marks of unfeigned pleasure at having exercised the feelings of hospitality, mixed with a little pride in the display of the riches of his wigwam."

[The narrative here recounts the Indian's history—that he had been brought up at the British settlement at Drummond Island, where he had been taught to pray and to be industrious, prudent and abhorrent of strong drink. —Now let us continue.]

"Shall I lift the same blanket after the lapse of 18 months? —The second summer has arrived since my last visit, the wigwam on the Lake shore, the fit residence of summer, is unoccupied—the fire is still burning in the wigwam of winter: but the situation, which has warmth and quiet to recommend it at that season when cold is our greatest enemy, is now gloomy and dark.—Wondering what could have induced my friends to put up with the melancholy of the deep forest, instead of the sparkling of the sun-lit wave, I hastened to enter. How dreadful the change! There was, indeed, the same Indian girl that I had left healthy, cheerful, contented and happy; but whiskey, hunger, and distress of mind, had marked her countenance with the furrows of premature old age. An infant, whose aspect was little better than its mother's, was hanging at her breast, half dressed and filthy. Every part of the wigwam was ruinous and dirty, and, with the exception of one kettle, entirely empty. Not one single article of furniture, clothing, or provision remained. Her husband had left in the morning to go out to fish, and she had not moved from the spot; this I thought strange, as his canoe and spear were on the beach. In a short time he returned, but without any food. He had, indeed, set out to fish, but had lain down to sleep in the bush, and had been awakened by a dog barking on our arrival. He appeared worn down and helpless both in body and mind, and seated himself in listless silence in his place in the wigwam.

"Producing pork and flour from my travelling stores, I requested his wife to cook them. They were prepared, and I looked anxiously at the Indian, expecting to hear his accustomed prayer. He did not move. I therefore commenced asking a blessing, and was astonished to observe him immediately rise and walk out of the wigwam.

"However, his wife and child joined us in partaking of the food, which they ate voraciously. In a little time the Indian returned and lay down. My curiosity was excited, and although anxious not to distress his feelings, I could not avoid seeking some explanation of the change. It was with difficulty I ascertained the following facts:

"On the opening of the spring of 1833, the Indian, having got a sufficiency of furs for his purpose, set off to a distant trading post to make his purchase. The trader presented him with a plug of tobacco and a pipe on his entrance, and offered him a glass of whiskey, which he declined; the trader was then occupied with other customers, but soon noticed the respectable collection of furs in the pack of the poor Indian. He was marked as his victim, and not expecting to be able to impose upon him unless he made him drunk, he determined to accomplish this by indirect means.

"As soon as the store was clear of other customers, he entered into conversation with the Indian, and invited him to join him in drinking a glass of cider, which he unhesitatingly accepted; the cider was mixed with brandy, and soon began to

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affect the mind of the Indian, a second and third glass were taken, and he became completely intoxicated. In this state the trader dealt with him; but it was not at first that the draught he had taken could overcome his lessons of prudence. He parted with only one skin; the trader was, therefore, obliged to continue his contrivances, which he did with such effect that for three weeks the Indian remained eating, drinking and sleeping in his store. At length all the fur was sold, and the Indian returned home with only a few ribbons and beads, and a bottle of whiskey. The evil example of the husband, added to vexation of mind, broke the resolution of the wife, and she, too, partook of the accursed liquor. From this time there was no change. The resolution of the Indian once broken, his pride of spirit, and consequently his firmness, were gone; he became a confirmed drinker—his wife's and his own ornamented dresses, and all the furniture of his wigwam, even, the guns and traps on which his hunting depended, were all sold to the store for whiskey. When I arrived, they had been two days without food, and the Indian had not energy to save himself and his family from starvation.

"All the arguments that occurred to me I made use of to convince the Indian of his folly, and to induce him even now to begin life again and redeem his character. He heard me in silence. I felt that I should be distressing them by remaining all night, and prepared to set out again, first giving to the Indian a dollar, desiring him to purchase food with it at the nearest store, and promising shortly to see him again.

"I had not proceeded far on my journey when it appeared to me that by remaining with them for the night, and in the morning renewing my solicitations to them, I might assist still more to effect a change. I therefore turned back, and in about two hours arrived again at the wigwam. The Indian had set off for the store but had not returned. His wife still remained seated where I left her, and during the whole night (the Indian never coming back) neither moved nor raised her head. Morning came; I quickly despatched breakfast, and leaving my baggage, with the assistance of my guide set out for the trader's store. It was distant about two miles. I inquired for the Indian. He came there the evening before with a dollar; he purchased a pint of whiskey, for which he paid half a dollar, and with the remainder bought six pounds of flour. He remained until he had drunk the whiskey, and then requested to have the flour exchanged for another pint of whiskey. This was done, and having consumed that also, he was so 'stupidly drunk' (to use the words of the trader) that it was necessary to shut him out of the store on closing it for the night. Search was immediately made for him, and at the distance of a few yards he was found lying on his face, dead."

So ends the story of the poor Indian. —And still, after eighty-seven years, the question of "To be, or not to be," in regard to strong drink, is with us still. As a last word: Remember, when "referendum day" comes, that if you want prohibition and closed bars you must put an X in the "No" column after every question.—Also, *don't sign your name*, or it will be a spoiled ballot.
JUNIA.

Plant Queries.

For "A Plant Lover," York Co., Ont. The trouble on your ivy, which is covered with small adhering spots that can be rubbed off, is scale, really an insect pest. Eben Rexford says "Unless washed occasionally the scale may take possession of the ivy and when this happens you will find it a difficult matter to get the plant clean. It is better to go on the 'ounce of prevention' plan and get a start of the scale by frequent scrubbing of the stalks and washings of the leaves. It likes a good deal of water on its foliage." To remove the scale Mr. Rexford recommends applying lemon or fir-tree oil. Directions for preparing the wash accompany the oils. Apply with a soft rag or a brush stiff enough to remove the insect after the application has done its work. Use the both frequently, after you have rid your plants of the pest, to prevent its return. The oils may be procured from any dealer in greenhouse supplies. Until

they can be procured, scrub the leaves with soapy water.

Maiden-hair Fern.—This fern dies down in the winter but has perennial roots. Better leave in the garden, covered with leaves, over winter. In spring, before growth starts, divide the roots carefully. It prefers a light, loose, rich soil, in cool, moist shade. If grown in pots the drainage, as for all ferns, should be perfect, but, while water must not be permitted to stand about the feet, the roots must be kept moist.

Tuberous Begonia roots, or tubers rather, should be lifted in fall after the first light frost and stored like dahlia tubers. For early flowering start the tubers in February or March in small pots or shallow boxes, in a soil composed of loam, sharp sand and leaf mould, keeping them at a temperature of 60 to 65 degrees F. When the plants are ready for re-potting, well-rotted manure may be added, and when the roots have taken fresh hold a cooler temperature may be maintained. If wanted for bedding plant out from the middle of May to the 1st of June from 3 1/2 or 4-inch pots, disturbing the soil as little as possible.

Coronation Cake.

"Miss Bluebell" is exceedingly anxious to get a recipe for this cake. After a vigilant search I have failed to find it, but perhaps some reader will kindly come to her assistance.—J.

Fall Cookery.

Mock Cherry Turnovers.—Cut rounds about 6 inches in diameter from good pastry (flaky pastry is best). Chop together 1 cup cranberries and 1/2 cup of large seeded raisins. Mix together 1 cup sugar, 2 level tablespoons flour and 1/4 teaspoon salt. Pour 1/2 cup boiling water over the fruit and when again boiling stir in the dry ingredients. Add a teaspoonful of butter and let cook until thick. Let cool a little, then set a large tablespoonful of the mixture on each round of paste. Brush the edges with cold water and cut 2 or 3 slits in the second round for each turnover. Put the "tops" on and press the edges together. Brush with water or milk, sprinkle with sugar and let bake 15 minutes.

Stuffed Onions.—Select 8 large onions, cover with boiling salty water and cook until nearly tender. Drain, then scoop out the center of each to leave a cup. Mix together 1 cup chopped cooked ham, 1 cup fine bread-crumbs, 1/4 cup melted butter, 1/2 teaspoon paprika, 1/2 teaspoon salt, 1 tablespoon finely-chopped parsley and the onion that was removed. Fill the onions, rounding it up well. Pour a cup of thin cream or rich milk around the onions and bake in the oven about 25 minutes, basting 2 or 3 times with the liquid in the dish. Mix 3 tablespoons melted butter with 1/2 cup of cracker or bread crumbs and spread over the mixture in the onions. Return the dish to the oven to brown the crumbs and serve at once.

Grape Pie.—Cook the grapes and put through a colander to remove skins and seeds. Add sugar to taste and a sprinkling of spice (a little cinnamon and a bit of cloves or nutmeg). If not very thick add a little cornstarch dissolved in a little water. Fill plates lined with nice pastry and bake. Cover with a meringue of the whites of 2 eggs beaten stiff with a little sugar, and brown very slightly in a hot oven.

Spiced Cranberries.—Three and one-half lbs. brown sugar, 2 cups vinegar, 2 tablespoons allspice, 1 tablespoon cloves, 1 3-inch stick cinnamon, 3 qts. cranberries. Tie the spices in a piece of cheesecloth and add to the sugar and vinegar, boiling all to a syrup. Add the washed cranberries, simmer for 2 hours, then put in jelly glasses, and when cold cover with melted paraffine. This is good with cold meat or fowl.

The Scrap Bag.
Bad Dreams.

If you want to avoid bad dreams never sleep on your left side, which seems to give too much pressure on the heart.

Cooking Turnips.

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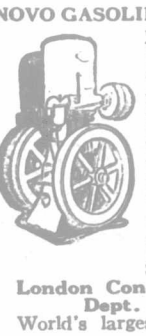
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Dept. B, London, Ontario.
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W. B. FERGUSON
R.R. No. 1, Burketon, Ontario.

FOR SALE
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Fred Arthur, - Knowlton, Que.
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TORONTO
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9.15 P.M.
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Colonist Cars. First-class Day Coaches.
Parlor Car through the Rockies.

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Canadian National all the way.

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GENERAL PASSENGER DEPARTMENT, TORONTO



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The Range that has Made Good for 20 years

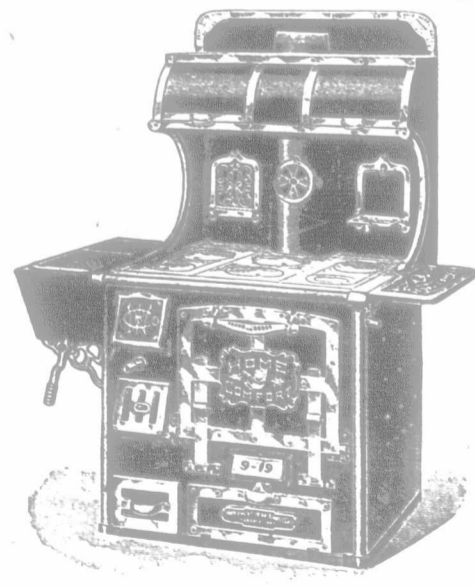
The "Home Comfort" Malleable Steel Range

For the past 20 years we have sold an average of 2,500 "Home Comfort" ranges—a total of 50,000. In some communities the "Home Comfort" is found in scores and scores of homes—due in no small measure to the fact that one woman user of it has recommended it to her neighbor.

It is truly "Home Comfort"—a perfect baker, economical on coal, easy to run and durable beyond any other range we know of in its finish and in regard to numerous features, it is women's own ideal—they have told us what they want.

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Office: King St. West Toronto, Ont. Factory: 22 Orillia Street

add a teaspoonful of sugar to the water when boiling them.

Rhubarb and Asparagus.

After the ground is frozen over mulch the asparagus and rhubarb beds heavily with manure scattered evenly over the surface, but not so thickly as to smother

the roots. Cover onions left for early spring use with straw.

The Christmas Gift Row.

Be careful of the plants growing for Christmas gifts. Keep poinsettia in a warm place free from draft; the soil moist but never wet; give plenty of sunlight.

Jerusalem cherry needs a cool place but no draft else its leaves will drop off. Ornamental pepper should be in a cool place and have plenty of water. Give the cyclamen a cool place without much sun and keep moist. Begonias need similar treatment to that given the cyclamen.

Appetizing Dishes For Cold Weather.

Chicken Goulash.—Two raw potatoes; 1 tablespoon butter or dripping; 1 cup brown stock or gravy; bit of onion; 1 cup cold chicken in small bits; salt and pepper. Pare the potatoes, then cut into small dice. Fry until they begin to brown in the spider, with the butter or dripping. Next add the seasoning, stock, onion and chicken. Simmer very slowly until the potatoes are soft. Serve very hot on buttered toast, or on a hot platter with slices of hot boiled beet around.

Clifton Potatoes.—Two and one-half cups cold mashed potatoes; ¼ cup warm milk; 1 egg-white; 6 small, thin slices of bacon; ¼ cup grated cheese; a little salt and pepper. Add the milk to the potatoes and beat until creamy. Fold in the egg-white, beaten stiff, together with a trace of salt and pepper, and spread in a shallow, well-greased baking-dish. Sprinkle with the cheese, lay the bacon over all, and cook in a moderate oven until the bacon is crisp.

Baked Bean Loaf.—Three cups cold baked beans; 2 small onions, minced; 1 cup stale bread-crumbs; 1 cup mashed cooked carrots; salt and pepper. Combine the ingredients, form in a loaf, brush with melted butter or sweet dripping, and bake 30 minutes in a hot oven. If the mixture seems too dry when mixing add a little Chili sauce, catsup or canned tomato.

Mock Sausage.—One cup cooked beans; 1 cup ground peanuts; 1 cup cooked barley or rice; 1 cup stale bread-crumbs; 2 tablespoons minced onion; ¼ teaspoon pepper; 1 teaspoon salt; 1 teaspoon sage; ½ cup milk. Mix well, let stand a few minutes then form into small flat cakes. Dip in flour and fry quickly. Serve with brown gravy.

Celery With Cheese.—Cut the celery in inch lengths and simmer in salted water until tender. Arrange in layers in a baking-dish, with some white sauce and a good sprinkling of grated cheese over each layer. Sprinkle bread-crumbs over the top, dot with butter, dust with a little grated cheese and bake in a hot oven until slightly browned.

Perfect Pumpkin Pie. Cut up the pumpkin without peeling it and steam in a covered colander until soft, then remove the peel. Put the pulp in a dish in the oven, and leave the door open until it is dry but be careful not to let it brown or bake. Press it through the colander and measure. To 2½ cups pulp add 2 cups cream or very rich milk; 1 teaspoon each (level) of salt, cinnamon and ginger; 1 rounded teaspoon of butter; 1 tablespoon molasses; sugar to taste; and, after cooling and beating well, 2 well-beaten eggs. Make a rich pie-crust and line an extra large and deep pie-plate, leaving a fairly thick edge all round on top. Pour in the pumpkin and bake slowly about 40 minutes until browned. Some dust nutmeg over the top. Be sure that the oven is not too hot for either pumpkin or custard pies, or the filling will be hard or watery. And be sure to take out of the oven just the moment it is done or the pie will be spoiled. Serve hot or very cold with spoonfuls of whipped cream all around.

What to Serve With What.

An old hand-written cook book has the following:

Always have lobster sauce with salmon. And put mint sauce your roasted lamb on. Veal cutlets dip in egg and bread crumb. Fry till you see a reddish-brown come. Grate Gruyere cheese on macaroni. Make the top crisp but not too bony. In dressing salad mind this law: With two hard yolks use one that's raw. Roast veal with rich stock gravy serve. And pickled mushrooms, too, observe. Roast pork, sans apple sauce, past doubt. Is "Hamlet" with the "Prince" left out. Your mutton chops with paper cover, And make them amber brown all over. Broil lightly your beefsteak,—to fry it Argues contempt of Christian diet. To roast spring chickens is to spoil them, Just split them down the back and broil them.

It gives true epicures the vapors To see boiled mutton without capers. Boiled turkey gourmands know, of course, Is exquisite with celery sauce. The cook deserves a hearty cuffing Who serves roast fowls with tasteless stuffing.

ing Dishes For Weather.

Two raw potatoes... Fry until they begin... Simmer very slowly...

Two and one-half potatoes... Add the milk to... well-greased...

Three cups cold small onions... form in a loaf, brush... dry when mixing add...

One cup cooked beans... cup stale bread-crumbs... into small flat cakes...

Cut the clery in... simmer in salted water... some white sauce and...

Cut up the pie... peel it and steam in... Put the pulp in a dish... Make a rich pie...

ve With What.

Written cook book has... sauce with salmon... your roasted lamb on... beefsteak,—to fry it...

Current Events

Hon. W. L. Mackenzie King has formally accepted the nomination for Prince Co., P. E. I.

Action by the Board of Commerce at Ottawa has caused a reduction of milk prices for October from \$4 to \$3.25 a cwt.

President Wilson is very ill, and a consultation over his case has been held.

Dr. Braithwaite, who has been President of the Western University, London, Ont., for five years, has been appointed National Organizer of the Inter-Church Forward Movement.

The Indians of Lethbridge District, in investing the Prince of Wales with the Order of the Red Cross, have conferred upon him a name that means "Chief Many Smiles."

The U. F. O. of Grenville Co., Ont., has chosen G. A. Payne of Cardinal, as their candidate in the coming elections. Mr. Barrick of Wainfleet has been chosen for Welland in place of E. McIntyre, who retired.

Brig.-Gen. Henri Panet succeeds Gen. Shannon as G. O. C. of Mil. Dist. No. 1, with headquarters at London, Ont.

The British troops have left Archangel, Northern Russia.

Mme. Adelina Patti, the world-famed singer, died at Craig-y-Nos Castle, South Wales, on Sept. 27. She left an estate valued at \$3,000,000.

The great British railway strike was settled on October 5. Following are the official terms of settlement:

- 1. Work shall be resumed immediately. 2. Negotiations will be resumed on the understanding that they shall be completed before the end of the year. 3. Wages will be stabilized at the present level until Sept. 30, 1920, and at anytime after Aug. 1 they may be reviewed in the light of circumstances then existing. 4. No adult railway man in Great Britain shall receive less than 51 shillings per week while the cost of living is 110 per cent. above the pre-war level. 5. The Railway Union agree that the men who work harmoniously with the men who returned to work or who remained at work during the strike. Nor shall there be any victimization of strikers. 6. Arrears of wages will be paid on resumption of work.

King Albert and Queen Elizabeth of Belgium arrived in New York on Oct. 2, and will spend a month in America.

The German Government is to issue shortly a decree ordering the removal of monarchical insignia and emblems from buildings, letter-heads, rubber stamps, etc., throughout Germany.

Lord Fisher, former First-Sea Lord of Great Britain, is appealing in British papers for a great Anglo-American Federation to compel peace.

The Italian Parliament has been dissolved by Premier Nitti, and elections will be held on Nov. 16th.

A lawyer was examining a Scottish farmer. "You affirm that when this happened you were going home to a meal. Let us be quite certain on this point, because this is a very important one. Be good enough to tell me, sir, with as little prevarication as possible, what meal it was you were going home to."

"You would like to know what meal it was?" asked the Scotchman. "Yes, sir, I would like to know," replied the counsel sternly and impressively. "Be sure you tell the truth." "Well, then, it was just corn meal."

A Game of Soldiers.

BY JOHN LIGHT.

We used to play at soldiers, Not many years ago: Me and my brother Willie, We used to love to go Out to the woods and green fields With other little friends, There by the winding river That turns and twists and bends, With its wooded little islands, And its rippling rhythmic streams. We used to play at soldiers— And yet it only seems As if the years were minutes And the hours we used to play Were but a fleeting vision Of a distant summer day, When we fought our little battles, And there echoed through the trees The sound of children's voices; And there wafted through the breeze Confused and hurried orders As to where we should attack, The weapons we should carry To drive the foeman back. There were so many orders, 'Twas hard to understand Who was the friend or foeman, Or who was in command. But I used to love those battles And hear the bugle blow, When we used to play at soldiers, Not many years ago.

Now Willie lies in Flanders, In a simple little grave With many other heroes, The bravest of the brave. And on a little hillock, Where the grass is growing green, And the daffodils are budding, Just a wooden cross is seen. I would have been with Willie When he fought and died out there, But I'm just a helpless cripple, And they wheel me in a chair; But I'd like to have been with him, Just to call to mind, you know, The times we played at soldiers, Not many years ago.

But one day I'll be with Willie, And I'll see him face to face, And he'll be amongst our heroes In a brighter, happier place, Where the birds are ever singing, And the night is as the day; Where the joyful bells are ringing, And all tears are wiped away; Where the trees are ever budding, And the gentle breezes blow; And perhaps we'll play at soldiers As we used to years ago.— In The Maple Leaf.

The Fairies' Flitting.

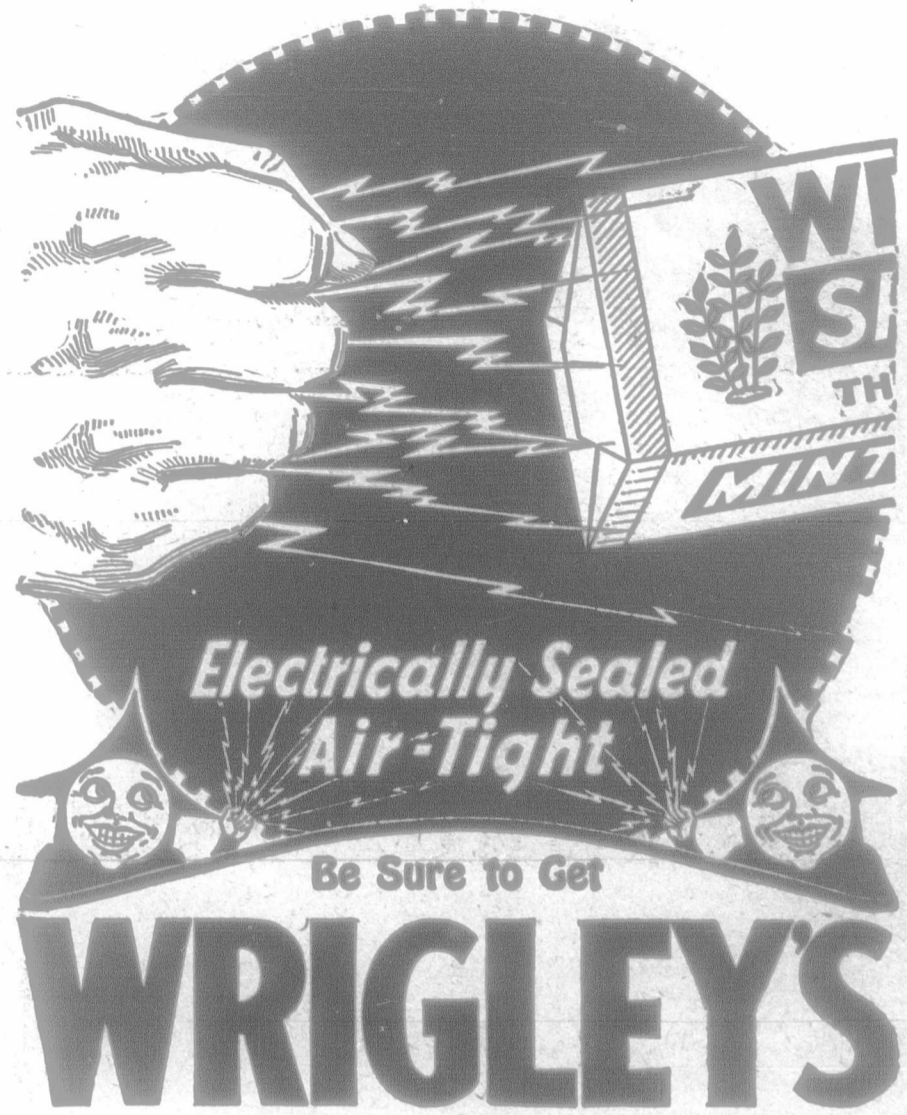
All over the land is the packing of kit, For the dear little fairies are making a flit, The chill of the autumn is creeping o'er all, And the fairies must go when the yellow leaves fall. So it's whisper and rustle: "Autumn is here!" Chatter and bustle: "Hurry up, dear!"

With flutter and song from the dawning of day The fairies are busily working away. From hedgerows and woods where the fading leaves cling Comes a hum and a buzz as of bees on the wing: "Nightcaps and candles! where is my fan? Pack up my sandals quick as you can!"

When darkness has fallen on meadow and dell There steals through the silence the fairies' farewell. And sad the wee song is, but gay the refrain: "Dear land! the next summer we'll see you again!" Then off they fly . . . Whither? Ah, who can say? Hither and thither vanished away!

Competition.

There were once two cats of Kilkenny, Each thought there was one cat too many, So they scratched and they bit, They fought and they spit, 'Till excepting their nails, And the tips of their tails, Instead of two cats there weren't any.



Be Sure to Get WRIGLEY'S Wrapped to insure its perfect condition. Sealed tight—kept right.



Advertisement for Corona Wool Fat ointment. Includes text: 'FREE - Postpaid This Big Sample Box of My Famous Healing Ointment'. Features a portrait of G. C. Phillips and a cow. Text describes the ointment's benefits for various ailments and provides contact information for The Corona Mfg. Co., 80 Corona Block, Kenton, Ohio, U. S. A.

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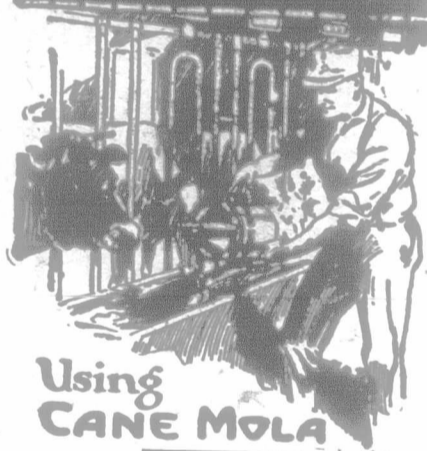
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CANE MOLA COMPANY OF CANADA, Limited
118 St. Paul Street W.
MONTREAL.

Good live agents wanted everywhere. Write quick for territory.

Please mention this paper

Training Little Children.

BY MRS. LENORE R. RANUS.

Everyone knows that a normal child has an active mind, but many parents do nothing to strengthen or train this vital part of their child's life, leaving all mental development to the teachers in the schools. Those parents are indeed fortunate who have kindergartens in their town or city, for the kindergarten gives systematic mental training to children as early as the fourth year.

The easiest way to teach a child to think is through play. The mother can begin to sing Mother Goose rhymes to the mere infant in arms. As the child grows he recognizes the words and often the tunes. Later, he will ask for his favorite songs or rhymes and then begin to sing or recite himself. Up to this point the mother has accomplished three things: Strengthened the memory, cultivated an ear for music and the ability to carry a simple tune, and enlarged the child's vocabulary.

Be sure to use only the best grammar when talking to a child. Baby talk is funny for the grown ups for a while, but the difficulty the child faces in overcoming this is tremendous.

As the child grows older a story hour should become a part of each day. This is really a lesson in language. The mother should begin with the finger plays when the child is 8 or 9 months old, such as "This is the church and this is the steeple," "Pat-a-cake," and the counting lesson, "The thumb is one; the pointer, two; the middle finger, three; ring finger, four; little finger, five, and that is all you see." "What the child imitates he begins to understand." That is the great purpose of the finger plays.

As the child grows other stories can be added to the story hour. A normal child, from about 2 years of age on, loves the stories of "The Three Bears," "The Three Pigs," "Little Half Chick," "Little Red Hen," and other similar simple tales.

In telling stories to children, especially to very young children, avoid the element of fear. Children love best the stories they have heard before. A good rule is to let the child choose his own story. Mother can introduce a new story when she deems best. Another good plan is to have the child tell mother a story sometimes, as this will aid self-expression and be a lesson in language.

To teach counting, make use of the play spirit again. In bouncing a ball, repeat the old-time jingle, "One, two, buckle my shoe." You will be surprised at how quickly the little ones will begin to count. Again, in building blocks, make a game of counting by saying, "Give mother one block," then "Give mother one, two, three blocks," etc. It is unwise to teach a child under 3, numbers higher than ten. They are well started if they are able to count as high as this correctly.

To develop the power of concentration, without which no human being can be successful in life, there must be a certain amount of directed play each day. Children are given this in kindergarten, and the mother can also give it to them in the home. When mother sews, the opportunity to direct play is at once afforded by having the child sit close by and sew a piece of loose-woven cloth, such as canvas or scrim. A big, blunt-pointed needle should be chosen for the purpose and tied securely to a heavy thread. When the child shows evidences of fatigue the work should be laid aside for another day.

Large, colored, wooden, kindergarten cubes and spheres, 1 inch in size, with a hole through the centre to string on shoelaces, are also fine for a lesson in concentration. This occupation should be permitted only when mother is close by to watch and help.

For a child of 3 or older kindergarten sewing cards which are perforated and to be worked in colored worsteds, are interesting and instructive. An economical way to procure such cards is for the father or mother to cut squares or oblongs out of cardboard, lightly trace an apple, ball, or some other object on one of the pieces and then perforate the outlines every half inch, making the holes as large as the head of a pin. These outlines can then be sewed by the child in bright colors, working up and down in the holes. Be sure the outlines of the object to be sewed are large, as small objects are too trying for young hands and eyes.

A Tip Top Investment

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Don't continue sending good money after bad—by buying poor roofing to patch and repatch your old roofs. Invest in

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A NEPONSET ROOF

and obtain lasting satisfaction, durability and economy.

Once Neponset Paroid Roofing is laid it forms an ideal roof, either on new buildings or over old shingles. It can be put on quickly without litter or fuss. Costs half the price of shingles and pays for itself by wearing for years.

Neponset Paroid Roofing can be used on any building no matter how large or small. Its fire and weather-resisting properties give it first place among roofings.

Neponset Paroid Roofing is made in three colors, red, green and slate grey.

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Combined Churn and Butter-worker

1,000 pounds capacity, in good order, with shafting and pulleys. Suitable for 5 H.-P. motor. Apply

WM. DAVIES CO., 521 Front St. E., Toronto, Ont.

There are four kinds of credit commonly made use of by farmers,—individual credit, store credit, bank credit, and co-operative credit. Individual credit is where an individual farmer borrows from an individual lender on such terms as the two can agree upon. This is the simplest form of credit, and if both parties to the transaction are honest and wise, it is the most satisfactory of all. However, it is limited in its application. It is similar to the case of a consumer buying direct from

the producer, which is an excellent system but not always possible.

To Improve Old Furniture.

Wash the furniture, a little bit at a time, with water and castile soap, rubbing each bit dry with chamois before going on to the next. If varnished woodwork is dull and shows white marks apply a mixture of linseed oil and turpentine, half and half, shaken in a bottle. Apply a very small quantity with a soft rag, and polish at once with dry cloths.

THE MOLSONS BANK

Incorporated in 1853
Capital and Reserve \$ 8,800,000
Over 100 Branches

Prepare Your Sons' Future

Open a Savings account in your boy's name in The Molsons Bank, and teach him to deposit his savings in it. The habit of saving thus acquired, even more than the money itself will prove a great asset towards his success in life.

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Don't let your silage go to waste through snow and ice and excessive freezing.

Read what Agricultural College men have to say about having roofs on silos. Their remarks are published in our Free Leaflet on "EMPIRE" SILO ROOFS.

Prices greatly reduced this year. Send a card to-day for prices and leaflet.

The Metallic Roofing Co. LIMITED
Manufacturers since 1885
King and Dufferin Sts., Toronto
Also at Winnipeg

When writing please mention Advocate.

Markets

Continued from page 1818.

Buffalo.

Cattle.—Trade at Buffalo last week showed considerable improvement over the preceding week, values ruling strong to fifteen to a quarter higher on shipping steers generally, while butchering grades showed a quarter and better prices. With the Jewish holidays over, a lighter supply in the east and generally a better feeling in the dressed beef line, killers were more inclined to take hold, as a result of which a good clearance was had all week. Canadian receipts were moderate, there being around 75 to 85 loads and the best steers offered were out of the Dominion, showing a range of from \$13 to \$13.50, with best natives around \$13.40. In the handy butchering line, best steers sold around \$12 to \$12.50, with the best heifers running from \$10.50 to \$11 generally, prime higher. Stocker and feeder market showed some very good qualified feeders, which sold up to \$11, with the lighter and less desirable kinds running down as low as \$6.50, this division showing strong prices. Bulls generally were advanced from 25c. to 50c. Milk cow and springer market was full steady. Offerings for the week totaled 4,850 head, as against 4,600 for the preceding week and as compared with 7,175 head for the corresponding week a year ago. Quotations:

Shipping Steers — Natives— Very choice heavy, \$16.50 to \$17; best heavy, over 1,300, \$15.50 to \$16; fair, over 1,300, \$13.50 to \$14; best, 1,200 to 1,300, \$15.50 to \$16; good, 1,200 to 1,300, \$14 to \$15; good, 1,100 to 1,200, \$14.25 to \$15; plain, \$11.50 to \$12.

Shipping Steers — Canadians — Best heavy, \$13, to \$13.50; fair to good, \$12.50 to \$13; medium weight, \$12 to \$13.50; common and plain; \$11 to \$11.50.

Butchering Steers— Yearlings, fair to prime, \$14 to \$15.50; choice heavy, \$13.50 to \$14; best handy, \$12.50 to \$13; fair to good, \$11 to \$12; light and common, \$9 to \$10.

Cows and Heifers. Best heavy heifers, \$11.75 to \$12; good butchering heifers, \$10.50 to \$11.25; fair butchering heifers, \$9.50 to \$10.25; Light, common, \$6 to \$7; very fancy fat cows, \$10.25 to \$10.75; best heavy fat cows, \$9.50 to \$10; medium to good, \$7.50 to \$9; cutters, \$6 to \$6.50; canners, \$4.50 to \$5.50.

Bulls.—Best heavy, \$9 to \$10; good butchering, \$8 to \$9; sausage, \$7.50 to \$8; light bulls, \$6 to \$7.50.

Stocker and Feeders.—Best feeders, \$9.50 to \$10; common to fair, \$3.50 to \$9.50; best stockers, \$8 to \$9; fair to good, \$7.75 to \$8.25; common, \$6 to \$7.

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

Hogs.—Prices at Buffalo, the same as at all other marketing points, took a big tumble last week, dropping to the lowest level since the latter part of October, 1917. Monday, which was the high day of the past week, top was \$18.60, bulk sold at \$18.50, with pigs \$17.50 and \$17.75, and by Friday the top was down to \$16.60, bulk moved at \$16.50 and pigs ranged down to \$15.50 and \$15.75. While a reaction in the trade may be looked for, the general opinion is that prices will continue to work lower and some are making predictions that the packing season will see good hogs selling as low as \$12. Buyers got good roughs the latter part of the past week at \$13 and \$13.50, and stags ranged from \$11 down. Receipts for the past week total 21,000 head, being against 18,796 head for the week before and 24,900 head for the same week a year ago.

Sheep and lambs. Last week opened with lambs selling lower and a strong market was had on sheep. Monday top lambs sold at \$16, with culls ranging from \$12.50 down, best ewe sheep sold at \$7.25 and \$7.50 and cull sheep ranged from \$3 to \$4.50. Market was active and generally higher the next few days. Friday best lambs brought up to \$17, good culls reached \$14 and \$14.50, ewes ranged from \$7.50 to \$8, and cull sheep \$3 to \$5. Receipts for the past week were 17,500 head, as compared with 12,494 head for the week previous and 13,600 head for the same week a year ago.

Calves.—On the opening day of last

The Farmer-Banker Alliance



You go to your lawyer for legal advice; to the doctor for medical advice; why not to The Merchants Bank for financial advice?

If you want a loan to buy cattle, hogs or equipment—if you want information as to how to invest money—come to those who make a business of financial matters, and are in a position to give you sound and impartial advice.

THE MERCHANTS BANK

Head Office: Montreal. OF CANADA Established 1864.

With its 131 Branches in Ontario, 42 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 30 Branches in Manitoba, 44 Branches in Saskatchewan, 74 Branches in Alberta and 9 Branches in British Columbia, serves rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

THE VALUE OF MONEY

Money—ready money is an essential in every line of business—mercantile or farming. Wise farmers build up Savings Accounts, which enable them to purchase for cash.

A Savings Bank Account with this Bank assures ready money when needed. Interest paid at current rate.

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OF CANADA

180 Branches in Dominion of Canada.

The Government of the Province of Ontario

Appeals to the farmers of the Province to fully protect their property from FIRE.

Fire record in Ontario for August on Farm Property:

Number of Fires, 75

Total Loss, \$259,491

Every fire has a small beginning. We can supply you with the necessary extinguishers to prevent them spreading.

We carry a full line. Mail the coupon to-day.

HAMILTON CLEVELAND COMPANY

Hamilton Cleveland Co., 18 Park St. South, Hamilton, Ont.

Without any obligation, send me complete information about Fire Extinguishers for my property. I want to protect property as checked:

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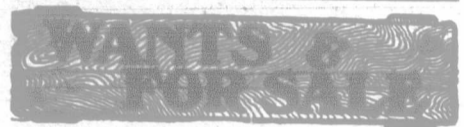
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If We Send You This Phonograph



at the lowest factory price will you show it to a few friends and tell them the low retail price. To the first in each locality who write we will make a very attractive offer. A post card will bring free particulars, illustration and description. Write today.

International Phonograph Co.
43 Scott St., Dept 7 Toronto, Ont.



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

TERMS—Four cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 60 cents.

ONE HUNDRED ACRES, COUNTY OF Perth, Township Northeast Hope, Lot twelve, Concession three. Seventy-five acres, clear and under cultivation, eighteen acres hardwood bush, eight acres stump land, bank barn, stone dwelling, excellent land. Farm may be purchased with or without season's crop, stock and implements. For particulars apply on farm or to A. W. Hamilton, Lucknow, Ont.

WANTED—LARGE FARM TO RENT, WITH view to purchasing; must have modern buildings and clay soil. Apply, stating full particulars. Keith F. Johnson, Leeville P.O., Ont.

Crate Fattened Poultry

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

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Fish, Oysters, Game, Poultry, Eggs and Vegetables.

344-350 West Dorchester Street, Montreal

POULTRY WANTED

We have a big demand for poultry all the year round, which enables us to pay top market prices. Phone or write for particulars. It will pay you to sell to

C. A. MANN & CO.
75 King Street London, Ontario

Twenty Choice Registered Ram Lambs, 25 Ewes. Average wool clip of flock for this year, 15 1/2 lbs. per fleece.

Donald Sutherland, R.R. No. 2, Ingersoll, Ont.

week top veals sold at \$23.50, Tuesday none sold above \$22.75, Wednesday's top was \$23.25, Thursday the bulk brought \$23.50, and Friday best natives sold at \$25 and \$25.50 with top Canadians going at \$23.50. Native culls reached up to \$21, Canadian culls sold from \$18 down, heavy fat calves landed around \$12 and \$15 and grassy kinds from \$7 to \$10. Receipts the past week were 2,500 head, as against 2,160 head for the week before and 2,250 head for the same week a year ago.

Pumpkin Time.

Now the autumn leaves are falling
And the chilling breezes blow,
And the clouds that sail above us
Tell of ice and sleet and snow;
Yet the children all are happy,
Singing many a cheery rhyme—
Need you ask of me the reason?
Boys and girls, 'tis pumpkin time!

Here they come with song and laughter,
Merry elves with face aglow!
Each one, from small, chubby fingers,
Swings a pumpkin to and fro,
As you look across the cornfield
Smiling fairies may be seen—
Need you ask of me the reason?
Boys and girls, 'tis Hallowe'en!

The new clerk, who was from the country, was approached by a fellow worker, who said: "Frank, we have raised fifty dollars to buy the boss a birthday present, and we want something that will make a big show for the money—something that will look big, you know. Can you suggest something?" Then after mature reflection, Frank answered: "I think I have it. Buy \$50 worth of rice and boil it."

My Dog.

EDITOR "THE FARMER'S ADVOCATE":

My dog is a mongrel. He is partly Scotch collie and the rest cur. He is worth his keep many times. He catches gophers; he drives the horses and cattle; he will hold a pig if I tell him to do so; he will chase a coyote; he will only bark at visitors in daytime, but will not admit strangers at night; he will guard a blanket or coat left by me until he starves; he will go with the kiddies (two little girls) to play and will see that nothing molests them; he will bark and chase away hawks. He used to eat eggs, but a good dose of cayenne pepper put wisdom into his head.

He stays in his own house and eats out of his own plate. He drinks out of the horse trough if his own trough gets empty. Now he never runs a mile to bark and chase cars, vehicles and the like either. He used to do that, but a good licking the second time he was caught at it put him wise again.

You ask how to train dogs? Just treat them humanely and feed and care for them as they should be. Talk only business to them. Pet them little. Keep them outside of the dwellings but fix a warm snug place for them. Use a whip or pull their ears when giving punishment. Keep the children off their backs until they are a year old at least, then they will not allow any foolishness like that. Children who fondle dogs are sure to eat hairs and are subject to catch different diseases. If the dog is fed plenty he rarely goes seeking dead carcasses. If he is treated with the respect a dog should have he will obey and respect those with whom he associates. Never allow a dog to jump upon one with the forepaws, as they do not know Sunday clothes from any other and do not seem to think of the fact that mud or manure may be on their feet. In the first three or four months a dog is trained, or he is a hopeless beast ever afterwards. Two trips to town behind a rig or car and you might as well shoot him. Show the dog what to do and his instinct will teach him to do it if he is not abused. Young dogs should be treated as young children in the way of rebuke. Punishment should be light but to the point. If the dog has sense he will show it soon. If he is senseless he should be shot before he eats as much as would raise a pig. Most dogs are a dirty nuisance and should be killed.

Sask. "STUDENT FARMER."

Agricultural Conditions in Manitoba.

The following summary of crop conditions in Manitoba was recently issued by the Manitoba Department of Agriculture:

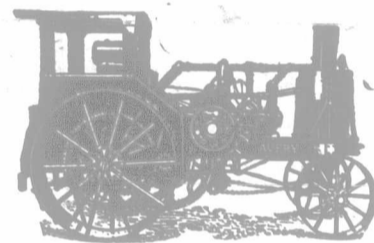
The average of the estimates given by correspondents as to the wheat yield falls between 16 and 17 bushels to the acre; oats about 36; barley about 23. Potatoes appear to vary considerably, but generally are not heavy. The almost entire absence of frost has been remarkable; in most parts of the Province there has not been any frost whatever since about the middle of May, and common field types of fodder corn have ripened abundance of their ears perfectly. The season has also been exceedingly favorable for all kinds of tender garden crops, maturing melons, egg plant, fruit and similar hot weather products. Animals are doing well everywhere now, although several correspondents mention flies and heat as having bothered them during the summer. In most places there is plenty of fodder for winter feeding, although hay, feed oats and potatoes are needed in parts of the south-western corner of Manitoba, and government assistance will be extended in the way of locating these and making it possible to finance their purchase. The grasshoppers have been active in this area up to the present. Though wages are still very high, the period of acute demand for help is past. In some places recent rains have caused the plow to be more used than the threshing machine, and there should be an unusual amount of fall plowing done in Manitoba this season.

"Avery" Tractors

At the Interprovincial Plowing Match and Tractor Demonstration at

Ottawa, October 14, 15, 16

Here's your opportunity to see this famous tractor on actual work on the farm. "Avery" tractors are built to deliver a big measure of power and service and to minimize the cost of operation and upkeep. Practically all the parts are easily renewable, even the inner cylinder walls, without the need of high-priced, expert workmanship.



Come to the Tractor Demonstration and see The "Avery" work—the way it will work for you.

If you cannot attend, see our nearest dealer, or write us direct for full particulars.

R. A. LISTER & CO. (CANADA) LIMITED
58-60 Stewart St., Toronto, Ont.

Notice to Stallion Owners

INSPECTION OF STALLIONS COMMENCES

October 21st, 1919

The stallion enrolment report containing route of stallion inspectors has been mailed to owners of enrolled horses. Any owner of stallions who has not received a report should write at once to the Secretary.

R. W. WADE, Secretary
Ontario Stallion Enrolment Board
Parliament Buildings TORONTO

When writing advertisers kindly mention Advocate.

Why Not More Sheep in Ontario?

EDITOR "THE FARMER'S ADVOCATE":

A general survey of the live-stock situation in Ontario clearly reveals the fact that there is still a great opportunity of increasing the sheep population of the Province. It is quite a common occurrence to visit progressive farmers by the score and find probably only a few who can boast possession of a single member of the woolly tribe. This is a condition which should not exist for several reasons, and while there was a slight increase in the number of sheep kept, during the war, there is still need for increasing not only the number of flocks, but also the size of the individual flock.

Perhaps one reason why more sheep have not been raised in the past is the fact that many farmers were under the impression that this class of live stock required practically no attention. Consequently they found that where improper attention was given in the way of protection in winter, and especially during the lambing season, that loss among the lambs was heavy; and ewes in poor condition resulted in a small yield of mutton and a poor quality of wool. To-day, however, this condition is being greatly improved, as farmers are realizing more and more the necessity of proper care, etc., if they are to expect satisfactory returns. The system of wool grading is also doing much to encourage the production of only the best class of wool.

On the other hand there are, I think, several good reasons why Ontario farmers should be encouraged to raise more sheep. In the first place, the average Ontario farm is well adapted for the raising of at least ten head of sheep. Few farms are without a few acres of bush and other kinds of waste land. Moreover, water is usually found in plentiful quantities, either naturally or artificially. There is little reason why a flock could not be kept to advantage.

A second important reason is the fact they require little attention as compared with other classes of live stock. This in itself should be an important consideration, for the labor problem is becoming nothing less than a veritable bug bear to the average farmer. It must not be inferred, however, that sheep can thrive and be a profitable investment without some attention on the part of the owner. Fortunately, though, this is required largely during the winter and early spring, when other farm operations are not pressing. So that, from the standpoint of labor there is a decided advantage in keeping sheep as one man could take care of ten or fifteen head with but little additional work. It is of importance, too, that sheep, owing to their close-cropping habits, are good weed-destroyers. It is a well recognized fact that where sheep are kept, less trouble is experienced in keeping in check the common enemy of the agriculturist—weeds.

Then, if for no other reason, it is a good, sound, financial investment to purchase sheep. For it need scarcely be pointed out, that Europe's flocks and herds are almost depleted and it will take at least a full decade before the live stock situation on the continent will be even normal. The same statement is true of England and so the older countries will look towards America and, especially Canada, for their supplies of both mutton and wool. In this connection it is well to remember that sheep like swine belong to the "get-to-market-quick" class and for this reason will certainly be in large demand until the cattle population on the continent has resumed its normal level. The demand, in turn, will insure, at least, normal, if not high, prices to the farmers.

To the prospective purchaser of sheep, one or two suggestions may not be amiss. The best time of year to buy ewes is usually the fall—September or early October. Now that the fall fairs are in full swing, there is good opportunity to get the best. Also secure a good sire and avoid the scrub for he will be a sure disappointment. A flock of ten ewes and a ram would make a good start and if given proper care, especially at lambing time, should prove to be a profitable investment.



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Winter care consists largely in providing a more or less open shed with a southern exposure, but free from drafts. The feeding of roots, grain and clover hay twice a day and with a supply of fresh water at hand. During the lambing season, ewes should be separated from the flock, given luke-warm water, and care taken that lambs are properly nourished. Provision should be made to have an attendant at hand almost constantly, as it will repay well by reducing the loss of lambs to a minimum.

In conclusion, then, it may be said that there still lies a great opportunity for the Ontario farmer. The farms of Ontario are well adapted for sheep raising, a comparatively small amount of labor is entailed, and the market prospects for sheep products are encouraging.

Wellington Co., Ont. W. J. LOWRIE.

The King Bird Matches His Strength With the Crow.

EDITOR "THE FARMER'S ADVOCATE":

Back of the old home stands a woodlot of tall evergreens, firs and hemlock, and back of this grove flows a river, and beyond the river are veritable "forests primeval." The crows used to be migrant birds with us, but for a score of years or more they are with us all the year, and we may feel that they are permanent residents. A crow is painted just as black as his color, but he is not altogether bad.

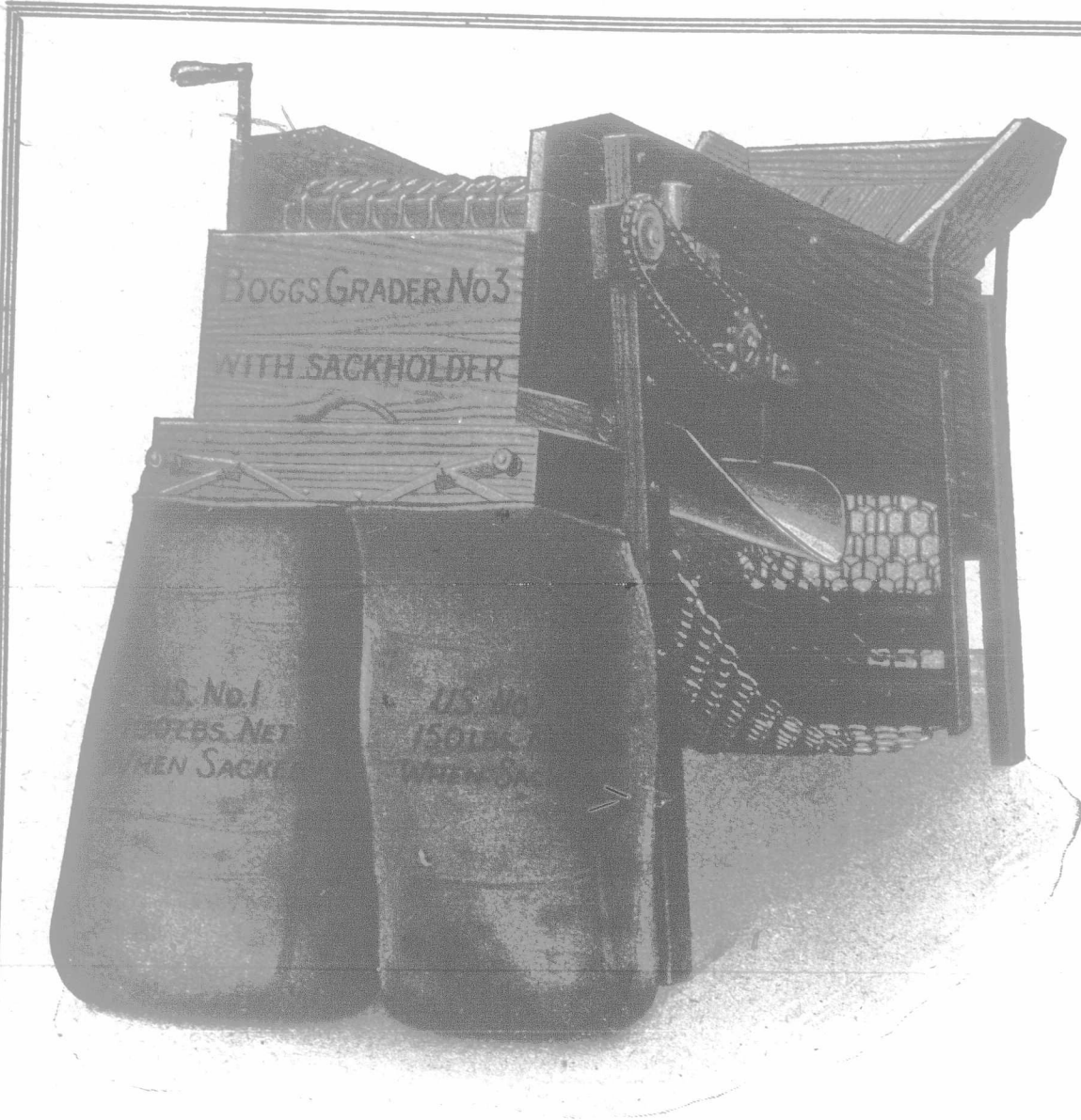
Crows are gregarious. It is not often you see a single crow. This grove is the favorite sleeping quarters for these birds. They practice "early to bed and early to rise," for they used to begin to gather in these favorite haunts around 4 o'clock, in the afternoon, and streams of aviators kept coming from every point of the

compass till there were hundreds and thousands by the time it was sundown.

Relays of 2's, 3's, a dozen, a score, etc., came in at a time to swell the crowds already there, and then what a hullabaloo they made screaming their hoarse, monosyllabic caw, caw, caw till they fairly made the Welkin ring with their cries, but soon their voices ceased and each bird went to roost and slumbered with his head under his wing. At daybreak they were awake and ready to be off, and in just a little while the woods were deserted of crows!

In the spring they build their nests in these pine woods. The beginning of April sees the sexes flocking instinctively to this trysting place. Their nests are placed high in the tall trees so as to be well nigh inaccessible.

The crow is no craftsman and his nest is a crude affair, very loosely put together with sticks and twigs and lined



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with a little grass, and there Mrs. Crow lays 4 or 5 blue-green eggs thickly bespeckled with shades of brown so that their coloring shades off into the color of the evergreen boughs that form a pendant roof over the rude affair that serves for a cradle for its young.

A crow is a very "smart" bird, and I use the word advisedly. It isn't easy to find their homes, even when you know they must be there.

Crow-babies, like all young birds, have very keen appetites and capacious stomachs, and crows are great scavengers, and when they live near the water consume an astonishing amount of dead fish and crabs washed up on the beach by the incoming tide, and besides take lots of insects, mice and young birds. In fact, crows will even tackle an old hen, as they did one day to a pair of our old Rhode Island mothers out for a walk on the road before the house. But while crows will take even adult birds and pester the lives of better birds by tearing up their nests and even destroying the young, every now and then the row meets his match and finds a bird that will give chase to the black bully. This the king bird does, and if you have ever seen a crow with a king bird after him you can't help but feel glad that Mr. Crow is getting a dose of his own medicine.

See that crow as he steers headlong while the king bird, whose technical name is *Tyrannus tyrannus*, which means he is the tyrant of tyrants, he goes right after the crow, flying now over, under and away from him, but only to come back to pluck a feather from the sable coat of his royal blackness, and at last after he has exhausted the gamut of his manoeuvres they arrive at the same perch.

The king bird wears a chip on his shoulder, and when he sets up his Ebenezer he publishes that fact just as persistently as ever he can to all the feather tribe. The king bird hates with a perfect hatred crows, jays, hawks and blackbirds, and when any of these appear on the scene the king bird at once "throws down the gauntlet." It is the signal for a pitched battle.

Suddenly thimbles and spoons and rinkets began to disappear from the

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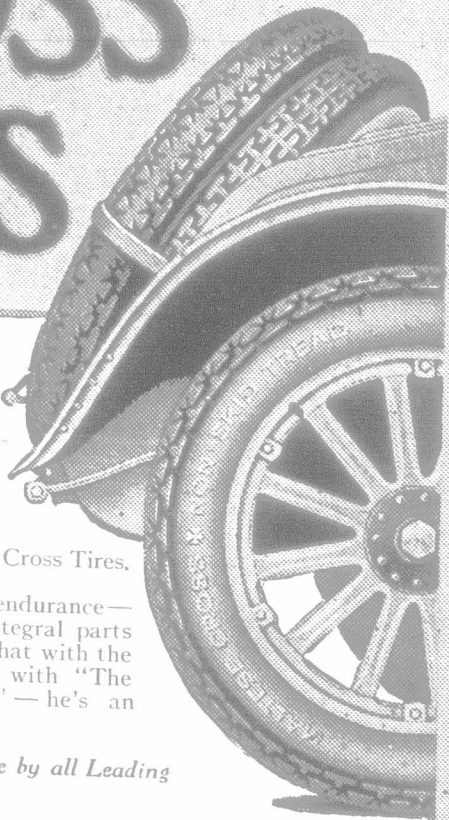
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house. Nobody knew anything about the missing articles, and no trace or clue to their whereabouts were forthcoming, when something possessed a boy to climb up to a very large, strong crow's nest. It is a notable feat to invade a crow's preserves in midair, and requires no small effort to "shin-up" to their quarters "but then play is what a body is not obliged to do." And it was an adventure such as the "lad o' parts" likes.

And there in the crow's house were the thimbles, spoons, etc. A crow has an eye for brightness and has a penchant for anything bright. Even on the famous golf links, in England, in the Kew Gardens the ubiquitous crow has been seen eyeing the bright new flying golf balls and even to attempt to get possession of the things, but, of course, he could not raise them to his nest, but he might secrete them for he is a cunningly wise old chap, and wisdom resides in his black pate.

F. M. CHRISTIANSON.

Looked Suspicious.—Gr-rr-r-h! The train drew up with a mighty crash and shock between stations.

"Is it an accident? What happened?" inquired a worried-looking individual of the conductor.

"Some one pulled the bell-cord!" shouted the conductor. "The express knocked our last car off the track! Take us four hours before the track is clear!"

"Great Scott! Four hours! I am supposed to be married to-day!" groaned the passenger.

The conductor, a bigoted bachelor, raised his eyebrows suspiciously.

"Look here!" he demanded. "I suppose you ain't the chap that pulled the cord?"—Truth-Seeker.

"My Sally's done well for 'erself Mrs. Higson," said Mrs. Earle proudly. "Her Bert's father was a banister of the law."

Mrs. Higson bridled and turned up her nose with scorn. "I don't know nothing about your banister," she retorted, "but my Gertie's Alfred has a brother that's a corridor in the Navy."

Live Stock in France.

Extracts from a recent report of special commissioners from the United States, sent to study agricultural conditions in France:

While there is no doubt that there is a shortage of horses as evidenced by the high prices for which animals suitable for work purposes are selling, and that a greater number could be used to good advantage, it is doubtful whether the shortage is great enough to interfere very materially with agricultural production. Cattle, both oxen and cows, are being used extensively for work purposes, especially in the central and south sections. Army horses and mules are being sold to civilians, and it is estimated that from 700,000 to 900,000 eventually will be returned from the various armies. The farm tractor also is being used to a greater extent than before the war.

The horses the writers have seen in France have been, as a rule, in good physical condition and have not shown any lack of feed. It may be stated that in general they are better in average condition than horses seen in England.

The writers attended a sale of British army horses and mules in Paris, on March 17th. The mules sold for \$125 to \$300 apiece, which was about 50 per cent. higher than mules of the same quality were selling in the United States at the time the writers left there. The horses sold for \$120 to \$500, which was about double what such horses would sell for in the United States.

Good horses of the draft type will sell at the present time for \$400 and up. Only those horses which are unfit for work are sold for meat.

While there is a shortage of horses in France at present, it is not likely that any very large number will be imported from other countries in the immediate future. Shipping space for live stock is difficult to obtain, and is needed for other purposes, and no doubt other means of supplying farm power will be utilized as much as possible.

Cattle—The decrease from December, 1913 to December, 1914, was 2,119,467 head, or 14 1/2 per cent. The decrease from December, 1914 to June, 1917, was 224,939 head, or 1 1/4 per cent. The increase from June, 1917, to June, 1918, was 871,652 head, or 7 per cent. If we assume that there has been a corresponding increase since June, 1918, up to June, 1919, the total cattle population on the latter date should be about 14,247,000 head, or within 540,000 of the number in December, 1913.

This increase in the number of young animals was evidenced by the large numbers the writers have seen on the many farms they visited in various parts of France. One of the most striking features of the cattle situation has been the large number of yearling and two-year-old heifers seen on both the farms of the large land owners and the farms of the peasant farmers. These heifers are for the most part well grown, of good size and in good condition. In fact, almost all the cattle were in good flesh, having come through the winter in good physical condition. The few exceptions occurred where there was a shortage of hay.

There appears to be an abundance of pasture in all the parts of France visited by the writers, which comprise about one-fourth of the departments. The pastures also appear to be in good condition. In many sections the farmers stated that there is a larger percentage of grass land than before the war, on account of shortage of labor necessary to care for cultivated crops. This should insure plenty of grass for the summer and fall and plenty of hay for next winter. Grain is not fed so extensively to cattle in France as in the United States, and consequently does not play such an important part in the production of cattle and dairy products.

The French Government has arranged to import a large number of cattle from the United States. All kinds of live stock are needed greatly in the devastated area. The greatest need, however, seems to be for milk cows, and the French Government desires, at the present time, to obtain dairy cattle for this area. The Government, in giving assistance in this area, is planning to import several thousand head from other countries. The plans include the purchase of some cattle in Canada, and it is reported that about 25,000 breeding cattle will be



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Style No.	Price Per Rod	Description	Spacing of Horizontals in Inches
4330	30c.	4 Bar 33 In. 9 Stays	11-11-11
5400	37½c.	5 " 40 " 9 "	10-10-10-10
6300	42c.	6 " 30 " 9 "	4-5-6-7-8
6400	43c.	6 " 40 " 9 "	7-7-8-9-9
7400	49c.	7 " 40 " 9 "	5-6-6-7-7½-8½
7480	51c.	7 " 48 " 9 "	5-6½-7½-9-10-10
831	60c.	8 " 31 " 12 "	3-3-3-4-5-6-7
8420	56c.	8 " 42 " 9 "	6-6-6-6-6-6-6
842	61c.	8 " 42 " 12 "	6-6-6-6-6-6-6
8470	58c.	8 " 47 " 9 "	4-5-6-7-8-8-9
847	63c.	8 " 47 " 12 "	4-5-6-7-8-8-9
935	70c.	9 " 35 " 12 "	3-3-3-4-5-5-6-6
948	69c.	9 " 48 " 12 "	6-6-6-6-6-6-6-6
9481	77c.	9 " 48 " 15 "	3-4-5-6-7-7-8-8
9500	63c.	9 " 50 " 9 "	4-4-5-6-7-8-8-8
950	69c.	9 " 50 " 12 "	4-4-5-6-7-8-8-8
1050	75c.	10 " 50 " 12 "	3-3-3½-4½-5½-6½-8-8-8

Medium Heavy "Ideal" Fence

Top and Bottom Wires No. 9, other Wires No. 12. Carried in Stock in 20, 30 and 40-Rod Rolls.

Style No.	Price	Description	Spacing of Horizontals in Inches
630	30c.	6 Bar 30 In. 12 Stays	4-5-6-7-8
641	31c.	6 " 41 " 12 "	7-7-8-9-10
6410	29c.	6 " 41 " 9 "	7-7-8-9-10
726	34c.	7 " 26 " 15 "	3-3½-4-4½-5-6
834	42c.	8 " 34 " 15 "	3-3½-4-4-5-6½-8
930	42c.	9 " 30 " 15 "	3-3-3-3-4-5-6
936	43c.	9 " 36 " 15 "	3-3½-4-4½-4½-5-5½
949	48c.	9 " 49 " 15 "	4-4-5-6-7-7-8-8
1150	54c.	11 " 50 " 15 "	3-3-3-4-4-5-6-7-7-8
1448	64c.	14 " 48 " 15 "	2½-2½-2½-2½-2½-3-3-3½-4-5-5½-6

"Ideal" Poultry Fence

Top and Bottom Wires No. 9, other Wires No. 13. Carried in Stock in 10 and 20-Rod Rolls only.

Style No.	Price	Description	Spacing of Horizontals in Inches
1848	80c.	18 Bar 48 In. 24 Stays	1½-1½-1½-1½-1½-1½-2½-2½-2½-2½-2½-2½-3-3-3-3-3½-3½-4
2060	88c.	20 " 60 " 24 "	4½-5-6-6

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3½ feet long, 36 inches high, each	3.30
3½ feet long, 42 inches high, each	3.40
3½ feet long, 48 inches high, each	3.75
4 feet long, 48 inches high, each	4.00
10 feet long, 36 inches high, each	6.75
10 feet long, 42 inches high, each	7.00
10 feet long, 48 inches high, each	7.25
12 feet long, 42 inches high, each	7.25
12 feet long, 48 inches high, each	7.75
13 feet long, 48 inches high, each	8.00
14 feet long, 48 inches high, each	8.25
16 feet long, 48 inches high, each	8.75

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Ideal Fence Stretcher, each	\$9.00
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bought from Switzerland. Some grazing cattle also may be imported. Whether or not any considerable number of breeding cattle will be imported by private individuals will depend largely on conditions which develop, especially after the signing of the peace treaty. It would seem that present prices would encourage importation.

Sheep—There has been a continued decrease in sheep. From December 31, 1913 to June 30, 1917, this decrease amounted to 5,544,796 head, or 35 per cent. of the total stock. The decrease from June, 1917 to June, 1918, was 1,090,279 head, or more than 10 per cent. The greatest decrease appears to have been in the number of ewes kept for breeding purposes. It should be remembered, when considering these figures, that the number of sheep in France was decreasing from year to year even before the war. The writers have not, however, been able to obtain any very satisfactory information as to the cause of this big decrease in the number of sheep. Monsieur Masse, in a report to the Minister of Agriculture, on October 17, 1918, gave the annual decrease in the number of sheep in pre-war times as 280,000 and attributed the greater rate of decrease during the war to the greater scarcity of shepherds, the necessity of farm women devoting themselves to hard farm labor, and the price paid by the Government for wool, the entire stock of which was requisitioned during the war period.

Swine—The estimates for the Ministry of Agriculture give the numbers of swine for the years 1913 to 1918, inclusive, showing a big decrease in the number of swine since 1913, but the decrease since 1916 has been comparatively small, and the number could be increased very quickly if conditions which would encourage an increase should develop. A continuation of the present high prices and a favorable season for the production of grain and potatoes no doubt would stimulate a greater production of swine.

There is no meat-packing industry in France such as has been developed in the United States. The writers have been informed that there are a few bacon and ham curing plants, but most of the cities and towns depend on the local abattoirs for their supply of fresh meats. The fresh meats also are handled to a large extent without refrigeration. The French people, thus, have not been accustomed to eating frozen or chilled meat, and for that reason there is a marked prejudice against imported meat. This prejudice may be illustrated by the prices asked for pork at Moulins on April 11th. Home-killed fresh pork was offered at one stall in the central market at 5 francs a livre (87½ cents a pound), while American dressed frozen pork loins and ribs, were being offered at another stall in the same market for 5 francs a kilo (44 cents a pound). This difference did not prevail with dry salt pork, as both local cured and American cured sides were being offered at 5 francs a livre.

The Government is trying to encourage the use of frozen meat in order to conserve French cattle and build up the herds of France as rapidly as possible. It was stated that many of the French soldiers had become accustomed to eating imported meat during the war, and that they probably would continue to use imported meat if it could be purchased to advantage. Various officials and others said that the demand for imported meat and meat products probably will continue for four or five years, or until the herds of France have been reestablished on a pre-war basis. It appears to the writers, however, that judging from the condition of the herds, the live-stock industry of France, under favorable conditions may reach the pre-war basis in a shorter time.

A rather choleric golfer went out to play for the second time on a certain course. Evidently his fame had preceded him, for at the drive-off he found an interested audience of local youngsters. "What's this?" demanded the choleric one, gazing at the assembly. "What do you want?" "Nothin'," was the non-committal rejoinder of the leader of the bunch. "Then clear off, every one of you!" exclaimed the player. "There isn't anything here for you to watch!" "We didn't come to watch," returned the youngsters, without attempting to move on. "We came to listen."

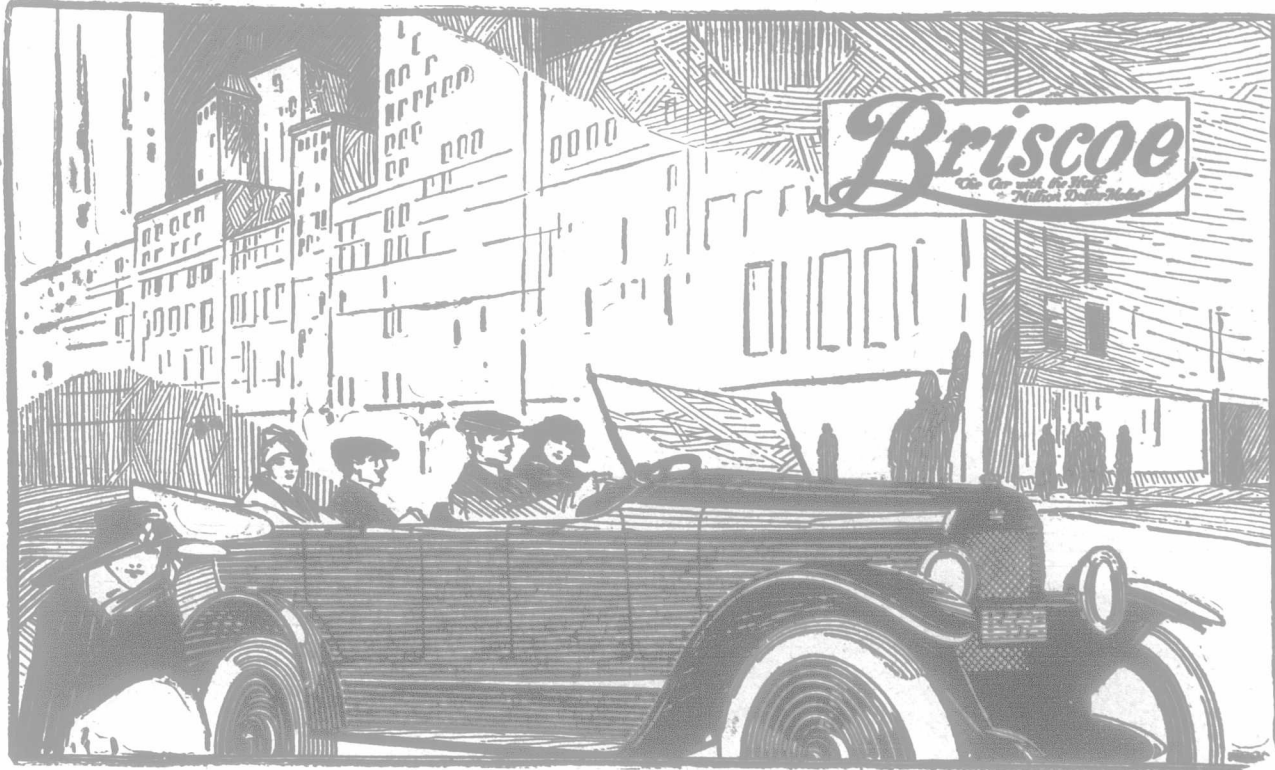
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been due to a number of ewes kept for
fleece. It should be re-
membered that in considering these figures,
the number of sheep in France was
a year to year even before
the war. The writers have not, however,
obtained any very satisfactory
information as to the cause of this
decrease in the number of sheep.
Monsieur de la Motte, Minister of Agri-
culture, in a report to the Minister of Agri-
culture, October 17, 1918, gave the
decrease in the number of sheep
as 280,000 and attributed the
decrease during the war to the
scarcity of shepherds, the
absence of farm women devoting
themselves to hard farm labor, and the
policy of the Government for wool,
of which was requisitioned
for the war.

Estimates for the Ministry
of Agriculture give the numbers of swine
in France from 1913 to 1918, inclusive,
as 1,000,000, but the decrease since
1913 is comparatively small, and
could be increased very
greatly under conditions which would
be favorable to the increase should develop.
A
decrease in the present high prices
of potatoes no doubt would
lead to a greater production of swine.
The meat-packing industry in
France has been developed in the
last few years. The writers have been
in several cities, but most of the cities
depend on the local abattoirs
for fresh meats. The
meats are handled to a large
extent by refrigeration.

People, thus, have not been
eating frozen or chilled
meat, and that reason there is a
preference against imported meat.
This may be illustrated by the
fact that at Moulins on
the 10th of October fresh pork was
sold at the central market
for 87½ cents a pound, while
a dressed frozen pork
was being offered at
the same market for 5
cents a pound. This
fact is not prevail with dry salt
cured and American
meats are being offered at 5

It is trying to encourage
the production of meat in order to
combat the shortage and build up the
supply as rapidly as possible.
That many of the French
are accustomed to eating
meat during the war, and that
they would continue to use im-
ported meat could be purchased to
satisfy officials and others
who demand for imported meat
is probably will continue
for years, or until the herds
have been re-established on a
basis that appears to the writers,
judging from the condition
of the live-stock industry
under favorable conditions
of a shorter war basis in a shorter



A MECHANICAL MARVEL

THE Briscoe owner is envied even by those who merely know the car by sight—its well-balanced body-lines give it an appearance finer than that of any other medium-priced car. But it is under its graceful stream-line "hood" that you find the real reason for the popularity of this sturdy, powerful car—the world-famous Briscoe Motor is the feature that makes every Briscoe owner proud of his car.

His pride is pardonable when he sees his car climb "on high" and with ease, the hills that bigger cars have to climb laboriously "on second." His pride is justified by the manner in which his car "handles" in city traffic and slips past other cars on the open highway.

But his greatest satisfaction is derived from the manner in which his Briscoe Motor squeezes the miles out of a gallon of gasoline.

Such a car is ideal for the average family—does all you would ask any car to do, and answers many a requirement for which a larger car would be inconvenient and unnecessarily expensive.

Snap, style, comfort, sturdiness—you'll find all this in the Briscoe—and you'll wonder, after you've driven the car, how the price is possible.

The prices of Briscoe cars, f.o.b. Brockville, with war tax extra, are as follows: Sedan, \$1,950; Special Touring, \$1,350; Standard Touring, \$1,225; Roadster, \$1,225.

THE CANADIAN BRISCOE MOTOR CO. LIMITED
Head Office: Toronto Factory: Brockville

Toronto Agents:
Bailey & Drummond Motor Co.
497 Yonge St.

Hamilton Agents:
Livingstone Brothers
97 King Street West

London Agents:
Binder & Morrison
174 Fullerton St.

Gossip.

Southview Shorthorn Sale.

Just two weeks ago on this date there appeared in the advertising columns of this paper an item that should have been of special interest to Shorthorn breeders who are at present looking forward to purchasing a few excellent breeding females this fall. We refer to the Southview dispersal which will be held at the farm one mile south of Tavistock on Wednesday, October 15. In all the Southview herd comprises 35 head, and the entire lot sells without reserve. As seen recently by a representative of this paper, the herd is made up of worthy representatives of the breed, and, speaking of the breeding females, splendid milking qualities is much in evidence

throughout. Each of these have one or two and, in some cases, three heifers also listed, which is in itself a pretty good sign that the cattle make up a breeder's herd of high merit. With very few exceptions these females all trace to that good breeding imported old family of Beautys, and a further review of the pedigrees of the younger breeding females show that the best of sires only have been used in the herd. For instance, all the one and two-year heifers are sired by the royally-bred former herd sire Secret Champion 98015, a strong Secret-bred bull got by Nonpareil Courtier, the latter being one of the very noted sires of the Province. The heifers from this former herd sire are an exceptionally promising lot, and several of them are shown in a small illustration which appears in Mr.

Stock's advertisement elsewhere in this issue. These heifers are all bred and many are already well forward in calf to the service of the present herd sire Victor Bruce 114766. This is a two-year-old sire belonging to the Miss Syme tribe, and got by Victor, a Princess-bred bull by Royal Scott. He sells with the herd and is listed with four young sons as well as a half dozen or more daughters, all of which are choice and just the sort to be appreciated by all on sale day. Everything will be found in the best of field condition, or in just the right fit to not only make excellent buying but also to go right on and do well for the breeder who buys them. Tavistock is on the Port Dover and Owen Sound branch of the Grand Trunk Railway, a few miles south of Stratford,

and the Buffalo and Goderich line also, only one and a half miles from the farm; C. P. R. connections for this line can be made at Drumbo. For catalogues address C. J. Stock, R. R. No. 6, Woodstock, and mention this paper. The sale begins at 1.30 p.m., standard time.

After two months at camp Private Nelson got his leave at last, and made what he conceived to be the best use of his holiday by getting married.

On the journey back, at the station he gave the gateman his marriage certificate in mistake for his return railway ticket. The official studied it carefully, and then said:

"Yes, my boy, you've got a certificate for a long, wearisome journey, but not on this road."

A cosy home—healthful moisture— no gas or dust

Hecla heating is warm air heating at its best.

For, it sends to every room a steady flow of warm, moist, healthful air, free from the slightest trace of dust or coal gas.

Special Hecla features insure this.

You will see them when you examine the furnace. The large Hecla water pan is circular. It holds a big supply of water. It sends equal moisture to every warm air flue. Thus every room gets its share of healthful mellow air.

And there is no taint of gas. No dust annoyance. The air from the registers is pure—and "clean."

For there is no possibility of a leak between the fire chamber and the warm air flues. Hecla Fused Joints make practically a one-piece weld of the passages for gas and dust. No mat-

ter how old the furnace, these joints cannot separate and leak.

This, we guarantee for the life of the furnace.

Anyone may get at the facts about the Hecla. Thousands of Heclas are making homes cosy in Canada. Inquire among your friends. Ask about Hecla heating capacity. Ask whether it is a "clean" furnace or not. Ask about its fuel economy. You will learn among other things that it has a wonderful firepot (steel-ribbed) that saves one ton of coal in seven.

Or write to us and let us lay the facts before you. Let us tell you everything about the Hecla—things you should know before you invest in any furnace. Ask our advice about a heating system for your own home—we will guarantee to work properly and make your home cosy. This expert assistance and advice will be given without charge. Write, sending a rough floor plan of your house.

Clare Bros. & Co., Limited
Preston, Ont.

HECLA MELLOW AIR FURNACE



FOR COAL OR WOOD

FEEDS

Linseed Oil Cake Meal, Gluten Feed 23%, Shorts, Bran, Feeding Corn Meal, Cane Molasses (in bbls.) Dairy Feeds, Hog Feeds, etc., in car lots or less.

WE BUY—Hay, Straw, Oats, Wheat, Buckwheat, Mixed Grains, Alsike, Red Clover, Alfalfa, Sweet Clover, etc.

CRAMPSEY & KELLEY.
Dovercourt Road, Toronto.

HEAVES CURED

Capital Heaves Remedy is the real cure proved by 24 years of success under money back guarantee. Will send a full week's treatment free on receipt of 5c. to cover mailing. 6
Veterinary Supply House
759 Cooper Street Ottawa, Ont.

Gossip.

Attention is drawn to the advertisement of R. Mitchell's Shorthorn sale, which appears elsewhere in these columns. The herd is made up of richly-bred Scotch Shorthorns, and on October 22 will be disposed of by Mr. Mitchell at his farm. Making mention of a few of the animals will indicate the breeding. Scottish Rose 6th, a beautiful dark red four-year-old, is by Scottish Baron 5th, and Carmine 2nd, is a three-year-old Blarney Stone. Among the sires used were Strathallan Chief and Roan Blarney. The latter bull was high-priced bull in one of the London sales. The foundation stock for the herd was secured from noted breeders as Watt, of Salem; Smith, of Hay; and Gibson, of Denfield. Nearly all the cows and heifers that are of breeding age are in calf. As there are six young bulls from three to nineteen months of age, there is an opportunity of securing herd header material. Look up the advertisement in this issue and write R. Mitchell, R. 2 Iderton, for fuller particulars regarding the sale.

Ontario Farm Properties Wanted

Parties having farms for sale may send particulars of same to the Provincial Bureau of Colonization for the information of prospective buyers from Great Britain and elsewhere. The Bureau will not act as broker for the sale of properties, but will direct buyers to the owner or agent of the property. Write:

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

When writing please mention Advocate.

A Flax Seed Inspection Service.

The Seed Branch, Ottawa, has made the following announcement to flax seed producers:

In order to safeguard your export trade in Ireland through the maintenance of uniform standard of high quality seed, the Federal Department of Agriculture has made provision for an inspection and grading service for the flax seed crop of 1919. It may be expected that for years to come Ontario seeds will come into keen competition with Japanese, Dutch and Russian seeds and, unless Ontario can insure the Irish trade with a quality of seed that will compare at least favorably with that from the other countries mentioned, you will be much handicapped in maintaining your market. You are offered the following service:

Any flax seed producer in the Province of Ontario upon application to the office of the Seed Branch, 28 Front St. East, Toronto, may procure inspection for his seeds, subject to provisions, to wit:

1. Producer must have at least a carload of 400 bags ready cleaned for inspection (see standards herein described).
2. The seed must be properly bagged in sacks of standard and uniform quality, net weight 189 lbs. and each sack must be securely sewed and sealed.
3. Each sack must be branded in red letters, (a) Ontario fibre flax seed growth of 1919, Grade No. Inspected by Department of Agriculture, Canada, (b) On the other side must be branded the shipper's name and address and the words "Certificate Number" followed by a space in which the number may be branded when known.
4. The grower must submit a representative sample of his seed for germination test to the Seed Branch, Ottawa, at least one week before the date of shipment to tide water.

After compliance with the foregoing, the Inspector shall be authorized to issue a certificate to accompany the bill of lading to Ireland. The number of the certificate shall correspond with the number on the sacks of the shipment and the Department of Agriculture in Ireland shall be so notified.

For producers who have not applications for cleaning the seed to standard, provision has been made whereby they may have their seed cleaned at any of the following points: Canada Flax Mills, Seaforth, Ont.; H. Fraleigh, Forest, Ont.; A. L. McCredie, St. Mary's, Ont.; Canada Flax and Seed Co., Oshawa, Ont.; whereat inspection services may be procured and the seed cleaned to standard at not more than 11c. per bushel, including the following charges; unloading, elevating, cleaning, rebagging, sewing, sealing, reloading, five days storage and insurance. Those who ship to these points will be required to remove chaff, etc., with a fanning mill before shipping for cleaning. Owner of seed shall pay for his own bags. All screenings shall be returned to him unless other instructions are given.

Grade Standards.—No. 1 flax seed for seeding purposes shall be mature, sound, dry and sweet; shall be practically free from seeds of other cultivated plants; shall be free from noxious weed seeds within the meaning of the Seed Control Act (1 noxious weed seed per oz.) shall be well cleaned and graded to remove light and damaged kernels, common weed seeds and other foreign matter and shall be capable of germinating at least 90 per cent. Certificates of this grade may be issued for Ontario fibre flax seed providing that the seed is accompanied by a affidavit of pedigree or certificate of registration satisfactory to the Chief Seed Inspector.

No. 2, flax seed shall be the same as No. 1 in all respects except that it may contain 5 noxious weed seeds to the ounce. Standard sacks may be procured, properly branded, upon application to the Department of Agriculture, Ottawa. Producers shall seal sacks that have been inspected and have come up to the required standards with seals supplied by the Seed Branch (Toronto office). Presses will be lent for this purpose.

A Grand Plan.—"What's the idea of sitting in the barn here all by yourself?" "Well," answered Farmer Cornsossel, "if the summer boarders aren't playin' jazz on the phonograph they're quarrellin' over the League of Nations, so I'm lingerin' out here with the cattle and restin' my mind."—Washington Star.

Seed Inspection Service.

...anch, Ottawa, has made announcement to flax seed ... safeguard your export through the maintenance of high quality seed, Department of Agriculture Division for an inspection service for the flax seed crop ... be expected that for Ontario seeds will come into ... with Japanese, Dutch ... and, unless Ontario ... trade with a quality ... compare at least favorably from the other countries ... will be much handicapped ... your market. You are ... service: ... producer in the Province ... application to the office ... 28 Front St. East, ... procure inspection for ... to provisions, to wit: ... must have at least a ... bags ready cleaned for ... (standards herein described) ... must be properly bagged ... and uniform quality ... lbs. and each sack must ... and sealed. ... must be branded in red ... fibre flax seed growth ... Inspected ... Department of Agri- ... (b) On the other ... the shipper's name ... the words "Certificate ... by a space in which the ... branded when known. ... must submit a repre- ... of his seed for germina- ... Seed Branch, Ottawa, at ... before the date of ship- ... er. ... with the foregoing, ... ll be authorized to issue ... company the bill of lad- ... The number of the certi- ... correspond with the number ... the shipment and the De- ... culture in Ireland shall ... who have not applicanc- ... seed to standard, pro- ... made whereby they may ... cleaned at any of the ... Canada Flax Mills, ... Fraleigh, Forest, Ont.; ... e, St. Mary's, Ont.; ... Seed Co., Oshawa, Ont.; ... on services may be ... seed cleaned to standard ... 11c. per bushel, includ- ... g charges; unloading, ... g, rebagging, sewing ... five days storage and ... who ship to these ... quired to remove chaff, ... ng mill before shipping ... er of seed shall pay for ... All screenings shall be ... less other instructions ... s.—No. 1 flax seed for ... shall be mature, sound, ... shall be practically free ... her cultivated plants; ... m noxious weed seeds ... ng of the Seed Control ... ed seed per oz.) shall ... d graded to remove light ... ernels, common weed ... reign matter and shall ... rminating at least 90 ... ates of this grade may ... ario fibre flax seed pro- ... ee is accompanied by ... ee or certificate of ... factory to the Chief ... shall be the same as No. ... except that it may con- ... ed seeds to the ounce. ... s may be procured, ... upon application to ... of Agriculture, Ottawa. ... seal sacks that have ... nd have come up to ... ards with seals supplied ... anch (Toronto office). ... t for this purpose. ... "What's the idea of ... here all by yourself?" ... ed Farmer Cortossel, ... boarders aren't playin' ... graph they're quarrelin' ... Nations, so I'm lingerin' ... cattle and restin' my ... ton Star.

Gossip.

Montgomery-Kay Sale at Ormstown.

There are many Ayrshire breeders in Canada to-day, those especially who held the interests of the breed at heart, who viewed the Montgomery-Kay sale announcement with deep regret when it first appeared in these columns, three weeks ago. Both Mr. Montgomery and Mr. Kay have been, in the past decade, of great strength to the breed in developing animals that held prominent positions, not only in the show-rings of the larger exhibitions but also in the Record of Performance tests that have, in the past few years, played such an important role in showing the sterling worth of the Ayrshire cow towards economical production. Labor conditions on both farms, however, have forced the sale, and the 32 head catalogued by Mr. Montgomery comprise his entire herd with the exception of last season's heifers, which he is reserving to form the nucleus of a new herd, Mr. Kay is selling the surplus of ten years' breeding at Ravensdale. Referring to the offerings separately, the catalogue begins with Mr. Montgomery's great herd sire Auchinbay Sir Andrew (imp.), which is probably the most noted three-year-old Ayrshire sire in Canada to-day. Individually he is hard to fault, and, coming out as a yearling, he won grand champion honors over all ages at Ormstown Spring Show in 1917, when only two weeks out of quarantine, and again captured the same honors at Sherbrooke the following September. In breeding he is a son of Netherton Viceroy, and he again is a son of the great Brae Rising Star. On the dam's side "Sir Andrew" is from a daughter of Holehouse Jean 6th, and Holehouse White Zomo, the latter being of the great bull Monkland Zomo-Sal. He probably combines more of the blood of Scotland's most famous present-day families than any other sire in Canada to-day, and while his 1918 daughters will be retained to form the nucleus of a new herd; all the cows are well forward in calf to him, and the several bull calves listed are all got by him. He himself should also prove the greatest drawing card in the sale. In reviewing the breeding females it might be well to go back to a few of the previous sires that have been used in the herd, and here let it be known that without exception each sire used has been imported. First came Barcheski Cheerful Boy (imp.) by Howie's Conductor and from Howie's Sprightly Jess. Howie's Conductor was by Spicy Robin, which was a full brother to Spicy Sam, champion bull of Scotland for three years. He again was by Not Likely, a bull that was never beaten in the show-ring, and whose dam, Howie's Brookie, was a 10,000-lb. cow three years in succession. Next came Hobsland Bonnie Boy (imp.), a brother to the noted champion Maple Leaf Jean; and then, Morton Mains Planet (imp.), the outstanding champion show bull of Western Canada for the past five years; fourth in service was Auchenbrain Sea Foam (imp.) by Netheral Good Gift, and also a noted championship winner, showing always in strong company. The fifth and former sire in service was Fairfield Main's Triumph (imp.), a son of the great "Perfect Peace." Thus it will be seen that each sire used since the herd was founded in 1903 has not only been imported but of the best breeding obtainable in Scotland, and in nearly every instance a champion show bull as well. Among the breeding females will be found daughters of each of these bulls and, true to their breeding, they have also been prominent winners at Ottawa and Quebec's leading exhibitions. Then again there has been always several imported matrons in the herd, all of which have been mated to the good herd sires, and these as well as their get are dotted throughout the catalogue and should further increase the interest of breeders who desire to make their selections from the best. Mr. Kay's offering begins with lot No. 40 in the catalogue—a choice, large, well-bred cow, and she, like several others in the herd, is also bred to Mr. Montgomery's herd sire Auchinbay Sir Andrew. In fact, not only does this sire figure prominently in many of Mr. Kay's pedigrees, but in several cases each of the other sires mentioned above have been used more or less in this herd in the past. A perusal of the catalogue



Where the Titan Comes in

IT PAYS to do farm work at the right time. There are only a few days when plowing, seeding, haymaking, harvesting, threshing and other essential jobs can be done to best advantage. To be able to take care of these operations at just the right time often means the difference between success and failure with a crop; between a big profit and, perhaps, no profit at all.

The uncertain factor in most cases is the amount and kind of power the farmer has at his disposal. That is where the Titan kerosene tractor comes in. You can depend upon it to furnish ten horsepower of drawbar power, or twenty of belt power, any time you need it. Many a farmer has told us that even if his Titan cost him twice as much as horses he would use the tractor by preference because of this one advantage of being able to get his work done at the right time.

Instead of costing twice as much as horses, the Titan operates at considerably lower cost than horses or any other kind of farm power. Besides being more dependable and more generally useful for field and belt work, it is also cheaper.

After harvest most of your power needs will be for belt work. The Titan makes it easy. It has a large pulley, high enough to keep belts from dragging, giving the proper belt speed, easy to line up, to start and to stop.

The Titan is our 10-20-H. P. tractor. There are two other sizes of International tractors, 8-16 and 15-30-H. P., all operating on kerosene and other cheap fuels. Write us for catalogues and full information.

INTERNATIONAL HARVESTER COMPANY OF CANADA LTD.

WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA. ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK. EASTERN BRANCHES — HAMILTON, LONDON, OTTAWA, ONT., MONTREAL, QUEBEC, QUE. ST. JOHN, N. B.

"Galt" Galvanized Steel Shingles



The "GALT" Shingle locks together in such a way that there is no weak point in its entire construction, and it is ornamental as well. It is, therefore, the Ideal Shingle for dwellings, Churches, Schools, Public Buildings, Barns, etc.

We also manufacture

**Corrugated Sheets Barn Ventilators
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THE GALT ART METAL COMPANY, LIMITED

Galt, Ontario

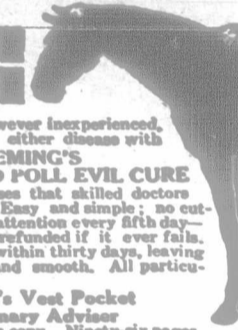
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A Safe, Speedy and Positive Cure for
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Strained Tendons, Founder, Wind,
Puff, and all lameness from Spavin,
Ringsbone and other bony tumors.
Cures all skin diseases or Parasites,
Thrush, Diphtheria. Removes all
Bunches from Horses or Cattle.


As a Human Remedy for Rheumatism,
Sciatica, Sore Throat, etc., it is invaluable.
Every bottle of Gaustic Balsam sold is
warranted to give satisfaction. Price \$1.75
per bottle. Sold by druggists, or sent by ex-
press, charges paid, with full directions for
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Any person, however inexperienced,
 can readily cure either disease with
FLEMING'S
FISTULA AND POLL EVIL CURE
 —even bad old cases that skilled doctors
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 ting; just a little attention every fifth day—
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 Cures most cases within thirty days, leaving
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 TRADE MARK REG. U.S. PAT. OFF.



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ABSORBINE, JR., for mankind—an
antiseptic liniment for bruises, cuts, wounds,
strains, painful, swollen veins or glands. It
heals and soothes. \$1.25 a bottle at drug-
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W. F. YOUNG, I.N.C., 258 Lyman's Bldg., Montreal.

Aberdeen-Angus
Meadowdale Farm
Forest Ontario.
Alonzo Matthews **H. Fraleigh**
Manager **Proprietor**

SUNNY ACRES
ABERDEEN-ANGUS
 The present string of young bulls for sale includes
 some classy herd bull prospects, winners themselves
 and sired by champions. If interested in Angus,
 write your wants. Visitors welcome.
G. C. CHANNON - Oakwood, Ontario
 P.O. and 'phone
 Railway connections: Lindsay, C.P.R. and G.T.R.

Alloway Lodge Stock Farm
ANGUS, SOUTH DOWNS,
COLLIES
 A choice lot of Angus cows in calf to Queen's
 Edward. Collie puppies—A litter now ready.
ROBT. McEWEN, R. 4, London, Ont.

Balmedie Aberdeen-Angus
 Nine extra good young bulls for sale. Also females
 all ages. Show-ring quality.
THOS. B. BROADFOOT - FERGUS, ONT.

shows three sons of Auchinbay Sir Andrew, one daughter of Fairfield Main's Triumph, a half dozen good breeding daughters of Auchinbrain Sea Foam, and then comes a strong contingent of young breeding females all sired by Ravensdale Peter Pan, which was one of the best breeding sons of Auchinbrain Sea Foam. These are females that carry a combination of individuality and breeding seldom equaled in a sale-ring in any country, and to strengthen the offering further the young bulls listed may be said to be the most important lot of youngsters ever catalogued for a Canadian auction. Speaking again of the opportunities offered by both herds, it is just possible that so important a lot of Record of Performance show cattle were never before catalogued for a public sale-ring in Canada. The sale will be held in the auditorium at the exhibition grounds, Ormstown, Quebec, on Thursday, October 16, and there will be positively no reserve. For catalogues write or wire Geo. H. Montgomery, K.C., Dominion Express Bldg., Montreal.

Patience Wins in Training a Dog.

EDITOR "THE FARMER'S ADVOCATE":
 A good farm dog is a valuable asset to any farmer, but a poor one is worse than nothing. To train a dog correctly is no easy task. In some respects it is about as big a job as training a child, and some people do it with as much care.

The first things in training a dog is to make friends with him. No one can train a pup successfully who hates dogs, unless he can properly conceal his feelings. One who likes and understands them can teach dogs and make them do things that the uninitiated can never understand. When there is a real bond between the owner and the dog, the dog will soon learn what his master likes and doesn't like, and will do his best to please him.

Dogs should be treated with real kindness. A man who kicks a dog whenever he happens to be in reach will never have a dog good for much except snapping at people at every opportunity, and he will keep out of their reach whenever anything useful is to be done.

A person's various moods should not be visited on the house dog. If we feel good we use him well, and if we are out of sorts we are cross and kick him around, etc. It is not a wise plan. Uniformity in training is desirable.

Judicious praise will help train a dog greatly. A dog loves flattery. If you praise him when he does something well, and pat him on the head, he soon learns to act wisely all the time.

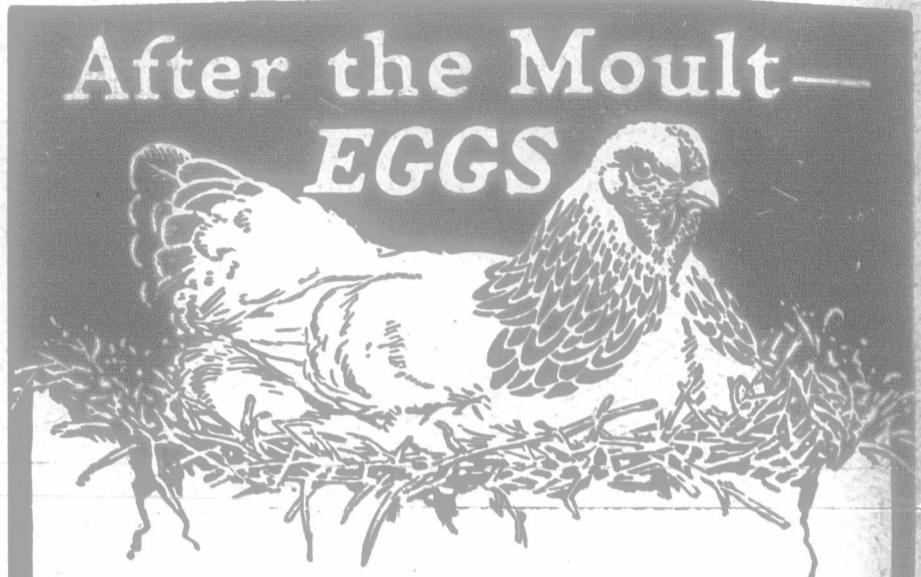
If a pup has a well trained mother to go along with he will learn how to drive and round up cattle and sheep, when to bark at dogs and people in the easiest and best way. But he should not be trained so much in this way that like a spoiled child he tries to overdo it. When he has learned to heel the cattle a little and to bark at the sheep and hogs, he can go out alone with the owner sometimes and practice it through praise, kindness, etc. He will soon respond to his master's wish but it takes several months and sometimes years to get a dog trained just as you want him.

If he has to go out alone in the beginning it may be wise to tie him with a string and teach him to run after and heel cattle and pigs. He should learn to accompany his owner well. Then he should be tied up for awhile and then taught to follow or stay behind, as his master wishes.

A dog will soon learn to bark and to be kind or cross to strangers by his master's attitude with him the first few times a stranger comes around. The dog will generally bark and sometimes jump or bite at the stranger, but if restrained and quieted as soon as the stranger comes in, he will soon learn to behave just right.

The pup should not be allowed to run around with other dogs, but to either go with his master or stay around the home. If he begins running around he soon learns bad habits. When a dog is caught in habits which are wrong it is a foolish plan to whip him after it is over. If he can be punished in the act it is good and wise, but if afterwards he thinks it is for coming to you, or he knows not what he is being punished for. Remember, dogs cannot reason and as many dogs are spoiled this way as in any other.

W. B. J.



After the Moul—
EGGS

REMEMBER, going through the moult is like going through a long spell of sickness. To force out the old quills and grow new feathers saps a hen's vitality.

If you expect your hens to be fall producers and winter layers, then feed them Poultry Pan-a-ce-a during and after the moult.

Dr. Hess Poultry Pan-a-ce-a

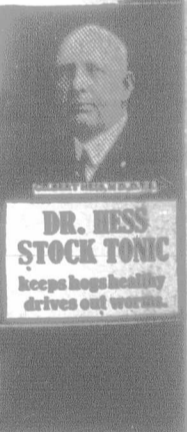
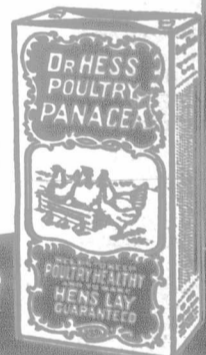
will start your pullets and moulted hens to laying

It contains Tonics that put your moulted hens in fine condition—Tonics that tone up the dormant egg organs—Iron that gives a moulted, run-down hen rich, red blood and a red comb. It contains internal antiseptics that destroy disease germs that may be lurking in the system. No disease where Pan-a-ce-a is fed. It pays to feed Pan-a-ce-a regularly.

It brings back the singing—it brings back the scratching—it brings back the cackle. That's when you get eggs; and it's eggs you want—fall eggs, winter eggs—when eggs are eggs.

Feed Pan-a-ce-a to all your poultry to make and keep them healthy. The dealer refunds your money if it does not do as claimed. Tell the dealer how many fowls you have and he will tell you what sized package to buy. Always buy Pan-a-ce-a according to the size of your flock. 35c, 85c, and \$1.75 packages. 25-lb. pail, \$3.50; 100-lb. drum, \$14.00.

DR. HESS & CLARK
 Ashland, Ohio



Dr. Hess Instant Louse
Killer Kills Lice

22 HIGH-CLASS **22**
Scotch Shorthorns
AT AUCTION
 16 Females. 6 Young Bulls.
 At Karama Dell Farm, Lot 11, Con. 10, Lobo Tp.
Wednesday, October, 22nd, 1919
 The Property of **ROBT. MITCHELL, R.R. No. 2, Ilderton, Ontario**
 The foundation stock of this herd is from the noted herds of Messrs. Watt, Harry Smith and J. T. Gibson. Only first-class sires have been used, such as Blarney Stone, Strathallan Chief, and Roan Blarney, etc. The majority of the cows are in calf. A few of the choice offerings in this sale are Scottish Rose 6th =121051=, by Scottish Baron, Imp.; Flora Queen =101834=; Carmine 2nd; Dan. Carmine =114664=, a beautiful 3-year-old by Blarney Stone; also a 2-year-old heifer by a son of Blarney Stone (Roan Blarney) the highest price bull at London Sale, 1915. The bulls in this sale range in age from 3 months to 19 months, and are a grand lot. There will be included in the sale two Clydesdale fillies (imported), eligible for registration; one grand, registered Clydesdale brood mare, 7 years old, a good breeder.
 As the farm is for sale, there will be no reserve, and all the other farm stock, together with implements, etc., will be sold also. Any person desiring to purchase this farm will do well to correspond with the undersigned. Sale commences 1 o'clock. Trains will be met at Komoka and Ilderton stations on morning of sale.
 TERMS.—8 months' credit on approved paper; 6% per annum off for cash.
 Auctioneers: Capt. T. E. Robson, London, Ont. H. Stanley, Lucan, Ont.
Robt. Mitchell, R.R. No. 2, Ilderton, Ont., Prop.

Kennelworth Farm Angus Bulls—The ever had, all are sired by Victor of Glencairn and a number are ready for service. Prices reasonable.
PETER A. THOMPSON, Hillsberg, Ontario.

Beaver Hill Aberdeen-Angus and Oxford Sheep—Bulls from 8 months to 20 months. Females all ages. Shearling rams and ram lambs. Priced for sale.
ALEX. MCKINNEY, R. R. No. 1, Erin, Ont.

Questions and Answers.
Veterinary.

Flat, Brittle Feet.

Seven-year-old mare has flat, brittle feet with very thin walls. The walls are always brittle even in damp weather. Is there any method of feeding or dosing that will remedy the fault? G. V. B.

Ans.—Feeding or dosing has no effect, and even local treatment is not satisfactory in animals with congenitally weak and brittle feet. See that the feet are supplied with sufficient moisture. Probably the best plan for this purpose is to pack the feet every night with a foot packing generally spoken of as "White Rock" which can be purchased from high-class harnessmakers or dealers. Also rub the coronets well once every ten days or two weeks with an irritant made of 2 drams cantharides mixed with 2 oz. vaseline. Have her shoes removed and re-set every 3 weeks. V.

Swollen Fetlock.

Race horse has a swelling at the fetlock. It is very feverish. I have been told it is broken down tendons. He is not lame, but walks on his toe when starting. E. C. McK.

Ans.—It is not "broken down" as if it were he would be lame. The swelling is due to severe exercise and probably to a sprain. Give him rest. Bathe the joint frequently with hot water and between bathings keep bandaged with a bandage saturated with a lotion made of 3 oz. tincture of opium, 4 drams acetate of lead and water to make a pint. As soon as heat and tenderness have ceased, rub a little of a liniment made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine, well in once daily. It will be well to not give him any severe exercise until next spring. V.

Rheumatism.

During the winter our cows are fed silage, straw, ground oats and barley mixed, twice daily, hay at noon. They have water in front of them all the time. In summer they are pastured on land that has been seeded 3 years or more and are given ground barley and oats twice daily. For a long time the milking cows have been troubled with rheumatism. It appears as a stiffness in fore legs and shoulders. Cows that calve in April or May are troubled more than those that calve at other times. They nearly all take the trouble in June. We never had any such trouble until we commenced to feed silage. T. R. J.

Ans.—The treatment you mention should not cause rheumatism. We have never known or heard of the trouble being caused by silage. If the sleeping quarters are cold or damp it would explain matters. Rheumatism in cattle is not common, and is very hard to treat. Treatment consists in keeping comfortable in perfectly dry, well-ventilated quarters. Keeping the bowels in a laxative condition by laxative feed, and, when necessary the administration of 1 to 2 pints raw linseed oil. Bathe the muscles and joints of the affected limbs well 3 or 4 times daily with hot water and after bathing rub well with hot camphorated oil. Give each 2 drams of salicylic acid 3 times daily. V.

"Remember, constable," said the portly Mayor to the policeman who stood on duty at the Town Hall on the night of the children's fancy dress ball, "no adults can be admitted."

"Right yer Mayorship," said Dooly as he set about regulating the crowd.

Everything was in full swing when Dooly felt himself clutched by an excited looking woman. "My little girl is in there," she said, pointing to the ballroom, "and she's forgotten part of her costume."

"Can't help it, ma'am. No adults is to go in."

"Nonsense," cried the woman. "My little girl has gone as a butterfly, and has forgotten her wings. I want to put them on her."

Dooly winked his forehead and tried to think if any of the official regulations prescribed for a case like that.

"Orders is orders, ma'am" he said at last. "Ye'll have to let your little girl go as a caterpillar."

INVINCIBLE
FORMERLY CALLED
MONARCH



"INVINCIBLE" Rubber Boots and Shoes are built of tough, tire-tread stock and by auto tire methods.

Like auto tires they are cured by the high-Pressure Cure Process. A combination that makes the toughest, strongest and longest wearing boot that your money can buy. "Invincible" Rubber Boots and Shoes will outwear any other make, bar none.

If you are hard on footgear ask your local dealer for "Invincibles" and save money.

The Miner Rubber Co., LIMITED.



TOP-NOTCH SHORTHORNS

FOR SALE—Sixteen yearling heifers, imported in dam, and four heifer cows and four bulls. See these before buying elsewhere. MARKHAM, ONTARIO
GEO. ISAAC

Spring Valley Shorthorns

—Herd headed by Sea Gem Pride =96365=. Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and few females. Write for particulars. Telephone and telegraph by Ayr. KYLE BROS., R. 1, Drumbo, Ont.

SHORTHORNS, CLYDES

Have a few choice bull calves left. See these before buying elsewhere. Also six Clyde Mares and fillies rising on to 6 years of age. Each by imported sire and dam. WM. D. DYER, R. No. 3 Oshawa. 2 1/2 miles from Brooklin, C.T.R., 4 miles from Brooklin, C.N.R., or Myrtle, C.P.R.

SHORTHORNS

SHROPSHIRE

COTSWOLDS

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

Pure Scotch and Scotch-Topped Shorthorns

—We have several choice young bulls of the best of breeding and ready for service. Two are by Rapheal (imp.), one by Right Sort (imp.), one by Sittyton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices right. R. M. MITCHELL R. R. NO. 1, Freeman, Ontario

GRAND VIEW FARM SHORTHORNS

Herd headed by Lord Rosewood =121676= and by Proud Lancer (Imp.). Have a few choice bull calves and heifers left, sired by Escanna Favorites, a son of the famous Right Sort (Imp.). W. G. GERRIE C.P.R. Station on farm. Bell Phone. BELLWOOD, ONTARIO

Newcastle Herd of Shorthorns

and Tamworths for Sale—5 choice bull calves, 5 to 6 months old, several heifer calves, all sired by Primrose Duke 107542, a choice lot of Tamworths of both sex and various ages; young sow or two bred to farrow in Sept. or Oct., all from noted prize winners. Long-distance Phone. A. A. COLWILL, R.R. No. 2, Newcastle, Ont.

English Dairy Shorthorns

Would it not be good practice to introduce new blood and increase flow of milk in your herd? We have for sale the right kind of young bulls to do this—the offspring of highly-bred, imported English animals. We have also for sale young stock of that excellent breed of pigs, English Large Blacks.

LYNNORE STOCK FARM
F. W. COCKSHUTT, Brantford

DUAL-PURPOSE

Shorthorns

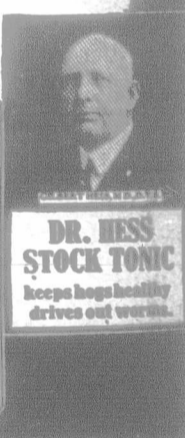
Present offering 6 young bulls, Red & Roans, also a number of females. They have size quality and breeding from good milking dams. Prices Moderate. Satisfaction guaranteed. Chas. Graham, Port Perry, Ont.

Mardella Dual-purpose Shorthorns

8 choice young bulls; 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs. butter-fat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or phone. THOMAS GRAHAM, Port Perry, R.R. 3, Ont

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going through old quills and
winter layers, after the moult.
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22 HEAD
Bulls.
Lobo Tp.
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Ilderton, Ontario
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ed for sale
, R. R. No. 1, Erin, Ont.



DR. HESS STOCK TONIC
keeps hogs healthy
drives out worms.



Make a Double Saving on the Construction Cost of your new Home

BUILD FROM FREE PLANS

Save \$75.00 to \$150.00 architects' fees. Get complete Plans, Blue Prints, Detailed Drawings, Working Specifications and Bill of Material, absolutely free of charge—our Catalogue tells how.

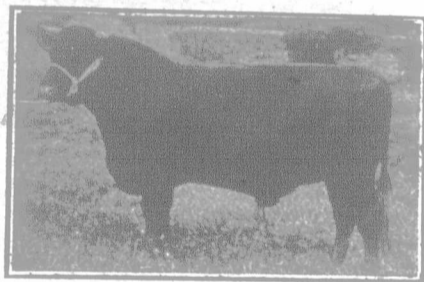
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THE HALLIBAY COMPANY LIMITED
FACTORY DISTRIBUTORS
HAMILTON CANADA



KELMSCOTT ACROBAT 4

Bred and Owned by R. W. Hobbs & Sons. Champion Milking Shorthorn Bull at the Royal Show Manchester, 1916.

The Kelmescott Herd of PEDIGREE MILKING Shorthorns, Flock of Oxford Down Sheep and Stud of Shire Horses

THE PROPERTY OF **Robert W. Hobbs & Sons**

Kelmescott, Lechlade, Gloucestershire, England

SHORTHORN CATTLE

One of the oldest and largest pedigree herds in existence. Milk, Flesh and Constitution studied. Daily milk records kept. Numerous prizes won for inspection, milking trials and in butter tests. The Gold Medal, Spencer and Shirley Challenge Cups were won at the London Dairy Show in 1914. The Fifty Guinea Challenge Cup for the best group of dairy Shorthorns at the Royal Show was won for the third successive year at the last exhibition at Manchester in 1916, also two firsts, one second and one third prize. All cows in milk and the stock bulls have passed the tuberculin test. Bulls and bull calves on sale at prices to suit all buyers.

OXFORD DOWN SHEEP

The flock was established in 1868 and consists of from 1,000 and 1,250 registered Oxfords. Numerous prizes for many years have been won at the principal Shows. At the last Royal Show first prize was taken for a single Ram Lamb and first prize for pen of Ram Lambs. Rams, Ram Lambs and Ewes always on sale.

R. W. Hobbs & Sons are breeders of high-class Shires. Sound active colts and fillies always on sale.

TELEGRAM HOBBS, LECHLADE
Inspection Cordially Invited

SHORTHORNS & TAMWORTHS

Young bulls fit for service, also heifers in calf to Isobels Prince 2nd. In Tamworth Stock, for Sale both sexes and all ages. Write or come to CHAS. CURRIE, Morriston, Ont.

Educational Conference in Winnipeg.

Education in Canada is placed under the control of the provinces. We have no commanding Education Association for Canada. Canada has a large number of enterprising, capable, enthusiastic teachers whose new ideas have little or no outlet. The result is, they evaporate, they go whistling down the wind, and do not get a chance to have themselves tried out. They should be mediated to the Canadian people so that public opinion can express itself with regard to them, and so that the good grain may be separated from the chaff. The fact that there was a forum for ideas would encourage teachers to formulate their ideas.

This is one of the objects of the Educational Conference which is to be held in Winnipeg this month, Oct. 20-22. The plan is to advocate the establishment of an unofficial bureau of the ablest experts that could be secured. The idea of the promoters of this project is that the bureau should be unofficial, without executive powers. It would simply guide and assist the educational thought of the country. The results of its labors would simply be available for the regularly constituted educational authorities. The result would be that provincial systems, instead of operating in more or less watertight compartments, would represent a friendly emulation in the best educational methods and ideals in the interests of the whole people.

Though this is the idea of the promoters of the Winnipeg Conference, the field will be open for the discussion of the merits of this proposition from the ground up. Any alternative proposition can be discussed freely. What is desired is an examination of the educational problem in the light of the nation's needs and our children's possibilities.

Why should Canada not have an agency for giving publicity in the Dominion to the best educational practice of the world?

The date—Oct. 20-22, with an extra day, Thursday, Oct. 23, for additional discussion of resolutions.

The place—The Convention Hall, Board of Trade Building, Winnipeg, Man. The conference is being called by a Convening Committee, composed of Winnipeg citizens, under the chairmanship of Sir James Aikins, Lieutenant-Governor of Manitoba.

The speakers—Twelve addresses are already assured; having been chosen from among the best known public men and women of Canada, the United States and England.

Discussion—Two speakers have been provided to open the discussion after each address.

The aim—The aim of the Conference:

(a) To direct public attention to the fundamental problems in our educational systems in Canada;

(b) To consider education in its relation to Canadian citizenship;

(c) To undertake the establishment of a permanent bureau to guide and assist the educational thought of the country. Representation is being asked from every organization and public body in Canada. If any organization is being overlooked, let us know. In addition, ample provision is being made for individuals who will attend the Conference in their own capacity.

Rates—The railways have given us a one and three-fifths rate for delegates to the Conference.

Expenses of delegates will be borne by the organizations they represent.

Information may be secured from the general secretary, 505 Electric Railway Chambers, Winnipeg.

Johnny paid his first visit to a farm the other day. All his life he had lived in the heart of a great city, and when he suddenly came in sight of a haystack he stopped and gazed earnestly at what appealed to him as a new brand of architecture.

"Say, Mr. Smith," he remarked to the farmer, pointing to the hay stack, "why don't they have doors and windows in it?"

"Doors and windows!" smiled the farmer. "That ain't a house, Johnny, that's hay."

"Don't try to josh me, Mr. Smith!" was the scornful rejoinder. "Don't you suppose I know that hay don't grow in lumps like that?"

LAST CALL

Southview Shorthorn Dispersal

Tavistock, Ont., Wednesday, October 15th

One mile south of town. Sale at 1.30 p.m., old time.

35 Head



31 Females

A group of heifers sired by Secret Champion, all well forward in calf to the service of Victor Bruce, and selling with a dozen others on Oct. 15th.

Comprising young cows with calves at foot, two-year-old heifers in calf, yearling heifers and heifer calves, and three bull calves, as well as the great two-year-old herd sire

Victor Bruce, No. 114766

This bull is rising three years old, and carries a strong Miss Syme pedigree. All the calves listed are sired by this bull, the older breeding cows are all well forward in calf to him, and he sells fully guaranteed.

WRITE OR WIRE FOR CATALOGUE. ADDRESS:

C. J. STOCK, R.R. No. 6, Woodstock, Ont.

Auctioneers: T. E. ROBSON, M. ROTH.

Plaster Hill Herd Dual-Purpose Shorthorns

For sale ten young bulls from large, deep milking cows, with records up to 12,000 lbs. 15 cows and heifers heavy producers mostly all in calf to Green Leaf Record 96115 or Dictator whose two nearest dams average over 12,000 lbs.

ROSS MARTINDALE CALEDONIA, R. R. No. 3, ONT.
Long Distance Phone.

The Salem Herd of Scotch Shorthorns

HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE
Write us about the get of Gainford Marquis. They have won more at Toronto and other large exhibitions than those of any other sire. We still have a few sons to offer, as well as females bred to Canada's greatest sire.

J. A. WATT - - - Elora, Ontario

BRAEBURN SCOTCH SHORTHORNS

150 Head - - - 100 Breeding Females
Herd headed by Nero of Cluny (imp.)

I have at present twelve young bulls that are now nearing serviceable age. The majority are sired by my present imported herd sire, and we guarantee them as good individually as the get of any other one sire in Canada. They are nearly all roans, and are priced to sell. Can also spare some breeding cows in calf to Nero of Cluny (imp.).

Brantford 7 miles. Oakland 1 mile. L. E. N. Electric R.R. Cars every hour.
CHAS. McINTYRE, Scotland, Ontario

SCOTCH SHORTHORNS

PRESENT OFFERING:

6 imported bulls, 4 home-bred bulls, 25 imported cows with calves at foot or forward in calf. Half a mile from Burlington Jct. Phone or telegraph, Burlington.

J. A. & H. M. PETTIT - - - Freeman, Ontario

ROBERT MILLER, Stouffville, Ont. Has EIGHT of the best young bulls that he has bred. Also several cows and heifers, some of them with calves at foot, good ages and beautifully Sultan, the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high, it will be paid.

GLENGOW SHORTHORNS AND COTSWOLDS

Six-year-old Cotswolds rams. These are big lusty fellows and in good condition. I also have four Shorthorn bulls of serviceable age. Write for prices and particulars.
Stations: Brooklyn, G. T. R.; Oshawa, C. N. R.; Myrtle, C. P. R. WM. SMITH, Columbus, Ont.

Dual-Purpose Shorthorns—Herd headed by Dominator 106224, whose two nearest dams average 12,112 pounds of milk in a year. Several bulls from six to nine months, priced for quick sale. Inspection of herd solicited.
WELLDWOOD FARM, Farmer's Advocate, London, Ont.

SPRUCE GLEN FARM SHORTHORNS

A number of good young bulls and a few extra good heifers for sale. You should see the JAMES McPHERSON & SONS DUNDALK, ONTARIO

Shorthorns For Sale

Two young Bulls fit for service, 1 roan, 1 red sired by King Dora (imp.), also some heifers in calf to King Dora (imp.) Their dams are good milkers.

SOCKETT BROS.
R.R. No. 5 - Rockwood, Ont.
Phone No. 22, R. 3

Shorthorns and Oxfords for Sale - Two choice roan grandson of Right Sort; also ewes and lambs, either sex.

GEO. D. FLETCHER, R.R. No. 1, Erin, Ont

Wrestling Book FREE

Be an expert wrestler. Learn at home by mail. Wonderful lessons prepared by world's champions Farmer Burns and Frank Gotch. Free book tells you how. Secret holds, blocks and tricks revealed. Don't delay. Be strong, healthy, handle big men with ease. Write for free book. State age. **Farmer Burns, 521 So. 4th St., Omaha, Neb.**

Irvin Scotch Shorthorns - Herd Sire Marquis Supreme - by Gainford Marquis (imp.). We have at present three young bulls of serviceable age and one younger, all sired by our herd sire and from Scotch bred dams. Good individuals and the best of pedigrees. Also pricing a few females.

J. WATT & SON, ELORA, ONT.

WALNUT GROVE SHORTHORNS AND OXFORD SHEEP

We are offering choice young heifers and bulls by our herd sires, Gainford Eclipse and Trout Creek Wonder. Also a few yearling and ram lambs for sale.

DUNCAN BROWN & SONS, Shedden, Ontario. P. M. M. C. R.

DON-ALDA FARMS, Todmorden, Ontario

Young herd sire, Don-Alda Pontiac Artis, for sale; calved April 5, 1918. Sired by King Pontiac Artis Sylvia. Dam Gypsy Wayne, 29 lbs. butter in seven days. Also a few younger bulls by our herd sire, Sylvia Segis Raymondale, from high-record dams. Our herd sire is grandson of May Echo Sylvia. His dam, De Kol Plus Segis Dixie, made over 32 lbs. as a Senior 4-year-old. Call or write.

MR. COWIE - Resident Foreman

Montrose Holstein - Friesian Farms

THE HOME OF 20,000-LB. COWS

Write us about our herd of 30,000-lb. R.O.P. producers. Every one is a choice individual—the breeding is choice, and they are rearing their offspring under choice, but normal, conditions. We have young bulls for sale. VISITORS WELCOME.

R. J. GRAHAM, Montrose House Farms - BELLEVILLE, ONTARIO

Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pieterje), and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long. Write to-day.

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

Hospital For Insane, Hamilton, Ontario

We have yearling grandson of King Segis Alcartra Spofford—a splendid individual. Also fine bulls of younger age, prices reasonable Apply to Superintendent.

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.
Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway

CLOVERLEA FARM HOLSTEIN FRIESIANS

Our present offering consists of two choice young bulls ready for service. Priced right for quick sale. Write **GRIESBACH BROS., Collingwood, Ont. R.R. No. 1**

Cedar Dale Farm - The Home of Lakeview Johanns Lestrang, the \$15,000 sire—He is a son of the 33.06-lb. cow, Lakeview Lestrang, and is our chief sire in service. We are offering a few females bred to him, and also have a few bull calves sired by him, at right prices. Other older bulls, sired by our former herd sire, Prince Segis Walker, son of King Segis Walker. **A. J. TAMBLYN, Cedar Dale Holsteins (C. N. R. station one mile) Orono, Ontario.**

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

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

PIONEER FARM HOLSTEINS

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

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

Holstein Bulls - A few ready for service, one from a 32.7-lb. dam. He has a 33.94-lb. maternal sister. Baby bulls by "Ormsby Jane Burke", and "Ormsby Jane Hengerveld King", grandsons of the 46-lb. cow, "Ormsby Jane Segis Aaggie," the only twice 40-lb. cow of the breed. Also females.

R. M. HOLBY, R.R. 4, Port Perry, Ont.

I Have Holstein Bulls and Females at right prices. The bulls are from good record daughters of Louis Prilly Rouble Hartog, and sired by Baron Colantha Rayne, a son of Canada's first 33-lb. cow. The females are of much the same breeding. If you want Holsteins, get my prices.

T. W. McQueen, Oxford County, Bell 'phone Tillsonburg Ont.

4 HOLSTEIN BULLS FOR SALE

from 2 to 7 months old. 2 grandsons of the 26,000 lb. cow. 2 great grandsons one from a 23 lb. jr. 4 years old. All sired by Hillcrest Rauwerd Vale whose two nearest dams average almost 30 lbs. of butter in 7 days and almost 26,000 lbs. milk in 12 months. Cheap, considering quality.

W. FRED FALLIS, MILLBROOK, ONTARIO.

6 BULLS BY KING SEGIS PONTIAC DUPLICATE

Brother to the \$50,000 bull. Three of these are ready for service and all are show calves. Write us also for females. We are pricing a number of heifers, bred to our own herd sire, Sylvius Walker Raymondale, a grandson of the great May Echo Sylvia. We now have bull calves a few months old by this sire. Let us know your wants. **R. W. WALKER & SONS, Manchester Station, G. T. R. Port Perry, Ont. R. R. No. 4.**

Evergreen Stock Farm Registered Holsteins

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

A. E. HULET - NORWICH, ONTARIO
(Oxford Co., G.T.R.)

Communism and Democratic Progress.

BY PROFESSOR W. W. SWANSON, UNIVERSITY OF SASKATCHEWAN.

All great revolutions of the past have concerned themselves with political rather than with economic ends, but to this the Russian revolution is a decided exception. It is impossible to stand aside and attempt to carry on our own affairs in isolation from those of the rest of the world for whether we will it or not these earth-shaking events will make their effects felt here. Not less than 180,000,000 people are involved in the great Russian experiment in communism, and its success or failure is a matter of vital concern to the nations which are confronted with similar problems elsewhere. And while men occasionally think, or say, that they are "through" with politics, they can no more get beyond the scope of politics than they can get out of their skins—since, as Aristotle has shown, to live outside of the organized community one must be either a brute or a god.

It seems perfectly clear that whatever faction the Russian peasant or artisan aligns himself with he has embraced the tenets of communism or socialism. This is true alike of the Bolsheviks and of the Social Democrats, and of the various parties in between. Let it be understood that it is not a matter merely of the distribution of the wealth that has been produced, the making of the rich poorer and the poor richer, but a radical reformulation of the terms and conditions under which the productive processes are carried on. The main body of the people feel that the great object to be sought by the revolution is the giving to each worker the opportunity to create something for himself, in the first instance. The Russians believe that the unforgivable sin of the bureaucracy, during the regime of the Czar, was not political in nature but economic—the denial to the workers of the tools of production, of access to the land, the mines, and the other sources of wealth. That the people have an inherent and indefeasible right to the use of the natural sources of wealth is the profound conviction of the masses in Russia; and no amount of mere abuse will alter that conviction, which amounts to passion and faith.

It is true that the Bolsheviks have committed terrible excesses, and for these no excuse can be offered or made. It is quite certain that the nation itself will deal with Lenine and Trotsky when the proper time comes, and that they will be called to account. A government, based upon force alone, cannot endure, and we may be confident that the Russian people will know how to deal with tyranny wherever it is found. At the same time, it may be pertinent to remind ourselves that the civilized governments of the world have diplomatic relations with the Sultan of Turkey and other corrupt and autocratic rulers in days gone by, and that no one expected to see the world made over in a day. It was freely stated after the Napoleonic wars that republics and monarchies could not co-exist, and that the one political system meant the destruction of the other—and yet both flourished side by side for a hundred years and more. If that could be accomplished while the people were still uneducated and without political experience, it is not too much to hope that in our day two great systems can exist side by side, each learning something from the other. Even during the days of the Czar's regime with little or no encouragement and scarcely any of the essential materials at hand, the Russians accomplished marvels in their co-operative enterprises. Indeed, it was only through co-operation that they were able to live at all.

Canadian farmers, of the west particularly, have been profoundly interested in co-operative experiments, through which they have attempted to free themselves from the burdens and wastes involved in ruthless competition. Whether the Russian Soviet Government lasts or not, we may be certain that the communistic experiment will be continued in Russia on a great scale. The real problem in Russia, therefore, is not



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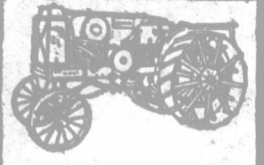
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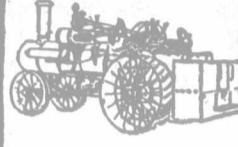
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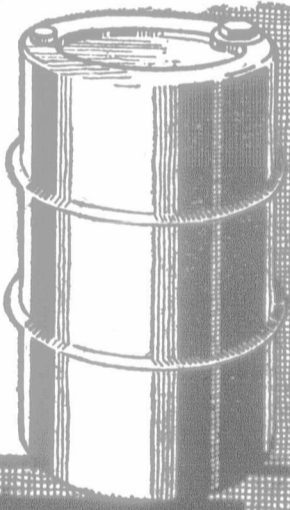
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political but economic in nature, and centres about the question as to whether the Soviet can carry forward the economic activities of the nation more efficiently and effectively than any other government that could be established. That is the crux of the whole matter, and by the right solution of that problem the Soviet will stand or fall. In both Canada and the United States there is much dissatisfaction with old methods of production and distribution, and it is not impossible that we can learn something to our advantage from the experiments under way in Europe.

Just now people are thinking about what the Bolsheviki have done by way of confiscating private property, and the like, in setting up the new regime. But their violent seizure of factories, mines, railroads, and the like, is negligible and comparatively unimportant in comparison with their attempt to organize production and distribution on a new basis. If they fail in increasing the sum total of economic goods, and in increasing the opportunities for the masses to improve their economic condition, they fail altogether. What is of importance, therefore, is that the Russian people shall establish a political system that will respond quickly and effectively to their needs, and that will enlarge the opportunities for making a living for the common people.

Reformers of days gone by have been confronted with the same problem, and for the most part have failed in finding a solution. After the French Revolution the disciples of Rousseau preached the doctrine of the simple life, and the advantages of the self-sufficing community. But life in our day is too complex and difficult to permit of any appeal of that nature being made—or, at any rate, of being made with any hope of success. The organized Russian community, if it finally determines to adhere to communistic principles, must not only appropriate mines and factories and lands for the common good, but operate them, and on a more efficient scale than has ever been done in the past. The one essential is that the national equipment be utilized as never before, and that the per capita income be increased by better organization, by larger opportunities for education, and that a certain amount of leisure be assured the individual to make him not only a better worker but a better citizen and man. It is passing strange that, with all our command over nature, the average man, whether in Russia or in America, should be denied the chance not merely to master the nature of his calling but the opportunity to improve his mind also.

In one sense the new Russian Government, whatever its ultimate form, will not have a difficult task in this particular; as under the old regime the wonderful resources of the country were but indifferently utilized, and the people existed in a state of chronic want and misery. It is computed that sixty per cent. of the masses were chronically under-fed and lived under what the average Canadian would regard as impossible conditions. The clothing was coarse and inadequate to the climate, and the housing not fit for brutes, not to mention men. Hours of labor were excessive, and the conditions under which work was carried on intolerable. A Government devoted to the interests of the people could hardly fail to better the economic surroundings of the farmers and the artisan class. Nevertheless, the new Russia, if it is to justify itself, must be able to bear comparison, not merely with former conditions at home but with the best elsewhere as well.

It is important to observe just in what particulars the Russian communistic state will differ in its economic programme from that obtaining in the nations of western Europe and America. As is well known our economic structure rests chiefly upon individual thrift, the making of profits, and the submission of labor to the discipline of capital. The survival of the fittest, the crudest kind of application of the Darwinian theory, lies at the bottom of our economic life. The Russian democrats repudiate that philosophy—one that is abhorrent to the Bolsheviki and the social democrats alike. The leaders teach, and the masses believe, that economic goods should be provided according to needs, and that each adult—whether man or woman—should render service according to the ability of the worker concerned. The Russian programme is but crudely formulated as

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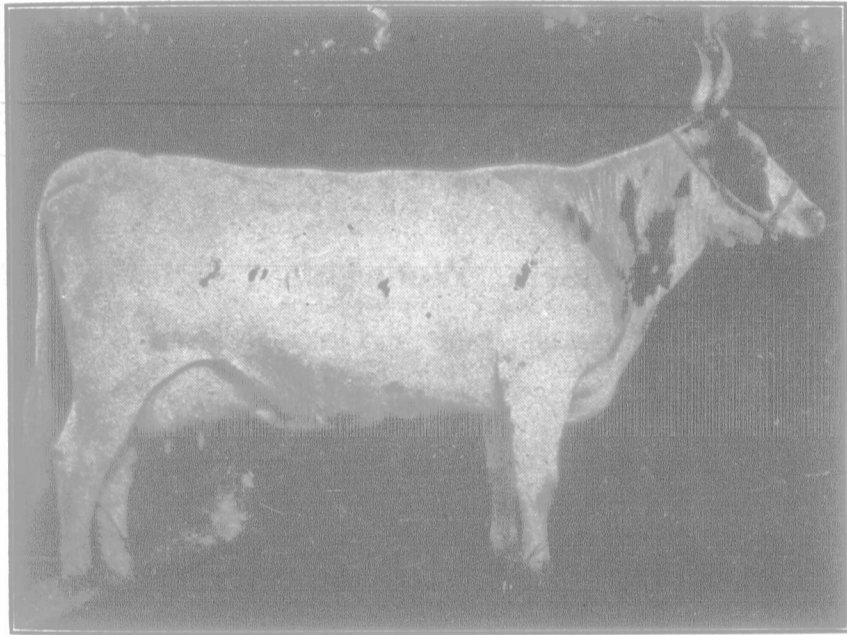
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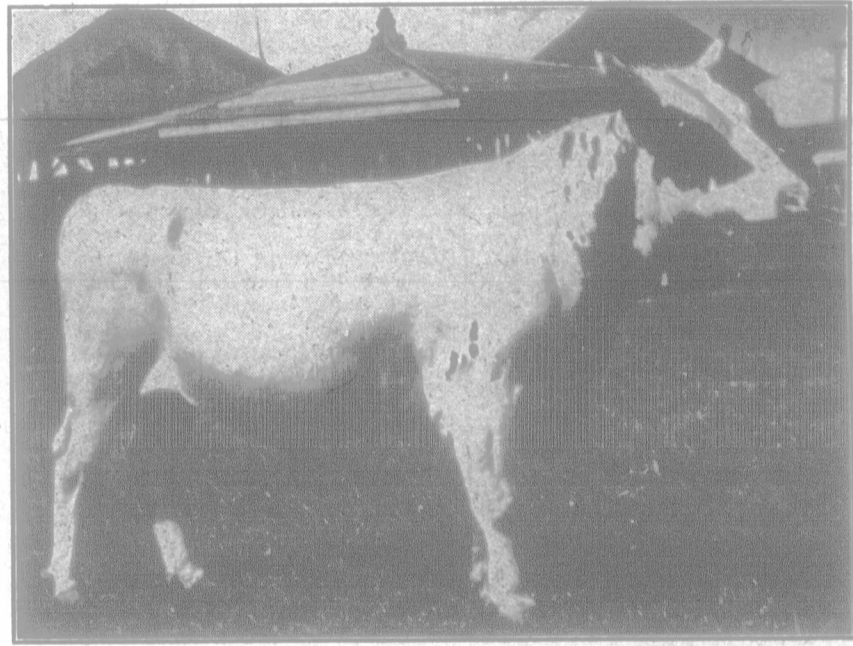
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In the reading columns of this issue appears a short review of the sires that have been used during the past decade in both herds, and while many of the foundation cows are equally as worthy of special mention, we have not sufficient space to discuss them at any length. To those, however, who are at all conversant with the breed it is sufficient to say that among the more representative ones appear such cows as Morton Main's Greenside (imp.), a grand champion winner in 1916, who made 6604.5 of milk and 302 lbs. of butter-fat as a two-year-old; Netherall Kate 2nd (imp.), a 9,386-lb. four-year-old; Lakeside Daisy shown above; Lakeside Rosebud, a 10,158-lb. R.O.P. two-year-old daughter of Barcheski Cheerful Boy (imp.); Lakeside Butterfly, a noted prize winning 7,455-lb. two-year-old; Lakeside Circe 3rd, an 8,367-lb. four-year-old daughter of Auchinbrain Sea Foam; Lady of Riverside, junior champion at Toronto in 1917; Ravensdale Lovely Rose, a first-prize winner at Ottawa and Ormstown; Morton Main's Glawourie (imp.), an R.O.P. daughter of Morton Main's Butterscotch, etc. There are a dozen or more others that are well worthy of special mention if space would permit, and in every case it will be found that each have one or more daughters selling. They are a choice lot throughout, and the entire sixty selections should all appeal strongly to those who are buyers of the best.

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yet; but it is sufficiently clear that in some fashion or other it is expected to displace the driving power of profit by the compelling claims of service. Thrift will no longer be looked upon as a virtue; as the individual, in old age, will be provided for by the state, and only sufficient thrift will have to be practiced to take care of immediate necessities. It remains to be seen whether the elimination of profits will seriously impair the efficiency of the workmen, or render less effective the utilization of the tools of production.

During the period of transition, the Russian communists will permit profits to be paid, and will also expect to provide exceptional wages for exceptional service—but only in the interim between the old order and the new. Once all industries are nationalized, it is expected that the capital essential for extensions, betterments and new plants will be provided for out of surplus earnings, just as many of the great modern corporations secure required funds for improvements out of their reserves, which have been accumulated from past profits. In any event, the essential thing is to see that there is a surplus by means of which improvements and plant extensions can be made.

In Germany, before the war, the cartel had been brought to a high pitch of perfection. The cartel was simply an organization by means of which trade secrets were shared, and improved industrial processes made common property, as between its members. The trust has met with such phenomenal success, at least in a large part, because it has placed each unit in the combination on the most efficient basis possible, by sharing methods and processes and making full use of the economics of large scale production. All these advantages are claimed for industries organized on a communistic basis. It is maintained that where the motive is service, and not profit, all the means by which one establishment has achieved success would be freely placed at the disposal of the other units in the different districts of the country. Nevertheless, this leaves out of account the tremendous effect that payment according to results has had upon the elimination of wastes of operation and the development of industry on a giant scale, on this continent and in western Europe.

In the first instance the communists will rely upon pride in one's work, the consciousness of duty done, to maintain standards or improve them. If that will not suffice there will be official recognition of some sort or other. If the manager and his men fall behind the mark of reasonable service and if they fail to improve upon fair trial, there will be penalties ranging from reproof to dismissal. If the record of the commune continues poor it may be boycotted by the entire national organization. It is plain that the penalties may be made unusually severe under autocratic rule of this nature, but they are harsh enough under the discipline of the capitalistic system. Men who have failed under our system may find employment elsewhere, but under the tyranny of extreme communism they could never hope to establish themselves again.

The Russian communists thus propose to push to its extreme limits the doctrine of governmental control of industry and the life of the individual. It is a doctrine that offers no attractions to the Anglo-Saxon nations, the people of which have based their entire economic and political life upon individualism and self-determination. Lenin has announced that the Soviets must control the press and the schools, in order that no subversive factors may operate and threaten the stability of the established order. On the other hand, with all the defects of our social organization, free speech—except during the war period—has been the bulwark of liberty in the United States and the British Commonwealth. In other words, there has been room for every variety of opinion; and, in theory at least, the minority has had the right to convert the majority to its manner of thinking if it could. It may be quite true that no matter what Government happens to be in power in Russia compulsion will be necessary until the masses are educated; but autocratic methods will never make a strong appeal to the Anglo-Saxon mind—and for that reason Bolshevism carries with it far less menace than many people appear to think.

It is difficult to predict, and futile to prophesy, but already it is certain that the

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Extremists in temporary control in Russia have been obliged to make compromises both with their ideals and practices. Managers have been appointed at high salaries to take charge of various industrial enterprises, and extensive use has been made of the co-operative societies, which have been the biggest factor in keeping the economic life of the nation functioning close to normal needs. The drift has been indeed, in the direction of capitalistic organization of industry; and with an approach to normal conditions Bolshevism in its present form at least, will fall of its own weight.

Undoubtedly, the current of world events will not leave Canada unaffected. A survey of events will disclose the fact that the people have made great progress in the art of self-government, and are ready for further progress. This must come, in part at least, by making service count for as much as profits in our economic affairs, and by democratizing our economic life. These several points will be discussed in a later article.

Grain Yields in Canada.

The Dominion Bureau of Statistics issued Sept. 18, the following report on the yield and condition of field crops in Canada, as compiled from the returns of Crop Correspondents at the end of August.

Preliminary Estimate of Grain Yields.

In the Prairie Provinces, the dry weather of June and July shortened the growing period and resulted in one of the earliest harvests on record. As a consequence of the drought, a large proportion of the areas sown in the west to wheat, oats, barley and rye proved either totally unproductive or was cut green. Crop correspondents throughout Canada were asked to return at the end of August their estimate of the percentages of the areas sown to these crops that were entirely unproductive or were cut green; but it is only in the Prairie Provinces that substantial percentages were reported as unproductive. These percentages range from 5 or 10 up to as much as 28 for wheat and 30 for oats in Alberta and 42 for rye in Saskatchewan. Taking these non-productive areas into account the following preliminary estimates of total yield for all Canada are arrived at. Wheat 199,239,800 bushels, as compared with 189,075,350 bushels in 1918. Of the total for 1919, 22,875,800 bushels are fall wheat and 176,364,000 bushels are spring wheat. The estimated total yield of oats is 381,359,000 bushels, as compared with 426,312,500 bushels in 1918, of barley it is 65,584,000 bushels as against 77,287,240 bushels in 1918; of rye the yield is 8,010,500 bushels, as compared with 8,504,400 bushels in 1918 and of flaxseed 7,350,000 bushels as against 6,055,200 bushels in 1918.

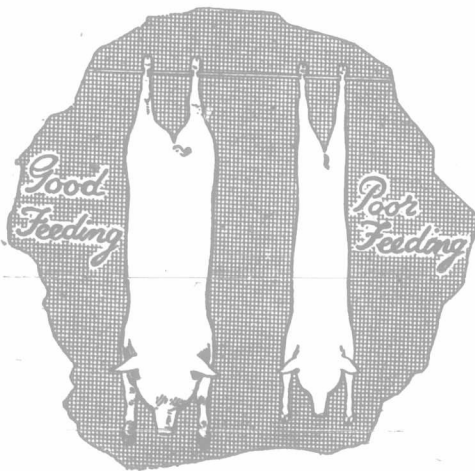
Grain Yields of the Prairie Provinces.

The estimated total production of wheat in the three Prairie Provinces (Manitoba, Saskatchewan and Alberta) is 162,326,400 bushels, as compared with 164,436,100 bushels in 1918. In Manitoba the total yield of wheat for 1919 is 36,999,100 bushels, as compared with 48,191,100 bushels in 1918; in Saskatchewan 88,21,000 bushels, as against 92,493,000 bushels, and in Alberta 37,106,300 bushels, as against 23,752,000 bushels. Oats yield 234,47,000 bushels in the three Prairie Provinces, as compared with 222,049,500 bushels in 1918; barley 45,988,000 bushels as against 47,607,400 bushels; rye 5,722,000 bushels as against 6,181,700 bushels, flaxseed 7,099,000 bushels as against 5,776,000 bushels.

Conditions of Late Sown Field and Fodder Crops.

Rain showers during August in the Prairie Provinces did much to revive the later sown field and fodder crops. Their average condition on August 31 for the whole of Canada, expressed numerically in percentages of the average yield per acre for the ten years 1909-18 was reported as follows: Peas, 87, beans, 93, buckwheat, 95, mixed grains, 87, corn for husking, 89, potatoes, 91, turnips, mangolds, etc., 99, fodder corn, 97, sugar beets 83 and pasture 89.

The Balanced Ration Pays



Which one of these bacon hogs would you rather get paid for? Imperfect feeding will get you a *certain amount of bacon*, but it is one of the causes of soft, flabby quality. On the other hand, the use of Monarch, a properly mixed and balanced ration supplying everything the hog requires in exactly the right proportions, will get you *far more bacon* to take to market. Experience has shown that hogs make larger and more economical gains when fed with

Monarch Hog Feed

The quality of bacon will be firm and of good texture, which is essential if you wish to get the highest prices. Monarch Hog Feed is properly mixed and is very palatable; no single feed can equal it. Its high protein content is splendid for growth, and the nutrients are so mixed as to supply every requirement for growing pigs. It gives them stamina, energy, vigor and size.

Monarch Hog Feed makes more pork and better pork and shortens the period of fattening, thus lowering the cost of production.

Order a ton from your dealer; if he cannot supply you, write us direct and you can always depend on getting deliveries.

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A vast new land of promise and freedom now open for settlement to returned soldiers and sailors FREE; to others, 18 years and over, 50 cents per acre. 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

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Director of Colonization,

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Tamworths for Sale Oak Lodge Yorkshires

One good stock boar two years old. One boar five months old. Two sows one year old, due to farrow in January. Two boars three months old. A number of sows five months old. Write for prices.

We have on hand at present the strongest selection of young sows and boars we ever bred, including a number of our recent winners at Toronto. Are also booking orders now for fall pigs.

Duncan MacVannel, St. Marys' Ontario J. E. Brethour & Nephews, Burford, Ont.

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.

YORKSHIRES

We are now booking orders for Fall pigs, both sexes. Several large litters to choose from.
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INVERUGIE TAMWORTHS
Boars ready for service; young sows bred for fall farrow; extra fine lot of little stuff just ready to wean.
Leslie Hadden, Pefferlaw, Ont. R. R. No. 2

Fairview Yorkshires—Am offering three litters, 8 weeks old, of good breeding and quality. If interested, write me for prices.
WM. BUNN, Denfield, Ont.

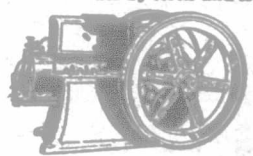
Berkshire Pigs—Large, quick-maturing, thrifty stock; reared under natural conditions—two imported boars; dozens to choose from. We bred the grand cham; pign boar, 1917, and first prize boar under two years, Toronto, 1919. Come and see them, or send for breeding list.
J. B. PEARSON, Manager. CREDIT GRANGE FARM, Meadowvale, Ont.

Prospect Hill Berkshires—Young stock, either sex, for sale, from our imported sows and boars; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right.
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Meadow Brook Yorkshires—We have a choice offering of sows bred and boars fit for service. Also a number of large litters ready to wean. All show the best of breeding and excellent type.
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YEARS IN ADVANCE OF ALL OTHERS
No Carburetor. No Batteries. No Spark Plugs. No Magneto. No Wires. It is the perfect oil engine. Runs on coal oil, fuel oil or crude oil. Uses no gasoline—not even to start with. And the savings, in quantity and price of fuel will pay for this engine in a few months. Starts easily and surely on its own fuel in the coldest weather. Its principle is purely mechanical. No electrical devices whatever to loosen and to get out of order. You should investigate.



The Hoag Oil Engine is in a class by itself and is the farmer's real friend. Write us to-day for booklet and information. Mention also you are interested in. Dominion General Supply Co., Dept. F, Toronto, Ont.

Big Type Chester Whites—Five importations in 1918 and 1919. We won all championships, and 1st in every class we had an entry, Toronto and London, 1919. Our champion boar weighs 1,005 lbs., and champion sow 815 lbs. April boars and weanling pigs for sale.
JOHN ANNESSER, Tilbury, Ont.

HIGH-CLASS DUROC JERSEYS
Herd headed by Brookwater Ontario Principal 9735 (Imp.). Champion male Toronto and London 1918. 25 high-class young boars 4 to 6 months old. Select your herd header here.
Culbert Malott, R. R. 3, Wheatley, Ont. Bell Phone.

Sunnyside Chester Whites and Dorsets—In Chester Whites, both sexes, any age, bred from our champions. In Dorset ram and ewe lambs, by our Toronto and Ottawa champions, and out of Toronto, London and Guelph winners.
W. E. Wright & Son, Glanworth, Ont.

Have three **York Boars for Sale**, pure-bred, three months old; dam bred by Duck Port Credit; sire bred by Brethour, Burford.
E. J. BRADY, Glanworth P.O.

Elm Brook Yorkshires—Boars ready for service, and younger sows, all ages; a few suckers, both sex. All good type and very best of breeding.
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Snowflake
Ammonia
Saves 90 Per Cent Soap
For Household and
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one throughout, and
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years. Prices reasonable.

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1 good shearling ram and
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s, four Shorthorn bulls.
Myrtle Station, Ontario

e sheep, including pure-bred
ford Downs, including a very
proved Yorkshire sows ready
sell to make room.
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K OXFORDS

ws, Shearling rams and
Sale. Bred from E. Bar-
y flock. Prices reasonable.
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The Farmer's Advocate

Remember the Date

October 20-22

National Educational Conference

At Winnipeg

PROMINENT SPEAKERS—LIVE SUBJECTS

In advance of the definitive program in the form in which it will be issued at the time of the Conference, the Convening Committee announces that the following items are definitely assured:

- 1—Salutatory Addresses—By His Excellency the Governor-General of Canada, Sir James Aikins, Lieutenant-Governor of Manitoba, and His Worship, C. F. Gray, Winnipeg.
- 2—"The Lessons of the War for Canadian Education," Hon. Dr. Cody, Minister of Education, Ontario.
- 3—"The School and the Development of Moral Purpose," Dr. Theodore Soares, Professor of Religious Education, University of Chicago.
- 4—"The Development of a National Character Through Education," Sir Robert Falconer, President University of Toronto.
- 5—"The Essential Factors of Education," Dr. Helen MacMurphy, Ontario Department of Education.
- 6—"The Boy Scout Movement as an Auxiliary to the School in Moral Training," Dr. James W. Robertson, Dominion Commissioner of the Boy Scouts.
- 7—"Methods and Ideals of the Canadian Standard Efficiency Training Groups," Taylor Statten, National Secretary Boys' Work Department of the Y.M.C.A.
- 8—"The Function of the Public School in Character Formation," Dr. J. F. White, Principal Ottawa Normal School.
- 9—"Education and Reconstruction," Peter Wright, British Seaman's Union.
- 10—"The Basis of Moral Teaching," Michael O'Brien, Toronto, Ont.
- 11—"The School and Industrial Relationships," Dr. Suzzalle, President University of Washington.
- 12—"The School and Democracy," President John H. Finley, Commissioner of Education for the State of New York, Albany, N.Y.
- 13—"The School and the Newer Citizens of Canada," Dr. J. T. M. Anderson, Director of Education among New Canadians, Regina, Sask.
- 14—"The Interest of the State in Character Education," Dr. Milton Fairchild, Washington, D.C.

The task of initiating discussions has been assigned to persons representative of all parts of Canada. Among those definitely secured at this date in this connection are:

Dr. Clarence McKinnon, Principal Pine Hill College, Halifax, N.S.; Prof. H. T. J. Coleman, Dean of Faculty of Education, Queen's University, Kingston, Ont.; J. J. Tompkins, Esq., Vice-President University of St. Francis Xavier's College, Antigonish, N.S.; Very Rev. Dean Llywdd, All Saints' Cathedral, Halifax, N.S.; Dr. H. P. Whidden, M.P., Brandon, Man.; Prof. Iva E. Martin, Royal Military College, Kingston, Ont.; Prof. W. H. Alexander, University of Alberta, Edmonton, Alta.; Dr. G. W. Parmelee, Deputy Minister of Education, Quebec; R. W. Craig, K.C., President, Winnipeg Canadian Club and Chairman Winnipeg School Board; Dr. John McKay, Westminster Hall, Vancouver, B.C.; R. L. Torrance, Manager Royal Bank, Guelph, Ont.; W. A. Buchanan, M.P., Lethbridge, Alta.; W. McL. Davidson, M.P.P., Editor Calgary Albertan, Calgary, Alta.; W. G. Raymond, Esq., Post-Master, Brantford, Ont.; Prof. C. B. Sissons, Victoria University, Toronto, Ont.; W. J. Sisler, Principal Strathcona School, Winnipeg.

Delegates to the Conference should make their hotel reservations immediately.

The following committees are at your service: Reception, Entertainment, Transportation, Hotel Accommodation.

Address all communications to

The General Secretary, National Educational Conference
505 Electric Chambers - - - WINNIPEG

Our School Department.

The First Dairy Lesson.

Our first dairy lesson will be in the form of a little question bureau. We want you to find out certain things for yourself as this is the only way of fixing information in one's mind so it will remain there. Anything which is easily learned is often soon forgotten.

We shall first get the image of a good dairy cow in our mind and from this we shall proceed to the production of milk, its care and manufacture into many articles for human consumption.

In another issue we shall indicate the good points of a typical dairy cow, but in the meantime, we are going to ask you to study the various cows in your father's herd. Have the best cow in the herd pointed out to you, and then study her point by point. When comparing the best cow with others not so good, make these observations:—(1) Has she a large or small muzzle? (2) Is she wide or narrow in the forehead? (3) Does she have a short thick neck, or a fairly long thin one? (4) Is she wide and fleshy on top of the shoulder, or rather pointed? (5) Is she deep and thick back of the shoulders or is she inclined to be smaller there than the inferior cows? (6) Is she deep in the side with plenty of room for feed, or she is small about the middle? (7) Has she a large or small udder? (8) Can you notice any large veins extending from the udder forward? (9) If she has any, are they straight and small or full and winding? (10) What can you find where these veins end farthest from the udder? (11) Is she short or long in the rump and quarters? (12) Does she consume as much feed as the other cows and is she fat or inclined to be thin but thrifty?

We are going to ask you to make these observations for yourself, and in another issue we shall tell you just how a good cow should appear in regard to these twelve points mentioned.

that the school fairs have grown so popular that in many places they have hurt the fall fairs that are run altogether by the bigger folk who like to go to a fair but often do not help build it up by contributing exhibits. Indeed, just in this very vicinity a fall fair had been held only a few days before where we were informed that the exhibits were not nearly up to the level of the Kemptville School Fair. We did have the privilege of visiting a fall fair held near Kemptville shortly afterwards and although this was one of the good fairs in the district the exhibits were not very much superior to those of the school fair. There were, of course, more kinds of exhibits, but we could not help noticing a lack of enthusiasm that was shown by the school fair. There were a great many people there in spite of unfavorable weather and the fair was a good one, but the people were interested in seeing each other and meeting socially.

One of the outstanding features about school fairs as we know them is the competition between schools. A trophy was awarded at Kemptville for the school winning the highest number of points and just as soon as the fair was over, everybody was eager to know what school had won the silver cup. The school parade was also one of the outstanding features of the fair, as indeed it must be, for when all the pupils of a dozen or more schools parade in competition for a prize, the event inevitably arouses a great deal of interest. This interest is intensified by the fact that most teachers try to give a note of distinction to their school by some special feature of decoration or make-up. Nearly all carried banners giving the name of the school; some were decked-out with hoes and garden tools for the boys and sun-bonnet and basket of garden products for the girls; others were very prettily arrayed in garland of maple leaves,



A School Parade at a School Fair in Eastern Ontario.

Courtesy Com. of Conservation.

Successful Rural School Fairs.

A few years ago, when rural school fairs were first started, it was not expected that they would grow so rapidly in size and numbers. To-day they are being conducted in almost every county in Ontario and most counties have many more than one each year. Representatives of "The Farmer's Advocate" do not get the opportunity of visiting many rural school fairs, but those we have attended show that an increasing amount of interest is being taken in them. Not long ago we had the opportunity of visiting a very successful fair held at Kemptville in the county of Grenville. Quite a large number of schools were represented and the attendance was really surprising. We estimated that there were probably 1,500 people present, while some others thought the number was nearer 2,000. At any rate there was just as big a crowd as we have seen at many fall fairs where there was horse racing as well as other attractions that the school fairs have been kept free from. Just here we might say

while others were dressed as uniformly as possible and supplied with banners. After the parade the schools were lined up for the public speaking contest and singing by the various schools. Numerous patriotic songs were rendered and some schools had yells which they gave with great enthusiasm.

The public speaking was particularly worthy of mention although only four pupils took part, three boys and a girl. It was truly surprising to see how splendidly and forcefully these boys and girls could speak, and if more of the boys and girls of our rural schools were given the opportunity of public speaking we would not have so many grown-up people who are afraid of the sound of their own voices. Boys and girls who enter public speaking contests at school fairs should not take hard or difficult subjects. The boy who won at Kemptville did so because he chose a subject of local historical interest, it was something he could enthuse over and he could go at it in a very businesslike manner.

Not the least of the good features of the fair was shown by the classes for cooking, needlework, art, penmanship and nature study. In these classes, especially the first two, some excellent exhibits were made.

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Jersey Cream Sodas

Sold fresh everywhere. In sealed packages.

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ment.

of fairs have grown so many places they have fairs that are run altogether by those who like to go to a fair and help build it up by exhibiting. Indeed, just in the city a fall fair had been held a few days before where we saw that the exhibits were not on the level of the Kemptville fair. We did have the privilege of attending the fair held near Kemptville afterwards and although the exhibits were not very much above those of the school fair, of course, more kinds of exhibits could not help noticing the enthusiasm that was shown by the people. There were a great many people here in spite of unfavorable weather and the fair was a good one, and we were interested in seeing the meeting socially.

Outstanding features about the fair were the exhibits of the high schools. A trophy was presented to the school of Kemptville for the highest number of points scored on as the fair was over. The school was eager to know what school would win the silver cup. The school of one of the outstanding fairs, as indeed it must be, all the pupils of a dozen schools parade in competition. The event inevitably arouses the interest of the people. This interest is due to the fact that most of the exhibits give a note of distinction by some special feature of make-up. Nearly all the exhibits are giving the name of the school. The exhibits were decked-out with bunting and flags for the boys and sunbonnets for the girls. Baskets of garden products and other things were very prettily arranged. A display of maple leaves

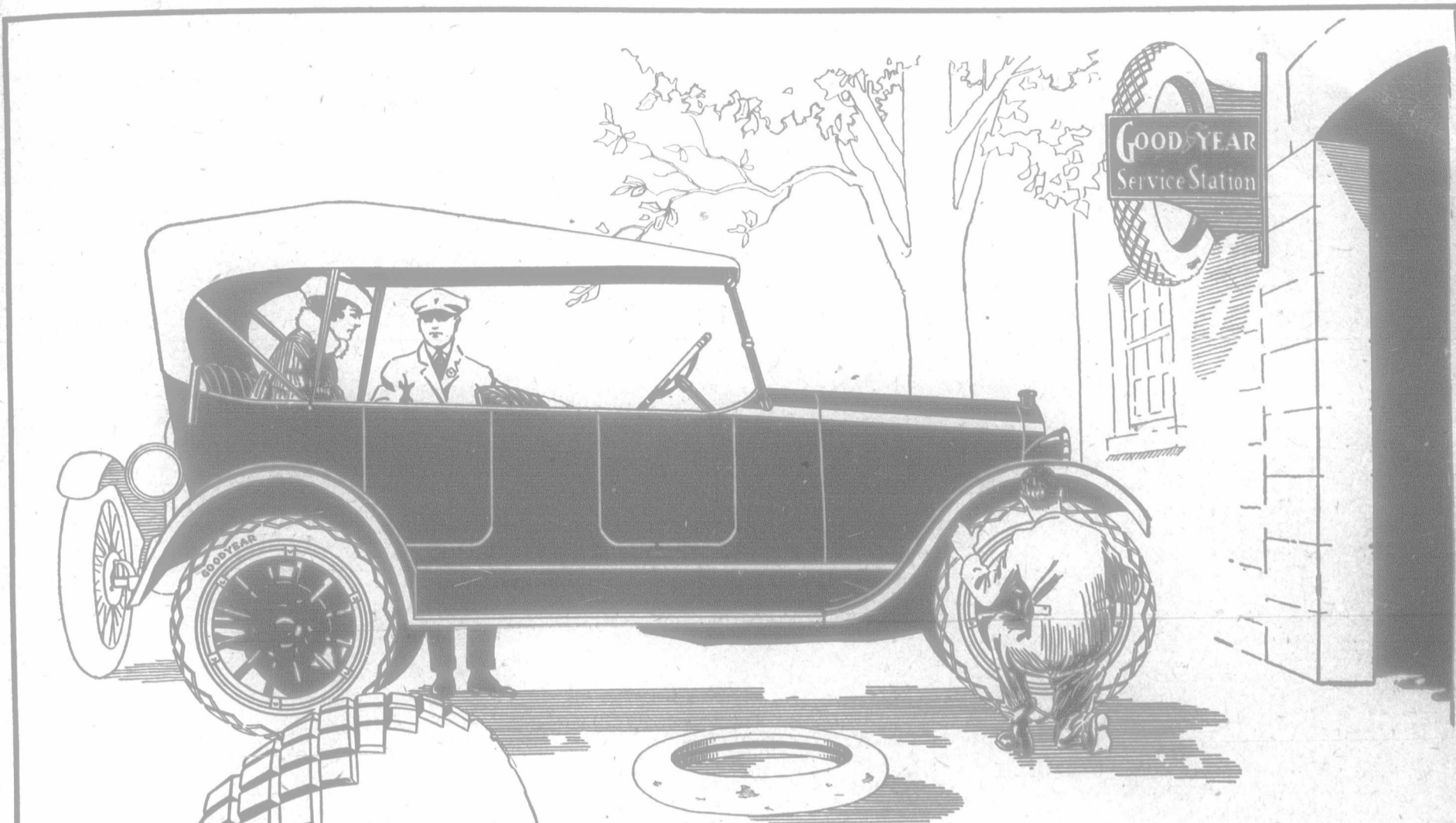


ern Ontario.

were dressed as uniformly as possible and supplied with banners. The exhibits of the schools were lined up in a public speaking contest and in various schools. Numerous songs were rendered and yells which they gave with enthusiasm.

Public speaking was particularly popular although only four schools took part, three boys and a girl. It was interesting to see how splendidly these boys and girls did. If more of the boys and girls of the schools were given the opportunity of public speaking we would have many grown-up people who would be the sound of their own voices and girls who enter public speaking contests at school fairs should be encouraged to take part. The school at Kemptville did so well on a subject of local interest, it was something he could not have done in any other manner.

Some of the good features of the fair were shown by the classes for penmanship, art, and penmanship study. In these classes, the first two, some excellent work was made.



Know the Tire You Buy

You can't tell the value of a tire by its looks. The unused tire is a riddle. Its sleek and unscarred surface tells no story. Its real value is hidden.

Nor can you tell the value of a tire by its price. The price may be too low. It may not allow of building a good tire. The price may be too high. It may be far above the value you will get.

But there is one reasonably safe indication of a tire's value available to everyone.

That is the service that tire is rendering in general use.

On this basis, we believe you will come to Goodyear Tires.

More Goodyear Tires are used than any other brand. They have received, and are receiving, the most severe test a tire can be given.

If you will talk to men who drive cars, you will find a strong majority for Goodyear Tires. A majority based on this very test of actual experience.

It will probably surprise you how many hard-headed men of your acquaintance are buying Goodyear Tires for the value which is in them.

Ask the Goodyear Service Station Dealer to tell you the experience of the men to whom he sells tires.

The Goodyear Tire & Rubber Co. of Canada, Limited

GOODYEAR
MADE IN CANADA

Provincial Highways

THE Councillor and ratepayer are vitally interested in understanding the relation of the Provincial Highway to the general plan of Ontario's road organization.

THE Provincial Highway System was authorized by an Act of 1917, and provides that the Department of Public Highways may take over, maintain and construct leading roads throughout the Province.

The Main Artery of the System.

THE trunk line—the main artery—of such a system would be the highway from Windsor to the Quebec boundary, with branches from Prescott to Ottawa and from Hamilton to the Niagara River. This route alone, about 600 miles in length, has within twelve miles from it, half the population of the Province, and over half the assessment. A road which will link up so much potential traffic cannot be ignored.

The Basis of the Market Roads.

THIS road is not merely a route for through traffic. Section by section it forms a series of most important market roads for local farm traffic. Residents on or adjacent to these roads are entitled to its proper maintenance for their market traffic. These roads must be so built as to carry all the heavy traffic which is flowing over them (or which will flow over them when improved to a reasonable standard), or else the farming community along them is unfairly penalized for residing on them. Local residents either cannot maintain the road, or do so only at an unfair cost.

Traffic Governs Cost.

THE CHIEF UNIT OF COST IN ROAD MAINTENANCE IS TRAFFIC, NOT MILES. Expenditure is necessary in proportion to the number of vehicles using a road. Traffic along certain of the main routes which may properly be included in a Provincial system has reached proportions which would place an impossible burden on the local municipality; and the only fair remedy is a Provincial system, largely supported by the revenue drawn from automobile owners.

BECAUSE they are assumed as Provincial Highways, new roads are not created. The roads already exist, the bridges and culverts on them must be built. Through township and county organizations large (and in some cases excessively large) expenditures were being made on them.

What Happened in Lincoln County.

BEFORE being assumed as a Provincial Highway, the Lincoln County Council was spending \$1,000 per mile annually on the Queenston Stone Road—and the road was deteriorating. Representatives of the Township of Pickering protested their entire inability to maintain their section of the Kingston Road, because of the excessive traffic. An unfair burden is merely removed from local municipalities and is properly assumed by the Province. The Provincial Highway System is a matter of justice to the municipalities through which these roads pass.

AN immediate and huge Provincial expenditure on a continuous pavement of cement concrete, similar to the Toronto and Hamilton Highway, is not proposed, as many appear to believe. The amount of traffic from point to point will vary; materials available, character of subsoil, and variety of conditions will affect the type of construction and cost. In some sections it is anticipated that existing gravel roads may be

developed and maintained for some years, or until the growth of traffic renders rebuilding cheaper.

Better Maintenance Keystone of Policy.

BETTER maintenance rather than heavy construction is proposed by the Provincial Highway Department. Many miles of the proposed Provincial Highways have been old gravel or macadam roads, the maintenance of which has been neglected. Many miles were inferior because they have not been properly drained. A thorough system of maintenance and development is first proposed so as to utilize the roadbed that now exists. Durable surface construction will follow as the needs of traffic demand, and as maintenance costs make it cheaper to rebuild.

IT is unfair to assume that all or even a majority of those who travel by motor car on these roads, in this populous part of Ontario, are doing so for pleasure only.

Motors a Necessity.

THE motor vehicle has become a recognized necessity of everyday life. It cannot be described as a luxury any more than the telephone, telegraph, steam railway, and similar advantages of the age in which we live. It enters into the practical affairs of the farmer, merchant, doctor, business men, men of the skilled trades, manufacturers, and has given the common highway a greatly increased transportation value.

AN appeal to prejudice rather than to reason is made by those who condemn Provincial Highways as "speedways for millionaires and pleasure-seekers." No doubt some of both will drive over these roads. They also travel on railway trains—but the commercial value of the steam railway is not diminished by the fact.

Farmers Own One-third of All Motor Cars in Ontario.

IN 1918, one-third of the passenger motor cars in the Province were owned by farmers. Over 82 per cent. of all passenger cars were small machines of 25 horse power or less—the cars of men of moderate means who have serious use for them. It cannot be doubted that, in addition to considerable motor truck traffic, the travel between Hamilton and Toronto, between Brantford and Hamilton, London and Woodstock, is largely of a business nature.

Good Roads Assist Agricultural Production.

PROVINCIAL Highways have been criticized because they will parallel the railways, and will compete with the Grand Trunk, which may soon become nationalized. The profitable traffic of the railways is the long-distance haul. Provincial Highways will compete only with the short haul, the "way-freight" traffic. Even this is affected to a limited extent only, for good roads mean greater agricultural productive development, and thus they create their own traffic.

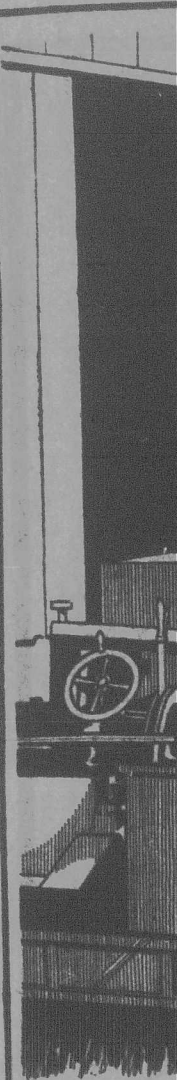
Farm Traffic Not Excluded.

IT has been feared by some that certain farm traffic would be excluded from the Provincial Highways, and that the Minister of Highways has arbitrary powers in that regard. It is manifestly absurd that any farm traffic could be excluded from public highways, as it is primarily for farm purposes that good roads are being aided and encouraged by the Department. The powers of the Minister are merely to "regulate" traffic, cannot conflict with the rights of the public under existing statutes, and are only such as to meet conditions of emergency.

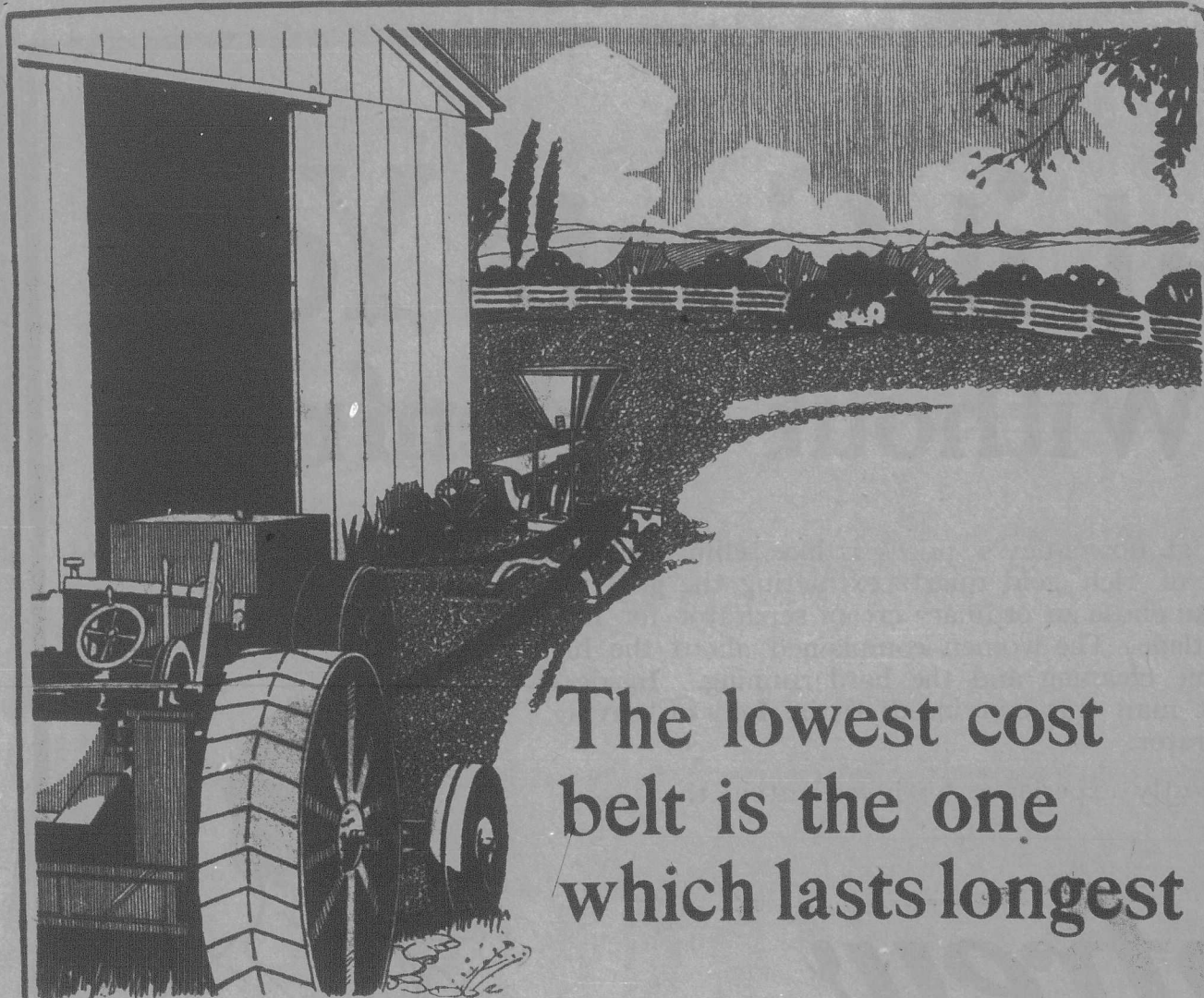
Department of Public Highways, Ontario

HON. F. G. MACDIARMID, Minister

W. A. McLEAN, Deputy Minister



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The lowest cost belt is the one which lasts longest

Don't be fooled by a price-tag into buying an extravagant belt for your farm.

A price-tag doesn't mean anything. You can't tell what a belt has cost you until it is worn out.

If you paid \$100 for it, and it lasted one season, the cost was \$100 a year.

But if you paid \$200 for it, and it lasted three seasons, the cost was only \$66 a year.

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