

FARM AND DAIRY & RURAL HOME



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BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Toronto, Ont., April 19, 1917



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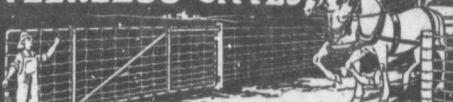
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Making a Farm in the Bush

M. N. Colvin, Middlesex Co., Ont.

I WAS born with a torch in my hand for my father was a great man in the woods, being large and strong and with a great constitution. I have helped to clear several farms, in Michigan I was foreman over seven men on the farm of Dreson Brine and we cleared 10 acres on clay at spare times throughout the year with a Sittard machine. It was all heavy pine and Norway Spruce and some trees were three and four feet across. We used two span of horses to do the work and it cost about \$100 an acre, finally bankrupting Mr. Brine and causing him to sell his farm.

I bought my present farm two years ago and a year ago last November started work here. I hired seven Indians to chop and paid them \$15 an acre. It was all second growth timber, being tamarack, black ash, soft maple, elm, birch, hemlock, cedar, pine and poplar. It had formerly been a pine and cedar swamp and there were many old pine stumps three and four feet across and cedar ones two and three feet across. All were grown up to the bush, as it is 25 years since first cutting was done. I got out three barn contracts out of my down timber this winter, and sold wood all winter by the load.

Last July I started with my torch to burn the old stumps and in two days I went across 10 acres through the centre of my farm, burning up all the brush heaps and making a job worth while. Then the work commenced night and day until Jan. 15th, 1917. Everything was cleared clean on the ground, but not a tree was burned. The roots were cut off clean and the trees allowed to fall and there was no blaze except on four cedar stumps. I also burned five acres of willow swamp which was so thick that man or beast could not walk through without an axe to break the way. I followed this for two months with a fork, throwing all brush in that fell back and burning it clean. I always worked with the wind behind me so as to escape the gas which generated from the peat and is nearly as strong as natural gas. I got my fill of gas one morning when the wind suddenly changed and the gas caught me square in the face and put me off my feet for two hours.

In order to do this work, one has to be properly dressed, so as to be able to stand the heat. All wool clothes are necessary, and boots must be well oiled every morning and covered over with soap to keep them from burning. I have a pair of shoes now which I wore all last summer and they are good yet, without a burn in them, and I walked right through the fire day after day. I burned over 65 acres on this farm last year all alone.

My soil is a splendid black loam or peat bog, well drained and with a good outlet. It will make a fine truck farm, as I can grow celery which can't be beaten. I will have about 40 acres ready for crop this fall. I could have more than this ready for cropping were it not that 25 acres are still covered with down timbers and I cannot get help to cut it up, so it will have to lie there till next winter. I will sell one-half of my farm (50 acres) in five and 10 acre lots for gardening purposes.

A Canadian World's Fair

EDITOR, Farm and Dairy:—What about a Canadian World's Fair Anniversary? Now I do not wish to strike the public fair in the face, but I wish to remind them of what seems a forgotten duty. We cannot speak too eloquently of our fair Canada; first in peace, first in war and now she should be first in the hearts

of the people. This proposal is not a vain one, but a substantial investment. This Dominion of ours is full from ocean to ocean with surprising possibilities for the great future. Ships will be flaunting our free colors and carrying our products to all climes. Why not invite the world to see our nativity for themselves. Why could this event not be started next October in the month that the fathers of confederation made and inaugurated the great event of all history. The main fair could be carried on the following spring in the same way as the Columbian Exposition at Chicago.—W. Millmore, Bromo Co., Que.

Farm Help Will Be Supplied

EDITOR, Farm and Dairy:—Never before was farm help so scarce in Ontario or prices so high for farm produce. The farmer says, "if I cannot get help I will have to do the best I can without it, and if the prices keep up I will do very well anyway, even with reduced acreage." The towns' people are worrying about the next crop. Boards of Trade, Patriotic Societies and other organizations are holding meetings and trying to induce retired farmers and citizens generally to turn out and help the farmer during the season. High school boys are also being induced to enlist for farm work. Now the city people are in dead earnest; the farmers are just as much in earnest. Then why is everybody excited about greater production? It seems to me there are three reasons why and all of them most important.

(1) The allies are not getting all the food they need. The world is short of food. Ten nations are on short rations and six nations are on the verge of starvation.

(2) Great Britain lacks food for her people at home. The wheat of Russia is inaccessible. The Argentine has a short crop. India is 7,000 miles away and Australia 13,000 miles from Great Britain. A ship can make four round trips from Canada to England while it is making one trip from Australia. The great need, therefore, of Great Britain at the present time is an inexhaustible pile of foodstuffs on the Canadian Atlantic seaboard.

(3) Surely it is our great patriotic duty to see that our boys are properly fed in the trenches! What a shame and what a farce it would be if these splendid Canadian young men who are offering their lives for the freedom of the world should be rendered powerless for the want of food.

I do not know how much reliable help it is possible to get for our farmers for the seed time, but I believe it is the patriotic duty of every Ontario farmer at this time to sow all the crop he can possibly get in, and give it such attention as he can during the growing period. When harvest comes I think I can assure him that help will be available for the actual harvesting of his crop. If the men from the cities and towns are really serious, and I think they are, if boys who cannot go to the front want to do their bit, if governments and municipalities and employers of labor realize the situation, and I think they do, then if it is necessary to close the schools and the shops and the factories in order to harvest the crop this will be done, rather than any soldier of the Empire at this crisis should go without food.—G. C. Creelman, Commissioner of Agriculture.

To prevent pneumonia, if the cow falls to lick the calf dry, rub it dry with a gunny sack and keep it out of draughts. See that the calf sucks the cow several times the first day.



FARM AND DAIRY



We Welcome Practical Progressive Ideas.

& RURAL HOME

The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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No. 10

Making the Most of the Spring Litter

Some Suggestions from A. E. Maclaurin, Macdonald College, Quebec

I WANT to raise some young pigs this spring, but don't know much about looking after the sow at farrowing time. Could you get some of your practical pig raisers to write on the care of the sow and the spring litter?"

This query was in the *Fair and Dairy* mail box last week. Just a few minutes later the editor, in glancing through the *Quebec Journal of Agriculture*, noticed an article from A. E. Maclaurin, of Macdonald College, so replete with just the information desired by our subscriber that it is reproduced herewith in full. Mr. Maclaurin's suggestions are as follows:

"With pork prices at an exceptionally high level, and with every assurance that no great decline will take place for a considerable time, every farmer should make an effort to prevent losses in the spring litters. Weak, sickly litters are very often the result of careless management of the sow before farrowing, and a few precautions attended to while the litter is on the sow may save the lives of what otherwise might have been healthy pigs. Each farmer should aim to rear the maximum number of thrifty pigs from each litter.

The care of the litter should commence with the care of the sow during pregnancy. The breeder should try to have his sow in good, vigorous, healthy condition, not too fat nor yet too thin. A very fat sow is liable to have difficulty in parturition, and will probably farrow a number of dead pigs, while a very thin sow is not able to nurse a large litter to the best advantage. Provide a meal ration that is not too fattening, but which contains considerable bone and muscle forming material. A ration of equal parts of ground oats and middlings, or of one equal parts of ground corn, ground oats and middlings, might be suggested. The value of the use of roughage and succulent feeds cannot be over-estimated. Not only are feeds of this kind cheap, but they also have a very beneficial effect, producing thrift and good health. From the point of view of economy, bulky feeds are very important now, because of the high prices prevailing for meal of all kinds. Second cut alfalfa is the very best roughage, but clover hay may be used when alfalfa is not available. Roots form the best source of succulent feed, sugar beets or mangels being the most palatable and beneficial. It is important that the sow be housed so that she may take considerable exercise.

At Macdonald College a number of young sows carrying their second litters, and weighing between 375 and 400 pounds were each fed the fol-

lowing daily ration:—Meal, 1½ lbs.; cob corn, 1½ lbs.; mangels, 3¼ lbs.; and alfalfa, 1½ lbs. The meal consisted of equal parts of shorts and mixed feed (barley and oats). This formed a very satisfactory ration, keeping the sows in good condition, and being very economical. Sows of the same weight and in poor condition would require a more liberal allowance to bring them up to good condition, but when in good shape a well balanced ration of this kind will maintain them very economically.

About a week before farrowing time the sow

for the little pigs often get entangled in the long straw and are crushed. Cut straw or chaff may be used; in any case give only a moderate amount of bedding. A guard rail of some kind should be placed around the wall near where the sow makes her bed.

Attention at Farrowing Time.

An attendant should be on hand at farrowing time, but need not interfere unless it seems necessary. If farrowing is prolonged, or if the pigs are weak, remove them and put them in a warm place. Sometimes a pig born apparently dead may be

revived by slapping smartly on the side, or by opening its mouth and blowing into it. Chilled pigs may be helped by immersing all except the head in water at a temperature of about 98 degs. F., then rubbing dry and placing in a warm place. When farrowing is completed and the sow becomes quiet, the pigs should be returned and allowed to suck. The sow's meal should be fed in the form of a very thin slop for some time after farrowing, gradually bringing it back to a thicker condition. The feeding of roughage and roots should be continued. There is no need of being in a hurry to start feeding the sow after farrowing, but it is advisable to have available some warm water to which a little meal has been added.

In an unthrifty pig examination of the mouth will sometimes show black teeth. The points of these should be smoothed off with a pair of small pliers. In the case of a small litter on a large, fat, heavy milking sow, thumps are liable to occur in the litter. The symptoms are a great accumulation of fat at first and later a sort of palpitation, the pig panting like a horse with heaves. The disease may be prevented by cutting down the sow's ration so that her milk will not be so abundant nor so rich, and by making the little pig take exercise. Another disease that may occur is scours. A tablespoonful of sulphate of iron in the sow's feed from time to time will help to prevent this trouble. In severe cases one to two teaspoonfuls of castor oil may be given to each pig affected.

Teaching Pigs to Eat.

When the litter has reached the age of about three weeks it is time to commence teaching the pigs to eat. Arrange a small enclosure with a partition of slats so arranged that the young pigs can get through while the sow cannot. Place a log trough in this enclosure. Start the pigs on skim-milk. If skim-milk is scarce, oatmeal siftings may be used as a supplement. A little care

(Concluded on page 13.)



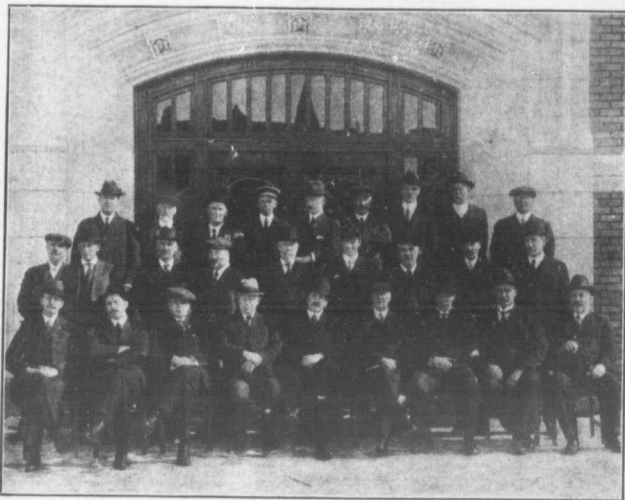
To the Dairy Cow

By W. E. VAPLON.

THE dairy cow, long may she wave her fluff tail her hide to save from gnats and fly and such like pest that seem to like to break her rest. It's she that brings the monthly check for cream she offers by the peck; it's she that often saves from wreck, the farmer who is wise, from wreck, the one who'd rather chew and spit tobacco spit, the kind whom farming doesn't fit, will keep on going into debt, it's just as safe as spuds to bet, while neighbor Jones with twenty cows will chase hard times to the bow-wows. To farm these days of high-priced land, you've got to plan to beat the band. To meet the price of high-priced tools and self-adjusting milking stools is surely not the job of fools. The farmer who will crop his land each blooming year for all 'twill stand at last before the judgment bar and wake up with a jolting jar. You feed your horse hay and oats, you even feed your lambs and shoats and then you wonder why the land should make a fuss and grow a stand that's not enough to feed ten goats. Put back into the soil, my friends, some of the elements it lends. Remember 'tis the cow and hog that give your bank account a jog that fertilize your worn-out soil and help the mortgage men to foil.

should be placed in the farrow pen. This pen should be shut off from the main part of the pigery, or else be in a separate building so that it may be possible to supply good ventilation, light, fresh air, and dryness. The pen should be thoroughly cleaned, and it is advisable to scatter some airslaked lime around. These precautions will help to prevent disease and unthriftiness in the litter.

As farrowing time approaches care must be taken to avoid constipation in the sow. This condition is very serious, and results usually in the loss of most of the litter and endangers the sow's life as well. To prevent constipation give the meal as a thinner slop and keep up the supply of roots. It is advisable not to use long straw for bedding, particularly in the case of large, clumsy



The Body That Gives Our Farmers a Voice in Public Affairs—The Canadian Council of Agriculture. Here we may see the members of the Canadian farmers' parliament, the Council of Agriculture. From left to right in the front row are: C. W. Gurney, T. A. C. Crerar, H. W. Wood, R. McKenzie, Secretary, J. A. Maharg, R. C. Henders, Cecil Rice-Jones, Jas. Robinson and Hon. Geo. Langley. First above Mr. Langley is Mr. Musselman and second from him is Jno. Kennedy. Mr. Chipman, editor of the Grain Growers' Guide, may be seen to the left of the top. These men, and the others whose likenesses appear, are doing a great work on behalf of organized agriculture in Canada. They represent a growing power with which politicians will have to reckon in the future when the interests of the farmer are at stake. Photo taken at Winnipeg.

For Profitable Root Crops

More Suggestions from Macdonald College

THE preservation of moisture is one of the principal things to keep in mind during the spring work. The land should always be "closed up" with a drag or a fine spike-tooth harrow, not only before the actual working of the land commences, but also after each plowing, discing or cultivating. It is difficult, not to say impossible, to prescribe for the preparation of different kinds of soil. What we want is a seed bed well worked, fine and not too loose, and at least comparatively free from weeds.

Provided that the root land has been properly handled previous to seeding, there is no factor which exercises a greater influence on the yield than the date of seeding. In experiments conducted at the College during a five-year period early seeding on the 8th of May has more than doubled the yield of mangels and Swedes as compared with late seeding on the 8th of June and the 22nd of June respectively. Carrots and turnips have also responded very readily to early seeding. The old, golden proverb that "The Lord helpeth the early seeder" applies to roots as well as to grain.

Early seeding, combined with comparatively heavy seeding, results in a good stand; and a good stand is half the crop. With rows 25-30 inches apart 4 lbs. of carrot seed, 15 lbs. of mangel seed, 4 lbs. of swede seed and 3 lbs. of turnip seed may be considered as normal rates per acre. Seeding on drills is preferable on shallow, weedy or poorly drained land. On deep, clean and rich land seeding on the flat is better because it ensures a more perfect germination of the seed. It is also cheaper because the weeder or tilling harrow may be employed to advantage across the rows for muling and thinning purposes.

On flat land roll down each individual row, and three or four days after seeding harrow across the rows. Run a wheel hoe close to the rows as soon as the plants can be seen. Give frequent horse

cultivations during the summer in order to keep down weeds and to prevent evaporation of moisture. Single as soon as possible, mangels to 8 inches, swedes and turnips to 10-12 inches between the plants. Harrowing before singling facilitates the work. Carrots merely need to be harrowed or thinned with a sharp pointed iron rake to about ½-1 inch between the plants.

An All Cement Stable

Sanitary, Durable and Vermin Proof

QUITE frequently we hear a farmer remark that he has a cement stable, and we usually understand by this that his stable walls and floors are made of cement concrete. Seldom do we see or hear of other parts of the building or fixtures being made from this material.

Mr. R. F. Hicks, of York Co., Ont., has gone a little farther than most men and has built his cattle and horse stalls and partitions of cement. His stable has been in use for several years and has given excellent satisfaction. The partitions are four inches thick and are supported at the rear end by a four-inch iron pipe, which is filled with concrete, thus making it doubly solid. It is also well embedded in the floor and extends to the ceiling, serving as a support to the barn above. Running along the top of the front wall of the manglers is another pipe, three inches in diameter. This makes a nice, smooth surface for the animals to reach over, and does not irritate them in any way. A similar pipe extends the full length of each row of cattle, several inches from the front wall of the stalls and just high enough that the upper portion of the animals' necks rub on it, instead of on the cement wall. The wall in front of the cattle has semi-circular openings for each animal's manger space. Between each pair is a square cement water box, the water being under control from a central box with a float.

The stalls in the cattle section are about four and one-half feet high and those between the horses 5½ feet high. The partitions around the

box stalls are one foot thick and about four feet high.

Much of this cement work was done by Mr. Hicks, using lumber and other material which was to be found on the farm for forms and supports. Everything is re-inforced with barbed wire, which makes it very strong. A stable built after this fashion is almost indestructible and fireproof. Another point in its favor is that it is vermin-proof. If care is taken to have all sides smooth and then whitewashed, no more sanitary or durable building could be constructed.

The Cost of Growing Potatoes

Experimental Data from New Brunswick

IN potato growing provinces like New Brunswick there is always more or less discussion as to what it should cost to grow a good crop of potatoes, and statements vary from as low as \$40 per acre to as high as \$125. Naturally, there will be much variation in cost according to local conditions, and especially to the ability of the land to produce without expensive fertilizing. It should be borne in mind that it will usually cost the potato specialist more to grow his crop than it will the farmer who follows mixed farming and makes his potato crop merely one of his many activities.

With a view to getting actual figures under average conditions in New Brunswick, a careful record has been made at the Dominion Experimental Station, Fredericton, for the past two seasons with an acre of land set apart for this particular purpose.

Neither rent or land nor depreciation of machinery was included in the calculation, for these two are items that are largely in the hands of the individual grower. As a general rule, however, it would be fair to charge an rent, 10 per cent. of the value of the land, and special potato machinery will depreciate from 25 per cent. to 50 per cent. per year if used steadily for ten days each season. In 1915, the depreciation of the potato digger alone, used at the Experimental Station, was \$6 per acre.

In 1915, the acre was planted with Green Mountain, Irish Cobbler and Empire State. Seed, cultural operations and harvesting cost in all \$67.93. Eighty barrels of 185 pounds each of marketable potatoes were obtained and sold at \$1.75 per barrel, making a profit over cost of production of 90c per barrel. Seven barrels of culls were sold for \$3.50, so that the total profit for the acre amounted to \$75.50.

This land was rather wet naturally, and during the very rainy weather of June and July was several times flooded, causing missed hills and inferior plants generally. This land was originally cleared many years ago, and after cutting hay for 30 years it was allowed to grow up to spruce, birch and alder. It was again cleared in 1913 and grew buckwheat in 1914.

In 1916, an acre was planted with Green Mountain seed.

The total cost amounted to \$82.33, the increase over 1915 being due to high priced seed, higher priced fertilizer ingredients and very dear copper sulphate.

One hundred and twenty barrels of marketable potatoes were harvested and could have been sold at \$2.25 per barrel, making a profit per barrel over cost of production of \$1.56½, plus six barrels of culls at 50c, \$3.00, making a total profit of \$190.20.

Market price when potatoes were dug was \$2.25 per barrel. Later they could have been sold at \$3.25, but are held for seed.

This land grew hay for many years, and was broken up and grew potatoes with 750 pounds fertilizer in 1915, corn with 18 tons barnyard manure in 1914, oats without manure in 1915. This land is on a slope, fairly well drained, and except for washing out slightly between the rows felt no bad effects from the June deluge.

Depth of Seed Planting It Varies With the Soil and the Seed

WHEN a seed germinates, it sends out a sprout and some temporary roots. The sprout must push its way through the soil. The food stored in the seed is used to keep the young plant growing until it has time to send out roots from the sprout. This requires about a week. The roots that first appear die at this time. Therefore a small seed planted deep in a heavy soil may never come up, although it may start growth. The same seed planted the same depth in a sandy soil might easily grow.

Corn has larger seed than wheat. There is more substance in the grain and it can be planted deeper in the soil than wheat. The depth is not in proportion to the size of the seed, because the corn sprout is larger around than the wheat. Therefore for each inch of growth, more food is required.

The location of moisture is important. A seed planted in dry soil is not going to grow until it rains or until the soil becomes wet, and since as loose soil dries out quicker than a compact soil the seed must necessarily be planted deeper in the loose soil in order to get to moisture. For this reason the seed bed for wheat should be more compact than the seed bed for corn. The corn sprout will grow higher than the sprout of wheat because there is more plant food in the kernel.

Grain crops should be planted sufficiently deep to get the seed into moist ground and at the same time it should be planted shallow enough so the sprout can reach the surface. This depth varies according to the kind of seed, type of soil, and location of moisture.—O. S. R.

More Feed--Fewer Acres How Old Pastures Were Renewed

THE pasture fields are an important part of the dairy farm. No milk is produced so cheaply as that made on pasture. Investigations on farms in Illinois, on land valued at \$750 an acre, showed that pasturing was more economical than soiling; this, of course, being a comparison of straight pasture for the entire season as compared

subject with all dairy farmers. One of the best contributions to the subject comes from the pen of H. H. Kildee, of Minnesota, and appears in a recent issue of Hoard's Dairyman. Prof. Kildee writes as follows:

"Seven years ago, when the writer took charge of the dairy farm at the Iowa Experiment Station, it was apparent that something must be done to supply the needed summer feed for the growing herd. As we wished to grow our own alfalfa and clover hay and enough corn to fill the silos, it was plain that we could not increase the acreage allotted to the pastures.

"The pasture land was rather rolling and the farm having been cash rented for several

years previous to the purchase by the state, little attention had been paid to making the rolling pasture land more productive. The soil on the higher ground was very thin with clay and gravel outcropping. Grass was rather thin here and weeds had things very much their own way, so far as competition with grass was concerned. On the lower land, however, the soil was deep, but the grass did not do extra well because of the sod-bound condition. Then, too, the pasture became brown and lost its succulence, and therefore its values in midsummer because the blue grass predominated.

Methods of Improvement.

"In improving these pastures a liberal but well scattered application of manure was first applied in the early spring. Then a mixture of brome grass, timothy, sweet clover, and medium red and



The Championship Team From Eastern Ontario.

Here is District Representative Bradt, of Dundas Co., Ont., and his county judging team, which won out over all Ontario in live stock judging competitions last fall. Letters from each of these young men, telling of the training that they received from Mr. Bradt, appeared in Farm and Dairy of March 15.

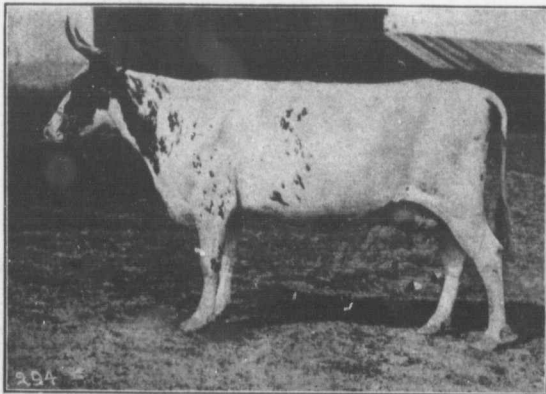
ture a less liberal application of manure was applied. The disc harrow was used to loosen the sod-bound condition, and clover seed, about two pounds per acre, was applied.

"The cows were not turned onto the pasture until May 29 and on subsequent years not until May 15. Turning the cows to pasture too early, before the grass gets a start, is one of the principal reasons why pastures are not as productive as they might be.

"The following spring manure was again applied to the higher land and a very small quantity of the same mixture sowed on the spots where the grass was still thin. As a result of this treatment, during the past five years from 40 to 50 cows have been pastured on a 1 1/2-acre pasture—replenished by six to nine acres of soiling crops; oats and Canadian field peas, alfalfa, and cane and cowpeas being used. The cows were pastured from May 15 to November 1. This pasture has retained its green color and succulence long after the pastures on neighboring farms have become parched and brown. The higher points of the pasture now support a luxuriant growth and there is sufficient variety present so that the cows do not tire of the brome grass, and the sweet clover is eaten down somewhat shorter than any other.

"Visitors during July and August frequently informed me that we ought to have more cows in the pasture when they noticed the abundance of green feed at a time when neighboring pastures were short and parched brown. Their surprise has been marked when they learned that the combined acreage allotted for pasture and soiling crops averaged less than 6-10 of an acre per cow."

Iowa conditions are not dissimilar to conditions in the best dairy districts of Eastern Canada, except in date and duration of season. For instance, when Prof. Kildee mentions pasturing on May 15, the date would need to be changed to June 1 to apply in Eastern Canada.



Ryangue Hattie 6th—A Canadian Bred Ayrshire Cow that Has Made Good in the U. S.

This cow was bred by Jno. Logan, Howick, Que., imported into the United States by P. Ryan, of Brewster, N. Y., and is now owned by J. W. Cline, Redmond, Washington. At her present home, Ryangue Hattie 6th has won a yearly official test with 17,214 lbs. milk and 506.91 lbs. butter fat.

with exclusive soiling, also for the entire season. The most advisable course was found to be pasturing, with soiling crops or summer silage to supplement dry pastures in midsummer. The improvement of pasture fields is, therefore, a live

white clover seed was scattered on the higher land, the quantity of the seed and the mixture depending upon the soil and the thickness of the grass. The disc harrow was used and followed by the drag harrow. On the lower part of the pas-

The summer silo is the ideal method of supplementing short pastures where there is the labor for a few minutes extra time for feeding each day. If soiling had to be practised fairly regularly all summer stable feeding might be a hardship. Under such conditions an annual pasture mixture of oats, spring wheat, barley and a little clover per acre would afford good feed and do away with stable work. This is the plan recommended by Mr. Leitch, of Guelph.

MADE FOR THE PURPOSE

Standard Hand Separator Oil

is manufactured especially for use on hand separators, where the close fitting bearings require a quick-acting lubricant. It is a pure mineral oil which cannot gum or clog the bearings. It not only serves as a superior lubricating oil but prevents seam rust and corrosion on the exposed surfaces of the separator. Put up in pint, quart, half-gal., gal. and 4-gal. cans. Sold everywhere by reliable dealers.

THE IMPERIAL OIL COMPANY
Limited
BRANCH STATIONS THROUGHOUT
CANADA



CITY MILK SUPPLY

Milk Epidemics

MILK epidemics are an established fact. Milk may be contaminated when it comes from the cow but in the great majority of cases it is contaminated after it is drawn, by sick persons coming directly into contact with the milk, or in water used for cleansing the milk vessel.

It is quite definitely established that the following diseases may be transmitted directly from the cow to the human: Tuberculosis, foot-and-mouth disease, cowpox, milk-sickness, catarrh of the stomach and intestine, enteritis, white anthrax rashes, actinomycosis, purid sore throat and many other diseases are looked upon as doubtful in being transmitted in this way.

Most of the milk-borne diseases are the result of contamination. The most common are typhoid, diphtheria and scarlet fever. Asiatic cholera, tuberculosis, syphilis, erysipelas and many others are placed in the doubtful class or at least of very uncommon occurrence.

The principal things to guard against in connection with the contamination of milk are typhoid fever, diphtheria, scarlet fever, and intestinal diseases in the summer time, especially among children. To prevent these diseases, it seems to me, the main thing is to preach milk hygiene to provide competent dairy inspection, and more than all, as an immediate protection, see to it that there is active cooperation between the doctors and the board of health to the end that every case of infectious disease, both at the dairies and houses where milk is delivered, shall be reported to the proper authorities without delay.—Geo. H. Glover.

made by more than one engaged in this branch of the dairy business that prices paid for sweet cream are not sufficiently higher than the prices paid for cream for churning. On the motion of Mr. R. W. E. Burnaby, of Jefferson, seconded by Mr. Richardson, of Queensville, it was decided that the price for sweet cream during the coming five months be 50 cents per pound butter fat, cans and jackets to be found and freight paid by the purchaser.

Are His Figures Correct?

ONE hundred hives of bees are worth as much as, or even more than, an 80 acre farm." This statement is credited to Francis Jager, Apiculturist at the Minnesota College Farm. His figures are submitted for the consideration of Canadian beekeepers, and their criticism.

For capital invested and labor required, says Mr. Jager, bees are the greatest money-makers one can keep on the farm. One hundred pounds is a fair average production under good management of the bee yard. At this rate 100 hives would produce 10,000 pounds of honey in one year. This, at 10 cents a pound, would give a return of \$1,000 for one year.

None of this has to be used to pay for feed for the bees for all their food and honey come from the flowers of the roadsides, woods, and meadows. Further, little or no rent is required for the land, for the beehives can be placed along roadsides and in meadows where the bees have food at their very doors.

If a yard is needed for the bees, a quarter of an acre is more than enough for 100 hives. This should cost \$1.50 as rent.

The only large expense is for equipment such as hives and supers, and this equipment will last a life-time. It can be supplied for \$300. This means a yearly charge of only about \$15. The bees can be obtained free by catching swarms in summer. Then by the use of pure-bred Italian queens, obtainable for a small sum, these swarms can be multiplied into a pure-bred apiary.

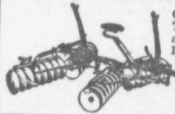
The total annual cost of the bees for one year then is less than \$20 exclusive of labor. The actual labor required is worth \$124 at the rate of \$400 per year, for only one-third of the time of one man is needed, according to Mr. Jager, who finds that one man can easily care for 300 hives. This leaves a net profit of \$38 for one year.

The 160-acre farms of Minnesota produce on an average, according to 1910 census reports, a labor income of \$330 a year.

Prevent Road Dust

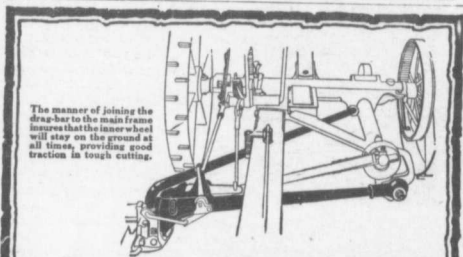
DUST in the road is largely caused by the breaking up of the ridges formed when the road bed is wet from standing water. If the road bed is kept well crowned and smooth water will run off. The surface will soften up some in case of a long rain, but it will not be nearly so bad as when there are ruts which hold the water. The wheels of each passing vehicle make the rut a little deeper. The best way to keep the road bed smooth is to run over it with the road drag. This should be done soon after it rains. The soil is then soft so it can be easily scraped. Any projections will be scraped off and dropped into any depressions. The harrow also lays the soil down in layers. It sort of plasters it down, which makes a harder surface than when the soil is dumped onto the road bed. The road drag is the most effective dust preventer except oiling the roads.

BISSELL Double Action Harrows will thoroughly cultivate and pulverize any soil.



One Harrow is Out Throw; the other is In Throw. They are simply constructed, rigid and durable. The Gangs are flexible and the Disk Plates are so designed that they "hang" right into the soil. Bissell Harrows are built in sizes and weights suitable for horse or tractor use. Write Dept. R for free catalogue.

T. E. BISSELL CO., LTD., Elora, Ont.



The manner of joining the drag-bar to the main frame insures that the inner wheel will stay on the ground at all times, providing good traction in tough cutting.

Deering—The Light Draft Mower

HAVE you ever noticed the extra long drag-bar of the Deering mower, its connection to the frame, and the way it supports the cutter bar? It is one of the exclusive and outstanding good features of the Deering, and an important reason why this mower has built up a reputation for light draft and great cutting power.

Through the use of the continuous drag-bar, the cutter bar has a flexible movement and floats lightly over even and uneven ground. You can test this by taking hold of the end of the Deering cutter bar and noting how easily you can lift it. The weight of the cutter bar being entirely on the wheels, the traction is increased and the wheels prevented from slipping or being lifted from the ground.

The Deering mower has many other good features. You should write for complete description, or better still, examine the mower. Made in the desirable sizes.

Deering rakes, tedders, International side delivery rakes, loaders, and hay presses are machines that save time and labor in the hay field. Write for complete information.

International Harvester Company of Canada, Limited

BRANCH OFFICES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.
EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

Toronto Milk Prices

TORONTO is to have no reduction in the present price of milk.

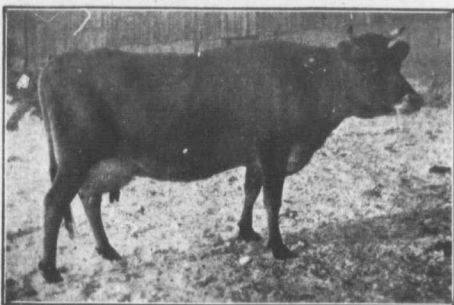
Such was the decree passed by the Toronto Milk and Cream Producers' Association at their meeting in the Postoffice Hall on Saturday last. The eight-gallon can of milk must bring two dollars, and this price has prevailed for the past seven months. Last summer's figure for this can was only \$1.25, but the producers state that, with the increasing price of feed and the scarcity of help, it is next to impossible to make any profit even at this higher figure.

E. H. Stonehouse, Weston, who is president of this organization of 1,500 milk-producers, quoted figures which gave ample proof that during the past winter the eight-gallon can cost \$2.50, including overhead expenses, to produce.

Among those who addressed the meeting were Vice-President Orr, Mr. Newhouse, of Snelgrove, Mr. Hicks, of Newtonbrook, and Mr. A. Foster of Markham, and representatives of fourteen sub-associations who spoke for more than 1,500 producers in all, reporting on affairs in their several districts. The scarcity of labor on the farms received attention from most of the speakers, while Mr. Hicks, of Newtonbrook, gave it as his opinion that the reason for the big movement of the population from country to city was due to the small wages paid on the farms, a matter that cannot be remedied while prices do not give the farmer a sufficient profit.

After the adjournment of the general meeting the cream producers, who were greatly in the minority, were stayed to discuss the prices for commercial cream. The complaint was

When You Write---Mention Farm and Dairy



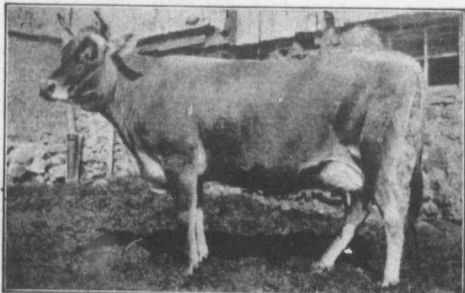
Flora of Glenboyle, a Canadian Record of Performance Champion. The cow illustrated was the first cow in the Jersey herd of D. A. Boyle, Woodstock, Ont., to make a record production in R.O.P. work. Her yearly record as a three-year-old was 11,954 lbs. milk containing 634 lbs. fat. —Photo by an Editor of Farm and Dairy.

Two Jersey R.O.P. Champions

Editor Farm and Dairy.—It is a pleasure to comply with your request regarding the new R.O.P. Jersey three-year-old class leader, Flora of Glenboyle. She freshened Sept. 5th, 1915, and started test Sept. 8th. Her grain feed consisted of rolled oats, bran and oil cake meal. Roughages were clover hay, alfalfa hay and silage. She also had turnips and pasture during the season. She was out every day in winter and stood in stanchion row with others in our small herd. She made 11,954 lbs. milk containing 634 lbs. fat and freshened with twin heifers 40 days after finishing test.

Next to her stands Beauty Maid, new R.O.P. Jersey four-year-old class leader, having finished her test on January 24th, 1917, with 14,852 lbs. milk and 872 lbs. fat, which makes her highest Record of Performance four-year-old cow, all breeds. She was treated in much the same way as her stable companion with the addition of a little cotton seed meal. Not the least interesting feature of this record is that Beauty Maid was cared for and milked every time throughout the test by the young herdsman, George Flood, she being the second cow with which he has had anything whatever to do in R.O.P. work, the first being Flora of Glenboyle—D. A. Boyle.

Lady: "Are these eggs fresh?"
Clerk: "Couldn't say, mum. I've only been working here six months!"



Beauty Maid, in Her Class a Champion Over All Breeds in Canada. Beauty Maid is also owned by D. A. Boyle, Woodstock, Ont. Her R.O.P. production, 14,852 lbs. milk and 872 lbs. fat, makes her champion over all breeds in butter in the four-year-old class. Figured on an 80% basis, this production is equal to 1,999 lbs. of butter. The completion of this record gives the Jerseys first place in two of the four R.O.P. classes.

An Appeal to Reason

Editor, Farm and Dairy.—Why should not organized labor and organized farmers of every nation follow the example of the workmen and peasants of Russia in issuing an appeal to the workmen and peasants of Germany and Austria to throw off the yoke of military tyranny which enthralled them? Why should not organized boards of trade of every nation issue an appeal to the business men of Germany and Austria to rid themselves of obnoxious military autocracy? Why should not the organized religious workers of every nation issue an appeal to the religious workers of Germany and Austria to denounce and repudiate the devilish despotism of the Kaiser and his clique and urge the people to follow the example of the people of Russia and revolt immediately against the obnoxious rule of the Hohenzollerns and help bring to an end the awful deluge of suffering and devastation which that insane dynasty has brought on humanity?

Why should not the Canadian Council of Agriculture and the executives of the various farmers' organizations of Canada, and the organized labor unions of Canada, and the organized churches of Canada all take action at once in issuing such an appeal to the farmers, workmen, and religious workers of Germany and Austria, and set a worthy example for the people of other nations to follow?—Wm. E. De Forest, Springfield, Ont.

How they made this road durable—

THIS is Kingston Road, an important highway in Scarborough Township, the main road leading east from Toronto, carrying heavy traffic the whole year round.

Originally it was built of plain macadam, but this was expensive to maintain because the automobiles wore it out almost as fast as it could be

rebuilt. That made it expensive, and the money which the authorities wanted to expend on new roads had to be expended in keeping the old ones going.

In 1915 this road was given a treatment with "Tarvia-B," a coal-tar preparation of great penetrating power. It is applied from a motor tank-truck or a modified sprinkling-cart at very low expense. It permeates into the macadam and hardens by evaporation, making a tough, plastic carpet coat of Tarvia concrete.

As soon as the Tarvia was ap-

plied the automobiles ceased to do any serious damage to the roadway. The rough tarviated surface sustained little or no damage from the wheels. It shed water promptly and quickly and excluded frost.

In 1916 the road was given another coat of "Tarvia-B," reinforcing the first, at a diminished expense.

In 1917 it will need a little "Tarvia-B" again and a little touching up.

As time goes on the intervals between treatments become longer and the annual expense gets lower and lower. Resurfacing will be required only one-third or one-quarter as often. The Tarvia way is the cheapest way to maintain macadam. Many towns and counties have adopted it for that reason alone.

We have illustrated Tarvia booklets which we are glad to send to any ratepayer. They show many nominal roads all over the Dominion.

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.



Kingston Road, Scarborough Township, York County Highway Board, Ontario. Treated with "Tarvia-B" in 1915 and 1916.



BUILD A STURDY STAVE SILO

10% Cheaper and 100% More Durable

Our Preservative Process is an Exclusive Feature.

A 50-page Fully Illustrated Descriptive Catalogue free on request.

Territory still open to live Agents.

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425 Atwater Avenue Montreal, P.Q.

When You Write---Mention Farm and Dairy

Seize this Export Market Opportunity

In 1916, Great Britain Imported
66,064,110 dozen eggs

TO that total Canada contributed 14,317,780 dozen—of which 7,363,290 dozen were United States eggs. Therefore Canada's net contribution was only 6,954,490 dozen domestic eggs.

CANADA'S eggs are of First Class quality and hold a high reputation in the British market.

THE present is a most opportune time to secure a permanent share of this trade.

TO do so, we should increase the output by at least 10 MILLION DOZEN.

THIS means 15 more hens on every farm in Canada.

Set more eggs—Raise
more chicks—Act now
—This is National Service.

Ask for Poultry Bulletin of
Information Bureau

DOMINION
DEPARTMENT OF
AGRICULTURE,
OTTAWA.

HON. MARTIN BURRELL,
Minister.



A Brooder Ration

By F. E. Ellis.

LAST week in Farm and Dairy I gave a feeding ration recommended by Prof. W. R. Graham, which had given great satisfaction in carrying the chicks through the brooding period. Shortly after that article was written, I visited the poultry department at Guelph, and in discussing the chicken business with Prof. Graham found that the ration I used last year had been improved upon. Here is the new ration as advocated by the professor:

No feed for the first two and one-half days.

For the first five days, feed five or six times daily, one ounce to 60 chickens of a mash mixed in the following proportions: two cups bread crumbs; two cups rolled oats; one cup hard boiled eggs and grit on the feed board once a day. After the first day's feeding, give one-quarter of a teaspoon of chickfeed in the litter.

On the second week give two feeds a day of chick feed and two feedings of wet mash, giving all of the wet mash they will eat at least once a day. The mash is composed of 100 lbs. bran, 100 lbs. low grade flour; 100 lbs. corn meal; 100 lbs. beef scrap and 35 lbs. of bone meal.

Leg Weakness in Chicks

“WHAT is the matter with my chickens? On a time they seem to lose the use of their legs and the trouble usually results fatally.”

Leg weakness herein described is one of the most common complaints on the poultry farm at this season. Where the chickens are brooded naturally the trouble does not appear. It is the poultryman who follows artificial methods who suffers from leg weakness. At the first sign of the trouble an effort should be made to get the chickens out on the ground. Some poultrymen, who make a specialty of very early chickens, will even scrape the snow off the ground in front of the poultry house, in order to get the chickens out. From this date on, however, there should be little trouble in teaching the chickens to run out of

Mention Farm and Dairy when Answering Advertisements

The New Series CHEVROLET

The Chevrolet has the famous valve-in-head motor which means fuel economy and power.

This alone would justify your choosing the Chevrolet in preference to any car selling for less than \$1000, yet there are many other exclusive features to augment your decision. See the Chevrolet before you buy your car.

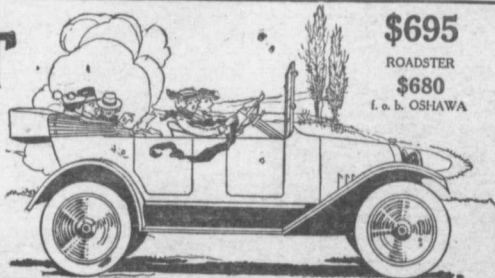
CHEVROLET MOTOR COMPANY
OF CANADA, LIMITED

OSHAWA, - - CANADA

WESTERN SERVICE AND DISTRIBUTING BRANCH,
REGINA, SASK.



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doors and then back to the shelter of the cover before they are chilled.

The trouble can be avoided almost entirely by proper feeding. The first essential is lots of green feed. Sprouted oats are good, the green blades of fall wheat are equally good and even mangels shredded up finely are appreciated. Perhaps a better plan still is to cut sods on which the grass has started into life and throw them into the brooder house.

Leg weakness may indicate a lack of animal food in the rations. Chick feed scrap and lots of skim milk, preferably sour skim milk that is thick will supply this deficiency. Leg weakness should be avoided by all means as it is a setback that it may take weeks from which to recover.—P.T.C.

Keep Houses Dry

GREAT care must be taken to keep dampness out of the chicken houses this spring. Waterways should be dug around chicken houses, so that the melting snow may run away from the foundation. If the walls are high and the floor of the house is a foot or more above the level of the ground, the capillary movement of the water being cut off by coarse gravel or cinders beneath it, a minimum of labor will be needed to keep the floor dry and comfortable for the flock. If, however, the walls of the foundation are low and the house is on level ground, there must be constant watching lest the water seep in from beneath, or run over the walls, and result in damp, soggy litter. Such conditions bring on colds, bronchitis, and roup. A temporary floor of boards on top of cement floors will prevent the dampness that results from the seepage of water.

The litter should be renewed very often, or it will become damp and foul resulting in disease and death. Cornstalks left in the manger, if cut up in short lengths, make fine litter for springtime—one of the best of all materials on the farm for the poultry-house litter for damp seasons.

Sneezing and rapid breathing in the flock, show that the hens are catching cold. Soon there is a watery discharge from eyes and nostrils. Give a purgative of Epsom salts, one tablespoonful to one gallon of water. Get the following prescription filled at the drugstore: Magnesium sulphate, 10 ounces; magnesium oxide, 1 ounce; sulphate of iron, 2 ounces; ground ginger, 2 ounces; flour of sulphur, 3 ounces; red pepper, 1-2 ounce. Mix thoroughly and feed in mash at the rate of one teaspoonful to 25 hens. Wash eyes and nostrils with three per cent. solution of boric acid when watery discharge is seen. Separate those seriously affected from the rest of the flock.—N. E. C.

Poultry Jottings

Eating geese at Michaelmas was a very early custom in England for as far back as the 10th year of the reign of Edward IV. (1471). John de la Haye was bound to render to William Baraby, Lord of Laestres, in the county of Hereford, for a part of the demesne land, one goose fit for the Lord's dinner on the feast of St. Michael, the Archangel.

The more range the growing stock get the better; it results in more vigor and better growth. It will also help to reduce the feed bill, as much feed can be secured from grass-hoppers, worms and insects. For best results provide the young stock with a run by themselves, and they should not be placed in the same house as the old birds. The coops should be constructed so as to provide an abundance of fresh air during the warm nights.

Massey-Harris Service

Talk No. 3.—Extra Parts for Repairs.

MASSEY-HARRIS Implements are built to last, and many have been known to give splendid satisfaction for twenty or twenty-five years. It is only natural, however, that some parts will wear and others be accidentally broken, and the matter of securing extra parts promptly is an exceedingly important one.

We have always prided ourselves on being able to promptly supply duplicate parts for any Massey-Harris machine no matter how long in use. All Massey-Harris parts are interchangeable, that is when any part is worn out by long continued use or broken by accident it can be promptly replaced by one exactly like it. This is true whether the part desired be made of Wood, Steel, Cast or Malleable Iron, or Canvas. Parts that go into the machines and parts for Repairs are made from the same patterns, are identical in every respect and will give satisfaction in every case.

By our complete organization for the handling of Extra Parts, we are in a position to give prompt service to our many thousands of customers.

Parts in common use are kept on hand at thousands of Local Agencies throughout Canada, while large stocks are maintained at our factories, branch houses and other convenient points from which other parts can be had promptly.

Some idea of the expense of maintaining this efficient Repair Service may be gained from the fact that the number of different parts listed in our Extras Lists is approximately fifty thousand, some of which are kept on hand by the hundreds or even thousands, representing a value in Parts and necessary Warehouse accommodation for same running into millions of dollars, with many thousands of dollars paid annually to maintain competent and experienced staffs at various points to handle same.

The importance of this service will be best realized during Seeding or Harvesting when every hour counts, and great loss may be sustained if parts cannot be secured promptly.

MASSEY-HARRIS CO., LIMITED

Head Offices—Toronto.

Factories at Toronto, Brantford and Woodstock.

Branches at:—Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton.

AGENCIES EVERYWHERE

Single Comb White Leghorns

Get in right this season by ordering BABY CHICKS from our noted heavy winter layers. Our stock has been Bred-to-Lay and Pay for generations. Baby chicks \$15 per hundred. Safe arrival at destination guaranteed.

F. R. OLIVER, Roseheath Poultry Farm, RICHMOND HILL, ONT.

BARRED PLYMOUTH ROCKS

Eggs from high class bred-to-lay strain. \$2.00 for 15. Stock for sale.

A. P. MacVannel - Picton, Ontario

In Union There is Strength

How a U.F.O. Was Formed

EDITOR Farm and Dairy: Received the sample copy of your paper, and have passed it on to a neighbor, as I have been a subscriber since last September, and I must tell you it was through your valuable paper that our U.F.O. Club was started in Walton. When I subscribed for your paper, I did not think I had much need for it, as I was getting the news and thought it quite sufficient. Now I look for The Farm and Dairy first, and I think it the very best paper for the farmer.

When I read about the U.F.O., and cooperative society, it seemed to touch a responsive chord. I mentioned it to some of the neighbors and they all seemed to be interested, so they asked me to send for Mr. J. J. Morrison, and he came up and organized a club on the twenty-third of January, and now we have a club of one hundred and seven members, with more to join at our next meeting, which will be the second of April.

We hold a meeting every two weeks and have ordered two car loads of flour and feed and a great amount of groceries and sugar, but it seems impossible to get corn, as we ordered a car when we were in Toronto at the convention, and it has not arrived yet.—John J. McElvinn, Walton, Ont., President of U.F.O.

Selling Farmers' Produce Cooperatively

THE success of the United Farmers' Cooperation Company Limited, in the buying and selling of supplies to the farmers of Ontario has led to a strong desire being expressed by farmers in different parts of the province for the company to undertake the selling of live stock, grain and other farm products. Already the company has been doing some business along this line, with the result that it is expected that in time this will become one of the greatest departments of the company's activities. While in western Canada, an editor of Farm and Dairy had an interview on this subject with Mr. Win. Moffatt, the secretary of the Grain Growers' Grain Company, and with Mr. Rice-Jones, president of the Alberta Cooperative Elevator Company Limited, both of which companies have departments which have undertaken handling farm supplies with considerable success.

In Alberta most encouraging progress has been made in the handling of farm supplies during the year ending July 31st, 1916, the live stock department of the Alberta Farmers' Cooperative Elevator Company, Limited, sold 763 cars of live stock, consisting of 58,002 hogs and 1,129 cattle and 806 sheep. The cost of operating this department was \$10,611 and the department showed a net profit at the end of December of \$3,619, being equal to about one half of one per cent of the capital used, or five dollars a car. In addition to this, livestock was sold on commission through the office of the company in the Calgary stock yards, on which the commissions earned amounted to \$1,042. This made a total profit in the Live Stock Department of \$4,661. Up to the end of July 1916, the department had handled a total of 33,516 hogs, 3,119 cattle, and 659 sheep.

The number of hogs handled would have been more, had it not been for the short crop in 1914 which led a large number of farmers to go out of hog-raising. "We are," said Mr. Rice-

Jones, "continually increasing the percentage of live stock that we are handling through the Calgary stock yards. In one week we handled 43% of the hogs and 13% of the cattle going to the stock yards. We have not attempted so far, to do very much in the cattle business, but are gradually developing that end of the department."

Farmers' Produce Exchange.

Owing to the fact that Winnipeg is the largest city in Manitoba, a considerable portion of the farmers in that province ship their farm produce to Winnipeg for sale. This led to a desire being expressed that the Grain Growers' Grain Company should change, which would sell their farm products for them to the residents of the city. A company was therefore organized for that purpose. At first the company did not prove profitable, but as those in charge of it became better acquainted with the market conditions, better results were obtained, and since then a small profit on the business has been shown. "We pay the farmers market prices for all goods shipped to us," said Mr. Moffatt, "paying them cash on the basis of the highest wholesale price less ten per cent. Should the price of these products go down before we sell them, it is our loss. Should it advance we gain. The goods are sorted at our doors and the price paid graded accordingly. The quantities of each of the grades received are entered in the ledger and credited to the shipper. We have sold \$1,300 worth of goods over the counter to city people in one day."

"Our greatest difficulty has been to get sufficient supplies of the different lines of goods we handle and to get quality. There is no trouble in selling the goods but we do find it difficult to keep up the supply. One month, say last month, we anticipated a shortage in butter, and laid in 2,800 lbs. It soon was all sold.

"We took stock on the 1st of January in order to compare with the previous years. We find our business had increased from \$42,000 to \$78,000; nearly double the business of the year's business, and our profits of the year's business, after all expenses paid, and allowing interest on money employed in the business, amounted to \$930. The following are the amount of products handled:

"Beef, 120,000 lbs.; butter, 25,000 lbs.; eggs, 40,000 doz.; poultry, 55,000 lbs.; lamb, 5,000 lbs.; pork, 48,000 lbs.; bacon, 16,000 lbs.; veal, 6,000 lbs.; potatoes, 153,900 bus.; hay, 69 cars; apples, 4 cars.

"Our city trade is being increased from month to month, and the average turnover now is from \$5,000 to \$8,000 a month. The greatest difficulty is in getting sufficient produce from the country to supply our city trade. This, however, is growing, and we are hoping for a more successful year again this present year.

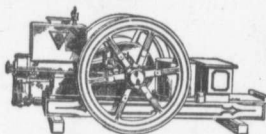
The foregoing statements indicate something of the possibilities ahead of strong farmers' organizations that undertake the sale of farm products as well as the purchase of supplies for their members.

Mr. Morrison, Sr., Dead

MR. J. J. MORRISON, Secretary of the U.F.O., will have the sympathy of his many friends in the movement in the loss of his aged father, who died at his home in Wellington County last week.

"The greatest convenience on the farm"—

that's what farmers who own them say about



Alpha Gas Engines

AND that is what you, too, will say after you have used one and seen how much time and work it saves.

If you want to cut or grind feed, fill a silo, saw wood, or pump water, or if the women folks want to run the cream separator, the churn or a washing machine, the ALPHA is right on hand ready to do the work—and do it more quickly and more cheaply than you can get it done in any other way.

The ALPHA is a powerful, smooth-running engine which will develop its full rated horsepower on a minimum amount of either gasoline or kerosene. The sensitive governor prevents any waste of fuel during changes in load.

The ALPHA has no trouble-making batteries, but starts and runs on a reliable low-speed magneto. It is so simple that a boy or a woman can start and operate it, and this simplicity means low upkeep cost and exceptional freedom from repairs.

You need a good gas engine on your farm. Send for our illustrated engine catalogue, which describes the ALPHA in detail and tells why farmers who use it get the most for their money.

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

THE DE LAVAL COMPANY, Ltd.

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

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



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SHAW MANUFACTURING CO.
Dept. 138, Galesburg, Kansas, U.S.

SEED CORN

A particularly fine lot of hand selected seed on the cob, Long-fellow, White Cap, Leaming and Bailey.

Write for prices delivered.
J. S. WAUGH, Chatham, Ont.

Outwitting the Frost King

When the snow lies deep on meadow and pasture, the farseeing dairyman—rejoicing in his trusty Natco Silo, Sweet-Juicy and Free from mold, the silage he holds the cows to full milk flow and puts flesh on the steers and fattening lambs. Your corn crop will go 40% farther when preserved in a

Natco Impervishable Silo

"The Silo that Lasts for Generations"
Built of glass hollow tile impervious to air and moisture, and frost-resisting. It is the silo that needs no painting—has no holes to lighten. Strongly reinforced and fully guaranteed. Simple to erect. No special shaped or fitted any mason can erect a Natco. Will increase the value of your farm.
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**In Painting
"Circles"**

—or wherever craftsmen gather, it is usually observed that

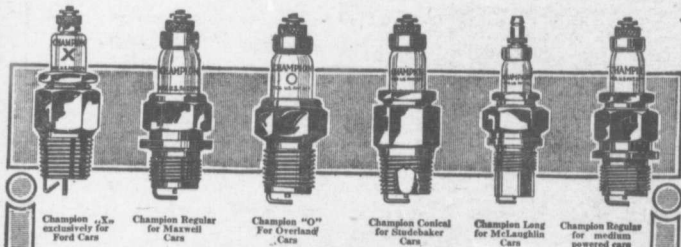
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When You Write---Mention Farm and Dairy



Guaranteed Spark Plugs For Every Make of Car

No matter what make of car you are driving there is a type of Champion-Toledo Spark Plug that has been specially developed for your motor under the most exacting road conditions, that a plus efficiency may be assured for every emergency.



**Champion
Toledo** Dependable
Spark Plugs

are exclusive equipment on all new Ford, Maxwell, Overland, Studebaker and over one hundred other makes of automobiles. The manufacturers have selected them because exhaustive tests have proved that the Champions designed for their motors give the maximum of efficiency and satisfaction.

When replacing the plugs in your car be guided by the selection of the manufacturer who made it.

Any Auto Supply dealer or garage can supply you with unconditionally guaranteed Champions for your motor.

Be certain that "Champion" is on the porcelain.

There is a Champion for every type of Farm Engine or Tractor.

Champion Spark Plug Co.
of Canada, Limited
Windsor, Ontario

16



Champion Heavy for High Powered Cars



Champion "All-in-One" Priming Plug

HORTICULTURE

Orchard and Garden Notes

ZINNIAS make good bedding plants as well as cut flowers. They may be started from seed now.

Cut out the old dead wood of the currants and thin out new shoots if they are thick. Leave no more than can have plenty of room to grow.

Give cauliflower, cabbage, and celery plants plenty of air.

Has the orchard been sprayed yet? Keep tulips covered until they begin to grow into the covering.

Seedlings should have plenty of air and sunlight to keep them stocky.

Do not prune spring-flowering shrubs until after they flower. Those that flower in autumn may be pruned now.

Many seeds will germinate better and the plants from them will be much stronger if they are placed near the glass in a greenhouse or cold-frame.

Watch the hotbeds and cold-frames

on warm days. A few minutes of hot sun on a hotbed will raise the temperature to the injury of the crop planted unless air is given.

Plums do well on sandy soil. Apples do best on a loam soil underlaid with clay. Many times a side hill may be made good use of for apples or plums.

Every farm home should have a good strawberry bed, 75 or more raspberry bushes and a few black, white, and red currant bushes. The black currants are thrifty and vigorous of growth. Red currant are sometimes a discouragement, because the currant worm gets the leaves. This is easily prevented by spraying with Paris green or arsenate of lead.

Strawberries for the Home

STRAWBERRIES are easy to grow; the easiest to grow of all fruits I believe. The berries are delicious either for consumption in their raw state or when preserved. We always plan to have an ample supply in our home. Generally we have a goodly surplus to market and the strange notion to me has always been that we could find a ready market for every berry we could spare among our immediate neighbors, practically all of whom are farmers. From our own experience we believe that every farm garden should have a strawberry patch.

Our strawberry patch consists of a dozen or more rows along one side of a large kitchen garden. The land is thoroughly prepared in the spring, having received a heavy coating of manure during the winter. It is not yet too late, however, to apply the fertilizer. When the land is well worked down with disk and drag harrows, we set the plants in rows four feet apart and 18 inches apart in the row. The simplest method of setting is to drive a spade into the soil, push it back, insert the plant against the straight cut surface, withdraw the spade and press the soil back against the roots with the heel. Setting in this manner, a good sized patch could be completed in an hour or two. Of course, if there is not lots of moisture in the soil at the time, it is advisable to pour a half pint of water or so around the roots of each plant, but it would be a mistake to first set the plant and then water it. During the first season all that is necessary is to cultivate frequently, pull off all blossoms and go through with the hoe two or three times to keep down weeds between the plants. We have never attempted to direct the runners other than to run the cultivator the same way in each row at each cultivation.

The next year we get our first crop. In the spring of the year the bed is weeded, although I believe some strawberry experts advise against even this. After the crop is off we mow the vines, cultivate between the rows and later in the season attempt to hoe out some of the weeds. Our method of renewing the bed, which is done every second or third year, is not to set out a new plantation as the commercial strawberry grower would do, but plow down one side and the middle of each row. The younger plants are on the outside of the row and we leave a row of these young plants about six inches wide. As a general rule the wood ashes from the kitchen range find their way to the strawberry patch and the plants are mulched with coarse manure each fall. This keeps the bed fertilized and we expect to get heavy crops from this same plot for many years to come. Nothing difficult about this. No reason why anyone should not have strawberries of their own.—E.P.K., Oxford Co., Ont.

Please Mention Farm and Dairy when Writing Advertisers

SHEEP AND SWINE

Fatality in Pigs

I HAVE a litter of little pigs five weeks old. They are fine pigs, and everyone who sees them remarks on their fine condition. Two of them died this week, however, and upon opening them we found a quantity of yellow water, the insides floating, and the heart in a big bag of bloody water and eaten full of holes like a watermelon. The liver is about the size of an ordinary hen's egg. They seem to be dead at night. Next morning they are dumpty, and are dead following night. Is the trouble a disease and is it contagious? Will the same stabbe as the cattle? The pig pens are cleaned every day and the pigs given a dry nest of oat straw.—Mrs. D. S., Nipissing, Ont.

The disease is not contagious, hence there is no danger of the cattle contracting it. The trouble is doubtless due to want of proper ventilation and lack of exercise. See that the pens are well ventilated, and also see that the pigs have plenty of room to move about. Any day that is fine enough allow them to run for a few hours in an open shed or out in the yard.

Making the Most of the Spring Litter

(Continued from page 2.)

is necessary in starting the pigs on oatmeal siftings, but once started they do exceptionally well on it. A substitute for skim milk that is now coming into favor in this country is tankage. This is a feed very rich in protein, and should be fed in small quantities in conjunction with shorts or middlings. The proportion of tankage to meal should not be more than one to ten. With a good supply of skim milk, shorts or middlings may be added, gradually increasing the meal as the pigs grow older. Too much emphasis cannot be laid on the importance of having skim milk for young pigs. It is extremely valuable at this period of the pig's life, and it is hard to successfully substitute as a feed for growing pigs.

The castration of all male animals not intended for breeding purposes should be performed when the pigs are from four to five weeks old. Weaning may be done when the pigs are from six to eight weeks of age, depending upon the condition of the sow and upon how well the litter is coming on. If the sow is in good condition the pigs may be left on until they are about eight weeks old. If the sow is getting rather low in condition it is usually advisable to wean the pigs a little sooner. It is a good practice to gradually wean them off, keeping the sow away for a few hours the first day, gradually increasing this period for a few days. If the little pigs have learned how to eat there will be no difficulty in weaning and they will not be hindered in their development."

A Dip for Sheep

WHAT kind of material is used for dipping sheep, and where could I buy one of the commercial brands?—R. C., Quebec.

Dips can be classified according to the nature of the poison they contain, as carbolic, arsenic and tobacco. Most standard proprietary dips will produce effective results providing the directions of the manufacturers are carefully followed. A good dip is "freeo-dip" manufactured by Parke-Davis Co., of Walkerville, Ont. Cooper's is a standard Old Country dip. A lime sulphur combination may be prepared at home. The dips containing the least lime and sulphur have been found to be effective and produce no noticeable effect upon the wool. The Colorado dip consists of 35 lbs. of flowers of sulphur, 11 lbs. of unslaked lime and 100 gallons of water. United States Bureau of Ani-

mal Industry recommends the following proportions: 24 lbs. of flowers of sulphur, 8 lbs. unslaked lime and 100 gallons of water. The objections urged against lime and sulphur dips based upon the injuries done by a very strong dip, cannot be applied to these.

To make a lime and sulphur dip requires more time and care than is usually given and for this reason the standard brands are preferred. The lime and sulphur should be weighed and the exact quantity of water measured. The given quantities of lime and sulphur are taken and water added

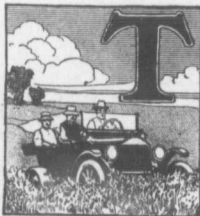
until it can be rubbed into a creamy paste. This mass is now boiled in from 25 to 30 gallons of water for two and one-half hours and stirred occasionally during the boiling period. The mixture is now allowed to stand overnight so that all the solid matter may settle and the clear liquid be drawn off. It is important that only the clear liquid be used. This is diluted in the dipping tank with sufficient warm water to make 100 gallons and is ready for use. Where only a few sheep are to be dipped it is doubtful if this mixture would be economical.

Prof. W. T. Connell, Provincial

Pathologist at Queen's, is making an analysis of cheese which poisoned some residents of Osgoode township in Carleton county two weeks ago. A Kingston dairy school student made an investigation and forwarded a piece of cheese. Suspicion is raised because chemical action does not poison cheese as it does milk.

When the wool is delivered at Guelph, Ont., the grower will be paid 50 per cent. of its estimated value and the balance when the wool is sold. The wool will be insured to its full value by the association.—Live Stock Branch.

A Car of Proven Quality



THE Ford car has been on the market twelve years, surely long enough to have proven its high quality. There is nothing experimental about it. Every part has stood the test of time and proven its stability with hard service. No other car has ever approached the durability records of the Ford.

No matter what price you pay for a car you cannot get one with a stancher chassis. Government Laboratory tests have shown that the different parts of the Ford car are superior to those in any other car. Ford Vanadium steel has never been equaled in strength.

If you want a car that can plow through deep mud, sand and gravel—that can cross fields, corduroy roads and ford streams—that can climb the steepest hills with ease—that will give the greatest mileage all year round with the least expense and care—then there is only ONE car for you—The Ford.



Touring - - \$495

Runabout - \$475

F.O.B. FORD, ONT.

Ford Motor Company of Canada, Limited

FORD - - ONTARIO

FARM AND DAIRY

AND RURAL HOME
PUBLISHED EVERY THURSDAY



SUBSCRIPTION PRICE, \$1.00 a year. Great Britain, \$1.20 a year. For all countries, except Canada and Great Britain, add 40c for postage.
ADVERTISING RATES, 12 cents a line per \$1.65 an inch in insertion. One page 10 inches, one column 12 inches. Copy received up to Saturday preceding the following Monday a date.

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STOCKWELL'S SPECIAL AGENCY
Chicago Office—People's Gas Building
New York Office—Truene Building
Toronto Office—37 McCaull Street.

CIRCULATION STATEMENT.
The paid subscriptions to Farm and Dairy exceed 23,000. The actual circulation for each issue, including copies of the paper sent to subscribers who are but slightly in arrears, and sample copies, varies from 24,000 to 25,000 copies. No subscriptions are accepted at less than the paid subscription rates.
Sword detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

OUR GUARANTEE.

We guarantee that every advertisement in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our readers-in-advance subscribers, we will make good the amount of your loss, provided such transaction occurs within one month from date of this issue, and is written to us within a week of its occurrence, and that we find the facts to be as stated. It is a condition of our contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy and they told me that they can't pay their trade at the expense of our subscribers, who are our friends, through the medium of these newspapers; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts."

The Rural Publishing Company, Ltd.

PETERBORO AND TORONTO

"Read not to contradict and to confute, nor to believe and take for granted, but to weigh and consider."—Bacon.

A Homely Hint

"DONT track the whole back yard into the house." How often we have heard it of everyone of us. Sometimes we thought mother was cranky. With more years and greater wisdom we realized that the trouble was just overworked nerves. Mopping up the floor continually should not be called work. It is drudgery, especially when one has to chase a mop over the large kitchens that are common in farm homes. Mother has good reason to object. Mud is a part of the farm, not of the house, and she believes in keeping things in their proper places. We men folk can help her.

It is now spring, the loveliest and the dirtiest season of the whole year. Here are some of the things we might do to keep the dirt outside: We might build a walk from the house to the barn and from the house to the driveway, so that occasional visitors may step direct from their carriage to a clean, dry walk. We might fix up the old dilapidated steps and put a foot scraper where it may be handy, also make it a rule that the foot scraper be used. Yes, we are in a great hurry nowadays, but so is mother—and she deserves some consideration.

Make Country Life Attractive

"FARMING should be made so profitable by "educational and financial aid, and the "social conditions of rural life should be "so improved that thousands of men with "natural inclinations that way, will be attracted "to agriculture, and will succeed at it."
The foregoing is an extract from an open letter addressed by Lord Shaughnessy to the Canadian people. It explains, in few words, the conditions that must prevail in agriculture before returned soldiers will be attracted to the land in any large numbers. We regret that the president of the Canadian Pacific Railway does not mention in more detail just how farming is to be made so profitable and desirable an occupation. Educa-

tional work and long time loans have already been tried extensively in many countries. In any case these measures proved to be more than palliatives. Rural depopulation still goes on, and every country in the world continues to nurse a rural problem. Surely at this late date, men occupying official or semi-official positions should come to realize what leaders of organized farmers' movements have long known, that government aid to agriculture can best be given by removing the legislative disabilities under which farmers labor. So long as farmers are made the taxpayers of the nation and indirectly the victims of exploitation, just so long will farming require long hours for very modest returns. And just so long will it be difficult to induce people in large numbers to settle on the land.

Production This Year

TEN nations in the world are now on short rations. Six nations are on the verge of starvation. Surely the call for greater food production this year could not be more insistent. Under these conditions production becomes a humanitarian as well as a patriotic duty. A few weeks ago it seemed that Canadian agricultural production could not possibly be kept up to normal. As we write, the situation is more promising. Alberta is talking of increased production. Labor is spoken of as plentiful in the other prairie provinces, and although the area fall plowed was smaller than usual, the area in crops this year may be even greater than in 1916. Dr. G. C. Creelman assures Ontario farmers that they can seed every acre of crop possible with the full assurance that there will be abundance of labor for the harvest, even if shops and factories have to be closed to supply the men.

An inspiring phase of the situation as we find it to-day is the hearty interest that city organizations are taking in the production campaign. At a great meeting in Massey Hall recently, the citizens of Toronto pledged their support. The War Production Club of the same city are carrying on an advertising campaign to induce employers of labor to free all experienced farm workers they may have in their employ to help get in the crops this spring. City people apparently are coming to realize that this problem of production is a national one and one in which they are really more interested than the farmers themselves. Let us repeat now as we did two weeks ago that there will be no starvation in rural districts. It is the city dweller who has caused fear that famine may yet reign in the land. Even with the best that our cities can do, however, the food production of 1917 rests largely with the Canadian farmer. And he can be depended upon to do his work and do it well.

Extending Dairy Influence

AT one of the most important discussions last spring, the highest priced cow fell to the bid of a Grey county man. Now Grey county has comparatively few dairy herds. The buyer assured us that in his district theirs was the only herd of dairy cattle. He is working at a disadvantage. Local conditions minimize his opportunities for manufacturing his milk product to the best advantage. There is no local market for stock, and one herd is not sufficient to attract buyers of pure-bred cattle from a distance. Was our Grey county friend foolish in paying a high price for cattle to take to such a community?

We think not. Our friend is a pioneer and has the courage of a pioneer. If his cattle do well others will follow his example and purchase dairy stock—for the pocket book argument is one that appeals in every community. Once the dairy cow gets established in any district, she makes her imprint indelibly in better buildings, more prosperous homes, more fertile fields and citizens with an all the year income who are independent

of the bankers. Every good dairy herd established in a beef making district, is that much done to extend the sphere of influence of the dairy cow.

Oleomargarine Legislation

EDITORS of city papers in general and of one Toronto paper in particular, are very busy nowadays labelling margarine restrictions as class legislation. They tell us that this legislation is designed to protect the dairy farmer from the competition of a cheap and wholesome substitute for butter and to enrich him at the expense of the poor consumer in the city. As a matter of fact, the present restrictions imposed on the manufacture and sale of oleomargarine in Canada, were not designed for the advantage of the dairy industry but to protect the consumer from the deception and fraud universally practiced by dealers in butter substitutes. When imposed, these restrictions had the whole-hearted support of the Canadian public and probably, too, of the publications that are now berating them.

When the manufacture of margarine was first introduced into the United States, wholesale grocery and provision houses paid high wages to buyers who were keen in detecting oleomargarine that was being "palmed off" as butter. Then the government took a hand. For thirty years, legislators have experimented but failed to find any adequate means of protecting the consumer. Even in 1916 forty-four margarine impostors were sent to jail, and several thousand cases of deception were brought to the attention of the courts.

And yet, in face of the failure of legislators in the United States to protect consumers against margarine deception, our Canadian government is advised to let down the bars and permit both the importation and manufacture of butter substitutes in Canada. Have we any reason to believe that margarine dealers in Canada would be any more scrupulous or conscientious than they have been in the United States. We fear that the publications who advise such action are themselves deceived by the dealers and packers who would expect to profit by the change; or else they are very short of information.

When the Soldier Returns

FOR which will the government do the most? For the returned soldier or for the land speculator? The land speculator is specially favored, inasmuch as he escapes with a single land tax. Will we treat the returned soldier in the same way, or will we increase the soldier's taxes for every improvement he makes on his land?

The industrious classes must now pay all the taxation, for idle speculation furnishes nothing for the support of society, and they must support the speculator besides. When the soldier returns, will he have to do the same thing, namely, work for the enrichment of the speculator?

Will the government do as well for the returned soldiers as it did for the manufacturers? Before the war the manufacturers had a free list of raw materials. Will the soldier be able to import his raw clothes, his raw tools, etc., free from duty, or will he be subject to the same impost and extortion as the laboring classes have been, namely, often to surrender his third dollar. Will he have to take three dollars to market to buy two dollars' worth of goods? Will he also have to add something to that to maintain the luxurious establishments of the ground lords?

When the war is over, what will the veterans find to welcome them? Will it be a lot of speculators to make the land dear, and a lot of favored manufacturers, enabled by law to make the goods dear—a double grind between the upper and nether millstones? Will it be monopolists to right of them, monopolists to left of them, and monopolists to the front of them?—The Square Deal.

Wayside Gleanings

Cultivate More Land

By "Burnbrae."

THE Toronto Globe, some weeks ago, had an editorial under the heading of "Farm Products Should be Increased." Part of the opening paragraph read as follows: "Any intelligent observer of the present economic condition of the world will assent readily to these propositions. That there is a world-wide shortage of farm food products and that general distress is sure to result if strenuous and successful efforts are not made in all agricultural countries to increase the available supply of food." The writer continues this thought in the second paragraph, where he says:

"It is impossible to indicate in de-

Ad Talk

A WORLD WITHOUT ADVERTISING.

IT is a consumption devoted to the reader of Farm and Dairy as he scans the above heading. He may tell you he has never been able to find them, but he has never been able to find them, and the sooner they disappear the better for all concerned. If you ask him, he will probably blame the advertiser for the "LOGG'S CORN FLAKES" for his breakfast, whereas Sunday, wears ARROW collars on a FORD, and separates his milk with the LAVAL SEPARATOR, never seeming to realize that advertising enters into every department of his life, and that if he might never have heard of it. But the purpose of this "Talk" is not to be an invective against some non-existent personage who does not read advertisements, but just to consider a few minutes what would be the effect on the welfare of humanity by some strange and mighty power the world was deprived of every vestige of advertising.

From a recent little booklet bearing the above title a few extracts will be factoring in the lives of men and women and varying has become. A world without advertising. Think of the blighting results that would follow to all industries that would depend on advertising. The first effect of such a calamity would be a night of financial starvation that would immediately descend on the whole world of the printed word. All the great magazines, newspapers, and journals of every kind would instantly shrivel and fall into decay such a famine. They could not exist without advertising. The world would be off that if this calamity should descend on the printing press. It would mean turning the clock of civilization back a century or more. It would mean the assassination of the great Breadwinner of the printing press and the starvation of Literature and the illustration arts. The famine would spread to every industry now served by the press until the intellectual illumination of the public would be reversed from the electric arc light to the tallow dip of the by-gone generation."

More disastrous still would be the blow of education. Advertising is one of the greatest educational forces in existence. It induces the cost of living and provides you with the means of intellectual recreation without which life would hardly be worth living. For a paper of the same size as that which you hold in your hand, without advertising, would pay at least twice as much as the mighty force of advertising. The clothes you wear, the food you eat, and the papers you read, are all a product of the advertiser. It is not a tax at all upon the consumer and collected by the retailer; it is the best machine thus far invented for increasing sales and thereby decreasing the cost of producing and selling an article.

Everywhere there is recognition of the fact that one of the worst and surest ways in which to waste money is to spend on untruthful advertising. Every advertiser must be prepared to substantiate his claim. If an advertisement is deceptive or makes claims that cannot be fulfilled, it certainly has no right to enjoy the privileges of any publication. Thus it has come about that it is daily growing more difficult to secure the publication of deceptive advertisements in any journal with even the shadow of a reputation. Advertising is your best friend. Remember that when you read the Ad. in this and other issues of FARM AND DAIRY. Remember that in writing your advertisers that it identifies you to mention you saw it in Farm and Dairy.

tail the many ways in which this increase of the world's food supply may be effected, but some of them are obvious enough to appear both desirable and practicable," and his suggested solution of the problem after careful consideration is apparently given in the words: "Most important and fundamental of all is the bringing of more land into cultivation."

To my mind this is the next thing to an impossibility and the writer must surely be a man unacquainted with the true condition prevailing upon Ontario farms. As has been often stated before, it is an easy matter for city men and those strong in knowledge regarding most other things, except the actual conditions of farm life, to advise the farmer what to do in such crisis as they are at present facing; it is even characteristic of them to do so. Yet they are very slow to suggest any way of providing the necessary labor capital to assist in carrying out the plans they formulate. "Bring more land into cultivation," is what they suggest when those who are tilling the soil to-day are crying out under the heavy burden they are already carrying. I wonder if our friend realizes that there are many 100-acre farms in this province that have only one man to do the work for the coming year? I wonder if he knows what it is to be in the dairy business with from 10 to 12 cows to milk and all other necessary chores to do and face the problem of getting the season's crop with the help of his wife and one or two children who are just coming into the teen age. Is it possible to conceive of a man who sees this staring him in the face and has no prospects of hiring help, no matter what the wage offered, considering the "bringing of more land under cultivation?"

The editorial further states that "The wasteful practice of pasturing live stock instead of feeding the animals with fresh-grown forage, might be usefully abandoned at least in part, by those farmers who are in a position to make the change." Again I feel that our friend is astray and may that ever I am convinced that he is not conversant with agricultural conditions, or the fallacy of his arguments would appeal to him. Can government pressure or any persuasive power convince farmers of the advisability of adopting a system of farming that would give "fresh grown forage" to feed his animals, instead of pasture and presumably to place this pasture land under other crops when they know the great amount of extra labor such a system would entail and no prospects of getting the labor under any conditions.

The writer mentions the thousands of acres of vacant land near Toronto that has been purchased by real estate speculators as land that might be brought under cultivation at this time. With this suggestion, I heartily agree, upon one condition, that it be worked by men who have many hours to spend in pleasure seeking, social jaunts, fishing excursions, etc., while these same hours are being industriously used by our uncomplaining farmers in a mighty effort to increase production and do their bit to save their country.

There are many things in favor of my suggestion. A few are, the nearness of the land to the city of Toronto; the excellent railway facilities passing through it; the availability of the labor to do the work and in many cases those who would be immediately interested in it are in possession of capital that could be well employed in carrying on the prospect and possibly the most important reason of all is the sense of appreciation of the farmer's position in this the greatest crisis in Canada's history.

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PROBABLY you intend to put up a silo some day. Why not do it right now?

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The longer you try to get along without a silo the longer you continue to sacrifice the profit you might have.

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To sell your surplus stock is through the live stock columns of Farm and Dairy. The cost is little and the results certain. Send in your ad.



KINDLY words, sympathizing attentions, these cost very little, but they are priceless in their value.—F. W. Robertson.

Winning the Wilderness

(Continued from last week.)

HE paused and looked at the men before him. They, were farmers, drooped to rest after the summer day's work, yet they listened with intense eagerness. Only Asher Aydelot sat in easy dignity, looking straight at Darley Changers with steady interest. The four years' training in the University of the Civil War had not been overcome by his hold on the plow handles. And, no farmer will grow hopelessly stooped in the plow handles and of countenance who lifts his face often from the clouds beneath his feet to the stars above his head.

"You all know crops were poor last year and only moderately prospered this year," Changers continued. "But this is temporary and you are stayers, as I can testify. The Changers Town Company is ready to locate town site and start a town right here at the deep bend of Grass River. We propose to plow the prairie into town lots with a public square for the court house and sites for the railroad station and grain elevators, a big hotel, an opera house, and factories and foundries that's bound to come."

The speaker paused a moment. Then the inspiration of the evening came to him.

"When you first came here, Aydelot, there wasn't nothing but imagination to make this a farming community. And it looked lots more impossible than this looks to me now. What's to prevent a metropolis right here where a decade and a half ago there wasn't nothing but bare prairie?"

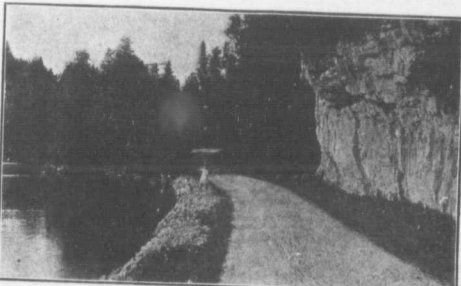
The appeal was forceful, and the very men who had stood like heroes against hardships and had fought poverty with a grim, unyielding will now before the same men stood before Darley Changers' smooth advances.

"Our company's chartered with no end of stock for sale now that in six months will be out of sight above price and can't be bought for no price. It's your time to invest now. You can easy mortgage your farms to raise the money, see? you can knock the mortgage off as quick and have abundance left over, if you use our bands 'stead of your tired legs to make money out of your land."

Cyrus Bennington and Todd Stewart and Jim Shirley, with others, were sitting up with alert faces now. Booms were making men rich all over Kansas. Why should prosperity not come to this valley as well? It was not impossible, surely. Only the unpleasant memory of Changers' holding back the supplies in the days when the grasshopper was a burden would intrude on the minds of the company to-night. Changers was shrewd to remember also, and he played his game daringly as well as cautiously.

"Maybe some of you fellows haven't felt right toward me sometimes," he said. "I hate to tell it, but, jus-

lice is justice. The truth is, it was a friend of yours who advised me not to let any supplies come your way, time of the grasshopper said. I listened to him then and didn't know no better'n to be run by him till I see his scheme to kill Wykertown at a town for hisself. He'll deny and I'll not, declare he never done it, and he'll not do a thing for your town down here. See if he does. But it's Gawd's truth, he held me back so's he could run you his way. It's your



Picturesque Road along Pulinch Lake, Wellington Co., Ont. This attractive scenery is to be found near Rockwood, Ont. The road is noted on account of some cave formations near it and the famous Devil's Well.

turn to listen to me now and believe me, too."

And well they listened, especially then men who still owed John Jacobs for the loan of 1874.

"You can have a boom right here that'll make you all rich men inside of a year. Why not turn capitalists yourselves for a while, you hard-worked farmers? Money is easy and credit low now. Take your chance at it and make five hundred per cent on your investments. I'm ready to take subscriptions for stock in this new town right now. Why not stop this small's pace of earnin' and go to livin' like gentlemen—like some Careyville men I know who own hundreds of acres they never earned and they won't improve so's to help others?"

"You're right there," a farmer sitting beside Asher Aydelot called out. "We all know how Careyville got her start. It's kept some of us poor doing it. I'll invest in Town Company stock right now."

Asher Aydelot turned toward the speaker in surprise.

"Jacobs helped you out as well as the rest of us in the drouth and grasshopper time of seventy-four," he said. "What's your grievance against him now?"

"Yes, and hung onto me like a leech of a Jew ever since," the man muttered.

"Because you never paid either interest or principal. And Jacobs has carried you along and waited your time," Asher asserted frankly.

But the farmer plunged into the discussion again, not realizing that his grudge against Careyville was the outgrowth of his own shortcomings.

"Take this site right here in the middle of your neighborhood where you've already got your church and schoolhouse, and your graveyard," Changers declared. "Aydelot here gave part of it and Pryor Gaines the rest. Gaines don't farm it any more himself, it's most too big a job for a man of brains like him. And that quarter across the river that used to be all sand, you own that now, to be all sand, you? What did you think of doin' with it now?"

"I think I'll set it in alfalfa this fall," Asher replied.

"Yes, yes, now these two make the very site we want. You are lucky, for you are ready right now to start things. How much stock do you want, Aydelot, and how will you sell?"

As Asher listened he seemed to see the whole scheme of the town builders bare itself before him, and he wondered at the credulity of his neighbors.

"Gentlemen," he said, standing before them, "it is a hard thing to put yourself against neighborhood senti-

ment and shining bubbles that glitter and burst on top of it. You'll have to count me out of your scheme. I'm a farmer still. So I'll wish you all good luck and good night."

"Good night, I must go with papa," Thaine Aydelot said, springing up from his play outside.

"No, you've got to stay here. Hold him, Leigh," Jo Bennington commanded, clutching Thaine.

Leigh sat calmly disinterested. "He's his papa's boy, I guess, and he ought to go," she asserted.

"You mean, meany," Jo whispered, "I don't like you."

But Leigh paid little heed to her opinion.

As Asher passed out of the room there was an ugly look in Darley Changers' eyes.

"No more ambition than a cat. One of them quiet, good-natured fellers that are as stubborn as the devil once they take a stand. Just a danged codd-hopper farmer, but he don't leave no enemies behind him. That's enough to make any man hate him. He's talked twice when I tried to drive. I'll not be fooled by him always."

So Changers thought as he watched Asher Aydelot walk out of the room. And in the silence that followed his going the company heard him through the open window whistling some old patriotic air as he strolled away in the June moonlight with little Thaine trotting beside him.

"Shirley, where is Pryor to-night?" Cyrus Bennington broke the silence with the query.

"I couldn't get him to come; said he had no land for sale nor money to invest," Jim replied.

"Then Jacobs got him at last. Fine friend to you fellows, that man Jacobs. Easy to see what he wants. He ain't boom'n' no place but Careyville," Changers snarled. "But the deep bend ain't the only bend in Grass River. Or do you want to speculate away when it comes right to your door?"

"Nobody wants to do that. Least of all did the Kansas settlers of the boom days turn away from the promise of a fortune."

So the boom came to the Grass River Valley as other disasters had come before it. Where a decade and a half ago Asher and Virginia Aydelot had lived alone with the wide and God, in the heart of the each solitary wilderness, the town of Cloverdale was staked out now over the prairie.

Stock in the new venture sold rapidly, and nobody ever knew how much clear profit came to Changers & Co. from this venture. A big slice of the Cloverdale ranch was sold to the staling of the new city, and prosperity seemed wedded to Jim Shirley. He ceased farming and became a speculator with dreams of millions in his brain. Other settlers followed his example until the fever had infected every man in the community except Asher Aydelot, who would not give up to it, and Pryor Gaines, who had nothing to give up.

Everything fell out as advertised. The railroad grade swelled up like a great wall across the land seemingly in a day. Suburban and Victorian radiating for miles in every direction. Bonds were voted for light and water and public buildings and improvements. Speculators rushed to invest and unload their investments at a profit. The Grass River Farmers' Company built the Grass River Creamery. And because it looked big and good they built the Grass River Suet Factory and the Grass River Electric. But while they were building their money into stone and machinery they forgot to herd cattle to supply the creamery and to grow up the

(Continued on page 20.)

The Upward Look

He Dwelt There

TERAH took Abram his son, and Sarai his daughter-in-law, from Ur, of the Chaldees, to go into the land of Canaan; and they came unto Haran and dwelt there.—Gen. 11:31.

On the very edge of this ancient Ur is Kut-el-Amara, about which we have been hearing so much in General Maude's triumphal march from there to Bagdad. Terah, with Abram, in going to Haran, followed the Tigris River, just as the Turks are doing now in their precipitate retreat.

Terah evidently started out with the intention of obeying the "heavenly vision" of his God, that was calling him to go into the land of Canaan. But when he came unto Haran he dwelt there.

What a tragedy of failure there is in that word "dwell." For Terah! We can but wonder if he gave up quickly and without a struggle, the going on to the land of greater opportunity. Or, if year after year he kept intending to rouse himself and carry out the purpose of his younger manhood. Then, when we read of the wonderful power and blessings that were promised and granted to Abram and his descendants, we think of all that Terah missed.

Are we dwelling in Haran, or are we going on, obedient to the heavenly call within us? Are we content to remain each day as we were the day before, or are we advancing, by learning to know and utilize better, the wonderful God-given power within us? Are we remaining stationary, or are we learning to know God better and understand the wealth of His power that is ours to command? Are we remaining still and missing His power and blessing, or are we taking them as promised and granted?—I. H. N.

Are Our Spare Minutes Wasted?

With the Household Editor.

WHAT do we do with our spare minutes? By spare minutes we do not mean the time that is left after we have finished our day's routine work, dressed up for the afternoon and sat still down for a short time before we have to get tea ready. No, we mean the odd minutes throughout the day when we are delayed in our work. For instance, there are times when we have to wait for the kettle to boil and we poke the fire, take the lid off the kettle to see if there are any bubbles showing, give the fire another poke and wonder if that kettle ever will boil, until we work ourselves up into quite an aggravated state of mind. Or we have the dinner piping hot and all ready to serve, but something happens and the menfolk are delayed in coming in. We walk back and forth from the window to the stove, worrying over the fact that the dinner will be getting cold and can't imagine why those men are not on time for their meals since in a while. It is such spare minutes as these when it does not seem worth while doing anything to which we refer.

Why not, instead of fretting and fuming over these delays, plan some line of work for these idle moments. Nowadays in many homes, such knitting for the soldiers is being done and it is a splendid idea to have a sock handy which can be picked up and a few stitches added. Then there is the woman who is fond of crocheting. Why not have a piece of crochet work always on hand? It may often seem hardly worth while picking up this

work for such a short time, but it will be surprising how a few stitches put in now and again will count up. Would this not be a good way to get Christmas gifts made for the friends whom we know appreciate our work. Having a basket nearby with material for quilt patching would be another way of utilizing odd moments, or rags might be sewn together for the rag rugs we are planning to have ere long.

Why not have a book to pick up on just such occasions as this. We may be fond of reading and find little time to devote to it. How much wiser we would be to pick up a book and enjoy reading a few paragraphs instead of playing havoc with our good nature by fretting when unforeseen delays occur. If we are ambitious we might make our reading at such times take the form of study. There are many subjects such as science, agriculture, history, nature study, food values, psychology, mother-craft, etc., etc., which if we would fit ourselves with good material on our chosen topic, we would be surprised at the end of the year to note what we had accomplished in the moments which previously had been wasted.

Let us try then to use our spare moments wisely. We must on the other hand guard against the tendency to crowd too much into the day. Our time for rest and recreation should also be carefully planned and followed.

Swiss Meat Cheese

M. S. Eakins.

IF you are tired of eating the same old sausage on the farm, try the following: Fresh lean veal, four pounds; pork, three and one-quarter pounds; wheat flour, three-quarters pound; hog liver, two pounds; onions, one-half pound.

Run through grinder until very fine and then mix the following: White pepper, one tablespoonful; nutmeg, one-half teaspoonful; mace, one-third ounce; salt, one handful.

A good way to prepare this for the table is to bake in square forms in a hot oven. Grease the forms with lard before filling and cover with a piece of caul fat.—Colorado Agricultural College.

As a side light on the labor situation, it is interesting to note that thousands of Kaffirs from South Africa have reached Europe, this influx causing considerable discussion in England.

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It tells you how to estimate the quantity of material for exterior or interior painting; the quantity of paint or finish needed for a given floor; the amount of varnish required for a door; the amount of single-stain required for a roof, etc.

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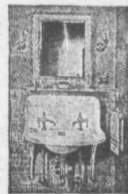
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East London, Canada. Branch Office, 119 Adelaide St. W., Toronto

HOME CLUB

Making "Play" a Business

I HAVE been wondering if there are any other mothers among our folks who live in isolated places and who have an only little girl to amuse and keep from feeling too much the lack of little playmates. My four-year-old daughter has had another little girl to play with only two or three times in two years, and with all the strength of her little heart longs for one. So mother just has to be a little girl and play with her whether the work gets done properly or not. And I thought some other mothers of lonely little girls might like to hear of our latest game which has kept my baby in the seventh heaven of happiness for a long time. It is very simple, but the beauty of it is that it never plays out.

We cut out some of the paper dolls in the Ladies' Home Journal, with their dresses, etc., and then we

tend the same ad infinitum by cutting out different series of pictures in connection with these little "pretend playmates." We made a house with partitions for the different rooms, out of a box. Then we searched through catalogues and magazines to find the nicest furniture, and we have furnished each room complete, even to the pots and pans for the kitchen. We cut out the biggest barn picture we could find and then we planned our "stock" and found pictures for them all, also all the barn furnishings, even to brushes and curry combs. We also have our beautiful big garden picture and all our garden implements. And sometimes we "gather flowers" and search through magazines for pictures of cut flowers, or of vegetables, all ready for the table. Then other days we plan meals for our "family" and find pictures to represent everything we want to serve to all the dishes too. We have all "Pats" and "Polly's" toys and personal belongings. We have taken them away for trips, and hunted for pictures of trains, boats, the things they took with them, the sights they saw. I must not make my story too

long, but you can see that the possibilities are endless, and it has made my little girl so happy. She never tires of playing with her "collection" and she has never once expressed a wish for "another little girl to play with" since I have made a real business-time to the next she is in a constant state of happy anticipation and enjoyment with her make-believe playmates. And when our play hour comes she is just overcome with delight. And it can be made of quite an educational value too. Baby has learned a lot of things, and I must confess that it is no hardship for me. I am afraid I enjoy playing with paper dolls about as much as I ever did.

For a long time it seemed as though I never could get time to play with my little girl. I have a lot to do. But finally it came to me that it was all a question of the relative value of things, and this is the way I have solved it. At night when I am planning my next day's work, I divide it into two lists, "Necessary" and "if possible." I have gradually come to see that a lot of things that

I had considered necessary and set myself to crowd into an over-full day, whenever I could or not, and at the expense of strength and nervous peace of mind, leaving me no time to rest or get fresh air, or for companionship with my little daughter. A lot of those "necessary" things I have relegated to my "if possible" list. Sometimes they get done and sometimes they don't. But always in planning my days, we make a room in my "necessary" column for this item, "Half hour or more to play with baby." Sometimes the family have a plainer supper, or the floor doesn't get scrubbed or—and I hope you will not be too shocked—the pillow slips and towels and even the handkerchiefs are put away unironed, in order that I may have this brief half hour with my baby, in complete abandonment and good fellowship, forgetting everything for the time being except that she and I are little together and of her fun we are having.

I had thought a good deal about it and was very dissatisfied with the "mothering" that I had been doing. I never had time, you see, so it finally came to me that if I couldn't be both, I might better be a good mother than a good housekeeper. I think when my little girl is grown up that she will remember these silly playtimes we are having together, long after she has forgotten my sins of omission in the housekeeping line.

Now I feel initiated (I hope I have not talked too long), and quite acquainted with all our Women Folk. I will feel more interested from now on in all the letters and suggestions in Farm and Dairy, as if they were from personal friends. I wish you could all come to visit me. We have lots of room—if not in our cabin, at least in the country.—A BRITISH COLUMBIA PIONEER.

An Informal Introduction

HOME Club members, it gives us much pleasure to introduce to you a new member of our Club, who comes to us under the pseudonym of "A British Columbia Pioneer." This is the first British Columbia member to join our circle, and we certainly give her a royal welcome. In a personal letter to the household editor, "A British Columbia Pioneer" said: "I have been trying my hand at a letter for the Women Folk of Farm and Dairy, but am afraid it has grown altogether too big. I do not want to be a nuisance, on the contrary, I only want to help." We feel sure that every member of the Home Club, upon reading our new member's letter below, will agree that her letter is not too long and that it has been an inspiration to all of us and will join heartily in inviting "A British Columbia Pioneer" to come again and to come often.

More About Dish Washers

I WONDER if "Merry Margaret" has secured her dish washer yet, and how it is working out. I read her enquiry some weeks ago and as I, too, am interested in anything that will lighten the never-ending task of washing dishes, I would like to be of some assistance. I fear though that what I have to say will not be of particular value as I cannot give any personal experience, but can only speak of things I have "heard tell of" as an old man whom I used to know would say.

Not long ago I heard that dish washers could be secured for \$25. That may seem quite a sum to pay out, but here is one way of looking at such an investment. How many implements could hubby buy for that amount? Not very many, and think of the machinery he has, which costs anywhere from two to six times the price of a dish washer. Then too,

The advertisement features a large map of Canada with the word 'McLAUGHLIN' written across it in large, stylized letters. The letters are filled with various Canadian provinces and territories, including BRITISH COLUMBIA, ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, QUEBEC, and NEW BRUNSWICK. A small inset box in the bottom left corner of the map area contains the text: '12 branch houses and 400 dealers make possible the excellence of McLaughlin SERVICE to McLaughlin owners.' Below the map, the text reads: 'The McLaughlin owner anywhere in Canada is within easy reach of one of the 12 directly controlled branch houses, where a stock of parts for all McLaughlin models ever built, is kept and where expert service is attainable. In addition there are 400 McLaughlin dealers employing expert mechanics and keeping a stock of parts. Backed by a Company prepared to give Dominion wide service, McLaughlin owners everywhere can have the uninterrupted use of their cars and enjoy the kind of service which makes motoring a pleasure. Before you buy your 1917 Car, consider the ability of the manufacturer to give you the kind of service you have a right to expect. Send for Catalogue "C" showing the New Series of McLaughlin Cars. The McLAUGHLIN MOTOR CAR CO., Limited, OSHAWA, ONTARIO. PIONEER BUILDERS OF VALVE-IN-HEAD MOTOR CARS IN CANADA. Branches in leading cities. Dealers Everywhere. Canada's Standard Car.'

The McLaughlin owner anywhere in Canada is within easy reach of one of the 12 directly controlled branch houses, where a stock of parts for all McLaughlin models ever built, is kept and where expert service is attainable. In addition there are 400 McLaughlin dealers employing expert mechanics and keeping a stock of parts.

Backed by a Company prepared to give Dominion wide service, McLaughlin owners everywhere can have the uninterrupted use of their cars and enjoy the kind of service which makes motoring a pleasure.

Before you buy your 1917 Car, consider the ability of the manufacturer to give you the kind of service you have a right to expect.

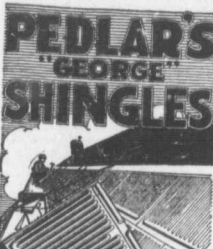
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OSHAWA, ONTARIO.

PIONEER BUILDERS OF VALVE-IN-HEAD MOTOR CARS IN CANADA

Branches in leading cities. Dealers Everywhere.

Canada's Standard Car



how many weeks or days in the year are some of these implements used, while a dish washer would be used over 1,000 times in a year! It really does not seem such an exorbitant price if the dish washer does efficient work.

Just the other day I read of a woman who invented a dish washer which is proving successful. She had a motor in the kitchen for running her washing machine, wringer and mangle and it occurred to her that it might wash her dishes also. This is how the system works:

For a pan she uses a long oval dish-bar across the sink and has a stopper in the bottom to let the water in and out. A bar across the top has two "U" shaped twists in it, one of which is upside down. The end of this bar is in a wheel that carries a belt from the motor. This woman has three small wire baskets, like they use in the stores to carry parcels and the change. In these she gathers the dishes. She fills her dish pan from the hot water tap, adds a little soap powder and hangs a basket by a wire hook on each of the "U" twists of the bar across the pan. Then she starts the motor going, and the baskets are lifted up and down in the water as the rod turns. As she fills the third basket she takes off the first and sets it to drain, replacing it with the third basket. When the basket is drained she carries it to the cupboard to put away the dishes, and taking a towel, wipes any drops away that have not already dried.

Some people tell us that it is not the time spent in washing dishes, but the time spent in drying them that really counts up. We are told, too, that it is not sanitary to rub each piece of china with a dish towel which, in many cases is not very clean. Dish drainers are, therefore, gradually coming into popularity. Some of these consist of a square galvanized drain pan and a removable wire rack into which the dishes are placed, and which allows them to stand upright. The rack is of various sizes—large for plates, smaller for saucers, with loops on each side to hang cups. When the dishes are washed they are placed in the drainer, and sealed by pouring boiling water over them. Such a dish drainer should save considerable time, especially in the family where dishes are numerous. So, even if one could not afford a complete dish washing outfit, it seems to me a drainer would be quite an asset to the kitchen equipment. What do you think, "Merry Margaret"? If I too could like to hear from others on this subject, and would be glad also of practical information on the freless cooker.—Aunt Flossie.

Selecting that New Rug

PERHAPS some of Our Folks are planning to buy that new rug for the parlor or one of the bedrooms this spring, and find it rather difficult to decide on a design or color that will harmonize with the other furnishings. The following hints are offered by the economics department of the University of Nebraska:

1. Do not choose a rug that is lighter in tone than the walls.
2. Choose one which is unobtrusive in color and design. Your furniture will look better than if you choose a rug of bright colors or of conspicuous design.
3. If you have furniture of various kinds, choose a rug of several colors. For example, if you have a mahogany piano case, an oak library table, and a gray-green reed rocker, a rug of old rose, gray-green, and tan will help to make each piece "belong."
4. If you are hesitating between two sizes of rugs, it is usually safer to take the smaller one, unless you object to bare floor.

ARE you really saving money by neglecting to re-shingle that barn roof? You know that each additional patch lessens the value of your building. You know each loosening leak means rotting, widening leaks and early decay. You know that only by fastening your roof can you get rid of rot. Pedlar's "Leak-Stopper" gives you the durability and wearing qualities of steel at a good wooden shingle cost. A Pedlarized roof sheds rain, keeps you from repair and rot. Pedlar's "Leak-Stopper" is the only thing you use at all times from the degree of lightning and snow. The "Right Roof" Booklet, F. D. telling you all about steel shingles and how to lay them, is free. Write to-day.

THE PEDLAR PEOPLE Limited
(Incorporated 1901)
Executive Office and
Factories
OSHAWA, ONT.

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GREAT DISCOVERY!

Remarkable Cloth that won't wear out or tear! Samples free by post to any reader.

Just fancy, readers! Whether a blacksmith, carpenter, milliner, labourer, farmer or clerk, could you by solid hard grinding wear, every day in the week—not just Sundays—wear a small hole in a \$2.25 pair of Pants or a \$6.50 Suit in six months? Could any of your boys wear a small hole in a \$2.37 Suit in six months? Demolish, six months of solid grinding wear and tear—not just Sundays—but every weekday and Sundays too! If any reader can do this, he can get another garment free of charge! A remarkable new untearable cloth has been discovered by a well-known firm in London, England. These new Holeproof Cloths are amazing. You can't tear them, you can't wear them out, no matter how hard you try. Yet, in appearance, they are exactly as finest tweeds and serge and cloth. But the price is only \$2.25 for a pair of Trousers, \$2.37 for a pair of Pants, \$6.50 for a well-made, smart, stylish Gent's Suit, delivered by post, with further charge whatever, \$6.50 only. Boys' Suits from \$1.27. Knickerbockers from \$1.90. Readers are reminded that the above sums cover cost of postage and all charges, and there is nothing more to be paid on delivery. Full particulars of these remarkable cloths, together with a large catalogue of patterns, fashions, and a simple measure chart, with which readers can measure themselves at home, will be sent absolutely free and postage paid to all those who hasten and postcard to Agents Dept. 10, The Holeproof Clothing Co., P.O. Box 156, Toronto. The Firm's London address is 65, Theobalds Road, London, W.C. Eng., but all applications for samples should be sent to Toronto, Ont.

(Adv't.)

When You Write—Mention Farm and Dairy

GILLETT'S LYE

HAS NO EQUAL

It not only softens the water but doubles the cleansing power of soap, and makes everything sanitary and wholesome.

REFUSE SUBSTITUTES.

DELCO-LIGHT

—you need not envy the city man his electricity now—

Have electricity on your farm. Delco-Light has brought this ideal to completion. Every farm can now have its own electric light and power plant at small cost—giving perfect service.

Easy to Operate—Economical—Safe

Delco-Light is a complete plant—gasoline motor, generator, storage batteries fully charged and ready to run. Once or twice a week you simply press a lever, starting the motor. The batteries are charged and when this is completed the motor stops automatically.

This wonderfully simple plant supplies light and power for the average farm for less than 5 cents a day. Delco-Light prices: No. 208, \$250; and No. 216, \$465.

Full Descriptive Literature FREE

You should all know about this great development in electricity. Write for full descriptive literature telling you all that Delco-Light does—how it works—how safe and economical it is. All sent free on request from any Canadian office.

C. H. Rooke, Limited
Delco-Light Distributor
160 BAY STREET, TORONTO

The greatest achievement of modern civilization—electricity—must surely be needed in every home in Canada. The organization selling Delco-Light where.

Delco-Light was developed by the same company making the world-famous Delco starting lighting and ignition plants for automobiles.

THE DOMESTIC ENGINEERING CO.
Dayton - Ohio.

You'll Find the Advertisers in FARM AND DAIRY advertising reliable goods. They want to know you; they saw the Ad. When writing them don't forget to tell them you saw the Ad. in FARM AND DAIRY.

Clover Seeds

High Grade Government Standard Seeds

No.	Name	Per Bus.
No. 1 Mammoth Red Clover	15.50	
No. 1 Red Clover	12.50	
No. 2 Red Clover	12.50	
No. 1 Alsike Clover	12.50	
No. 2 Timothy (this seed grades extra No. 1 for purity and germination)	4.25	
No. 2 Timothy (this seed grades No. 1 for purity and germination)	4.00	
No. 3 Timothy	3.25	
White Blossom Sweet Clover (Ontario grown, free of mustards)	13.00	
No. 1 Alfalfa (Northern grown)	13.00	

SEED GRAIN.

Name	Per Bus.
Marquis Spring Wheat	\$2.40
G. A. C. No. 21 Barley	1.50
Banner Oats	1.25
G. A. C. No. 75 Oats	1.25
Golden Yoke Peas	1.40
Crown Peas	3.25
Canadian Broad	4.50

SEED CORN.

Name	Per Bus.
Leaning Fodder	\$1.75
Improved Leader	2.00
Southern White Fodder	1.75
Red Cobb Fodder	1.75
Compton's Early	2.75
Sanford White Fodder	2.50
Golden Glo	2.40
Wideman No.	2.30
Pride of the North	2.00

Terms Cash with order, bags extra at 30 cents each. We pay the freight on all orders of \$25.00 or over East of Manitoba. Send for samples if necessary.

TODD & COOK

SEED MERCHANTS
Stouffville, Ontario

"Learn 2 a day at home"

You may say that, too—if you want more time to learn. Steady work at home this year. Write Auto-Cutter-Honery (Canada) Co., Ltd. 301F 287 College St., Toronto.

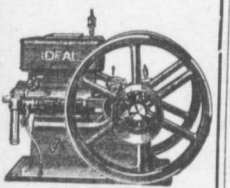
MUSIC IN YOUR HOME FREE

By the Oldest and Most Reliable School of Music in America—Established 1800. Piano, Organ, Violin, Mandolin, Guitar, Banjo, Etc.

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Stationary Mounted and Traction



WINDMILLS

Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.
GOULD, SHAPLEY & NUIR CO. LTD.
Brantford, Winnipeg, Regina, Calgary.

Winning the Wilderness

(Continued from page 18.)

SUGAR product and to sow and reap grain to be elevated. Also, the Cloverdale Farmers' Company, made up mostly of the members of the Grass River Farmers' Company, built the Cloverdale Hotel, and the Cloverdale State Bank, and the Cloverdale Office Block. And the sad part of it was that the mortgage and the double mortgaged farms and not the price of crops had furnished the capital for the boom building. It is an old story, true, and none too interesting—the story of a boom town founded on prairie breezes and built out of fortune seekers' dreams. Meanwhile, Asher Aydelot, watching the sudden easy prosperity of his neighbors, fought down the temptation to join them and resolutely strove with the soil for its best yield. The

grown vacant town lots, Eastern money was withdrawn to other markets, speculators burned their out, and the Wilderness came again to the Grass River Valley. Not the old Wilderness of loneliness, and drought, and grasshoppers, and prairie fires that had dared the pioneer to conquest; but the Prairie, waiting again the kindly hand on the plow handle, gave no quarter to him whom the gilded boom had lured to shipwreck.

CHAPTER XIII.

The Rollcall.

Nothing is too late Until the tired heart shall cease to palpitate.

—Longfellow.

The twilight had fallen on the prairie. Grass River, running bank full from the heavy May rains, lay like a band of molten silver glistening in the after-sunset light. The draw, once choked with wild plum bushes in the first days of the struggle in the wilderness, was the outlet now to the little lake that nestled in the heart of the Aydelot grove. The odors of early summer came faintly on the soft twilight breeze. Somewhere among the cottonwoods a bird called a tender good-night to its mate. Upon the low swell the lights were beginning to twinkle from the windows of the Aydelot home, and the sounds of voices and of hurrying footsteps told of something unusual going on within. Asher Aydelot, driving down the old Grass River trail, saw from far away the windows of his home beginning to glow like beacons in the twilight. Beyond it was the glimmer of the waters of the river and before it spread the mile-long grove, dim and shadowy in the mist-folds rising up from the prairie.

"A man can win a kingdom in the West. I told my mother one spring evening long ago," he murmured as his eyes took in the view. "It's surely more like a kingdom now than it was when we came down this trail a quarter of a century ago. Twenty-five good years of life, but it's worth the effort, and we are just now at the opening of our best years. A man's real usefulness begins at fifty. This is more like a kingdom, too, than it was twenty years ago when those old hulks of ricks that strew the prairie down the river were banks, and hotels, and opera houses, and factories of boomed-up glory. We are doing something for the land. I hope our boy will make up his mind to want to keep it when his time comes."

He lifted his head bravely, as if to throw off all doubt, and tightening the reins on his horses he swung away down the trail toward the home lights shining in the gathering gloom.

As he neared the house, Thaine Aydelot leaped from the side porch and hurried toward him. Climbing into the moving wagon, he put one hand affectionately on his father's shoulder.

"Don't you know whose birthday this is?" he inquired with serious concern, "and you've not spoken to me all day."

"I know my boy is nineteen to-day and expects to have a birthday party here to-night, and that I left him asleep when I started to town this forenoon about nine o'clock."

"Nineteen cats! You left at five sharp to go with John Jacobs over to Wolf Creek after what you never got, judging from this empty wagon. And had half of the feeding done when you left the house here. I saw you when I was out by the old stone corral looking after the pigs, but they squealed so loud you could not hear me telling good-by."

(To be continued.)

INCREASE YOUR EARNINGS BY FEEDING

Your live stock
WITH "MAPLE LEAF"
LINSEED OIL CAKE

As a fattening food Oil Cake Meal stands far ahead and will make animals ready for market quickest and most economical. Write to-day for our free booklet, "Facts to Feeders."

THE CANADA LINSEED OIL MILLS LIMITED.
TORONTO & MONTREAL

THE C. P. R. GIVES YOU TWENTY YEARS TO PAY

An immense area of the most fertile land in Western Canada for sale at low prices and easy terms ranging from \$11 to \$30 for farm lands with ample rainfall—irrigated lands up to \$50. One-tenth down, balance if you wish within twenty years. In certain areas, land for sale without settlement conditions. In irrigation districts, loan for farm buildings, etc. up to \$2000, also repayable in twenty years—interest only 6 per cent. Here is your opportunity to increase your farm holdings by getting adjoining land, or to secure your friends as neighbors. For literature and particulars apply to Allan Cameron, General Superintendent of Lands, Department of Natural Resources, 216 First Street East, Calgary, Alta.

DITCHER and GRADER DIGS and DITCHES GRADES YOUR ROADS

EASILY QUICKLY CHEAPLY
REVERSIBLY ADJUSTABLE
MADE IN CANADA

DOES THE WORK OF 50 MEN SEND FOR FREE BOOKLET
THE PRESTON CAR & CRACK CO. LIMITED
83 BOYER ST. PRESTON CANADA

FOR SALE AND WANT ADVERTISING

THREE CENTS A WORD, CASH WITH ORDER

BUFF ORPINGTON EGGS for hatching, \$1.00 for 15 eggs. 9 chicks guaranteed. Silver cup winners and extra heavy layers. Hugh A. Scott, Calestonia, Ont.

A FIRST-CLASS BUTTERMAKER wants position from May 15th. In also good cheesemaker. Apply Box 22, Farm and Dairy.

FOR SALE—Himan Milk, used only four months. Cost \$145. Will take first check for \$100. This is great bargain. Also Canadian Fairbanks 1 1/2 h.p. engine. Will sell for \$20, including belt, line shaft and pulley. Ivan St. Law, R. 1, Hampton, Ont.

WHITE and COLUMBIA WYANDOTTES, LIGHT BRAHMAS, S. C. WHITE LEGHORNS.
Michael K. Boyer, Box 23, Hamonton, N.S.

The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

Workmanship

ALTHOUGH the grade of a given churning of butter is based largely upon its score for flavor, the matter of workmanship is, of course, an important contributing factor. Even the most competent butter-maker is unable at times to secure the flavor he desires in the finished product, on account of defective raw material, but even if the flavor be defective, there is no reason why any buttermaker should not put uniformly good workmanship into each churning of butter and at least do this to secure for it the best grade possible.

A very large proportion of the butter packed into 56-lb. boxes finds its way into the retail trade in the form of one-pound "bricks." Therefore, poor workmanship in the packing alone will inevitably cause added labor, expense or short weight troubles to the dealer who does the "bricking."

Every buttermaker should see to it that the butter made under his direction is being properly packed. It is a simple matter for him to "strip" one or more packages from each day's churnings and examine the workmanship with the critical eye of the buyer. This is what the official grader aims to do when he places the score and grade on any lot of butter.—C. Mark, er, Alberta.

Costs in 1914 and 1917

WHAT amount of material is necessary for the production of a ton of cheese, including rennet, coloring, cheese boxes, cheese cloth, etc., in 1914? (2) What was the cost of this material at the prices that will prevail in 1917? (3) Would you consider that if a cheesemaker got \$1.25 a cwt. for the material that he should be getting too much in 1917 for requesting \$1.80 a cwt. of cheese, supplying all material as before?—J. F. Elgin County, Ont.

The following is an approximate estimate of the material necessary to produce a ton of cheese, the cost of material in 1914 and 1917, and the profits of the makers in the two years:

Material	1914	1917
Rennet	88 oz. .90	\$2.25
Color	2 1/2 oz.	.29
Cheesecloth	9 yds.	.54
Cheese boxes	22	4.14
Caps	46	.37
Scaleboards	46	.11
Salt	55 lbs.	.39
Incidentals		.25
Fuel		1.60
Labor		3.60
Board		2.16
	\$14.35	\$25.02

Prices of Cheese Supplies, 1914, 1917.

Rennet	\$.165 a gal.	\$.415 a gal.
Annatto	1.70 "	3.00 "
Bandage	.06 a yd.	.085 a yd.
Caps	8.00 per M.	11.90 per M.
Cheese boxes	18 a box	.25 a box
Scaleboards	2.50 a M.	3.00 a M.
Salt	42 p. 280 lbs.	33 p. 280 lbs.

Curdling—\$.25 in 1917, said to be one-fifth stronger than standard rennets.
At \$1.25 a cwt. in 1914 it would cost \$25 to make a ton of cheese, and at \$1.50 in 1917 \$36 a ton. On this basis, therefore, the profit in 1914 would be \$10.65 a ton, and in 1917 \$10.98 a ton.

Every Farmer positively needs this book

Many money-saving improvements on your farm are made possible by the instructions contained in this Book. To be without it is to remain in ignorance of one of the big, vital aids to farming-at-a-profit. You cannot get the most out of farming without the improvements of Concrete, which this book tells you how to make IN YOUR SPARE TIME. So clear, so practical, are its instructions that you can do practically all your concrete work yourself. Ask for the book and check off on the coupon the subjects in which you are interested.

CANADA CEMENT COMPANY, LIMITED
40 HERALD BUILDING MONTREAL

I wish you send information about—	
FLOORS	DAIRY HOUSES
CONCRETE BLOCKS	SAVINGS
SEWERS	FENCE POSTS
GARAGES	ROOT CELLARS
TRIGGERS AND TRAPS	ROADS
I wish the farmer did so with concrete!	



Dead easy to clean

—because it has fewer parts than other standard cream separators, the Viking is easy to wash and keep clean. The key ring makes all work so easy, the Viking bowl can be made perfectly clean in from two to three minutes. Read what successful farmers say of the Viking.



Dept. G. Descriptive Booklet Free. (10)
SWEDISH SEPARATOR CO.
515 South Fifth Ave., Chicago

VIKING

SHIP YOUR BUTTER & EGGS

—to us. We are not commission merchants. We pay net prices and remit promptly.

THE WILLIAM DAVIES COMPANY LIMITED
Established 1824. TORONTO, ONT.

"Hired Men Galore for the Farmers"

Under this heading in the "Toronto Globe," of April 7th, Peter McArthur explains the plans of the Resources Committee, to farmers. He says in part:

"You will have a chance to increase your products so that you will greatly help your country, and by doing so you will greatly increase your profits. No matter how much you put in, there will be plenty of labor to harvest it carefully. These (business) men are not asking the farmers to accept inexperienced and unskilled help. There are thousands and thousands of men who did farm work for years before going to the city. . . . Their services will be offered to the farmer just like those of any other hired man."

Let us do what England is doing—let us fence in every available foot of land.

If quality and permanence are desired in a fence—Page Wire Fence is the fence you will choose. In Essex, our home county, we sold last year \$27,951.69 worth of Page Fence, Gates, etc., or the equal of about thirty full cartloads. Isn't the fact that we got the business in our own locality where we and our fence are best known—a good reason why you should write for our 1917 printed matter—if you want to help your country by raising more food.

THE PAGE WIRE FENCE COMPANY LIMITED.

WALKERVILLE, TORONTO, MONTREAL, ST. JOHN.

Please Mention Farm and Dairy when Writing Advertisers



Co-Operation Not Competition is the Life of Business

CO-OPERATION is simply working together. By such action we can accomplish what is hard or impossible to obtain by individual effort. By pooling our interests, concerted action is promoted, and co-operative effort attains the desired result. Those who ordered their cement before March 29, may consider themselves fortunate, as the price is now twenty cents per barrel higher for MAY shipment. We are also advised that the railroads are liable to advance their freight rates, and if they do before that time we shall be obliged to charge accordingly.

Coal Oil and Gasoline have advanced two cents per gallon, and sugar six cents per hundredweight during the past three weeks.

Farmers having seed corn and potatoes for sale may forward samples to this office, stating price, variety and quantity. We expect to have our coal prices ready in about one week or ten days, and are still soliciting estimates.

Our Produce Department is progressing rapidly. Get our prices before selling your butter and eggs elsewhere. Always send us a statement of what you are shipping.

We are in position to quote special prices on fertilizers, groceries, implements, seeds, spray material, gasoline engines, etc.

The United Farmers' Co-Operative Co. LIMITED

110 Church Street Toronto, Ont.

THE AVONDALE CONSIGNMENT TO THE BROCKVILLE SALE.

AVONDALE Farm is planning to carry over their annual sale for a shortage of cattle. A number from Avondale will, however, be consigned to the Brockville sale on April 25. This consignment will consist of a number of very select sires that have so far been used at Avondale—namely that noted herd sire, King Pontiac Artin (Canada, Prince Hengervold Fielde, Woodcrest Sir Clyde, and void Fielde. Woodcrest Sir Clyde, and possibly some will be bred to one of the breed's great sires, CHAMPION ECHO SYLVIA PONTIAC. In regard to these noted sires, it will be remembered that the senior sire, Prince Hengervold Fielde we consider one of the greatest producing sires of the breed. His daughters, bred without an exception, through their great production of milk and butter, that is the great transmitting power, that is found in this wonderful sire. He now has five daughters all well over the 30 lb. mark. Two of them are 38 lb. junior four-year-olds. Another one in test at the present time is also hitting the high marks, and it is expected that she will be well over the 30 lb. The daughters of this bull are very persistent milkers, and come back again with a will for greater production. When you consider his 25 lbs. and 27 lb. junior two-year-olds making again over 100 lbs. at three years and coming back again at junior four-year-olds making over 100 lbs. this also proves the staying qualities that are possessed by these great cows. Avondale Farm is consigned a daughter of this great sire with a junior four-year-old record of 27.4 lb. milk for 30 days, with 2234 lb. milk. This is a choice bred young cow with a continuing string of records all through her pedigree. Another of the choice things that has been offered is a half brother to Prince Hengervold Fielde. This bull is the greatest individual young sire that the manager of Avondale Farm has ever imported into Canada. Personal inspection of this great sire is invited. The daughters of this bull are not yet at milking age, and are the greatest prospects of being the greatest producers ever raised at Avondale Farm. They are the most uniform lot of stuff ever sired by any one sire. In color workings, they are ideal, with very few exceptions all are from two-thirds to seven-eighths white, and all show the conformation and capacity of their sire. Woodcrest Sir Clyde is consigned four years old and over 3,000 lbs. Another of the offerings from Avondale is a three-year-old daughter of Sir Clyde Lady Korodora. This is a sire, who is a half brother of Rag Apple Korodora, the \$25,000 bull. This is a very magnificent young cow, an AI individual, and straight as a line, low down type, the old-fashioned kind. She is to be freshened before the sale, and will be given the opportunity of making an official record. Her dam is a sister to the great King Segla. Get a catalogue and look up these and other offerings.



The Dairyman knows that he cannot afford to keep poor cows in his herd as his profits are to come from the factory or creamery. Why then should a farmer neglect to exercise the utmost care in his selection of his seeds? Why should he not make certain seeds which he does not know? If the proper selection of seed is not made, the labor, the time, and the land is bound to be wasted to some extent at least.

"McDonald's Tested Seeds" are famed far and near as producers of abundant yields—they are thoroughly reliable.

The following are a few of McDonald's outstanding specialties:

CARROT, Danvers Half Long, per bush, postpaid, 75c.
TURNIP, Danvers Half Long, per bush, postpaid, \$1.75

McDonald's Perfecta Swede, The finest pure-bred top Swede obtainable, 70 \$3.00

Prince Marston Long Red, 50 2.00
Eckendorfer Root, 50 2.00
Giant Half Sugar, 50 2.00

RAMP Improved Dwarf Essex, Genuine English sex, 25 1.25
JAPANESE MILLET, makes valuable fodder for milt cows, 100 lbs. \$6.00

SOGHUM or Early Amber Sugar Cane, Sweet, tender and very nutritious green fodder, 6.50

COCKS, McDonald's Improved Special Leaning strain. There's no other grown to equal this for Per Bush, 25 \$2.50
50 \$5.00

BANNER SEED OATS

There is without doubt no more satisfactory oat than the "Banner." As regards yield, it occupies a front place and is most in demand at present all over Canada. Banner oats thrive in a great variety of soils.

We are offering at present a quantity of Registered Banner Oats, supplied under seal, and which are of very superior quality. We have no hesitation in recommending these as the very best that can be obtained in their respective classes:

1st Generation, per bushel \$1.60
2nd Generation, per bushel \$1.50
3rd Generation, per bushel \$1.40
Improved Banner, grown from Registered stock \$1.25

All put up 5 bushels per bag.

These Oats are all put up in best quality new cotton bags at an extra charge of 30c each for the bags.

Write for copy of McDonald's Seed Catalogue, making mention that you saw this advertisement in "Farm and Dairy."

KENNETH McDONALD & SONS, LIMITED, Ottawa, Ont.

ADVERTISE In these popular columns you will find a host of others and cost you only 11¢ an inch.

CREAM

WE ARE OPEN TO BUY CREAM, both for churning and table use.

ASK ANY SHIPPER about our service and prompt returns.

ASK FOR PRICES. The figures for yesterday may be TOO LOW for tomorrow.

WE FURNISH CANS.

The Toronto Creamery Co., Limited
Church St., TORONTO, Ont.

FILL YOUR SILO WITH YOUR OWN ENGINE

A 4 or 6 H.P. will operate the small size. Darby Bros., of Rockwood, write: "When we filled our 11x30 silo in seven hours with our own engine the neighbor-hood was amazed."

T.H. GILSON SILO FILLER

is truly called "The King of Corn Cutters." Why take chances with your own crop? Play safe—don't worry whether you can get the cutter gang when you need it. This is the machine you want. Order NOW, before the season's supply is exhausted.

GILSON MFG. CO., Limited 437 York St., Guelph, Ont.



Send for free catalogue and prices.

THE FARMERS' SEEDSMAN SEEDS FIFTY ONE YEARS SERVICE

1866 1917

Good reliable seeds of all kinds are very scarce and hard to get this year. We are therefore very much in earnest when we say

DON'T DELAY! ORDER AT ONCE

and avoid being disappointed.

We pay railway freight on all orders of \$5.00 or more in Ontario and Quebec.

BEED CORN	Rack Crib cured and in crates, bags. For Bushel	
Wisconsin No. 1	.....	\$2.25 \$3.00
Golden Orow	.....	2.15 2.50
Baylor	.....	2.15 2.50
White Cap	.....	2.25 3.00
Longfellow	.....	2.50 3.00
N. Dakota	.....	2.25 3.00
Compton's	.....	2.50 3.00
Quebec No. 2	.....	2.50 3.25
Rack cured in bags, at 15c per bush, less than in crates.		
O.A.C. No. 3 Oats	.....	2.00
O.A.C. No. 72 Oats	.....	\$1.25 \$1.35
Banner Oat, unregistered	.....	1.20
Yellow Russian Oat	.....	1.30
Potatoes, Irish Cobbler	.....	4.50
Delaware	.....	\$4.50
Thousand Headed Kale	.....	25c lb.
For Clover and Timothy at low 30c for each cotton bag required. Grain sown free.		

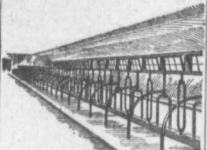
MANAGER: Keith's Prisetaker, Danish Intermediate, Giant Half Sugar and Mammoth Long Red, in 1b. packs, 25c. 1 lb. or more of one variety, 25c.

Send for our 1917 Catalogue. It is FREE.

GEO. KEITH & SONS SEEDS 124 KING ST. E. TORONTO

LOUDEN

Sanitary Steel Stable Equipment



What it means to You

MODERN, Sanitary Stables at a reasonable outlay of time and money.

Convenience in looking after your cows, and a saving of time and labor in tying, feeding and cleaning them.

Increased milk production, no waste feed, and increased profits.

What it means to your Cows

COMFORT, cleanliness and almost as much freedom as when in pasture.

More sunlight and fresh air, the great germ destroyers.


Our catalogue is FREE. Write for it to-day. It tells all about the complete LOUDEN line.

Ask for our New Book of Barn Plans. It's free.

LOUDEN MACHINERY CO. OF CANADA, LTD.
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ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.



will reduce **Inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Pock Evil, Quittor, Fistula, or any unhealthy sore** quickly as it is a positive anesthetic and germicide. Pleasant to use; does not blister under bandage or remove the hair, and you do not work the sore. \$2.00 per bottle delivered. **Book 75 free.**

ABSORBINE, JR., anesthetic liniment for marking, Reddened Flannels, Swollen Veins, Galls, Wrens, Strains, Bruises, stops pain and inflammation. Price \$1.00 per bottle delivered. Write for more if you wish. **Manufactured only by W. F. WILSON, P.O. Box 1233, Ymca Bldg., Montreal, Can.** Absorbine and Absorbine, Jr. are made in Canada.

All cows give some **MILK**

Well fed cows of course give **MORE MILK**

but cows fed **COTTON SEED MEAL** give the **MOST MILK**

and do it at less cost per pound. **COTTON SEED MEAL**

when carefully selected, such as our Brands are, is the most economical and most satisfactory concentrate on the market. It is rich in protein, and offers it to the animal in a highly palatable and digestible form, and cows need protein to produce the maximum amount of milk. A scientific dairymen will always include in the ration sufficient cotton seed meal. More natural farm roughage and less grain products can be used. Ask your Experiment Station.

OUR BRANDS:

Owl Brand	41-45% Protein	Jay Brand	36-38% Protein
Dove Brand	38-40% Protein	Pea Brand	36-38% Protein

All selected quality—Cotton seed meal is our specialty and has been for forty years. Come to headquarters.

F. W. BRODE & CO.
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SOUTHERN ONTARIO CONSIGNMENT SALES CO.

5th ANNUAL HOLSTEIN SALE

At TILSONBURG, Ontario,

On TUESDAY,

MAY 8th, 1917.

R. J. KELLY,
Manager,



Contains beyond a doubt the best lot we ever offered.

Write for Catalogues.

CULLODEN, Ont.

CHEESEMAKERS! HANSEN WANTS RENNETS

We have opened a factory in Toronto for the manufacture of our well-known Rennet Extract and other preparations. And we need all the Rennets and teachers in your locality and ship them to us. The Rennets should be those of milk-fed calves only.

GOOD PRICES PAID.

Write us for special circular containing full instructions for the preparation of Rennets for shipment, and particulars of the prices we will pay. In this now—There's money in it for you.




CHR. HANSEN'S CANADIAN LABORATORY,
201 Church St., Toronto, Ont.

Fullest Efficiency Means Largest Profits

Experience has proven that the most characteristic feature of the "Simplex" Hand Separators is their mechanical efficiency and their light running in proportion to capacity. The **SIMPLEX CREAM SEPARATOR** of 1,100 lbs. capacity is just as easy to turn, when at speed, as the 500-lb. capacity machine of other makes. With a higher standard of bearings and gears than is to be found in almost any other machine, perfect workmanship, and the special link blade system permitting a lower bowl speed, it is found to run easier than other machines, even in the largest sizes. The link blade system adds greatly to its efficiency and capacity. Besides, it cuts down by half the time needed for perfect skimming, and you know what a big saving that means in these days of scarce labor. No wonder the Simplex soon makes up its slight extra cost in larger profits.



Send postal to-day for complete information

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Write to-day for our big **FREE CATALOGUE** showing our full line of Bicycles for Men and Women, Boys and Girls—Tires, Conster Brakes, Wheels, Inner Tubes, Lamps, Bells, Cyclometers, Saddles, Equipment and Parts for Bicycles. You can buy your supplies from us at wholesale prices.

T. W. BOYD & SON,
27 Notre Dame Street West, Montreal.

Maxwell

LONG experience has taught us the best principles of churn construction. For instance, wood is the best material for the barrel, it does not chill like crockery or glass and oak is the best wood. The barrel of Maxwell churn is made only of selected oak. Mechanism is simple but strong. Every detail of construction and finish is high class throughout. That's one reason why Maxwell churns are exported to all the great butter-making countries of the world.

Maxwells Ltd. - Dept. G. St. Mary's Oct. 27



KEEP THEM WORKING



A horse in the field is worth two in the barn. You can't prevent Spavin, Kingbone, Splint, or Curb from putting your horse in the barn but you can prevent these troubles from keeping horses in the barn very long. You can get

KENDALL'S SPAVIN CURE

at any drug store at \$1 a bottle, 6 for \$5, and Kendall's will cure. Thousands of farmers and horsemen will say so. Our book "Treatise on the horse" free. 115

Dr. B. J. KENDALL CO., Rossburg Falls, Vt.

BOOKS Send for our Catalogue of Books Sent Free on Request.

Great Demand for Pietje Bulls

Why—Because they are such excellent individuals.

We are offering three youngsters sired by the great bull, WOODCREST SIRE CLYDE. They are three of the choicest this year on Avondale Farm, MILLS, record nearly 25 lbs. from the great show cow, PRIDE OF OCHARD. HENDEVELD, PIETJE and PRIDE OF MILLS. Another boy Nov. 14, 1916, son of PIETJE CLOPHLEVE OF AVONDALE, record over 25 lbs. a daughter of PRINCE HENDEVELD, PIETJE and PRIDE OF MILLS. Third born Jan. 25, 1917: Dan, PIETJE CLOPHLEVE PONTIAC. Third born years 18 1/2 lbs. a daughter of R. P. A. CANADA and PIETJE CLOPHLEVE volume of three generations of cows. Write at once for prices.

H. LYNN, Manager, AVONDALE FARM, BROCKVILLE, ONT.

HOLSTEINS

Could spare 10 cows or heifers bred to the Great Bull KING SEGIS PONTIAC DUPLICATE. Have one yearling bull, and calves from 10 months down. Murtle, C.P.R. Manchester, G.T.R.

R. M. HOLIBY.

Port Perry, P. R. 4

HIGHLAND LAKE FARMS

Here first AVONDALE PONTIAC ECHO (under lease), a son of MAY ECHO SYLVIA, the world's record cow for milk production and Canadian Record for butter, 41 lbs. Only one other 41-lb. bull in Canada. Our herd of one hundred head is nearly 80% daughters of a 33.1-lb. son of the great KING SEGIS, brother to the three world's record cows—the great KING SEGIS, Sr. 477-40 46.84, Jr. 4 yr.-old 49.32 lbs. Junior herd sire, KING SEGIS PONTIAC CANADA, a half brother to AVONDALE PONTIAC ECHO. Offered at 30 lbs. Segis cow. He is for sale. If this combination of breeding interests you, write for prices on either male or female.

R. W. E. BURNABY, (Farm at Stop 55, Yonge St. Radial), Jefferson, Ont.

LAKEVIEW HOLSTEINS

Are still in the lead. The latest Holstein year book shows that they held possible at both Toronto and Lekeview, both having all honors are offering several richly bred young fellows that are looking forward to the fall fair, and we have decided to give \$25.00 in aid to the man that buys the 1917 yearling.

Don't miss this opportunity. Act quick, and plan to spend a day at Lakeview. Terms cash or time.

Major E. F. OSLER, Prop., Bronte, Ont.

T. A. DAWSON, Mgr.

FOR SALE

A pure-bred Holstein bull calf. Dam gave 16,000 lbs. milk as 2-yr.-old, and is from high testers. Sire is a grandson of HENGBERVELD DEROL through PONTIAC HERMES, a brother to the dam of KING OF THE PONTIACS. The sire's dam carried 75 per cent. of the blood of LILU KEYSER, over 34 lbs. butter 7 days. Price, \$40, delivered to any station in Ontario.

N. R. McARTHUR, R.R. No. 3, Thamesford, Ont.

AYRSHIRES

BURNBRAE AYRSHIRES

A few nice bull calves for sale from high producing cows. If you are in need of a good head, they can't be beaten. Could spare a few heifers too. Write Jos. Hudson & Son, Lyn, Ont.

AYRSHIRES

I have at present a number of Ayrshire calves, including my stock bull "Gold," born (4/2/96), four years old, whose sire was imported, and who is also grandson of Nelly Osborne. I have several good bull calves from pure-bred heifers to offer. J. M. Stark, R.R.7, Peterboro, Ont.

TANGLEWYLD AYRSHIRES

The Leading R. O. P. Herd Large Cows, Large Teats, Large Records, High Testers, Choice Young Bulls and Bull Calves, and a few Cows for sale.

WOODBINE BROS., R. B. No. 1, MISSISSAUGA, ONT.

Springbank Ayrshires

For sale. One yearling bull, first in junior calf class at the Canadian National and one nine-month-old bull out of the second prize at the Canadian National. Also for sale a few choice bull calves, three months old. All are of R.O.P. blood.

A. S. TURNER & SON
Ryckman's Corners, Ont.

Ferbrook Ayrshires for Sale

Bulls from 8 to 12 months old, out of dams closely related to the two greatest Ayrshire cows in the world, Garceling May Mischief and Jean Armour.

COLLIER BROS., Beachville, Ont.,
Oxford Co.

AYRSHIRE BULLS

We offer an exceptionally good pair of bulls, 12 and 14 months old, from particularly choice R. O. P. cows, with R. of P. of R. P. will be pleased to give descriptions.

W. W. BALLANTYNE & SON
R. R. 3, Stratford, Ont.

PEACH BLOW AYRSHIRES

Young Stock for sale, always on hand (both sexes), from high-testing heavy producers. Good udders and large teats a special feature of my herd. Three fine young Sires ready for service. Get particulars for the Sire you need a sire. R. T. BROWNLEE, Peach Blow Farm, HEMMINGFORD, ONT.

FAIRMOUNT AYRSHIRES

Mature cows and young stock for sale always on hand (both sexes) from large heavy producing high testing cows, sired by Robin Hood of Fairmount, Imp. U.S.A. No. 6214, son of the famous Netherland Robin Hood, Imp. No. 2672. Inspect herd or write for particulars.

B. J. TAYLOR

AYERS CLIFF, QUE.

Market Review and Forecast

Toronto, April 18.—Trade is good. Reports from East and West are optimistic. Eastern trade was exceptionally lively and all wholesalers report a good volume of business.

In the farm produce market, wheat holds the center of attention. It has gone up and under the influence of government crop reports and war rumors, but the net result is a gain of several cents. Export price are expected, and further decreases in mill stuffs are about steady. Pork is at new high levels.

The entrance of the United States into the United States government is considering measures which have for their object an increase in production and also a more distribution of their surplus produce where it will do the most good for the skilled cause. Just what form these regulations will take is not yet known, but every rumor which has seized upon and made the excuse for price manipulation on the market. It is generally felt, however, that net results of the entry of the United States into the war will be higher prices.

Wheat.

A rumor last week to the effect that the United States government would control wheat supplies, caused a decline in quotations, market steadily regained confidence, however, and the report dealing with conditions in the south west, caused wheat to make a gain of about 1¢. If such a program of reports, however, have adopted, La-zoo's confidence and the record high prices have been maintained. Late in the week the market again advanced strongly. As a matter of fact the volume of actual business being done is bay ports. No. 1 northern, \$2.27; No. 2 northern, \$2.21; No. 3 northern, \$2.16; No. 4 wheat, \$2.15; Ontario wheat, No. 2 winter, \$2.08 to \$2.10; No. 3, \$2.06 to \$2.08.

Coarse Grains.

Canadian Western oats have about a slight tendency toward lower levels. Ontario oats, however, are stronger. While official quotations have not been changed on corn, business has been done at lower levels. Barley is higher. Quotations: Oats, C.W. No. 2, \$1.92 to 78c; Ontario No. 1 feed, 78c; No. 1 feed, 77c; Ontario No. 2, 75c to 74c; No. 2 feed, 74c to 73c; corn, \$1.70 to 70c; rye, \$1.30 to \$1.32; buckwheat, \$1.23 to \$1.49. Montreal quoted as follows: Corn, \$1.48 to \$1.60; oats, C.W. No. 2, 77c; C.W. No. 3, 78c; Ontario No. 1 feed, 78c; Ontario No. 2 feed, \$1.91; buckwheat, \$2.11.

Milk Feeds.

Demand is steady and a tendency to higher levels is in evidence. Shorts are bid, one load. Montreal freight, \$40 to \$42; bran, \$35; mid-ship, \$43 to \$45; feed flour, per bag, \$2.78 to \$2.80. Montreal quotes bran at \$77 to \$78; shorts, \$40; middlings, \$45.

Potatoes and Beans.

Supplies of potatoes have never so limited as they are at present. Both Eastern and Ontario potatoes have advanced on the wholesale market. Idaho warms are now quoted at \$4 a bag; Ontario at \$3.75 and Western potatoes, at \$3.50.

Beans, Japanese hand-picked, bushel, \$6.25; prime, \$5.75; Canadian, hand-picked, \$7.25; prime, \$6.75.

Hides and Wool.

Country markets quote as follows: Beef, heavy, fat, cured, 19c to 20c; salt cured, 20c; fresh, 18c to 19c; dressed or bot calf, \$1.75 to \$2.25; calves; horse-hair, \$1.50 to \$2.00; No. 1 sheepskin, \$1.50 to \$2.00. Horsehair, farmers' stock, 11c.

Unwashed fleece wool, as to quality, 35c to 45c; washed fleece wool, as to quality, 45c to 65c per lb.

Butter.

The tendency in eggs has been toward low levels and is expected to continue. It is now about 30c. On this market quotations are selling to the trade at 28c to 30c for new labels. At Montreal, fresh eggs are quoted 26c and selected 30c. Further recessions in price are expected.

Poultry.

Chickens, fat 22c to 24c
Ducks, fat 25c to 25c
Geese, ordinary 22c to 26c
Fowl, ordinary 20c to 23c

The butter market is firmer to-day than it was a week ago and unless plentiful supplies are gotten in, it is not coming on to the market in any great quantity and storage supplies are practically exhausted. On this market, creamery brands, fresh made, are quoted 45c to 46c and dairy prints are 40c to 41c, depending on quality. At Montreal, choice creamery is 45c and secondaries to 41c. The New York market is higher than either, with choicest creamery at 46c to 48c.

Cheese prices are firm and all fodder goods being offered are being taken up rapidly. Montreal quotes finest Western at 25c to 24c, and finest Easterns at 23c. Tweek's cheese, now large at 27c to 28c, and twins, 25c to 25c.

Live Stock.

The past week has had a decidedly strong one on the live stock market. Receipts have been cleaned up each day and in no case have the runs been more than moderate in size. Advancing quotations on United States steers have led to firm prices at Toronto and Montreal. Milk cows are in record demand here. The quality is good. Veal is firm and receipts of sheep and lambs have been strong. Wholesale quotations follow:

Choice heavy steers \$11.25 to \$12.00
do medium 10.50 to 11.00
Butcher's choice heavy 10.75 to 11.50
do good to good 8.50 to 10.00
Butcher's choice cows 9.50 to 10.00
do medium 8.50 to 9.00
Butcher's bulls 6.50 to 7.00
Pigs, 500 to 1,000 lbs. 8.15 to 10.00
do medium 700 to 800 7.50 to 8.00
do small 6.50 to 7.00
Stockers, 700 to 900 lbs. 7.25 to 8.00
do medium 6.50 to 7.00
Grazing steers 6.75 to 7.50
1,100 lbs. 6.50 to 7.50
Canners 6.00 to 6.75
Cattle, good to medium 9.00 to 9.50
do common and medium 5.00 to 6.00
Springers 15.00 to 16.00
Calves 6.00 to 10.00
Lamb, choice 14.50 to 15.50
do medium 12.50 to 14.00
do culls 7.50 to 10.00
do spring lambs, each 13 lbs. or over 10.00 to 12.00
do heavy and bucks 8.50 to 10.00
do culls 6.00 to 7.00

Hogs have been extremely strong. Toronto prices being higher than the record prices which have been given in Chicago. Off cuts are quoted 10c for fat and stewed, 10c for fat and f.o.b. country, 15c to 16c; loss due on hives; \$1 to \$2 on lights; \$2 to \$2.50 on culls.

Montreal good steers range from 11c to 11.50; lower grades, 9c to 10c; butchers' cows, 8c to 9c; butchers' cows, 7c to 8c; common and inferior cows, 5c to 6c; butchers' calves, 4c to 5c; butchers' calves, 3c to 4c; butchers' calves, 2c to 3c; butchers' calves, 1c to 2c. The tone of the market for hogs was firm, with good demand for selected lots at 16.00 to 17c a cwt., weighed off cars.

Zeonolite

Light and Heat

SHEEP DIP

More Wool and better grade Wool comes from sheep whose fleeces is kept free from ticks by the use of Zeonolite, the great standard God T. Disinfectant. Zeonolite-treated sheep have clean white fleeces which bring higher prices. Sheep kept healthy by Zeonolite put on weight and are more profitable for the market as well.

As a "dip," Zeonolite is clean, and does not leave greasy stains or an offensive odor. It is a powerful permanganate, stronger than any other dip, yet is not poisonous, is not inflammable and irritate the skin as most other preparations do. It is sold by Agricultural Colleges, FREE copy of our booklet, Diseases of Livestock, and Zeonolite form sent post-paid on request.

ZENNER DISINFECTANT CO.
Sandwich St. East, WINDSOR, ONT.

MADE IN CANADA

The Finest Blood of the Breed

60 HEAD will be offered 60 HEAD

AT THE
Fourth Annual **Brockville Sale, April 25**



In keeping with the high standard set for BROCKVILLE sales, we are this year offering some of the choicest that have ever been led into a sale ring. They are backed by the wonderful cows and sires for which the Brockville District is known throughout Canada. This season there will be also a selection from AVONDALE FARM, private sales from Avondale being so good as to leave too few animals for a separate sale. We therefore invite every admirer of choice Holsteins to be with us on April 25th. Especially attractive are the richly-bred young sires. A few of the offerings are:

**NORTH STAR
FARM
J. W. STEWART
Lyn, Ont.**

Sons and Daughters of Sir Waldorf Korndyke

This herd is backed by much of the richest blood in the herds of Canada and the United States. It includes a pair of splendid three-year-old daughters of KING SEGIS PONTIAC DUPLICATE, due to freshen about sale time. You cannot beat these. Look them up. A sample of choice conformation bull. Our sire offerings include a son of AVONDALE PONTIAC ECHO, the \$5,000 son of MAY ECHO SYLVIA. Another choice sire is NORTH STAR DEKORL CLYDE, a son of WOODCREST SIR CLYDE. Mark this young chap for your next great credit to their purchaser, as they are backed by the best blood in the Holstein world, and will be a individual offered has great possibilities.

**BROWN BROS.
Lyn, Ont.**

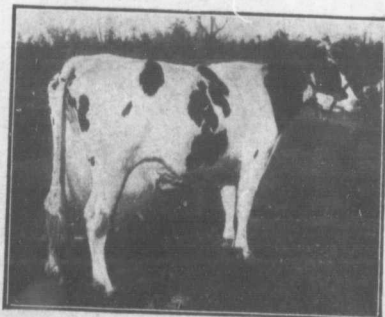
Daughters of King Pontiac Artis Canada

Amongst the 16 head of our consignment are two daughters of KING PONTIAC ARTIS CANADA, who, as you know, has more high record daughters than any other bull in Canada. One of his daughters in the consignment has 18.92 lbs. butter in seven days at two years. We are also putting in one of his granddaughters, two years old, which has recently made 19.85 lbs. butter, seven days, 82.5 lbs. 30 days; and three two-year-old daughters of the 31-lb. sire, KING URMA, whose dam, URMAGELSCHIE 2nd A, has 31½ lbs. in seven days, and has three daughters averaging over 31 lbs. We have 11 other females besides these in the sale, each backed by the best blood, and offering a great opportunity for the laying of some good foundation stock. See our gossip notes for more specific information and come to the sale and see for yourself what kings and queens in the Holstein world we are offering.

**AVONDALE FARM
A. C. HARDY
Brockville, Ont.**

Great Blood from Avondale

The offerings from Avondale are not only worthy of our great cows—they are exceptional. They will include KING PONTIAC ARTIS CANADA, PRINCE HENGERVELD PIETJE, WOODCREST SIR CLYDE. These are the great tested sires of Avondale Farm. PRINCE HENGERVELD PIETJE has now five daughters over 30 lbs., two being 36 lb. junior four-year-olds. The females include a daughter of this bull, and also a daughter of WOODCREST SIR CLYDE. Our other females and sires are just as fine in breeding and type. No large breeder in Ontario should miss the chance of bidding on them. See our sales notes and get a catalogue. The splendid array of mature and young sires should attract every breeder who needs a herd head of choice breeding. Come to the sale at Brockville and pay us a visit also at AVONDALE FARM, and inspect some of the great sires we have in our herd.



Several splendid grandsons of May Echo Sylvia are included in our big offering of April 25. Look these up in our catalogue.

When you study these animals in the catalogue you will want to attend this sale. For catalogues, write

G. A. GILROY Secretary Glen Buell, Ont.

Brockville Holstein Breeders' Club

DRUMMOND CUP WINNERS 1914



One million more sheep wanted from Ontario

Co-operative marketing of wool pays. The Provincial Department of Agriculture, through the Ontario Sheep Breeders' Association, is anxious to assist every sheepgrower to place this season's clip upon the market so that it will bring the greatest return to the Producer and will also be of the greatest value to the Manufacturer

Quality and freedom from foreign material are the factors governing comparative prices for fleeces.

Modern methods of selling the product, breeding the sheep, and caring for the sheep, means greater profits.

Ontario is the great sheep centre of Canada—the introduction of co-operative marketing of wool will arouse interest, and if other approved methods are adopted the sheep population will again rapidly increase.

Ontario now raises 1,000,000 sheep, and we should produce 2,000,000 sheep—Modern methods will supply the necessary impetus.

The consumption of lamb and mutton in Ontario is increasing—too great a part of this is yearly imported. Too much hard cash is sent away for foodstuffs which should be raised in Ontario!

Every sheepraiser is asked to co-operate in the movement for more sheep, and better sheep throughout Ontario.

Study these ideas for more profits in marketing wool:

Old Way—Wool was often tied with binder twine, yarn, cotton cord, wire, wool rope, and some was not tied at all.

NEW WAY—Wool is all tied with paper twine, which disappears during the manufacturing process.

Old Way—Some sheep were washed, and many were shorn without washing, and in many cases the wool was tub washed after shearing. Tub washing actually decreased the value of the wool, because all the qualities of a single fleece became so mixed that sorting was impossible.

NEW WAY—The sheep are not washed, and the wool is delivered just as it comes from the sheep.

Old Way—The wool of high grade was sold for the same price as that paid for the lower grades.

NEW WAY—All fleeces are graded by an expert and the quality determines the comparative price.

Old Way—The farmer did not know the real value of the wool. The purchaser, assumed unnecessary risks.

NEW WAY—Seller and purchaser thoroughly understand the transaction.

Old Way—The farmer who bred good sheep, kept them clean, and fed them well, sold his wool at a disadvantage.

NEW WAY—Breeding, feeding and care are paid for when the quality system is used.

Old Way—The actual value of the wool was decreased too often.

NEW WAY—The actual value is increased because the manufacturer has the opportunity to use every pound of wool for the proper grades of material.

Old Way—Distrust and suspicion were aroused. **NEW WAY**—Confidence and co-operation appear. The producer and consumer are drawn closer together.

Results on the Farm

- (1) Sheep raising will become more attractive.
- (2) In many cases sheep will be better fed and generally better cared for.
- (3) More pure-bred rams will be used.
- (4) The quality of the wool and mutton will be raised to a higher standard.
- (5) More farmers will consider sheep raising as part of the regular farming operations.
- (6) There will be less weeds to go to seed. This is a Farmer's Movement. The Sheep Industry in Ontario has been growing smaller. Your support is necessary in order that this important industry will receive the impetus it deserves. Quality and Quantity are the points of emphasis.

Conditions under which wool shall be accepted by the Ontario Sheep Breeders' Association:

- (1) Application forms should be received in the Secretary's Office, Parliament Buildings, Toronto, not later than April 23rd, 1917.
- (2) Shearing should be completed so that wool may be received at the Winter Fair Building, Guelph, between May 15th, and June 11th, 1917.

If you have not received a circular enquire from your District Representative or from R. W. Wade, Parliament Buildings, Toronto.

Ontario Department of Agriculture

Sir Wm. H. Hearst,

Minister of Agriculture

G. C. Creelman,

Commissioner of Agriculture



ONTARIO

There is big money in modern methods