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Vol. LIII.

LONDON, ONTARIO, JUNE 20, 1918.

No 1343



Flying Sparks die out on Brantford Asphalt Roofing

The best way to economize

The best way to economize is to buy roofing with the quality put into it that will make it last longer than ordinary roofings.

Asphalt is one of the most enduring materials known to science—especially if the hard, brittle asphalts are blended with the soft, pliable kind, which produces an asphalt of remarkable toughness, elasticity and durability. This is what we do to get the very best grade of asphalt for the saturation and coating of

Brantford Asphalt Roofing

The saturation of the felt in Brantford Roofing is done at the high point of more than 350 degrees. This makes the saturation complete, every fibre of the felt being soaked through and through with the asphalt.

Brantford Asphalt Roofing does not evaporate under the heat of the sun. Neither does it absorb moisture, freeze or crack. It is also a wonderful fire-resistant, the insurance companies classifying it as a non-combustible. Farmers need not hesitate to put it on barns or other buildings close by railroad tracks, because flying sparks from locomotives or threshing engines that fall on Brantford Asphalt Roofing are harmless and quickly die out without injuring the roofing.

If the interior of a building should catch fire, a Brantford Asphalt Roof acts as a blanket and helps smother the fire. It never sends embers flying through the air to spread a fire.

Brantford Asphalt Roofing has been on the market for many long years—long enough to have proven its lasting quality beyond question. The first roofs covered with it are still doing yeoman service in resisting rain, snow, hail, frost, heat and wind.

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Brantford Asphalt Roofing is made in three thicknesses. No. 1 is 60 lbs. per square. No. 2 is 70 lbs. No. 3 is 80 lbs. Both surfaces are sanded, which adds to the weight and durability of the roofing.

Brantford Rubber Roofing

has the same high quality asphalt saturation and coating as Brantford Asphalt Roofing, but it has a smooth rubbery surface instead of being sanded. It is also in three weights.

No. 1 is 40 lbs. No. 2 is 50 lbs. No. 3 is 60 lbs.

Standard Mohawk Roofing

This roofing is made of same materials as Brantford Asphalt but is lighter in weight. It is the best quality of any low price roofing on the market. It is a standard that has been tested for years and given entire satisfaction. Sanded on one side. One weight only—40 lbs.

Mohawk Rubber Roofing

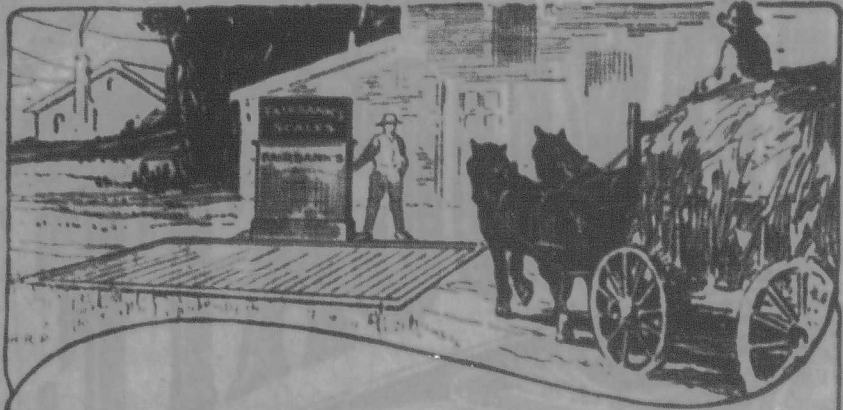
The same grade as Standard Mohawk except that it has a smooth surface. Used for all classes of temporary works—sheds, barns, shacks, bunk houses, camp sites; and even dugouts in the trenches are covered with it. 35 lb., 45 lb., and 55 lb. weights.

Leatheroid Roofing

Slightly lower quality than Mohawk Rubber and used for same purposes. Has a leathery surface. Exceptionally good roofing at a low price. 35 lb., 45 lb., and 55 lb. weights. Samples and prices mailed on request.

Brantford Roofing Co., Limited

Head Office and Factory: BRANTFORD, CANADA
Branches at Toronto, Montreal, Halifax



Fairbanks Wagon Scales

are the practical heavy load scale for the farm as well as for contractors, builders, hay and grain dealers or coal merchants. They combine convenience, simplicity and accuracy. Fairbanks Wagon Scales fill every weighing requirement in

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Every Fairbanks Wagon Scale may be fitted with a Compound or Columbia Grain Beam, adaptable to graduations and standards required by the purchaser. Platforms are of steel frame construction and vary from 8 x 14 ft. to 7 ft. 11 in. x 22 ft. Extension levers to carry beams 20 feet from scales are another convenient device obtainable at small additional cost, making it possible to locate the weighing beam under cover of an adjoining building.

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are convenient and accurate scales for use where a pit is undesirable. The height of scale is only nine inches from top of platform to bottom of steel frame. This is an ideal scale for farm, contracting and quarry use. Capacity 5 tons. All prices are exclusive of timber and foundations. Write our nearest branch for full particulars.

The Canadian Fairbanks-Morse Co., Limited

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The Paint for the Barn

The barn is usually the most valuable building on the farm; it houses several thousand dollars' worth of stock, implements and foodstuffs. Don't leave so much valuable property unprotected. Safeguard it with

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This is the best wearing and most economical paint for all farm buildings. One gallon covers 300 square feet, two coats, where the wood is in good condition. It's a wise investment to let this good paint protect all your farm buildings.

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Write for prices and catalogue. AGENTS WANTED.

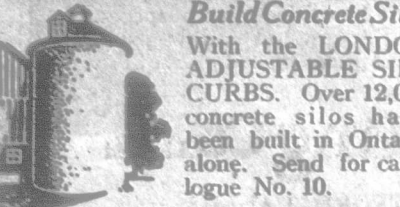
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"In reply to your inquiry, I put in about forty acres of wheat last Fall, and for experimental purposes, your goods being new to this district, I applied Sydney Basic Slag to one of my fields. To-day I measured the growing grain and found it stood on an average twenty-six inches in height. In all the years I have been farming I never had such a fine crop, and I am perfectly certain it cannot be beaten in Western Ontario. I am now thoroughly satisfied that Basic Slag is the ideal fertilizer for Fall Wheat, and I will only be too pleased to show the crop to any one you care to send to inspect it. Some of my neighbors who used Basic Slag on their wheat are equally well satisfied, and I believe that once our farmers in Ontario get a knowledge of your goods there will be a very large sale for them."

Sydney Basic Slag costs \$24 per ton at any station in Ontario, and is the best value obtainable in fertilizers.

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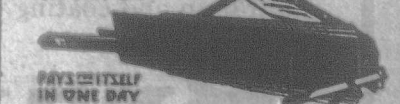
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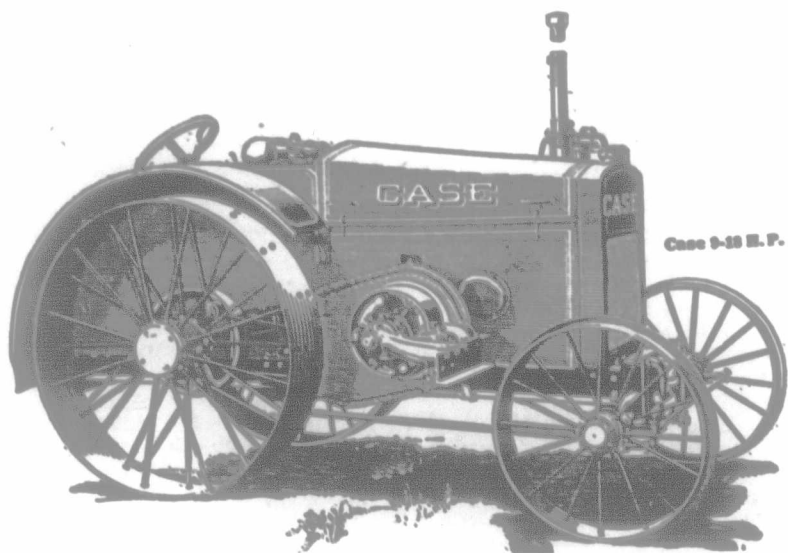
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Each tractor develops more than its rated power by actual factory test. It develops 9 horse power on the drawbar for ploughing, harrowing and hauling. For belt work it may be used successfully, delivering 18 horse power to the pulley for driving the thresher, the baler, husker, silo filler, or operating other farm machinery.

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The Canadian Fairbanks-Morse Co., Limited



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Use Power in the House as well as in the Barn

Runs by Motor or Engine

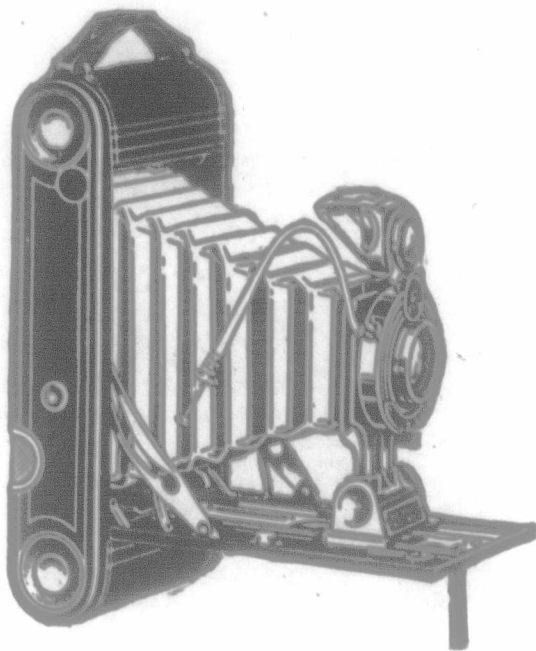
YOU know how much farm work is saved by electric motors and gasoline engines. Why not adopt the same idea in the house? Backaches from washing are out-of-date—successful housekeepers everywhere insist on washing machines, and the best idea of all is the power washer, because it does all the work itself and needs no attention whatever.

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—has proved itself a wonderful friend to others. Let it help you. It will even do the heaviest or daintiest clothes with no tearing or wearing. Pays for itself over and over! Made in three sizes. Write for particulars.

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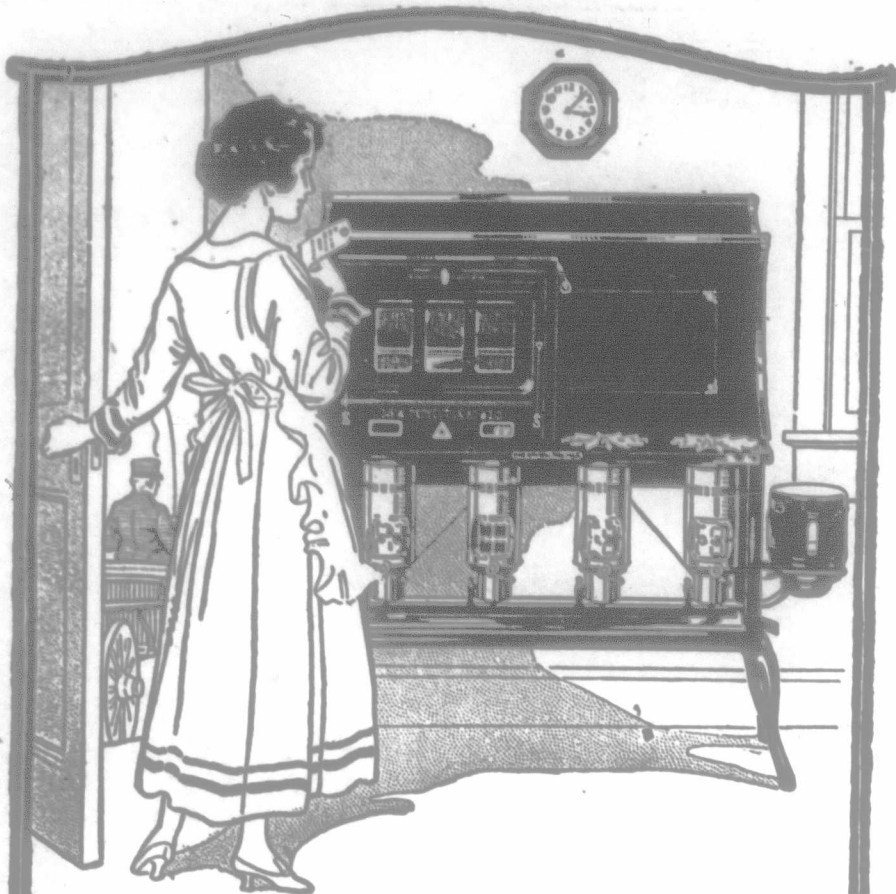


The price of bricks has gone up very little in three years. You can build an average-size, warm house on your farm of

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for the proceeds of half as many hogs as in 1914.

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THIS summer should not find you cooking on the old-fashioned coal range. Prepare for hot weather. Buy your New Perfection Oil Cook Stove now and know real cooking comfort.

The Long Blue Chimney provides a clean, intense heat. Its long draft consumes all the fuel—without heating you or the room in the process. No odor—no smoke. It bakes, roasts, broils, toasts—gives every cooking service at the low cost of coal oil.

The New Perfection Oven is scientifically designed and ventilated to bake unusually well and does it.

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NEW PERFECTION OIL COOK STOVE

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The Super-Simple Pulsator gets it

THIS IS THE WAY IT IS MILKED!

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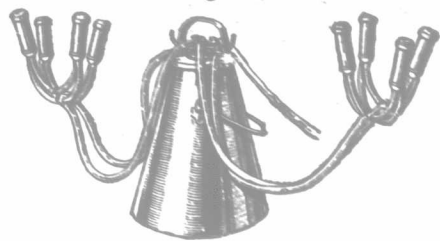
FOR months we have been experimenting—investigating—testing—fighting, to find a way to make the Empire Milking Machine, already the unquestioned leader, still more efficient for the dairy farmer.

THE BATTLE IS WON.

We have given the milking machine a new heart—the pulsator is the heart of the milking machine—and the result of our experiment, the new Empire Super-Simple Pulsator, is the most wonderful development since the invention of the Empire—the competent milking machine.

To be successful a milking machine must have a perfectly acting pulsator to cause the alternating action of suction and massage on the teats (to imitate the calf's "suck and squeeze") to occur with absolute regularity; and to make the change from suction to massage and back again instantaneous.

The Empire Super-Simple Pulsator, the pulsator without a piston, does that and more. It really is Super-Simple—so simple that it can be taken apart and put together again in less than two minutes. It has but five moving parts; nothing to wear out or "get out of gear." It cannot lose vacuum, so its action is perfect.



It places the Empire Milking Machine immeasurably in advance of all competition. Your cows should be milked by an Empire Milking Machine with the new Super-Simple Pulsator. It will

milk them more rapidly than ever—it will solve your labor problem—it will increase milk production at a decreased cost; it will transform milking from drudgery into a pleasant chore.

Our factory is overtaxed by the increased demand for Empire Milking Machines, so go to your dealer at once, see the new Super-Simple Pulsator and tell him to order your Empire outfit without delay; or write for Catalog. J

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Make a Comparison

Assume nothing in a tire that you cannot see.

It is easy to measure "Traction's" big corrugations, or "Special's" big "buttons," with any competitive anti-skid.

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LIII.

LONDON, ONTARIO, JUNE 20, 1918.

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EDITORIAL.

It is not too late yet to sow rape.

Corn has gotten away to a good start. Encourage it with plenty of cultivation.

Where it is desirable to prepare a clover meadow for seed it will be necessary to remove the first crop for hay as soon as it is fit to cut.

While fighting "to make the world safe for democracy" we should maintain a democracy at home or the memorable phrase will be emptied of all meaning.

Anyone wishing titles should place their order early, for after the next session of Parliament it may be deemed necessary to prohibit the importation of such expensive luxuries.

The quality of Canadian butter and cheese will influence the demand for it on foreign markets. In this connection a Dominion Dairy Council could be of benefit to the industry.

The Kaiser values a mile of ground gained or a position won in the terms of human lives. This is war, but some countries appraise their soldiers higher than do others, and a German is apparently listed away below par.

Agriculture in Ontario is in need of a leader who can rally around him the representatives of all branches of the industry and present a solid front to the opposing forces. We have many organizations. Consolidation is the next step.

The prohibitory measures concerning the feeding of wheat will delay the marketing of hogs this coming autumn. It might be advisable, in the case of well-grown pigs, to purchase corn and get them finished before the heavy rush takes place.

Transportation must be in such a condition that our crops can be moved this fall on land as well as sea. The Government should see to it that a breakdown does not occur right here at home, or all this production they have been urging will be of little avail.

A great deal of misunderstanding arises out of the inability on the part of many classes to get the rural viewpoint. Clergymen with urban as well as rural charges could profitably attend the School for Rural Leadership, to be held at Guelph late in July.

The agricultural industry has been asked to "make bricks without straw," but the cause for which this country has been fighting since August of 1914 is such that farmers will carry on to the best of their ability in spite of the actions of those who have been empowered to rule.

With their usual acumen and farsightedness, the manufacturers have arrived in on the ground floor at the opportune time with the Canadian Industrial Reconstruction Association. Perhaps a sister organization composed of agriculturists and the taxpayers of Canada could help them considerably in the proper adjustment of affairs.

Canada stands first amongst all the countries of the world in production of foodstuffs per capita, and it is what the individual, not the acre, can produce now that counts. Our exportable surplus and our proximity to the seat of demand places the Dominion in a very responsible position in the prosecution of the war.

Slander and Verbiage.

One should never condemn a class of people for the words of a few self-appointed spokesmen among them, nor should one attempt to correct a wrong through a personal attack on the party responsible for it. In any matters of importance there is invariably a principle involved, and that principle should constitute the main theme of any discussion or controversy. It is a characteristic of the Anglo-Saxon race that one can appeal to their sense of justice, and in the end justice will be meted out. Many respectable citizens have been angered by a slanderous article which appeared recently in what has been considered to be a reputable Toronto weekly. This particular article discussed the farmers' delegation to Ottawa on May 14 in such a way that it was simply two columns of abuse and nothing more. Anyone who knew the author personally or by reputation wisely passed it by, but those less acquainted with the writer looked upon it as an expression of city sentiment. The latter view is altogether a mistaken one. This particular bit of slanderous verbiage was only the weekly contribution to a paper which has consistently misrepresented agriculture for no apparent reason. Urban people who think, hold sane views. Those who do not think are likely to entertain all kinds of opinions and make all kinds of statements. This is not a peculiarity of the city folk alone; all classes are alike in this regard. Nevertheless, it is a fact that while the farmer has pursued the even tenor of his ways, bearing no ill feeling toward any class, he has been constantly held up for ridicule by an element in the towns and cities who should know better, and to this element the article in question would especially appeal. However, that is a thing of the past and there is seldom any use in thrashing old straw. The future is before and the duty of all, whether they be farmers, journalists, legislators, professional men or day laborers, is to see that justice and equity reign, and that a feeling of good will exists among all classes in this country. The situation is such that we must appreciate the efforts of the other fellow and pull together. Class-feeling, strife, antagonism and petty jealousies are obstacles that should be forced aside rather than piled up on the road to hinder progress towards the common goal. Whatever our station in life may be, our aims should be constructive rather than destructive, and never in the history of Canada was unity more necessary to national existence than at the present time.

Protection First—Win the War Later.

The consensus of opinion seems to be that we should go on and win the war first, and then with that job off our hands we may turn to domestic affairs and adjust any little family matters which require straightening out. Opposed to this view we find the Manufacturers Association firm in the belief that now is the proper time to build a higher tariff wall about the Dominion in order to protect infant industries which are in danger of being harmed by some ruthless outsider. Strangely enough our industries never grow up; they are always in the infant class, and whenever any free-trade breeze comes from the north-west they are tucked at once into the cradle, covered warmly and furiously rocked so the harsh winds will not blight them in their infancy.

In addition to the tariff wall to keep out big boys a guardian has been appointed in the form of the Canadian Industrial Reconstruction Association, composed of men well known in industrial life. This watchman says in part: "The war may and possibly should bring new forms of taxation, but customs duties must continue to be the chief source of revenue. It is doubtful if all the new forms of taxation that can be devised will meet the interest upon the war debt alone, to say nothing of pensions and other heavy war obligations. Duties necessary to provide revenue will afford such incidental

protection as should enable us to create and maintain new industries and take full advantage of all that we have learned during the war of processes of manufacture, stores of raw material, and requirements of oversea markets. Much that we imported before the war we will manufacture in the future if we afford REASONABLE SECURITY in home markets and utilize our greater knowledge of the resources of Canada for the advantage of Canada."

Seemingly the policy of this new Association is adroitly set forth in the preceding paragraph, and it might be well to have an organization of the people, who really pay the taxes and afford this reasonable security, to guard the guardian. The President of the Manufacturers' Association was recently reported as declaring his faith anew in the policy of protection, and he is apparently determined to make the country safe for the manufacturer.

Why all this anxiety? The Western element at Ottawa is hardly strong enough yet to overthrow the forces that protect these infant industries. The parapets and barb-wire entanglements are still intact. The trenches are still habitable.

It will be interesting to watch the activities of the new Reconstruction Association, and with outposts well located to announce any threatening movements on their part, let us go on with the war.

Agricultural and Industrial Training.

There seems to be a feeling lurking in high places that Canada must pay more attention to agricultural and industrial training if we are to meet successfully the strenuous competition which is likely to follow the cessation of war. No doubt a great readjustment will take place, but in adapting ourselves to it good citizenship should be the aim, rather than the fashioning of human beings to fit as a part of a big machine, and thus repeating the folly of a nation whose false doctrine and pernicious Kultur we are endeavoring to confine. The principle of vocational training is absolutely right so long as it equips the individual to carry on in his chosen profession or work, but when it attempts to make a tool of him for some particular industry, regardless of his abilities or desires for such a line of endeavor, it is absolutely wrong. Up to a certain age all children are entitled to the same training and the same opportunities in order that they may go forward in whatever directions they choose, fortified with an education that will enable them to become efficient workmen and good citizens in whatever occupation or profession they may find themselves in after years.

A recent address made by the New Minister of Education for Ontario, Hon. Dr. H. J. Cody, leads us to believe that matters such as these will receive the attention of his Department, and since mention was made of linking up the rural school with agriculture it is only reasonable to expect that an effort will be made to bring the educational system more in harmony with the popular demands. However, the teaching of agriculture in the rural school should be approached with caution and not until after a thorough canvass of the situation has been made. Furthermore, it appears that some preparatory work is necessary and, though this may at first sight seem strange, the initial work should be commenced in the urban schools. A very large percentage of our teachers are town or city reared and educated, and in no way qualified to interpret an agricultural text book to the pupils. Nor are they sympathetic enough towards the industry to create the proper atmosphere. The 200 teachers who attend the summer course at Guelph cannot radiate the spirit and knowledge they acquire to their teacher comrades who number almost 10,000 in the Province of Ontario. The task is too big for the present equipment and system

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

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THE WILLIAM WELD COMPANY (Limited),
London, Canada.

of the Department of Education. If agriculture is to be taught in the rural schools it must first receive some attention in the urban schools, and since it embraces so many sciences the city pupil will be the gainer for his acquaintance with it, even if his life work confines him to the centre of the largest city in the country.

The rural sojourner in the city who blows out the gas is no more to be laughed at than the teacher in a public school who does not know the difference between buckwheat and fall wheat, or who thinks that silage is taken from the bottom rather than from the top in a silo. The latter's career in teaching agriculture is likely to be quite as brief and unsuccessful as the former's visit to the city.

There is one more thought in this connection: All public-school education should be so outlined as to make citizens rather than farmers, doctors, lawyers or mechanics. If the boy is not suited for or cannot adapt himself to farm life, his early instruction should be such that he will not be at a disadvantage when he seeks a higher education or wishes to prepare himself for the work that appeals to him. What is wanted is a system that will not continually educate away from the farm but any scheme destined to make rural children hewers of wood and drawers of water for the remainder of their days will not meet with favor.

If threshing gangs are used farmers will be relieved of exchanging work with neighbors and, therefore, in a position to sow more fall wheat and get plowing done. The actual cash cost of threshing per bushel will be higher than usual, but where the plan is feasible it will be an economical way of securing help when it is badly needed, and the extra work done at home will more than compensate for the outlay.

Putting in the Time at Road Work.

BY ALLAN MCDIARMID.

It is about this time of the year, in most parts of this country, that the attention of the tax-payers, is turned for a short time to the question of how to improve our public roads by means of such systems as may be established in their particular localities. The old Statute Labor plan was probably the very first method used to get the people into the way of building and maintaining the highways on which they had to travel. This system has been in use a long time and has a good deal to recommend it if men were all as honest and conscientious as they ought to be. But an "if" of that kind has been the knock-out blow to many hopeful institutions of other kinds in the history of the world and it's not surprising that our attempt to keep up the condition of our roads through the honest co-operation of the farmers and other inhabitants of the country has met with only partial success. When it comes to shoveling gravel or broken stone into a wagon on a hot day in June, very few men want to do any more than their rightful share and the only way to do as little as the other fellow seems to be, very often, to do next to nothing at all. In many places men do not take advantage of the fact that it is only one of their neighbors that they have "bossing" them and something worth while is accomplished, but I have known a case of a pathmaster on a certain road-section being seen hard at work with his shovel while his men were all standing round talking and smoking. It was one time when the setting of a good example was without result. Of course the trouble with these men lay in the kind of a pathmaster they had. If he had had any ability as a foreman he would never have touched a shovel but would have seen to it that the rest of the men made good use of theirs. He would have known that when a man has three or more men working for him it pays him to do nothing else than direct the efforts of these men and see that they do not waste any of the time that belongs to the working day.

But the weak point comes in right here, where the Statute Labor system is concerned, because it is usually a farmer in the community who is appointed to see that his neighbors do the work, and no ordinary man is going to run chances of getting on bad terms with the people he has to live among by trying to compel them to do more or work longer hours than they feel inclined to. He's got to keep them in good humor and get what he can out of them. The result is that some of the willing workers of the road-section get the most of the work to do and the others share equally in any benefit that may be the outcome of their labor. I have seen men come to a gravel-pit with boxes on their wagons so small and so badly constructed that all their load was scattered along the way, and by the time they reached the dump they had simply to turn round and go back for a repetition of the process. The men with these "automatic unloading devices", as we called them, should have been sent home and made to pay their share of the road improvement in their taxes, but the pathmaster "didn't like to" and the thing was allowed to slide. Where men agree to work honestly and effectively together, for their own good and for the good of the community, the Statute Labor system is all right, but where they look on it as a sort of an excuse for a holiday and at the best only working "for the Government", it is all wrong. In an ideal world where all men were what they ought to be, it would probably work well, but in this world it doesn't always. It's a lack of public spirit that makes men unwilling to do anything for nothing, that their neighbor may benefit by. If they had the "community interest" as it is called, the result would soon be seen in the increased prosperity, not only of their neighbors, but of themselves. It's the same old story over again but applied to a different line of work. But it may be taken for granted that it is going to take some little time yet to convince everyone of the fact that it is only as we give that we can expect to get, at least in the best sense of the word. And as a rule for every-day business it applies about nine-tenths of the time. Those that have no contribution to make towards the welfare of humanity shouldn't be disappointed when the world refuses to admit that she owes them even a decent living. The men of my acquaintance who are prosperous in their private business concerns are, almost without exception, willing and ready to take a hand in anything that is likely to be of public benefit. But in some of our country districts this class of men are not as plentiful as they should be. If there were more of them our roads would show it and there would be some inducement for a person to own an automobile and get the benefit that they say is to be had by travelling. But when we find that "the even tenor of our ways" is interrupted by a series of ruts and ridges, of mud-holes and corduroy poles and of stones, both loose and solid, we are apt to think that the pleasure to be had from travel has been slightly exaggerated. It doesn't take much time or labor to keep the roads in repair when all do their share, but, of course, here is just the point; they don't. Things are just allowed to run along. I remember seeing a cedar fence-block that had somehow got into the road-way and had lain there and rolled about and been driven over until it was pretty well worn out. No one had even bothered to kick it off into the ditch. Some years ago we had a sort of local celebrity in our community who was, as the boys said, "a little off his base", and who spent his time like the well-known character mentioned in the Bible, by "going to and fro in the earth and walking up and down in it". But unlike the one whose example he followed in this way, he was of some benefit to those in his vicinity. He had acquired the habit of kicking every loose stone he found on the road, off to one side where it could no longer interfere with the wheels of the buggies and wagons

that passed along the highway of the King. They say that a streak of insanity and a streak of uncommon good sense often run very close together in the same person. It must have been the case with our friend, the pedestrian. He had the public spirit that we mentioned a while ago, at least, and we feel the need of some one to take his place now that he has laid down his job. None of those that are left have sense enough to kick the small stones off the roads and they are getting into a bad condition.

Nature's Diary.

A. B. KLUGH, M.A.

I write from the mouth of the Miramichi in northern New Brunswick. The Miramichi is one of the best Salmon streams in Canada, and the country about is a splendid Moose country. This morning a Moose was swimming across the river, which at this point is about a mile and a quarter wide. We went out in our dinghy and were able to get as close to it as we wished, that is close enough to get a good view of it without alarming it more than necessary.

This is a Spruce-Birch country, that is the main timber consists of Red and White Spruce and Paper Birch. The most conspicuous.

The above sentence was unfinished because of a slight interruption. I have been out fighting a forest fire. To get to the fire entailed a run of a couple of miles in a high-powered car, with a load of axes and shovels and buckets aboard, and all speed limits were thrown to the wind. The fire had a good start in a slash and a bit of spruce timber, and the wind was



A Flower of Rhodora.

blowing a gale. Trees, dead and living, were ablaze to the top. But in spite of the high wind we were fortunate in being able to get it under control, and then the wind dying down all danger was past. How did it start? We don't know. Hardly anybody ever does know how a forest fire starts, and those who do know aren't saying a word. Carelessness; gross, criminal carelessness, is the origin, of that we may be sure.

Now, as I was saying, when interrupted, the most conspicuous feature of the landscape in this part of the world at this season is the glorious show of Rhodora. This is a shrubby plant belonging to the Heath family, which along the Atlantic coast grows in great luxuriance in bogs and damp places. It has large, rose-purple flowers, with the two lower petals free and the three upper petals united. A single flower is shown in our illustration. There is a considerable amount of variation in color in the flowers of this species, some being much paler pink, and others being a very fine, deep, rich, rose-purple. At the time of blooming the young leaves are just beginning to expand.

In the same bogs with Rhodora is another very handsome plant, also a member of the Heath Family, known as Kalmia, Sheep Laurel or Lambkill. The flowers of this species are saucer-shaped, and their most remarkable feature is the series of ten little pockets in the petals. Each of these little pockets holds the anther of a stamen when the flower first opens. At this time the stigma is mature and while it stands up and is ready to receive pollen brought to it by bees from other flowers its own stamens are out of the way and thus the flower cannot be self-fertilized. Later the anthers spring out of their pockets at the slightest touch.

There are several birds which are now breeding here, which do not breed in the more southerly portions of Canada, for instance, the Yellow Palm Warbler, the Slate-colored Junco, the Magnolia Warbler, the Pine Siskin, the Purple Finch, the Red-breasted Nuthatch and the Hermit Thrush. If I had to pick the two most beautiful songsters among all our birds I should name the Hermit Thrush and the White-throated Sparrow, and both of these birds are common here and are now in full song.

I came across a flower to-day which is not very common in any locality with which I am acquainted, and which is entirely absent from many districts—the Moccasin-flower. This is one of the Orchids, and the lip—as the united lower petals of the flowers of the Orchids is termed—is sac-shaped and split along nearly its entire upper surface. The flower is about an inch and a half long and is of a deep magenta color. It grows in shady bogs. It is sometimes called the Stemless Lady's-slipper, the term "stemless" in this case meaning that it has no true stem, in the botanical sense, above ground, the apparent "stem," which is from ten inches to a foot in length, being really the pedicel, or flower-stalk.

In the same bog in which the Moccasin-flower grows the little Gold-thread is abundant. This plant has delicate, white, five-pointed flowers and shining, three-parted leaves. Its name is derived from the bright yellow color of the fine under-ground runners.

The Dwarf Cornel or Bunch-berry, a little plant with four white bracts which look like petals, which occurs right across the continent, but which seems to reach its greatest abundance in the Maritime Provinces, is just coming into bloom.

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THE HORSE.

Runaways the Result of Carelessness.

EDITOR "THE FARMER'S ADVOCATE":

A few weeks ago a farmer was "hooking" his horse into the buggy in front of a hotel stable. A motorcycle whirred up from the rear. The horse, a fine, young chestnut, not knowing what to make of the racket, naturally bolted. The owner had been hitching one side with the lines down on the other. The animal dashed up the street, by luck missing the scattering pedestrians. Finally it struck a curb and went down on the slippery pavement. It received severe injuries, requiring the attention of a veterinarian. The buggy was also badly smashed.—And all through carelessness.

In hitching a horse always retain means of controlling it. When the animal is taken out of a stable, fasten the lines to the bit. While hitching, keep the lines within reach. If a young animal, hold them in one hand, and when you go to the other side, transfer the lines. In hitching fasten the tug first, then the hold-back. By doing this, the shafts will not fall down and frighten the horse if it starts.

All harness should at least be strong and not fastened together by twine or other temporary, weak fixtures. These may be cheap mending when done but may cost more than a new set of harness later on. The harness should be capable of standing the tension of a horse bolting. Many times it is the harness breaking when a horse gives a sudden start that prevents the driver bringing it under control. A hamestrap, buckled somewhere on the harness is very handy in case of a breakage.

The buggy or vehicle being used should be kept properly repaired. A few years ago I missed a telephone post by three inches when thrown from a rig. The horse had received a fright and dashed away. The sudden start had severed the wire which held one shaft to the axle. This let the shafts down, increasing the animals' fright. A raised sidewalk stopped her with the above result.

Not only are these bolts liable to end in serious runaways, but they teach the horse bad manners. By exercising proper care, the animal never gets the chance to store away within its skull the idea of bolting at every little cause.

Wellington Co., Ont.

G. B. Hood.

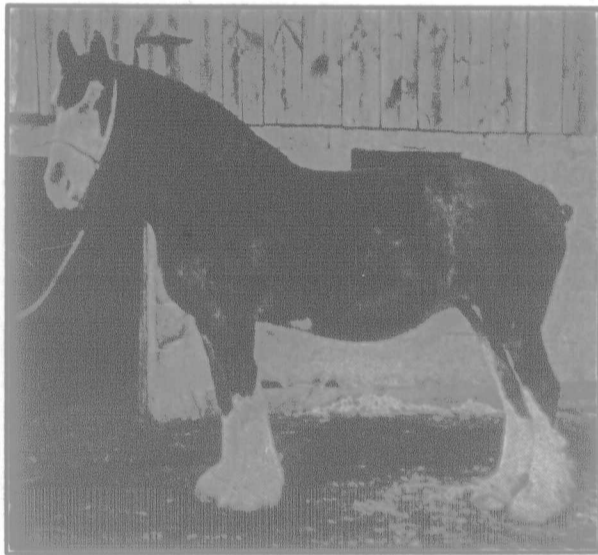
Constipation in Foals.

Constipation, or retention of the meconium in foals, is probably responsible for more fatalities than any other abnormal condition. During foetal life there is an accumulation of faecal matter in the intestines formed from the bile that is secreted by the liver and which enters the small intestine in the normal manner. This is dark, almost black in color, of a gummy sticky nature, exists in lumps, and is called "Meconium." Under normal conditions its expulsion commences soon after birth, and continues at intervals, and is all expelled in about twenty-four hours, after which the excrement is of a yellowish color. The voiding of yellow excrement indicates that the meconium has all been expelled, and the faeces now passing are the excreta from nourishment taken after birth. While retention of the meconium may occur under any and all sanitary conditions, it is more frequently observed in early foals whose dams have been fed on dry fodder, and had little exercise during the winter. The foals of mares that have had regular exercise or light work, and been fed liberally on soft, laxative and easily digested food, do not so frequently suffer, but the condition is liable to occur even under these circumstances, and it not by any means unknown in late foals, whose dams have been on grass for a greater or less length of time before parturition. The first milk, or fluid that escapes from the mammae after, or shortly before, parturition, is of a different character both as to appearance and constituents from real milk. It is of a clear, viscid color and somewhat resembles oil. It contains a greater percentage of laxative material than milk. Its function is to nourish the young animal and at the same time exert a slightly laxative action upon the bowels. It is called "colostrum", and if from any cause the young animal is deprived of it, there is greater danger of retention of the meconium than under normal conditions. At the same time it must not be understood that it is necessary, or even desirable, to substitute purgatives when the colostrum is absent. The administration of purgatives in such cases, unless in every small doses, usually complicates matters, and renders incurable a condition that in all probability could have been successfully overcome if properly treated. The meconium, as stated, exists in lumps of a tough, gummy nature, about the consistency of putty. In the majority of cases where it is not spontaneously voided, these lumps with which the rectum is filled are so large that the little animal has not sufficient explosive power to force them through the anus. In such cases it is obvious that purgatives will have little effect, as they act upon and render fluid the contents of the anterior intestines, increase the backward action, called "peristaltic action" of the same, but have little or no action upon the contents of the rectum. We can readily see how this, by increasing the action of the anterior intestines, without removing the obstruction to the passage of faeces, which exists in the rectum, will increase distress and lessen the hopes of successful treatment. Hence we should be very careful about dosing the foal with purgatives or laxatives, but depend largely upon mechanical treatment.

Symptoms.—The symptoms for necessary interference are plainly seen. The foal will arch his back,

elevate his tail and make ineffectual efforts to defecate. At first the distress is not great, but as time goes on these ineffectual attempts become more frequent and longer continued, and the intervals between them shorter; he becomes restless, rolls on his back, takes little nourishment, becomes tucked up in the flank, grinds his teeth, becomes weaker and weaker, refuses to nurse, suffers intense abdominal pain, looks around to his sides, and eventually expires.

Treatment.—As stated "purgatives should seldom be given". When the first symptoms are shown the attendant should oil his finger, get an assistant to hold the foal, introduce the finger carefully into the rectum and remove all the lumps he can reach. In the meantime the patient will press, and, as the meconium is removed by the finger, a fresh supply is forced into the rectum, and it is not unusual to be able to remove a pint or more at one operation. An injection of a liberal supply of soapy warm water, or warm water with a little raw linseed oil, should be given and in the course of a few hours the operation should be repeated and every few hours afterwards until the excrement becomes yellow. When the meconium continues to reach the rectum and can be removed by the finger, it is not wise to give any medicine by the mouth. In some cases a lump of meconium can be felt by the finger, but the latter is not long enough to remove it. In such cases it can usually be removed by using a piece of doubled wire; the doubled end (first being well oiled) is carefully inserted into the rectum and then carefully manipulated so as to remove the obstruction. When these methods



A Popular Type of Brood Mare.

of removal fail it is necessary to give laxatives as an ounce or two (according to size of patient) of castor oil or raw linseed oil, but in no case should drastic purgatives, as aloes, be given, except in very small doses, as diarrhoea is easily excited and very quickly weakens the foal.

It is good practice to remove the meconium as above in all foals. The operation, if carefully performed, so as not to irritate or scarify the parts, does not injure the foal in the least, and in all cases saves more or less exertion, and, while in many cases it is not necessary, it is better to be on the safe side, and anticipate trouble, rather than await its symptoms. The lives of many foals would be saved if this little precaution were taken. Foals should be carefully watched in this respect until the faeces passed are of a yellowish color, after which there is little danger of constipation, if the dam be properly fed.

WHIP.

LIVE STOCK.

At Waverley, Ia., B. C. Dove disposed of 67 Angus cattle for \$39,350. The top price was \$3,500 for Black Cap Poe 2nd.

J. Miller, of Missouri, disposed of 42 head of Short-horns the last of May at an average of \$1,120. Five bulls averaged \$2,125.

Owing to absence of competition in the hog market, prices for live hogs in the Maritime Provinces and P. E. I. are reported to be considerably below what is being paid in Ontario.

Our correspondent in England reports that the catch words "raise a pig" have re-echoed through the country with a swing and responsive echo unknown in the histories of many of the oldest stockmen.

Cross & Son, of Walnut, Iowa, recently disposed of 73 head of Herefords at an average of \$1,243. The offering was of high merit, and animals of Fairfax lineage brought the highest price. J. A. Shade, of Iowa, also held a very successful Hereford sale, when 61 females averaged \$856. The highest price paid was \$1,700 for Bertha Mischief by Beau Mischief.

The stability of agriculture in any country depends a good deal on its live-stock industry. Selling grain and hay may be most profitable for a time, but marketing these crops through high-quality live stock not only brings in a remunerative revenue but aids in maintain-

ing the fertility of the soil, thus making it possible to continue producing large crops to feed more live stock. Without live stock our farms would deteriorate in value as they lessened in fertility.

Importations of Pedigreed Stock Curtailed.

We understand from the Live Stock Journal that the War Trade Department of England has ordered a curtailment of the export trade in pedigreed live stock. This step was undoubtedly taken to prevent the undue depletion of many of the large herds and flocks of the country. However, it strikes the importing colonies rather severely. Canada, along with the other colonies, has in the past imported quite largely from the British Empire. This blood was used to improve the home herds and flocks, which has been a great advantage to the country that is building up a live-stock industry. While in many cases the home-bred pedigreed stock equals the imported stock in type and conformation, the latter is usually looked upon with a little higher favor. It is understood that the established exporters are to be allowed to ship during 1918 their average number of cattle, sheep and pigs. This average will possibly be struck from the volume of trade spread over the past few years, which was considerably less than in pre-war days. No new exporter is to be allowed to ship any stock at all. The United States and Argentina have almost secured their quota for the year, especially if the hundred head bought in Scotland, and which went to the bottom of the sea, are counted in America's average total.

The excellency of Canada's herds and flocks is due, in a large measure, to the blood imported from the herds of long standing in the Old Land. Without access to these animals of highest quality to serve as foundation stock, or to place at the head of our herds advancement in the live-stock business would not have been so rapid. Canadian breeders are in a much better position to-day to stand the curtailment in imports of stock than they were a decade ago. Due to careful and wise selection of breeding stock, herds and flocks of excellent type and quality have been built up. It is not uncommon for Canadian-bred stock to win the highest honors in the largest show-rings in competition with imported stuff. While animals of equal quality are to be found in Canadian herds, stock from renowned herds in England and Scotland, which have been decades in the making, add tone and aid our largest breeders to keep their stock up to the highest standard, in order that they in turn send out herd headers and foundation stock to improve the quality of smaller Canadian herds and flocks. Curtailment of imports will, no doubt, be a handicap to further improvement in some Canadian herds and flocks which are the last word in excellency. We have looked to breeders in the Old Country for new blood to use on our herds and have not been disappointed. While the curtailment in importations of pedigreed live stock will affect us it will not prevent breeders from carrying on their business. The pioneers of the Canadian live-stock industry laid the foundation well, and from their long-established herds and flocks can be secured individuals that compare favorably with the world's best.

Live-stock Prices in England.

By order of the Government, pedigree stock exportations from Great Britain are to be restricted. Exporters on license are only to export in 1918 up to their "average" number of the past three seasons, and no new exporters are to be given licenses. America has about had her quota of stock this year, for at the spring Short-horn sales in Scotland and Penrith, large numbers of stock were bought for the United States, but alas, about 100 head went to the bottom of the sea! Canada's "average" has not yet been attained. The new order is rather hard on our younger colonies which are just building up their foundation herds, and who are only just beginning to send back beef and mutton (chilled and frozen) to us.

Farm and street working horses (mares and geldings, Shire, Clydesdale and Suffolk-bred) are making tremendous sums at repository and farm stock sales in Britain. Twenty Shire-bred horses averaged \$875 apiece at Welshpool, and sixty others averaged \$770 each. In Newport (Monmouth) a Shire working mare realized \$7,250, and every-day, haulage horses run to \$950, \$935, \$750 each. At Preston (Lancashire) a dozen Shire geldings cost \$575 apiece, and at farm sales in Elgin, seventeen head on one holding averaged \$590 each. A yearling colt cost \$250, and big, strong geldings brought \$900 and \$890 each.

It is something to "let" a Shire stallion for a season at well over \$5,000, but such is the record of Robt. L. Mond, Seven Oaks, Kent, who has pocketed \$29,000 in five seasons of "lets" on one stallion, Babingley Nulli Secundus, a rare type of horse siring most wonderful stock in Middle England.

Even the Lincoln Red Shorthorn is booming. At an ordinary bull sale in Boston, J. B. Riggall got \$1,000 for a yearling coming from a long line of deep milking cows.

We are going in for pig raising "baldheaded," as the British saying runs. All kinds of community pig raising societies are springing up everywhere, even at munition works. Commercial gilts are selling at \$100 apiece, as if they were such common things as cigarettes. All the stupid by-laws in Britain which prevented pigs being raised near any public building, house or road have been wiped out of existence for the time being

(let us hope forever), and local authorities are financing and assisting community breeders with might and main to "raise a pig." The "Farmer's Advocate" slogan "Raise a Pig" has biffed our old sporting and hunting cry of "Walk a Puppy!"

Milking Shorthorns made good average money at Penrith in mid-May; some 143 head averaging \$313 apiece, or a total sum of \$45,221. At \$550, W. Hartnett, buying for the United States, secured the first-prize cow Princess Gladys, bred by F. Heath, Acklington. The highest price, however, was \$1,300, given by W.

Taylor, a local new-chum forming a fresh herd, for Haltcliffe's Grace.

A smart little sale of Herefords was held in May by the Herd Book's Society auctioneers, when the highest price realized was \$675, paid by Capt. R. T. Hinchey for the yearling bull, "Merry Oyster," bred by Messrs. Newman Bros., Lower Wickton, Stoke Prior. This bull was the only reserve in his class, but he is of the noted Oyster Girl family. The next best price was \$625 paid by Mrs. Wilson Slater, the Irish breeder, for Castle-Nau, bred by W. Griffiths. The first-prize bull was

J. T. Price's Knokes Tumbler, which only made \$330. Large, white Yorkshire pigs averaged close to \$200 for 59 grown head at Chivers' sale, held at Histon, Cambridge, in May. The best young boar made 60 guineas from Sir Gilbert Greenall, but Dr. Watney and Preston Jones each gave 80 guineas for gilts.

Hampshire Down ewes have realized \$28.80. This has been the most remarkably successful lambing season British flockmasters can remember.

ALBION.

Orms' Ninth Annual Show a Success.

For the first time in several years the Orms' Annual Spring Show, Quebec's greatest live-stock event was favored with four days of ideal June sunshine; and from the opening day on June 4 to the closing evening on June 7 there was not one dull moment in the 1918 schedule. Right here it should also be stated, that the program is purely a live-stock one throughout, and this year's record attendance, as well as the appreciation shown the entire event, should leave no doubt in the minds of outside visitors that Orms' is, at least, one place in Canada where mid-way and other frivolous attractions are not in any way essential to the success of an agricultural or live-stock exhibition. Here, with the exception of a few trials of speed on the track, the days are entirely taken up with the judging of live-stock exhibits, while the night performance is devoted wholly to the harness classes of the light-horse sections, and the cattle and horses on parade, which always announce the opening of the evening performance, never failed this year to fill the big arena early. This feature was also exceptionally well staged on the afternoon of Thursday, the third day of the Fair, for the special benefit of Mr. Crerar, the Dominion Minister of Agriculture, Mr. Arkell, the Dominion Live Stock Commissioner, members of the Quebec Legislature, as well as several members from the Upper House, all of whom attended in a body, and in short addresses expressed gratification in the great array of breeding stock and the magnitude of the show, an exhibition which is only in its infancy.

An analysis of two years' entry list showed 406 cattle this year as compared with 330 in 1917. Horses fell from 265 to 263, but sheep and swine both made an increase of 100 per cent., which made the standing this year for cattle, horses, sheep and swine 920 as compared with 710 in 1917. Poultry entries were this year 240 in all.

HORSES.

As is stated in the figures previously given, the horse section was the only division in the entire live-stock exhibit which showed a deficit in numbers when making the comparison with the entry list of 1917. This, however, was scarcely large enough to be noticeable, and the quality in evidence throughout both the heavy and light-horse sections was quite equal to any of the records of pre-war days. Of the breeds the Clydesdale predominated, but as usual it fell upon the light-horse or harness sections to furnish the special or chief attraction for the evening performances. In the breeding sections here, however, there was also a falling off. The call for Standard-breds and Hackneys brought forward only five stallions in all, with Ness & Son's Prince Poilin heading the class of three in the former, and Steel Bros.' Walington Squire being placed over Terrington Narcissus (imp.) in the latter. Other features aside from the breeding sections which never fail to furnish keen competition at Orms', are the teams and singles in the grade draft sections. Although there were fewer out this year than formerly; the showing would have been a credit to many of Canada's largest exhibitions, and D. A. McCormick's span, which were got by Sir Spencer and pulled the red in the class for teams under 2,700 lbs. weight, would be noteworthy in even the pure-bred sections of many show-rings. The judge for the light-horse sections was W. J. Bell, Kemptonville, Ontario, and in the heavy sections, Prof. Barton, Macdonald College, Quebec.

Clydesdales.—So far as the Province of Quebec is concerned the Clydesdale at Orms' may be said to be in his home town. Here within a radius of a very few miles may be found more Clydesdale bone and Clydesdale quality than can be found perhaps in the majority of the other counties throughout the whole province. They breed them here and they also bring them to the show. Like all other shows, however, the falling off in importations has had its effect on this particular exhibit. In the imported classes, where former years have brought full entry lists all the way down to two-year-olds, there were this year only three classes shown. The aged stallions and the yearling and brood mares. Baron Stanley, by Baron's Pride, and grand champion stallion of the 1917 show, again won the class with only four showing. Countess Queen, a clean, good-quality mare, was in first for yearling mares, and Corona, a thick, choice matron from the same stables, took the red for brood mares, and afterwards came in for the championship ribbon.

Canadian-bred aged stallions were out five strong, and in the winner, Spencer of the Briars by Sir Spencer, Prof. Barton found the grand champion stallion of the show. There were several other old-time winners among the honor seekers here, making one of the strongest classes of the week. The three-year stallions brought out a class of five young horses, and there was not one entry among them that was not a worthy get of this district's great sires. Of the younger classes detailed awards are given, as are also those in all of the

female sections. Substance and quality predominated throughout, and it may truthfully be said that the few entries short in the 1918 exhibit were fully counterbalanced by the extra quality exhibited.

Exhibitors.—J. T. Thompson, Bainsville; Jno. W. Logan, Howick Station; H. Laberge, St. Louis; R. G. Brownlea, Hemmingford; R. Ness & Son, and W. Nussey, Howick; Steele Bros., D. A. McCormick, Albert Nussey, Jas. Bryson, D. J. Greig, of Brysonville; S. McGerrigle, J. C. McEwen, J. W. Nussey, Taylor Bros., W. G. McGerrigle, S. McGerrigle, Geo. McClintock, of Orms'; and Cumming Bros., of Lancaster, Ont.

Awards.—(Imported) aged stallion: 1, Ness & Son, on Baron Stanley by Baron's Pride; 2, Taylor Bros., on Baron Stockwell by Baron's Pride; 3, Ness & Son, on Bladnoch by Everlasting. Yeld mare, (aged): 1, S. McGerrigle, on Countess Queen; 2, Ness & Son, on Twynholm Violet; 3, McClintock, on Lady Isobel. Brood mare (aged): 1, S. McGerrigle, on Corona; 2 and 3, Steele Bros., on Torr's Countess and Cynthia. (Canadian-breds)—Aged stallion: 1, Ness & Son, on Spencer of the Briars by Sir Spencer; 2, W. Nussey, on Baron Siloth's Heir; 3, Steele Bros., on Hillhurst Stanley by Sir Spencer; 4, Laberge, on General Baron by Baron Brown. Stallion, 3 years: 1, C. Nussey, on Sir Hugo of Cherry Bank; 2, Brownlea, on Meggido; 3, Steele Bros., on Silver Spring. Stallion, 2 years: 1, S. McGerrigle, on Banker; 2, McEwen, on Gallant Spencer; 3, Steele Bros., on Golden Lion. Stallion, 1 year: 1, Ness & Son, on Woodside Seal; 2, S. McGerrigle, on Osburn; 3, Thompson, on Laird of Lakeview. Yeld mare: 1, Thompson, on Mabel Kandahar by Kandahar; 2, A. Nussey, on Maud Spencer by Sir Spencer; 3, Steele Bros., on Lady Hazelwood by Selborne. Brood

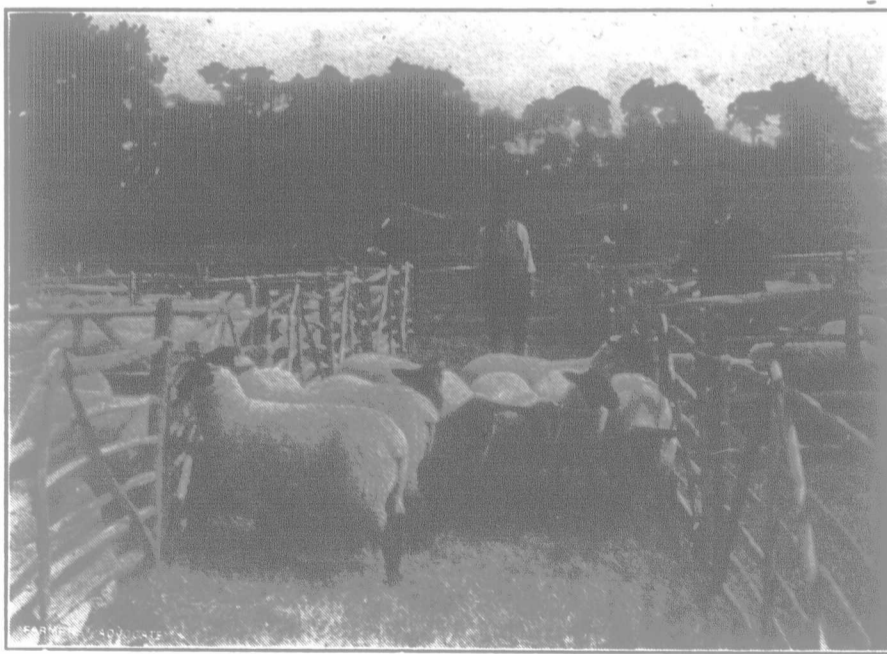
Alex. Hume, Menie, Ontario, made the awards, and as a beginning had seven aged bulls in the ring, with Fanny Sensier, a bull far above the average show individual, away down to fifth place. This perhaps best illustrates the quality of the four bulls above him. The winner of the class was Glenhurst Torr's Major, from R. R. Ness' Burnside herd. D. T. Ness took the red away from Kerr's Sunnyside Buster in the two-year class, and Sunnyside Leader by Sunnyside Masterpiece won for Logan in senior yearling. These two winners were placed in their individual classes, chiefly on smoothness of general conformation, a feature which Mr. Hume followed throughout. Stonycroft Flicitus Pride, a smooth, well-grown youngster, won the junior yearling class with a fair margin, and later took the junior champion ribbon. In females the competition was of the closest kind at all times. Four-year-old cows in milk came out first, making a class of eighteen matrons with only one cow in the entire lot which was not above the average. McMillan's Maple Leaf Jean, a strong, smooth type of cow which had milked over 9,000 pounds since last freshening, won over R. R. Ness' old-time champion, Hobsland Barbara, and was later also given the championship ribbon. The class for dry cow, four years old and over, also brought out some old-time champions in Harleyholm Rose (imp.) and Gordon's Hobsland Pansy. Two-year-olds in milk were headed by McMillan's Queen Bess, and while not a large class, all down the line it showed exceptional promise. Thirteen dry two-year heifers produced some extra choice things as did also the eighteen junior yearlings, which lined up in the most even class of the show. R. R. Ness' junior champion, Burnside Randy 3rd, came in for the over six months class, and here as also in the junior class there were almost a dozen calves

below the money that would grace the pens of the best of breeders.

Exhibitors.—Jno. W. Logan, Howick Station; R. R. Ness, Hector Gordon, D. T. Ness, P. D. McArthur, W. G. McArthur, J. West and W. Peddie, all of Howick; Gilbert McMillan and R. Arther, both of Huntingdon; Taylor Bros., Jas. Cavers, M. Kerr, Jas. Elliott, and Chas. Moe, all of Orms'.

Awards.—Aged bull: 1, R. R. Ness, on Glenhurst Torr's Major; 2, McMillan, on Lessnessock Golden Love (imp.); 3, Logan, on Sunnyside Masterpiece; 4, Gordon, on Stonehouse Kaiser; 5, Cavers, on Fanny Sensier. Bull, 2 years: 1, D. T. Ness, on Barwey's Footprint; 2, Kerr, on Sunnyside Buster; 3, Elliott, on Burnside Pearl Master. Bull, senior yearling: 1, Logan, on Sunnyside Leader; 2, D. T. Ness, on Burnside Bunt

Master; 3, Moe, on Ridgehaugh Chief; 4, R. R. Ness, on Burnside Piecemeal. Bull, junior yearling: 1, Arthur, on Stonycroft Flicitus Pride; 2, Gordon, on C. C. Gipsy Boy; 3, McArthur, on Champion of Elderwood. Bull calf (senior): 1 and 3, Logan, on Sunnyside Russel and Sunnyside Melville; 2, R. R. Ness; 4, McArthur. Bull calf (junior): 1, W. G. McArthur; 2, Elliott; 3, West. Senior champion bull, R. R. Ness, on Glenhurst Torr's Mayor. Junior champion bull, Arthur, on Stonycroft Flicitus Pride. Aged cows (in milk): 1 and 3, McMillan, on Maple Leaf Jean (imp.) and Ruth of the Willows; 2, R. R. Ness, on Hobsland Barbara; 4, Gordon, on Stonehouse Milkmaid; 5, Cavers. Cow, 3 years old, in milk: 1, R. R. Ness, on Burnside Barbara; 2, D. T. Ness; 3, 4 and 5, Cavers. Cow, 2 years old, in milk: 1, McMillan, on Queen Bess; 2, D. T. Ness, on Edgewood Pearl; 3, Gordon, on Stonehouse Bud. Aged cow (dry): 1, R. R. Ness, on Harleyholm Rose (imp.); 2, Gordon, on Hobsland's Pansy; 3, Cavers, on Ryanogue Genevie; 4, Logan, on Sunnyside Governess. Cow, 2 years old (dry): 1, R. R. Ness, on Burnside Barbara 2nd; 2, Gordon, on Stonehouse Lovely; 3 and 4, Cavers, on Braeburn Spottie and Braeburn Dewdrop. Heifer, 1 year (senior): 1, D. T. Ness, on Edgewood Pearl 2nd; 2, R. R. Ness, on Burnside Randy 2nd; 3, McMillan, on Springburn Witch. Heifer, 1 year (junior): 1, McArthur; 2 and 3, R. R. Ness; 4, Logan. Heifer calf (senior): 1, R. R. Ness, on Burnside Randy 3rd; 2, Cavers; 3 and 4, Logan; 5,



A Suffolk Sheep Fair in England.

This lot of ten ewes sold for \$45 each.

mare and foal: 1, Ness & Son, on Woodside Rosebud by Sir Spencer, foal by Baron Stanley; 2, W. G. McGerrigle, on Flossy Fyvie; 3, W. Nussey, on Oakhurst Bessie Spencer; 4, J. H. Nussey, on Baroness Belle; 5, A. Nussey, on Rosa Spencer. Filly, 3 years: 1, A. Nussey, on Daisy Spencer; 2, D. McCormick, on Grace of the Briars; 3, W. McGerrigle, on Nettie of Rosedale. Filly, 2 years: 1, Steele Bros., on Dunmore Rose by Sir Spencer; 2, D. A. McCormick, on Howick Queenie; 3, W. Nussey, on Oakhurst Water Lily; 4, McEwen. Filly, 1 year: 1, Ness & Son, on Woodside Jewel; 2, A. Nussey, on Cherrybank Jean; 3, Logan. Mare and two of progeny: 1, S. McGerrigle; 2, W. G. McGerrigle; 3 and 4, W. Nussey. Champion stallion (imported), Baron Stanley. Champion stallion (Canadian-bred), Spencer of the Briars. Grand champion stallion, Spencer of the Briars. Champion mare (imported), Corona. Champion mare (Canadian-bred), Daisy Spencer. Grand champion mare, Corona.

CATTLE.

Ayrshires.—Ayrshire breeders, who are at all familiar with the many splendid herds in the Province of Quebec, are always deeply interested in the results of the placings made in the Ayrshire section at Orms' Annual Show. It is generally known that here one may meet with the strongest competition of any Ayrshire ring in, perhaps, the whole Dominion. This year ten full herds pulled out to maintain this reputation.

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McArthur. Heifer calf (junior): 1 and 4, R. R. Ness; 2, McMillan; 3, Logan. Senior champion female, McMillan, on Maple Leaf Jean. Junior champion female, R. R. Ness, on Burnside Randy 3rd. Graded herd: 1, R. R. Ness; 2, McMillan; 3, Cavers; 4, D. T. Ness; 5, Logan. Junior herd: 1, R. R. Ness; 2, Logan; 3, D. T. Ness; 4, Cavers. Four calves, bred by exhibitor: 1, R. R. Ness; 2, Logan; 3, McMillan; 4, Cavers; 5, D. T. Ness. Produce of cow: 1 and 2, R. R. Ness; 3, D. T. Ness; 4, Cavers; 5, Logan. Get of sire: 1, R. R. Ness, on the get of Hobsland Masterpiece; 2 and 4, Logan, on gets of Netherall Sir Douglas and Sunnyside Masterpiece; 3, Cavers, on the get of Cheerful Masterpiece.

Holsteins.—With each succeeding year the "Holstein" shows improvement at Ormstown. The entries have each year steadily grown in numbers, and the exhibit brought out for the show just closed was one of the best ever seen in the province. Many of the animals, however, could do with considerable more fitting, but with the present prices of feeds we can, no doubt, look for plenty of stuff to be out this season that has not been overfed. The only outside herd that made its appearance was that of W. C. Stevens, of Philipsville, Ontario, who was also probably the largest winner. F. R. Mallory, Frankford, Ontario, made the awards, a detail list of which follows.

Exhibitors.—W. J. Scott, Tatehurst; Jas. Winter, Neil Sangster, J. Tinning, F. N. Williams, J. D. McEwen, A. Younie & Son, and Wm. Rutherford, all of Ormstown; J. J. Alexander and Philip Picard, St. Louis; A. McNaughton, Dewitsville; J. McRae and Wm. Rutherford, Howick, and W. C. Stevens, Philipsville, Ont.

Awards.—Aged bulls: 1, McNaughton, on Gano Favorit Braveboy; 2, Younie & Sons, on Prince Ormsby Posch; 3, Williams; 4, Alexander. Bull, 2 years: 1, Scott, on Pontiac Mutual Friend; 2, McEwen, on Leonard Pontiac; 3, Picard, on Pedro Prince De Kol. Bull, senior yearling: 1, Stevens, on Riverdale May Echo Lyons; 2, McNaughton, on Johan Elgin De Kol; 3, Tinning, on Minto De Kol Gano. Bull, junior yearling: 1, Winter on Prince Otto of Pinedale; 2, Anderson, on Prince Inferno Favorit; 3, Younie, on May Echo Darkness; 4, Elliott. Senior calf: 1, McRae; 2, Alexander; 3, Stevens; 4, Sangster. Junior calf: 1, Sangster; 2, Alexander. Senior and grand champion bull, McNaughton, on Gano Favorit Braveboy. Junior champion bull, Stevens, on Riverdale May Echo Lyons. Aged cow (in milk): 1, Stevens, on Pauline Beets Segis; 2, McEwen; 3, Alexander; 4, A. McNaughton. Cow, 3 years old (in milk): 1, 3 and 4, Sangster, on Lada Rhoda, Helena of Pleasant Valley and Olna of Pleasant Valley; 2, Winter, on Stella Kalmer. Cow, 2 years old (in milk): 1, Sangster, on Martha Pontiac Johanna; 2 and 4, McEwen; 3, McNaughton. Aged cow (dry): 1, Stevens, on Pauline Pet Posch; 2, Younie, on Cornucopia De Kol; 3, Alexander, on Pauline of Howick. Heifer, 2 years: 1 and 2, Sangster, on Rhoda's Queen May and Lou Porcelain Posch; 3, Rutherford; 4, Stevens. Heifer, senior yearling: 1, Stevens, on Favorit Netherland Posch; 2, 3 and 4, Alexander. Heifer, junior yearling: 1 and 2, Sangster; 3, Stevens. Heifer calf (senior): 1 and 2, Stevens. Senior and grand champion female, Rhoda's Queen May. Junior champion female, Favorit Netherland Posch. Graded herd: 1 Stevens; 2, Sangster; 3, McEwen; 4, Winter; 5, Alexander. Junior herd: 1 and 5, Stevens; 2, Sangster; 3, Winter; 4, Alexander. Four calves, bred by exhibitor: 1, Stevens; 2, Alexander; 3, Winter. Produce of cow: 1, Younie, on the produce of Cornucopia De Kol; 2, Sangster, on the produce of Rhoda's Queen. Get of sire: 1, Sangster, on the get of Gano Favorit Posch; 2, Stevens.

Shorthorns.—One lone herd of Shorthorns made up the entire exhibit in the beef cattle section, and these were exhibited by C. M. Stainton, of Hampton, Ontario.

It was a creditable herd, however, and quite a contrast from the few poorly fitted animals that represented this section in 1917. There is plenty of room for the advancement of the Shorthorn breed in Eastern Canada, and the presence of similar exhibits at several more of the larger shows throughout the East would, without doubt, be a great stimulant to the beef industry in this section of the Dominion. The Jersey and French Canadian breeds were also each represented by lone herds in each section. A. Martin, of Warden, Que., had the former and E. Sylvestre, of Clairvaux, Que., had those in the latter. Both were creditable exhibits. Prof. E. S. Archibald, Ottawa, made the awards in all three sections.

SHEEP AND SWINE.

As usual the sheep and swine division of the Show could hardly be said to be a strengthening wing in the Exhibition. However the swine section this year showed a vast improvement, and could almost be said to compare favorably with the success of other exhibits. With the exception of the entries of E. Sylvestre, of Clairvaux, Que., the other exhibitors were all local, while in the sheep division there was also only one outside flock, and this came from Ontario.

THE FARM.

Food Materials Per Capita From Farm Crops.

BY DR. C. A. ZAVITZ, O. A. C., GUELPH.

For the three years previous to the war, viz.: 1911, 1912 and 1913, the average crop acreages of the most important agricultural nations of the world, excepting

China for which statistics are not available, are given in the following order: United States, Russia, India, Germany, Austria-Hungary, Argentina, France, Italy and Canada.

Those countries which had the greatest crop acreages per capita were Argentina, Canada, the United States, the Russian Empire and France.

Based largely on Danish experiments and on estimates made in the United States Department of Agriculture, the following gives the relative percentages of foodstuffs produced from farm crops, per unit of population in the leading agricultural countries of the world:

Countries.	Per Cent.
Canada	100
Argentina	80
United States	64
Australia	35
German Empire	30
Austria-Hungary	29
France	25
Russian Empire	24
Italy	14
India	11
Great Britain and Ireland	8

It will be seen that Canada produces, per capita, more food materials obtained from farm crops than any of the other principal countries of the world. Her farm production is high and her domestic consumption is low. This enables her to export a relatively large proportion of the essential food materials produced in the country. It is the surplus which counts.

The Canadian farmers form one of the greatest economic factors in the world's supply of foodstuffs at the present time. Every effort should be made to produce and then to save.

Agriculture in Allied and Enemy Countries
By a Returned Prisoner of War.

Capt. J. E. Lattimer, the author of this article, was formerly a farmer in Brant County, Ont., and later a District Representative of the Ontario Department of Agriculture. He went Overseas with the 4th C. M. R. in July, 1915. After 8 months in France he was captured at the battle of Sanctuary Wood or the third battle of Ypres. He was held a prisoner of war in Germany for 18 months, during which time he was interned in five different prison camps. Capt. Lattimer was then exchanged and interned 4 months in Switzerland, at the end of which time he was repatriated, arriving in Canada in May, 1918. The writer being a close observer of agricultural conditions and being privileged to observe them, colored by the exigencies of war, in many countries, his article is of intense interest.—Editor.

Among many interesting features of European conditions not the least striking to the average Canadian is the absolute waste of labor in agriculture. During the last four years great things have been attempted in some places to remedy this by the adoption of modern machinery. Yet to-day maximum production with minimum effort is far from being attained. Certainly Europe practices intensive methods that challenge our

admiration, and which we might well follow to a certain degree. We cannot expect their adoption until absolutely necessary. For the immediate future, at least, maximum production per man is even more important than maximum production per acre. We have many advantages over the continent of Europe when we consider that fact.

Cheap transportation and easy access to the products of virgin soil enabled Britain to acquire the "cheap loaf" without developing her agriculture. The fallacy arose in many quarters that it was impossible to develop industries and agriculture at the same time. The greatest mistake possible. Witness present conditions in many countries. The strongest countries are those both industrial and agricultural. Events of the past four years have at least rubbed that in. Another idea confronting the pleader for greater production is that you cannot cultivate much and produce live stock as well, and that the live-stock industry depends on a great percentage of grazing land. This idea needs much modification. Countries that are cultivated can and do carry more live stock per acre than grazed ones. In Britain, where large estates have been converted into small holdings, the numbers of every class of live stock have increased on the area. This has been brought about by the disappearance of grass land.

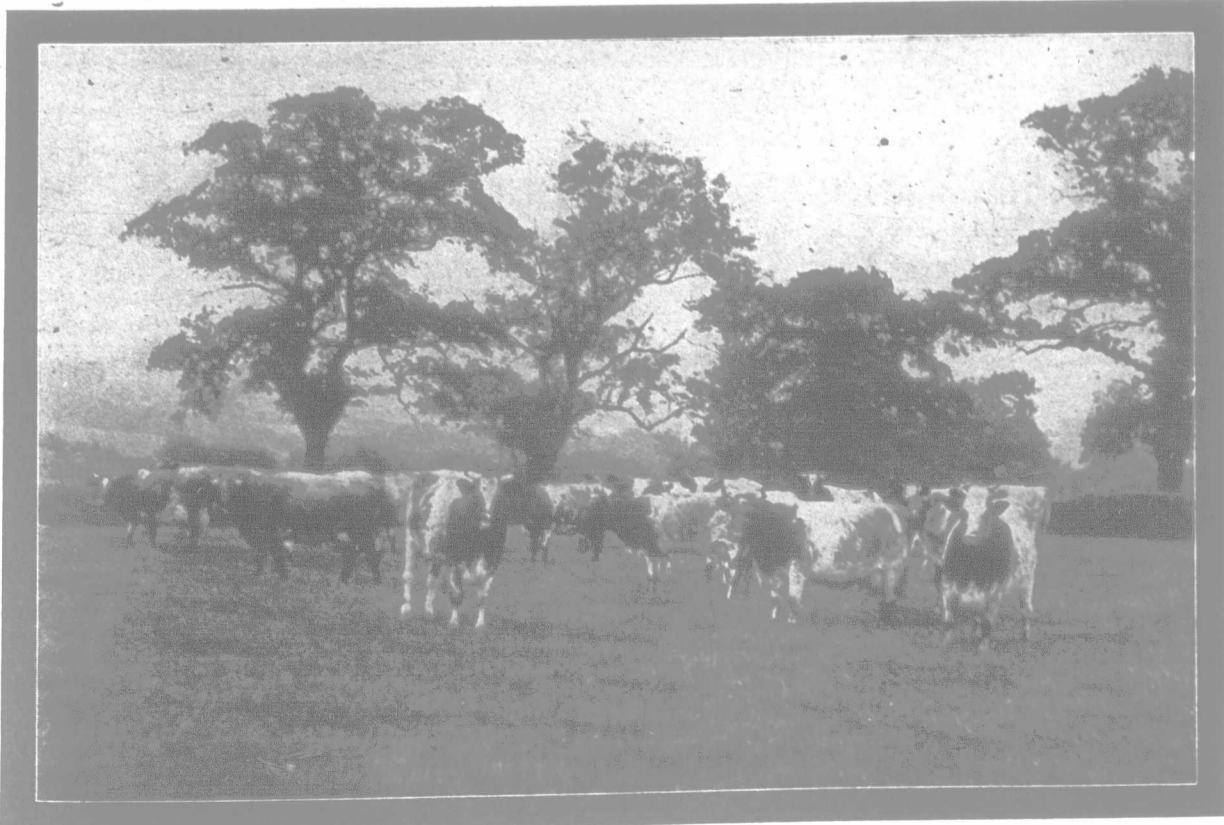
During the last three years a great change has come over British agriculture. Much grass land has been broken, and the country is changing from a grazed to a cultivated one. Silos are being recommended as a necessary addition to farm buildings. The acreage of cultivated land has greatly increased. The numbers of live stock have remained about normal. Small allotments near the cities have increased in numbers, and everywhere more intensive methods are being adopted. Let the good work go on. There is a great deal yet to be done before the British Isles are anything like as intensively cultivated as France or Belgium.

France a Wheat-growing Country.

That France is a rather important wheat-growing country probably accounts for the fact that to-day it is about the only country in Europe eating white bread. France has developed her agriculture. Between 1834 and 1909 the population of France increased by 20 per cent. while the production of wheat increased by 74 per cent., and during this time there was a corresponding increase in other branches of food production. France has suffered in common with the rest of the world from rural depopulation, yet she has retained 18 out of her 40 million of population on the land. In the British Isles there are 8 million out of 45 on the land.

In Flanders wheat seems to be the chief grain crop. There appears to be much choice of seeding time. I have seen it sown in November, December and January. It grows somewhat all winter and produces excellent crops. There is a considerable acreage devoted to sugar beets. The country side is dotted with hop poles, which in Flanders are about the size of telegraph poles in this country, and about twice the height of the hop poles used in England. Judging from the height of this crop this is pretty rich soil. There are other evidences of its fertility. Only a very rich soil could produce mud of the depth, consistency and stick-tiveness of that of the Flanders trenches.

The chief attraction among the live stock is their horses. These are as generally admired as the beef cattle of England. They are very generally good and in excellent condition. Judging from the light load



A Good Investment.

some of them draw one might imagine that they were almost an object of worship; at least they are more highly revered than mules and dogs, which look far more poorly nourished and often more heavily loaded according to their size.

Land rents for around \$15.00 per acre. There is little grazed land. Intensive methods are practiced.

Belgium Leads in Oats and Barley.

Belgian farmers reckon on a return of \$100.00 per acre from their arable land. Considerable rye is grown in Belgium, which seems rather strange on such fertile soil. Belgium leads in production per acre of barley and oats, and is a close second to Denmark, which leads in the production per acre of wheat. Its community gardens are noted. In Antwerp many of the dock laborers have gardens to employ their slack time, from which they are summoned to resume their ordinary occupations. Some years ago it occurred to me that if our city people could arrange to release their labor in harvest time for a short period it might tend to shorten the line for free meals in the winter. The idea received the ridicule that a good proposition generally does. Now we are achieving similar results by allowing soldiers leave of absence for the harvest.

In Europe generally there is a remarkable development of gardening in small allotments near the cities. This is something that we might take up in this country. There will likely be quite an inviting field of endeavor along this line in the future, specially when munitions workers cease to draw their 50 or 75 cents per hour.

Agriculture in Germany.

Germany is a great rye growing country. Much of their land is light and sandy, and rye is a much more important crop with them than wheat. Potatoes and sugar beets are largely grown. Rye bread and potatoes figure very largely in the German diet in times of peace. At present deficiencies in supplies of these are made up by various substitutes not nearly so palatable.

Germany, on somewhat barren soil, has by scientific methods, extensive use of artificial fertilizers and full use of man and woman power on the land, produced remarkable results. To-day they are handicapped in many ways. Their supply of artificial fertilizer is insufficient to maintain the fertility of the soil. Their labor is scarce, even when considering the number of their prisoners of war. Their chief handicap is their lack of horse-power on the land and the absence of modern machinery. Some tractors and steam plows are in use.

The steam plows are the style that have been used for sometime in the country with a steam engine on each side of the field and a cable drawing the plow. They are not economical of man power. The most of the farm work is not done by this method. Probably in the next field to where a steam plow is working you will see a team of cows or a cow and horse hitched together.

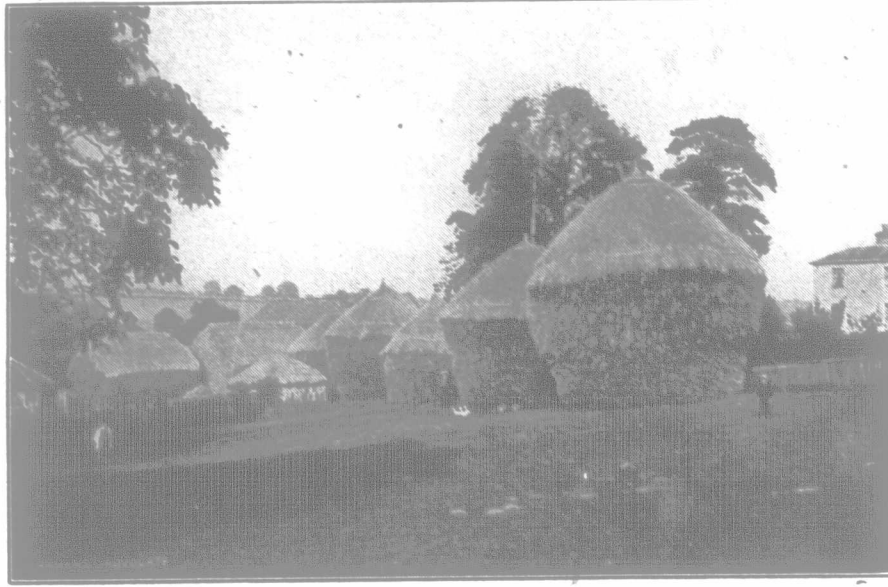
Their machinery for planting and harvesting potatoes is modern. Yet in the smaller farms much of their hay is mown with a scythe, and considerable of their harvesting done by hand.

Little land is wasted, few fences interfere with cultivation, as cattle have a herdsman and even geese have an attendant to drive them to pasture. The railroads are not fenced and cultivation comes very close to the road bed. In some districts fruit trees line either side of the

unfenced roads. Unfortunately I never happened along when those trees were laden with fruit.

It is something of a dairy country, and in the northern part good specimens of the Holstein-Friesian breed are common. In the Province of Hanover good dairy cows are numerous. If they had such a thing as a good beef beast it got away before I reached the country, and I was unable to get any trace of it alive or dead. Many hogs are kept; they even locate sometimes near the heart of cities. Generally, however, city people only keep chickens and rabbits. This gives their food control organization extra labor. Special arrangements have to be made for city people who keep a few hens. Even the farmers' hens are counted by inspectors, but we have it on good authority that occasionally one is reported dead. It is not all smooth sailing for the food controller there. In Stuttgart in 1916 the milk supply was running short. Some writer in response, no doubt, to a brain wave pointed out that the price of milk was fixed at a few pennings per litre below that prevailing in Denmark, which is something of a dairy country; yet some consumers were surprised that the supply was falling off. Frantic efforts have been made through the press to restrict the farmers' rations, but a few writers maintain the fruitlessness of such endeavor.

An outstanding feature of rural Germany is the extent and development of its forests. Much land is, no doubt, more suitable for forestry than other purposes. Still there seems to be some land in forest plantation that one would imagine would be more valuable as arable land. In the Kingdom of Saxony, which is agriculturally a good part of the empire, 25 per cent. of the land is under forest. Extensive plantations in every stage of development reveal the existence of a



How Crops are Stacked and Protected on an English Farm.

systematic policy of forestry, and the appearance of their matured forests speaks volumes for that policy.

Deductions Drawn From Observations.

To-day in the business of food production we have here many advantages over the Germans. We have more land which allows more extensive methods and a far greater production per man. We have a richer soil not dependant on artificial fertilizers. We have modern machinery and horse-power in abundance, while the enemy work oxen and their triple purpose cows. These cows are developed to milk, produce beef and do the work of an ox, and certainly do not look as though they would excel in achieving any of these aims.

Our chief difficulty is lack of labor. Even considering this we have many advantages over the enemy. There is a tendency in some quarters to take life easier,

In some places laborers, now receiving higher wages than usual, require a half holiday to spend their money. There is no half day off per week for the soldier, nor any Sunday observed in the trenches. When I was farming some years ago I was accused by some of my neighbors of doing two men's work. It is much more necessary to carry on in that way now and far more profitable; and with modern machinery and ample horse-power it is possible for us to produce individually not twice as much but several times as much as the enemy who are ignorant of modern agriculture and labor-saving machinery.

Renovating the Old Mower.

EDITOR "THE FARMER'S ADVOCATE":

Everywhere farmers are trying to make the old mower last a while longer. It is up to us to make an effort along this line, both from the patriotic as well as financial standpoint. If we can make any machine do fairly good work this season we should go ahead and do so rather than burden manufacturers who should perhaps be making goods for more urgent needs of our country.

As the cutterbar of the mowing machine is the most important, the first thing to do is to line it up. Natural wear and tear has a tendency to pull the bar back further than it should be and when you have run into a few stumps or stones going at full speed, it is further disarranged and usually far out of alignment. On most machines provisions are made for lining up the bar and bringing it into proper position, without much difficulty, although on some of the older types this is not easily done. No matter how bothersome this job is, it should be attended to if the machine is expected to cut as it should. The outer point of the cutterbar should travel a little in advance of the inner point when actually at work which means that it should set further ahead than might seem necessary with the machine standing idle. There is wear in the joints that will allow the bar to set back further than you may think possible when at work in a heavy swath.

After lining up the bar the next thing to look after is the guards and the plates that are in them. In nine cases out of ten, unless new guard plates have been recently put in, they will need to be renewed. This can only be done by taking the guards from the bar and doing the work at the anvil. After bolting the guards back securely be sure and line them up for you will probably notice by looking along the line that the points of some set at one angle and some at another. Guards will usually stand a reasonable amount of cold hammering, so you can line them up with a heavy hammer in connection with something that answers the purpose of a hand anvil. See that they are in line along the guard plates as well as the guard point, as any machine cannot cut well with one guard plate low and another high. Of course everyone recognizes the fact that a sharp sickle is necessary, but many seem to forget that sharp guard plates, securely rivetted in lined-up guards, firmly bolted to a lined-up bar are an equally important half of the cutting system.

All work so far mentioned has been done on the cutterbar but here is found 90 per cent. of the reason for poor cutting. Possibly the gears need some looking after, a boxing or two may need renewing, particularly on the pitman wrist pin, for a loose boxing on the pitman means a jerk at every stroke which is hard on both pitman and sickle as well as giving lost motion resulting in poor cutting.

A little coal oil used on all the oiling parts to clean out hardened grease will be found very helpful and when machine oil is added the bearings will run smooth and easy, thus lightening up the draft of the mower. A mower will last twice as long and will be twice as easy on the horses and give far better results in cutting if just a little "rainy day" time is taken to go over it thoroughly and see that it is in the best possible condition for cutting. The old machine is worth the extra attention this year especially.

Middlesex Co., Ont.

W. M. CHISHOLM.

Automobiles, Farm Machinery and Farm Motors.

Tires.

If any of our readers ever get an opportunity to inspect the process by which manufacturers make tires, we would strongly suggest that they take the utmost advantage of it. The lessons to be learned are many and of great value. You will realize, of course, that with the pneumatic tire, we have the longest step that was ever taken toward making the motor car a practical proposition. The air of the pneumatic tire takes up all those road shocks, which would otherwise be conveyed very harshly to the mechanism of the automobile, and to the passengers therein. The pneumatic effect also kills vibration, which is very injurious to a power plant. It is interesting to note that air is a great absorbent of shocks, more so than springs or solid rubber, or any other medium that has ever been devised.

Tires are made on moulds of different sizes. Generally speaking, two circular wire cables are first attached to a layer of heavy cotton canvas, filled, stuffed or impregnated with rubber gum. This constitutes what is known as the carcass of the tire. The cushion is then applied, which is nothing more or less than a layer of compounded rubber. It is held in place by a length of canvas known as the breaker-strip. The last section

is termed the tread. This is the part that comes in contact with the road, and is compelled to stand most of the wear. When the whole structure is vulcanized together a substantial wear resisting casing has been produced. Inside the casing a tube with a check valve is fitted, and on the introduction of air to the tube the beads grip the rim and hold it firmly in place.

There are two things which you should always bear in mind if you wish economical tire maintenance. Never use a tire that is under inflated, or you will find that the walls, which are naturally the finest part, will soon become broken. When the air in your tire is allowed to go down, the carcass naturally comes in contact with more obstructions, and it is not long until the sides are so worn that a blow-out occurs. You cannot tell the pressure of air in a tire through any system than that of using a gauge. Kicking a tire, pounding it with the hand, or striking it with a stick, are not satisfactory. Use a gauge and make sure that you have almost twenty pounds of pressure per inch of tire.

The second important thing to remember is that the shifting of the position of the tires on the wheels will increase mileage. Front tires wear longer than rears, and those on the left side usually give less trouble than the ones on the right. Changing the tires is, therefore,

a good plan. If you wish to preserve a uniformity of wear, do not forget that heat, light and oil have injurious effects upon rubber. If you carry a spare tire see to it that there is a cover for it. Do not allow your tubes to be exposed. See that they have some kind of a box or bag to themselves, and it is always well to have the valve stems covered up in order that they may not damage the rubber. Never allow grease to accumulate on your tires, as it takes the resistance out of the rubber. Perhaps we should not say anything about speed, because most motorists know that if you travel at a terrific rate it almost eats up tires. Slow, comfortable speed reduces wear and tear to a minimum.

It is not an uncommon sight to see a car running along with a flat tire. This is certainly bad policy. If the air has left the tube, the rim grinds both it and the casing. To travel any distance with a flat tire is sure ruination for both the tube and its cover. Immediately upon discovering a puncture, pull you car up quickly, and jack up the affected wheel with the least possible delay. If you see two front tires on a car that have worn down to the fabric, you can rest assured that they have either gone a tremendous distance, or been out of alignment. Misalignment soon eats up a pair of tires. This is quite common where front wheels are concerned. It causes the wheels to run out of line.

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If your casing seems to be wearing too rapidly, it would be well to investigate the camber and gather of the wheels. If found faulty rectify them with the least possible delay.

Vulcanizing has saved thousands and thousands of dollars. If you get a sand-boil, cut it open immediately, clean it out, remove all loose portions, wash it out with gasoline and vulcanize it. If you strike a piece of glass, and a long cut appears on one of the casings, have it vulcanized at once, or it will ruin your tire beyond repair. Bruises should also be attended to with the same speed and alacrity.

AUTO.

The Tractor a Labor Saver.

EDITOR "THE FARMER'S ADVOCATE":

In your issue of May 16 I noticed a letter from a Middlesex County man under the heading, "Prefers Horse to Tractor". Undoubtedly this man has been bothered somewhat by agents as most farmers are. Now I am a farmer and nothing else in the way of profession. When the great call came for "greater production", I had been considering the idea of giving up farming, on account of the shortage of help. My children were too small to be of any help. I considered the proposition

very carefully and decided to change my methods of farming. I visited some of the tractor demonstrations and finally decided to purchase a tractor outfit. I had previously been using steam power for belt purposes. I turned the steamer over in part pay, sold two of my horses, which I could easily do without, also many of my two-horse implements, which I replaced with larger ones. I now find after a year's trial and by keeping close account, that the shortage of help can be nicely overcome by the use of machinery and will also give a greater production with a very great saving of time and hard work at a minimum cost.

Simcoe Co., Ont.

SIMCOE FARMER.

Canada's Young Farmers and Future Leaders.

On Being Progressive.

Did you ever stop to study the difference in meaning between the words "aggressive" and "progressive." We are prompted to call attention to the radically different meaning of these two words, because of the frequency with which one hears the statement that "so and so is a progressive farmer," or "Smith is an aggressive fellow." What does it mean to be a progressive farmer? Some people will say "Oh, a farmer who goes ahead and makes money!" But the word "aggressive" means something altogether different, and yet it may be said with equal truth of the aggressive farmer that he "goes ahead and makes money."

Suppose we consult a dictionary and see what these words do mean. And not only that, suppose we go a step further and see what each of them does not mean. This we can do by comparing the synonyms and antonyms of one word with those of the other. Synonyms are words of similar meaning, while antonyms are words having an opposite meaning. If we follow this suggestion the line-up of words would appear as follows:

Progression.		Aggression	
Synonyms	Antonyms	Synonyms	Antonyms
Advancement	Check	Assault	Defence
Attainment	Decline	Attack	Repulsion
Development	Delay	Encroachment	Resistance
Growth	Falling back	Incursion	Retreat
Improvement	Relapse	Invasion	
Increase	Retregression	Onslaught	
Proficiency	Withdrawal	Trespass	
Evolution	Recedence	Intrusion	
Unfold	Retirement		
Amplify	Desistance		
Education	Retreat		

It is easy to see from the various shades of meaning brought out by these words that, while they have something in common, they are really very much unlike. Briefly, "aggression" is said to mean "an unwarranted inroad or encroachment upon the rights of another,

whether prompted by hostility or not; also, disposed to work actively in behalf of one's interest," while "progression" means to "proceed toward new conditions or results; to go onward toward perfection; to make improvement; to advance towards a higher or better state."

This will show us in a little clearer light, perhaps, just what kind of man a progressive farmer is. He is a man whose work is constructive, whether on his farm, or in the community. One would expect him to show a certain amount of aggression also, if he were successful in a business way, but he need not be any more aggressive than is necessary to protect himself from men less scrupulous than himself, or to take prompt means of acquiring any new information or equipment which will be of assistance to him in bringing about improvements on his farm, or in the quality of his crops and stock.

The difference between aggression and progression is well illustrated by the difference in the attitude with which some men approach farmers' or other organizations. Some men are anxious to get in on the ground floor so as to more easily satisfy their aspirations for office. The progressive man may be equally keen to see the organization successful, but he prefers to give the matter his careful and thoughtful consideration and, if he secures office, to receive it from the membership because he is well thought of, rather than because he has been able to do some clever electioneering. The progressive man is always looking for something better; he is observant of men and what is happening about him. He is quick to notice some new method of performing a farm operation, or growing a crop or animal. He is not lassoed and hog-tied to any one way of doing a thing merely because that method was inherited from his father and had always given satisfaction. But at the same time he is not erratic in his methods, changing quickly from one thing to another, making snap judgments which frequently turn out badly. He is always on the lookout for something better, but is convinced of the advantages of the new before he gives up the old. Perhaps he tries out a newly recommended method of growing corn or roots in a small way at first, in order to assure himself of its adaptability to his conditions.

Once convinced that he can save labor, or secure greater yields per acre, or make quicker gains on his live stock with the new method, he does not hesitate to cast aside the old idea for the newer and better one.

Not only does he observe what his neighbors are doing so as to profit from their experiences, but he goes outside of his township and his county in an endeavor to keep in touch with the agriculture of the province or country. He is ready for co-operation, or some other idea which will assist in putting farming upon a safer basis and, without making himself conspicuous by uncalled-for aggressiveness, takes a prominent part in, or lends his unqualified support to the movement to help it along.

The progressive farmer endeavors to keep in touch with the Government Department of Agriculture. He may become acquainted with some or all of the officials who are carrying on the work of the Department, or the Agricultural College, in order to learn of new ideas which he can put into effect in his own business. He knows that it is to his advantage as a farmer to do this because of the fact that these officials are but servants of the remainder of the people, and that their work is determined quite largely by what the farmers demand. The farmer with a progressive spirit and who is always looking ahead, knows that these officials cannot always be right and endeavors to put himself in a position to offer constructive criticism where he feels that he is needed. He is not a knocker, but will not hesitate to withhold his support from projects which he feels are not conducive to the betterment of agriculture and the farming industry. Moreover, he is not self-centred, either with regard to his own interests on the farm or the industry he is engaged in; his desire is to acquaint himself in a general way at least with the conditions surrounding the workers in other industries, so that he may make of himself a better citizen and elevate the dignity of his own calling by a fair consideration of its problems. In short, the progressive farmer endeavors to be a good farmer and a good citizen, deserving of the respect and well wishes of his neighbors, because he believes in his calling and recognizes, in addition, the fundamental principles of democracy.

THE DAIRY.

Keep the calf growing.

June grass is very nearly an ideal dairy ration in itself.

The value of dairy products should be well advertised.

As much of the ration for the dairy herd as possible should be grown on the farm.

If you are a breeder of pure-bred cattle, give the farm a registered name. It will help you.

King of the Pontiacs was for a time the only bull with more than one 40 lb. daughter. He is at present the only bull with three 40-lb. daughters.

Summer silage is, as a rule, the most economical method of feed to help out short pastures. It is wise to keep a reserve, if possible, for midsummer and fall.

The Holstein-Friesian Association of America now has 10,739 members, 2,776 of whom are in New York State, 1,329 new members having joined the Association in 1917-18.

The bull calf intended for breeding purposes should be well fed from birth to maturity. An underfed animal will always remain undersized and will never develop to the limit.

At the New York Dairy Show Governor Whitman asked for an introduction to Oxford's Briar Flower, the \$10,000 Jersey cow. The social status of the cow is being established.

Tietje Queen De Kol 2nd is the thirty-second forty pounder among Holsteins. She recently finished an official seven-day test with a yield of 639.3 lbs. milk and 43.29 lbs. butter. She is owned in New York State.

Once the milk flow is allowed to run down in mid-summer from lack of feed, it is almost impossible to restore it. Summer soiling crops are less expensive than heavy grain rations where summer silage is not available.

Emphasizing the importance of pure, fresh water for the dairy herd, it was recently stated by an authority that a cow weighing 1,000 pounds and making 50 lbs. milk or the equivalent of 2 lbs. butter-fat daily, requires approximately 150 lbs. water.

One hundred and fourteen head of Jerseys were sold by dispersal at Glenwell's Farm, near Grandviw, Missouri, May 24, for \$23,970, an average of \$210.16. The highest priced animal was Glenwell's Cora Raleigh, a two-year-old bull bringing \$1,000.

Another record price for a Jersey cow was paid on June 1 at the Hood Sale, Lowell, Mass. Sophie's Agnes sold to Ayredale Stock Farm, Bangor, Maine, for \$10,099. The former record price was for Oxford's Briar Flower, sold recently for \$10,000.

If the cereal grain proteins are used as a sole source of proteins for the growing animal they will show an efficiency of less than 30 per cent., while the protein from milk will reach an efficiency of 65 per cent. Even the small amount of proteins in whey, supplements the cereal grains in a most effective way.

Four entries in the Ayrshire Advanced Registry, averaging 12,826 lbs. milk and 535.83 lbs. fat, give Willowmoor Soncy Girl a very satisfactory place among Ayrshires. All records were made on a cumulative basis, the last one being 16,707 lbs. milk and 709.60 lbs. fat. She is owned in Washington, U. S.

Five factors are necessary in a diet for adequate nourishment. These are a sufficient amount of energy or fuel food, good proteins, suitable mineral matter and two chemical substances of unknown character belonging to the class of materials new called vitamins. Milk is one of the few foods containing these essentials in suitable proportions.

The West in Unison.

EDITOR "THE FARMER'S ADVOCATE":

I have received a marked copy of your issue of May 30th, which contains an editorial on the proposed National Dairy Council. I wish to congratulate you on the excellent points brought out, and no doubt they will assist the committee when appointed to work out the details of this organization. I agree with you that Government officials should not be included as officers

in the organization. The dairymen can always rely on the officials of the different Departments of Agriculture, to assist in every way possible any organization which will work in the interests of promoting the dairy industry.

Your suggestion that this organization be confined solely to the dairy farmer, would, I think, be a serious mistake. In Manitoba we have endeavored to create a friendly feeling between the manufacturer and his patrons, and have been successful in this. I know the manufacturers in this Province are vitally interested in the promotion of this organization; they have a large amount of capital invested in the business, and they play an important part in the development of the industry. However, I am open to conviction on this point as well as others, and the proposed organization can rely on my support.

The men of the Western Provinces have given this matter considerable thought, in fact we have been working on it for a year or more, and the West is a unit in regard to this organization.

Manitoba.

L. A. GIBSON,
Dairy Commissioner.

Hood Farm Jersey Sale.

A very marked tribute was recently paid to skilful breeding and development of dairy cattle when 66 head of Jerseys, owned by C. I. Hood, of Hood Farm, Lowell, Mass., sold for \$60,198, an average of \$912.09. Since 1903, fifteen years ago, 386 records have been entered in the Register of Merit from this herd. The total amount of milk involved in the making of these records is 3,237,653.4 lbs., an average of 8,388 lbs. The total fat amounts to 177,074.88 lbs., averaging 459 lbs. per cow.

At this remarkable sale, Jerseys bred on the farm sold for \$7,500 and \$10,099, the latter establishing a new record sales price for a Jersey cow, Sophie's Agnes, a granddaughter of Sophie 19th of Hood Farm, the world's champion Jersey cow, with a record of 17,557 lbs. 12 oz. milk, 1,248 lbs. butter. The latter is also the world's champion long distance dairy cow, with 7 years' authenticated tests totalling 91,869 lbs. milk, 6,600.8 lbs. butter. Sophie's Agnes traces back through four generations on both sire and dam's side to Sophie's Tormentor, the sire that has made the herd. Sophie's Agnes is now on test and bids fair to break the world's record made by her grandam.

The world's champion Jersey junior four-year-old,



Champion Sylvia Johanna.

A six months calf contributed to the Moyer National Holstein Sale by A. C. Hardy, Brockville, Ont. This calf sold to E. A. Stuart, Seattle, Wash., for \$106,000.

Sophie's Adora sold for \$3,599 to the Ayredale Stock Farm, Bangor, Maine, purchasers of Sophie's Agnes. E. C. Lasater, of Texas, paid \$7,500 for a choice of one of three sons of Sophie 19th. His selection was Sophie 19th's Tormentor, the oldest of the three, and he retains the privilege of exchanging him for one of the others after three years. Another bull, a two-year-old, sold for \$4,600. Fifty-six animals bred at the farm averaged \$1,030. The following summary will prove of interest to lovers of the Jersey:

Number head	Total	Average
19 cows	\$25,153	\$1,323.83
9 two-year-old heifers	6,195	688.33
12 yearling heifers	6,980	581.66
17 heifer calves	7,225	425.00
3 bulls	12,600	4,200.00
6 bull calves	2,045	340.83
66	\$60,198	\$912.09

Bacteria in Milk from Gargety Cows.

The great problem in the production of market milk which bothers a great many dairymen, is that of securing milk which does not show a higher bacterial count than 10,000 bacteria per cubic centimeter. This number is the one which is sometimes rather arbitrarily fixed as determining what is commonly known as certified milk. Milk with a bacterial content of 10,000 or less per cubic centimeter, and which fulfills the other requirements, may in such cases be marketed as certified milk. There are a great many influences which are brought to bear upon the quality of milk, by either careful or careless methods, which influence to a very marked extent the bacterial count. Some cows apparently yield milk which, in its pure state and before it has had a chance to become contaminated by outside influences, has a very much higher bacterial count than that secured from other cows in the same herd. Moreover, recognized health authorities are now agreed that the production of clean and healthful milk does not depend so much upon stable environment and sanitation in the dairy stables, as upon the very important factor of personal cleanliness and proper care of the animals, particularly at milking time.

Some very interesting investigations were recently conducted in Rhode Island, with a view to determining the influence of cows which were affected by mammitis, upon the bacterial content of the milk produced. The result of these investigations showed that there appear to be two main factors which are responsible, in a dairy which is kept in a sanitary condition otherwise, for the production of milk with more than 10,000 bacteria per cubic centimeter. The first of these factors has to do with the existence in the herd of certain animals referred to above and which may be called "high-count" cows. These animals are those whose milk when freshly drawn and when drawn under such conditions that there is no chance for contamination, will contain a large number of bacteria per cubic centimeter than 10,000. It appears that as a result of two hundred and forty-three tests of individual cows, twenty-eight per cent. of this number were of the so-called "high-count" type.

The second factor determined by these investigations has to do with gargety cows—cows affected with incipient, acute or chronic mammitis. Mammitis,

ordinarily, is an inflammatory condition of the mammary gland, or udder. Sometimes it is spoken of under the colloquial term of "caked bag". Heavy-milking cows are most commonly affected, the udder becoming swollen, hot and somewhat tender, and the disease is usually manifested just before calving. Ordinarily the condition may be remedied by careful milking and the exercise of absolute cleanliness; frequently, too, the condition may be relieved by bathing with hot water, and the use of ointments.

Sometimes, however, mammitis is apparent in a contagious form, in which case contagion is due to the invasion of the udder by bacteria. In such cases inflammation is more serious and more careful treatment is needed in order to make sure that the bacteria are destroyed, and the spread of the disease prevented. In the investigation referred to above, it was found that a few of the "high-count" cows were infected with mammitis in one-quarter of the udder, and in order to determine whether an infection in one quarter

would spread to other parts of the udder, a bacteriological examination of each teat was made. These examinations showed that where one quarter was known to be infected and where the infection could be determined by a mere physical examination, the organisms had already penetrated to one or more of the remaining quarters of the udder. The mere fact that such is the case proves the folly of following the common custom of discarding only the milk from the infected quarter and of adding the milk from the remaining quarters to the whole milk of the herd, because, as can be easily seen, a high bacterial content of milk from these quarters might easily be the means of increasing very materially the average count in milk from the whole herd.

Dairy Council Comment.

EDITOR "THE FARMER'S ADVOCATE":

I have read with interest your editorial in the May 30th number of the "Advocate" with reference to "Dairy Councils".

In the main, I should be inclined to agree with your argument that milk-producers should have strong representation in both provincial and dominion dairy councils, but that they should dominate these, is open to question. As you rightly point out, the producers of milk for cheese, butter, condensed and powder milk manufacture have no organization from which material could be selected to represent them in these Councils. The Eastern and Western Dairymen's Associations are controlled by manufacturers and buyers, though the public money for their support comes from a vote for agriculture. Farmers have too long allowed the other fellow to spend the money appropriated for the benefit of agriculture. So far as dairying goes, the only remedy for this is to have a thorough reorganization of the Dairymen's Associations of the Province of Ontario—in fact I never could see any reason for two dairymen's associations in this Province. The present system is a waste of public money and should be no longer tolerated.

We would suggest one strong organization of producers, manufacturers and dealers, with a fair representation from each class on a strong board of Directors. From these could be selected men for a provincial dairy council, and from these again, material for a national council of dairymen. In this way the various parts of the dairy industry would be linked together in mutual interests. Up to the present, milk-producers have been regarded as a class to be

exploited by the other classes of dairymen. But farmers are waking up and there is now danger of going to the other extreme. The dairy industry differs from all other lines of agriculture in that it seems necessary to have a large manufacturing class who stand between the producers and the consumers. This class is really the tail of the organization, but it has almost invariably "wagged the dog", up to the present. There must be, and is, some common ground on which all classes interested in the dairy industry can meet for the purpose of furthering the interests of the whole, not merely a part, of the dairy business in Canada. This, it seems to me, is, or should be, the chief object of dairy councils, both local and federal.

Regarding your three propositions for an Ontario Council, I would observe with reference to number one, that it meets with my hearty approval. It should be limited to strong men—and not more than one or two from each of the present dairy organizations in the Province.

Proposition number two that the producers should have a majority representation, I should be inclined to question. The writer is a strong believer in the rights of farmers, but in such an organization as is proposed for dairymen where others are vitally interested, if the producers have greater representation than any other one class, it will cause the others to combine against the producers, thus defeating the objects aimed at. Such an organization can endure only by mutual goodwill and respect for the rights of others.

Your third proposition that representatives of the Department of Agriculture should find no place in this Council, also has my support, if the dairymen outside the Department of Agriculture, will take hold of this progressive movement and "make it go".

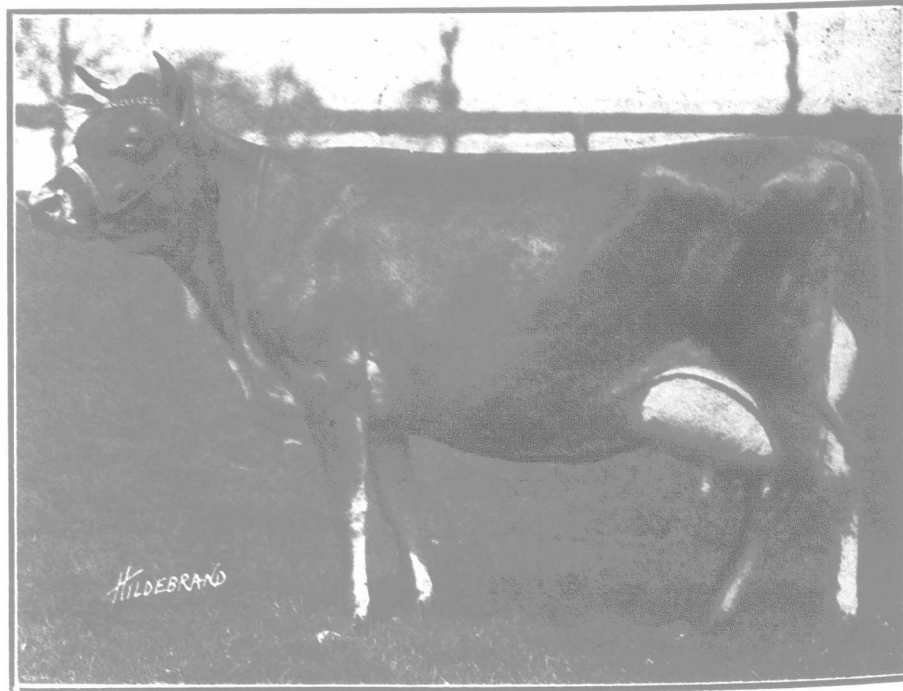
In this connection may I offer a word of personal explanation regarding the Dairy Conference held at Guelph in April last? I have been charged with seeking to form a new dairy association, of which I proposed to make myself Manager, etc. For some time there has been a good deal of dissatisfaction with the present dairy organizations. Strong interests have complained that they could not get representation in the present associations. Farmers and the newer branches of dairy manufacture, including town and city milk trade, were ignored. In a word, what the writer did was to give an opportunity for these varied dairy interests to get together, and if his services were of any use to these progressives, they were freely offered, so far as he could do so without prejudice to his College work, which is, and always has been, his first consideration. In no way did he seek to impose himself on the dairymen of Ontario. Neither was he at all disgruntled because in their wisdom the dairymen took another line of action. He has given the proposal for a provincial dairy council, independent of Department influence, his heartiest support, and will continue to do so, so long as a progressive spirit is manifested. There is one class of men the writer has no use for—the "stick-in-the-muds" and non-progressive dairymen, who proceed on the principle of "what was good enough for our fathers is good enough for me." He also has very little use for precedents and "red-tape". He would favor putting a charge of dynamite under these and blow them to the—if necessary, in order to make progress.

H. H. DEAN.

Feeding Concentrates on Pasture.

The feeding of grain or concentrates to milch cows on pasture is a subject about which there is considerable diversity of viewpoint. Generally speaking, however, there has not been a general adoption of this practice with the average farm herd, and rightly so in many cases. As a general rule, it will be found that only animals that are good producers will make sufficient response to the increased feed to warrant it.

This question has been given a considerable amount of attention in England, especially since foodstuffs have



Rower's Eventide Lassie.

One of the five daughters of Rower that won for him first prize for his get on the Island of Jersey in 1917. Rower and Rower's Eventide Lassie are now owned by John Pringle, London, Ont.

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been getting scarcer and, as a result, a joint statement has been issued by the British Board of Agriculture and the British Ministry of Trade, which lays down the rule that during the coming months when cows are out on grass, they should receive no concentrates before August 1. This rule was made after a careful survey of the practice in various parts of England, and after consideration of the investigations which have been conducted by the various agricultural experiment stations in England for the last twelve years. These experiments had all been carried out in districts where the feeding of concentrates on pasture is commonly practiced, and the results are so uniformly alike that it is needless to repeat them in detail. The most extensive of these experiments was conducted at the West of Scotland Agricultural College and was continued for three years, including, in all, 224 cows. The experiment began each year (1912-14) about the middle of July and continued for twelve weeks throughout the time when the pastures had got beyond their best. The net result of these experiments showed a greater increase in milk flow resulting from the feeding of concentrates with each succeeding month. This occurred at most of the farms where lots of cattle were being fed. Taking the experiment as a whole, the increased milk secured amounted to 8.7%, of which 1.9% was credited to the first month, 2.8% to the second month, and 4% to the third month. In actual milk yield per cow this percentage increase amounted to about 10 pounds per week for the first month, 12½ pounds for the second month, and 20 pounds per week for the third month.

It was not possible to detect any measurable influence upon the fat content of the milk, and so far as an eye-estimate could tell, the condition of all the cows was about the same at the close of the experiment. In some of the other experiments, however, gains were recorded, some in favor of those fed concentrates and some in favor of the other lot. A profit and loss account was kept, from which it was determined that there was an average loss of \$2.42 per cow for the three months. Only one lot showed a small profit. When the manurial value of the concentrates was considered the loss was reduced 60 cents per cow. After the experiment closed, the cows were all treated alike, and for the fourth month the cows which had been fed concentrates previously for three months, showed a continued advantage, although it was not so great as during the time the grain was actually being fed. The gain in this fourth month is sufficient to change the loss of 60 cents for each cow to a profit of 7½ cents. It is noted further that the weather during these experiments was such as to favor the use of concentrates, since the grass was rather short at several places during the course of the several tests. The statement issued by the authorities points out that the nature of the season and pasture must influence considerably the influence of concentrates, but it is believed that the uniformity of results secured, warrants their application in all but very abnormal seasons. So far as milk production is concerned, therefore, the experiments conducted in England seem to prove that the increased yield does not warrant the use of concentrates, except during the latter half of the pasturage season.

Investigations in America have not provided a great deal of conclusive evidence on this subject, although considerable work has been done. Eckles admits a difference of opinion from the standpoint of economy, but argues that more milk will unquestionably be produced where grain is fed than where it is not fed. The cow giving a small quantity, however, will increase her flow but little. This author maintains, nevertheless, that for cows that are heavy producers, the high level cannot long be maintained on pasture unless grain is fed, because such cows cannot secure sufficient nutriment from the grass alone. He states that a Jersey cow giving 20 pounds or a Holstein or Shorthorn giving 25 pounds and more, daily, should receive some grain, and states his own practice with regard to these two types of cows to be as follows:

Jersey or Guernsey Cow.		
Pounds Milk Daily.		Pounds Grain.
20		3
25		4
30		5½
35		7
40		8
Holstein, Shorthorn or Ayrshire Cow.		
25		3
30		4
35		5½
40		7
50		9

These figures are applicable, we are told, only when pastures are abundant, and corn is suggested as a desirable grain feed, since it does not unbalance the ration, unless quantities of more than 5 pounds daily are used, in which case feeds containing more protein are better. Another extensive set of experiments in the United States indicated that each pound of concentrates fed returned about one pound of milk, the total increase in milk yield amounting to 28 per cent.

One of the greatest advantages of feeding concentrates on pasture is derived from the effect of this feed upon the later performance of the animal. That this effect is very appreciable is indicated by an experiment conducted at Cornell University some years ago. During one summer a herd of 16 cows was divided into two lots, one of which was fed 4 pounds of grain feed per head and the other none, both being on the same pasture. The cows fed concentrates each gained 166 pounds during 22 weeks and averaged 616 pounds more milk than the cows in the other lot. The following year these same two lots of cows were turned on the same pasture, neither receiving any grain. The

yield of the cows that had received concentrates the year previous was 3,440 pounds each, as compared with 2,960 pounds from the other lot, a net gain of 480 pounds or 16 per cent., which was attributed by the investigator to the residual effect of the concentrates fed the previous year. It is reported that the benefits were especially marked in the case of two and three-year-old heifers, since they developed into better animals than those of similar ages in the other lot which had received no extra feed the previous year.

It is altogether probable that the matter can be summed up as depending upon the relative cost of pasturage and concentrates, the price of dairy products and the producing ability of the cows. In any case, where it is deemed advisable to feed grain on pasture, the amount must be left to the experience and judgment of the owner of the herd.

Sixty-one Holsteins Average \$446 at Farewell's Sale.

The Farewell dispersion sale of 61 Holsteins, held at the farm near Oshawa, on Tuesday of last week, was one of the most successful pure-bred live stock auctions ever held in the Dominion. There have been sales where the general average has been higher, but at none of these has there been such a large number of calves of the calendar year selling. Here 18 of the 61 head passing through the sale were calves under twelve months of age; of these 11 were males and 7 were heifers, and a number of them were so young that they were not even catalogued, being born after the pedigrees were in the hands of the printer. The average of \$446.65, however, takes in all of these youngsters, and had they not been sold separately the figure would in all probability have been equal to the best of Canada's high record sales. The top price for the day was paid by R. Cooper, of Welland, for the five-year-old, 30.63-lb. daughter of King Walker, Leila Segis Walker. She is not only the highest record daughter of her sire, but she is also one of the best individuals that will pass through a sale-ring this year, and was considered one of the best buys of the day. Her 30-lb. record has been made recently and was therefore not listed in the catalogue. There were six other females in the offering that went above the four figures, and with one exception all went to Canadian buyers. Of these, A. C. Hardy, Avondale Farm, Brockville, the seller of the \$106,000 bull calf at Milwaukee the week previous, took three, and W. L. Shaw, of Roycroft Farms, Newmarket, who consigned the \$12,750 heifer to the Milwaukee sale, took one. Mr. Shaw's purchase, Echo Sylvia Gelsche Segis, was only an eight-month-old heifer, sired by a brother of the Milwaukee calf mentioned above. A general summary of the sales gives an average of \$617 for the 18 mature cows, \$498.75 for 12 two-year-old heifers, \$430.45 for 11 one-year-old heifers, and \$322.77 for the 18 male and female calves.

Following is a list of the animals selling for \$100 or over, together with the names and addresses of their purchasers:

Queen Segis Walker Korndyke, R. Cooper, Welland	\$ 450
Bull calf, Jas. Hoover, Weston	135
King Segis Walker, Jos. Todd, Agincourt	300
Pontiac Sir Korndyke Wayne, P. D. Nelson, Campbellford	305
Segis Cynthia, Wm. Currie, Aurora	225
Heifer calf, H. Carson, Ottawa	130
Forest Ridge Segis Inka, Gofort & Bennett, Scarborough	270
Edgemont Faforit Segis, N. I. Metcalf, Bowmanville	300
Faforit Segis Walker, P. J. Salley, Lachine, Que.	330
Edgemont Ida Mechthilde Segis, R. W. E. Burnaby	320
Jefferson	110
Bull calf, W. G. Emery, Massey Stn.	325
Edgemont Pride Segis, R. W. E. Burnaby	325
Heifer calf, Niagara Maid Farms, East Aurora, N. Y.	120
Pride Segis Walker, P. J. Salley	300
Edgemont Ida Segis, A. L. Pascoe, Hampton	225
Ida Segis Walker, McCullough Bros., Sutton, Que.	240
Pietertje Mechthilde Korndyke, A. C. Hardy, Brockville	800
Segis Mechthilde Korndyke, Niagara Maid Farms	1,160
Heifer calf, Niagara Maid Farms	405
Flottie Mechthilde Walker, A. C. Hardy	1,600
Bull calf, Grove & Robinson, Markham	360
Pietertje Mechthilde Walker, A. C. Hardy	1,100
King Korndyke Wayne Walker, M. G. Gay, Courtice	170
Mechthilde Korndyke Walker, A. C. Hardy	960
Gelsche Segis Walker, W. C. Houck, Chippawa	510
Fulton Sylvia Queen, A. C. Hardy	1,075
Bull calf, Rutledge Bros, Sydenham	125
Fairview Rag Apple Imperial, G. A. Brethen, Norwood	630
Heifer calf, J. H. Mitchell	165
Segis Rag Apple Korndyke, J. E. Griffith, Weston	255
Rag Apple Imp. Walker, R. H. Davies, Oak Ridge	320
Bull calf, Cowie & Forester, Locust Hill	135
Rag Apple Wayne Walker, H. Carson	200
Meadowbrook Queen Korndyke, Gofort & Bennett	300
Snowball Korndyke Walker, Chas. Stevenson, Orono	300
Heifer calf, W. L. Smith, Orono	120
Queen Korndyke Walker, H. Carson	260
Heifer calf from lot No. 23, R. Cooper	165
Daisy Segis Walker	305
Pieter's Leila De Kol, Niagara Maid Farms	925
Bull calf, R. M. Holtby, Port Perry	330
Leila Segis Walker, R. Cooper	2,500
Bull calf, W. F. Elliott, Unionville	430
Leila Inka Walker, L. M. Kennedy, Unionville	270

Bull calf, Swinlan Bros., Pickering	\$ 135
Leila Walker, R. Cooper	310
Leila De Kol Walker, A. C. Hardy	420
Leila Pieter Walker, R. Cooper	625
Urmagelsche Segis, H. Carson	1,000
Echo Sylvia Gelsche Segis, W. L. Shaw, New Market	1,500
Pietje Pauline Hengerveld, R. M. Holtby	850
Bull calf, R. M. Holtby	310
Ladoga Veeman Woodcrest, J. W. Innis, Woodstock	200
May Fayne Segis, J. W. Innis	385
Lauretta Fayne Segis, A. Muir, Scarboro	410
Susie Segis Walker, W. F. Elliott	700
Segis Lyons Walker, H. Carson	200
Mollie Beets Walker, H. Carson	175

POULTRY.

- Swat the Rooster.
- Cull the flock now.
- Make room for the growing stock.
- Provide plenty of pure, fresh water for all the poultry.
- Use labor-saving devices in the poultry yard as well as in the field.
- Lice and mites will cause loss to hundreds of poultry raisers this month.
- Is it true that the greatest preventable loss in eggs occurs on the farms?
- Leg banding of chickens and chicks is a good way of keeping track of the flock.
- Don't forget that the crowing of the rooster will be costly for the next few months.
- Have you planted any corn or sunflower yet to provide shade for the growing stock?
- If poultry houses are cleaned thoroughly and kept clean there will be little trouble from mites.
- Produce infertile eggs for market. It costs thousands of dollars every year to hear the roosters crow in the summer.
- Don't allow the hens to remain on the nest after they have stopped laying. Break broody hens up as quickly as possible.
- Leghorns and the lighter egg breeds mature faster than the heavier breeds and the sexes should be separated earlier.
- Prepare to turn off surplus stock to advantage. A rooster of the highest quality is one which is young, full grown, plump and well finished.
- If some of the hens are not to be kept over for another year it will pay to sort them out and get them on the market before it is glutted with fryers and broilers.
- Two parts of vaseline and one part of blue ointment, mixed, are recommended as a preventive and cure for lice. Rub below the vent and on the skin of each thigh.
- If the average hen produced twelve eggs for each month of the year she would be an efficient hen, and would make a good profit over and above the present cost of feed.
- Watch the growing stock closely for runts and weaklings. With the present price of grain feeds and the high premium on labor, it will not pay to furnish grain or any food to birds that cannot make use of it.
- Under conditions where fowls are supplied with each kind of food they require, each will consume about 90 pounds of grain, 20 pounds of green feed, 2 pounds of oyster shell, 1 pound of grit, and 1/10 pound of charcoal annually.

The Poultry Department, Macdonald College, Quebec, says that as far as relative efficiency is concerned, Plymouth Rocks, Rhode Island Reds and Wyandottes are practically on a par, bearing in mind, however, that the strain of a breed is more important than the breed itself.

Co-operative Egg Circles.

The report of the co-operative egg circles in Canada for the three months ending March 31, shows some interesting figures regarding this phase of Canada's poultry industry. From Ontario 32 associations reported shipments for the first quarter of 1918, from Quebec 6, Alberta 5, and from Prince Edward Island 23. A total of 80,743 dozen eggs has been shipped in this manner by 1,993 members of local associations, making an average of practically 40 dozen per member. These eggs were sold for a total of \$40,415.18. The largest single association reporting business for the quarter is the Lansdowne Association in Ontario, with a gross value of \$1,948.43 and 110 members. This association made 13 weekly shipments totalling 8,897 dozen eggs. In addition they shipped 1,124 pounds of poultry for \$305.10.

The Growing Stock in Summer.

The young chickens should be supplied with plenty of fresh water, green feed, shade and free range. Green feed is absolutely essential to their successful growth as are shade and fresh water. Plenty of opportunity to roam over the fields, or through the orchard will enable them to pick up large quantities of feed and to destroy numbers of insects, in addition to lessening the work of caring for them.

One of the best ways of conserving labor in the poultry yard is to use the hopper method of self-feeding. Allow the stock to feed themselves from feed hoppers constructed so as not to waste food, but which may be filled up each week, or each few days. One of the best hoppers which will supply both chopped and whole grain, is one which is divided into two compartments lengthwise and with each side slatted for feeding. A convenient size for this type of hopper is one three feet long, one foot wide and two and a half feet high. A hopper which slopes from both sides will feed better than one sloping from one side only. A hopper may, of course, be of any size or shape, so long as it provides a constant supply of feed and will hold sufficient for about a week. One of the greatest advantages of hopper feeding is that the danger from underfeeding is largely eliminated. Many chickens are stunted in growth and among laying stock egg production is often cut down by underfeeding.

Water or sour milk should be given once daily in addition to the grain feeds and should be given in a clean dish. For those who wish to take special care of the growing stock a moist mash fed once a day is good. This will secure better growth than if the feed is secured from the hopper only. Overcrowding is a great danger as the season advances. Coops or houses which appear to provide plenty of room early in the season will fill up rapidly as the chickens mature. Overcrowding is not good for the growing stock and may be very harmful. Plenty of fresh, pure air should be available from good ventilation. Close stuffy quarters weaken the birds and before you know it they have gone wrong. A little carelessness such as this may spoil the young pullets as egg producers or future breeders.

Remember that for the growing stock green feed is an absolute essential; where they have opportunity to range at will over the fields they can pick up what green feed they need, but where the range is restricted green feed must be grown for them and supplied in suitable quantity. It is customary and an excellent practice in addition to practise a rotation of crops in the poultry yard where the range is not unlimited. The range can be yarded off so that the flock can be turned from one yard to another as the successive crops are ready for them.

Shade is very important. Growing stock will develop and mature much more satisfactorily if they do not have to remain continually in the hot sun while feeding and exercising. In the heat of summer the chickens get very hot and their heavy coat of feathers in addition makes it necessary to provide shade for their comfort. For this reason an orchard is a splendid place to rear chickens. Failing this, fruit trees are sometimes planted about the yard in order to provide the requisite shade and at the same time provide fruit for the table. Plum and cherry trees grow well, provide an abundance of shade and bear early. Very frequently too, rows of corn or sunflowers are planted for this purpose, the corn providing green feed as well as shade also. The stock can be allowed to run in among the corn as soon as it gets to be about a foot high and from then on it will provide a nice lot of shade.

Good care of growing stock consists in giving plenty of feed and room so that there will be no tendency toward stunted growth from which they may never recover later. Care should also be taken that chickens are not allowed to roost in dirty houses and that their surroundings are in a reasonably sanitary condition. One other point is worthy of mention and that has reference to soil. Experience has, we think, shown that chickens will do better on good than on poor soil. Therefore, when selecting a range for the stock, other things being equal, good soil should be given the preference.

The Candling of Eggs.

It is difficult to estimate the production of eggs in Canada, but a few years ago it was conservatively estimated at more than a hundred million dozen. A startling percentage of this huge production is a loss to the country and largely from preventable causes, which investigations conducted at one time by the United States Department of Agriculture place at 17 per cent. of the total quantity of eggs produced. The big losses are said by dealers to come from three causes, cracked eggs, held eggs and rotten eggs.

How much of this loss is traceable directly to the farm? The consensus of opinion seems to be that a goodly proportion of it can be so traced and one of the most frequent causes is irregular gathering and marketing with poor storage facilities meanwhile. Eggs should be stored in a cool, dry place at a temperature of 60 degrees or less. Sunlight, moreover, is very detrimental to the keeping quality of eggs, especially if the eggs are fertile. Alternate heating and cooling for even a short period will cause the contents of the egg to deteriorate and complete spoilage soon occurs.

Fresh eggs differ in size, shape, color and quality, and are products of a very perishable nature. For this reason they need to be transported from producer to consumer as quickly as possible. Eggs are one of the most difficult products to grade also, for the reason that the contents, or edible portion, is protected by a shell which prevents examination of the interior except

by a special apparatus. These conditions surrounding the egg trade, together with the unfortunate and unprofitable but convenient practice of selling eggs to the small dealer or storekeeper, are so difficult to overcome as applied to the whole industry, that the grading and marketing of eggs for local trade is one of the greatest handicaps now holding back the poultry industry.

Very fortunately for the consumer and no less for producers of eggs, the egg is a semi-transparent product when held before a light, so that if turned slowly in front of a strong light in a darkened room, even small and unimportant defects can be seen. This fact has provided the only commercial method in use for grading eggs, namely, candling. A candling outfit consists of a very strong light enclosed in a box of some sort which will permit of light showing only from a small aperture in which the egg can be slowly revolved between the fingers. Kerosene lamps, gas jets, or electric lights are used for commercial grading and it is possible to grade very rapidly. Rapidity in candling depends, however, upon the season and the quality of the eggs, but it is possible for expert candlers to handle from 750 to 1,500 dozen per day.

Quality in eggs is determined by the size of the air cell, the characteristics of the yolk and albumen or white of egg, and the general transparency of the whole egg. A newly-laid egg presents quite a different appearance from one that has been kept a few days. The contents of an absolutely fresh egg completely fill the shell, but as the egg cools, the contents contract and an air space is formed in the large end. The yolk moves readily in the albumen as the egg is turned and is not as clearly visible as later. In candling, and recognizing a new-laid egg, one should make sure that the egg is clean and of good size, while the air cell should not be larger than a ten cent piece. Such eggs, the air cells of which are not enlarged, are said to be "full". Besides these characteristics the albumen should not be watery in appearance. Stale or "shrunken" eggs may be detected by the enlarged air cells. Evaporation constantly takes place at temperatures above freezing because the shell is porous. A certain amount of evaporation takes place even when eggs are carefully stored, but if there is much circulation of air and higher temperatures are encountered, the rate of evaporation is greatly increased. As evaporation progresses, a stale flavor develops and mustiness occurs where careless or damp packing is used. Staleness is accompanied by an increased wateriness of the albumen and in extreme cases the yolk may break down and mix with the white or albumen.

In a moderately stale egg, the yolk will be more highly colored, but still retain its position and although the size of the air cell is increasing, the egg is still fit for domestic consumption although not of as fine a flavor as though it were strictly new-laid.

Spot rot arises from the development of bacteria or moulds within the egg. These growths occur in the albumen and although the egg, as laid, is practically sterile, the porosity of the shell permits of easy infection from dirty nests, or damp surroundings. Bacterial moulds readily develop in the albumen, which is an excellent medium. It can be readily seen, therefore, that poultry houses should be kept as clean as possible. It is important, too, that eggs be not washed, since excessive moisture will break down the tough inner membrane which is, partially at least, bacteria proof. The various stages of incubation are comparatively easy to detect since the whole egg gradually darkens, except the air cell, and becomes black. In a typically bad egg the air cell is ruptured and the yolk and albumen becoming mixed, begin to decompose, while the contents shake or flow from one end to the other.

Anyone can readily candle eggs and soon learn to tell at a glance the difference between good and bad eggs. Simple cardboard appliances can easily be made at home or can be obtained free from the Poultry Division of the Live Stock Branch at Ottawa. Candling does not require much time, especially for the few dozen eggs that are produced by the average farm flock, while it does provide against loss in marketing and prevents such a widespread and universal use of eggs as food, as would otherwise occur if all eggs were marketed in salable and edible condition.

HORTICULTURE.

Good fruit always pays better than poor fruit.

Watch for the White Marked Tussock Moth this year.

Small fruits are almost sure to be a good price this season. See that good fruit is marketed.

Cultivate the young asparagus bed often during the summer in order to keep down weeds and grass.

Take care of the strawberry patch. Small fruits must be a good price this year and only good fruit should be marketed.

Young cabbage and cauliflower plants should be ready for planting out in the field four or five weeks after the seed is sown.

Watch for cane blight and orange rust on raspberries during the summer. The only remedy is to remove the plants as soon as the disease is noticed.

If the weather is damp and wet following the third spray for the apple crop, a fourth spray about 10 days later will aid along materially in controlling scab.

Raspberry Leaf Curl.

This disease has been known for some time both under the above name, as well as under the name of Raspberry Yellows. Since the curling of the leaves is the most outstanding feature in connection with the disease, it is preferable to use the term Raspberry Leaf Curl.

The disease affects the leaves and shoots and is often confined to a single bush or part of a bush, some of the shoots being perfectly normal and others with the leaves affected. The affected shoots, instead of producing normal, large, broad leaves, bear leaves which are conspicuously small and badly curled downwards. In the early stages this symptom is not so pronounced, and while a small amount of curling may occur then, the disease is more noticeable on account of the yellowing which takes place during the summer because of the unhealthy state of the foliage. Since yellowing of the leaves may be due to a number of other causes, such as wet feet, poor soil, drought, etc., it is best to determine the disease mainly by the Leaf Curl symptoms.

In the advanced stages, the canes bear no fruit. When first attacked, they flower almost normally, but the fruit is small and dry and shrivels up before ripening, so that little or no fruit is ever produced from an infected bush. Of the three varieties which are commonly grown in the Niagara district, Cuthbert, Marlborough and Herbert, the Herbert seems to be freest from the disease. The other two varieties are quite susceptible, but one rarely sees signs of Curl Leaf in the Herbert.

So far as is known the disease is not due to any parasitic organism. It apparently belongs to that type of trouble which has been called physiological disease, and could therefore be put into the same class with peach yellows and little peach, and the mosaic diseases of tomatoes, tobacco, potatoes and so forth. No records are available as to how the disease is brought into the field in the first place, nor how it is transmitted from one plant to another. It undoubtedly does spread once it becomes established in a plantation and many fine plantations are known to have been greatly injured by the presence of a large number of Leaf Curl plants. If the disease corresponds closely with the mosaic or yellow disease, one would suspect that it is carried either by insects or pruning operations.

Although too little is known about Leaf Curl to advise a sure means of control, one should always remove the affected plants as soon as they show signs of disease. They are of no use in any case, and are likely to spread the disease to other parts of the plantation. In taking out Leaf Curl plants, one should be careful to get the whole of the root system, otherwise the parts that are left will start to grow and produce new shoots which will also show Leaf Curl. It is possible that some of our Leaf Curl originates from nursery cuttings and some care should be taken when setting out a new plantation, to avoid this disease.—Experimental Farms Note.

White Marked Tussock Moth.

The White Marked Tussock Moth is one of our native pests which is widespread throughout Canada and causes, periodically, immense damage to shade and fruit trees. According to the Entomological Branch of the Dominion Department of Agriculture, an outbreak of this pest is at present taking place in Ontario and the Maritime provinces—where it is always most serious—and it behooves fruit growers and the authorities in towns and cities to look carefully to the destruction of this pest in orchards and parks.

Information at hand shows that the last outbreak of this conspicuously marked insect was during the years from 1903 to 1911, and that it was controlled quickly by the introduction and use of parasites which attack it and which, in this case, caused its sudden disappearance in 1911. Since that time caterpillars of this pest have been present only in comparatively small numbers until last season, when in several towns and cities rather severe outbreaks were experienced, so that now, numerous egg masses on tree trunks testify to imminent damage unless precautions are taken. On apple trees particularly, among fruits, the pest is serious, since it attacks the young fruit as well as the leaves, and eats through the skin into the flesh, leaving ugly and often rather deep scars on the surface.

The two sexes of the adult moth are quite different, the male being a beautiful, greyish colored moth, while the female is an awkward, clumsy creature that dies immediately her mission in life, egg laying, is accomplished. The eggs are laid in masses of 100 to 500, only one mass being laid by each female, who covers the mass with a layer of white, frothy fluid which hardens rapidly, holding the eggs together and protecting them from the weather. It is very easy to recognize the egg masses after having once seen them on the trunk and underside of the large branches where they are deposited by the female. When the outbreak is serious they may be found in considerable numbers upon the upper parts of the tree and upon fences and buildings nearby.

These egg masses remain over winter where they are deposited, over the greater part of Eastern Canada, but in Southern Ontario there may be a partial second brood. The eggs usually hatch out during the month of June. In early seasons the eggs may hatch during the latter part of May, but in Nova Scotia where the season is later, hatching usually takes place about the last week in June. The young caterpillars spread over the leaves to some extent and feed individually on the under surface of the leaves, dropping, when disturbed, by means of a small silken thread. As they grow older and larger their wandering instincts become more marked and, also, their appetites become more ravenous; to

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such an extent that they devour the greater part of the leaf, and when present in large numbers may almost completely defoliate the trees. The larger caterpillars may spread from tree to tree, and in this manner may reinfest trees previously cleaned of them.

A rest occurs when maturity is attained, which occurs during July or early in August. The normal resting place of these gormands is on the trunk or larger branches where they spin a greyish cocoon made from silk and hairs from the body, and attach it to the bark. Within this cocoon the larvæ or caterpillar changes to the chrysalis or pupa, the third stage in the life-history of an insect which undergoes complete metamorphosis. After ten days or two weeks in the pupal stage the adult moth appears from the cocoon and, in the case of the female, seldom moves away from the cocoon; usually she crawls upon it and after being fertilized by the male, deposits her eggs and dies. The male caterpillars cease feeding sooner than the others and spin their cocoons earlier, these being smaller than the ones from which the females moth emerges.

Epidemics of certain fungi and bacteria destroy large numbers of tussock moth caterpillars and sometimes act as the principal agent in controlling them. In addition some kinds of birds feed greedily upon these hairy caterpillars, where man and his pesky enemy, the English sparrow, do not conspire to prevent these friendly birds from getting in their good work. Artificial means of control are most effective when directed at the destruction of the egg masses. There is a long season between the egg laying and hatching seasons, extending throughout the fall and winter and part of the summer and early spring. A convenient method which has been followed very successfully is to paint the egg masses with creosote, but if spraying is properly done and done in time, this pest may be controlled by the same poison spray that is applied for the control of the codling moth. The important point in spraying is to get the material applied to the trees before the larvæ emerge from the egg stage, since a spray two weeks before they emerge is more beneficial than one two days afterwards. If spraying for this pest alone, a good strong dose of arsenate of lead alone, in water, will be sufficient, if applied well and in time.

Fruit Prospects in Ontario.

The general and very substantial increase in the cost of food products during the past three years, particularly among the staple foods, has given to the various fruit crops an importance as a food which was not previously accorded them. An endeavor to utilize greater quantities of fruit in order to save exportable foods for transport to Europe has likewise added to the interest which will be attached to fruit prospects in Canada. In addition to this there is the fact that with few exceptions the importation of fruit into Canada has been prohibited, in order to restore our trade balance to more suitable proportions.

In order to furnish our readers with as much accurate information regarding fruit prospects as could be done in a short time, we have obtained from correspondents, crop reports, and from a very careful personal survey of the Niagara district a review of the situation which we believe to be as accurate as any such review can be at this season of the year. Much depends on the weather as to the final outcome. The June drop annually takes a great deal of the young fruit from the trees and this year in some parts of the country this drop is not yet over. Moreover, any prophecy as to what the crop will be must recognize the great amount of winter injury which has occurred all over the Province of Ontario, and doubtless in other provinces as well. This injury is not fully developed as yet, and it may be expected that with some fruits and in certain districts fruit prospects will show more favorably now than in another week or two. It will be remembered that since 1914 there has been no large crop of apples in the Province of Ontario. This has, in some respects, been fortunate, since last year the export of fruit to Great Britain was cut off for lack of tonnage. This condition must still obtain for the crop of 1918, and Nova Scotia, whose principal market is the export market, will be forced to find a market for her crop in the United States and Canada. Generally speaking, there is every indication that the price of all kinds of fruit will be very high, made so not only because of a moderate crop but because of a more or less reduced acreage in the smaller fruits and because of an increasing amount of neglect in apple orchards throughout the country.

Niagara District.

Generally speaking, the peach crop in the Niagara District will be light. Conditions at the time of our visit, June 11 to 14, would indicate an average peach crop of possibly thirty-five per cent. of a full crop, although it is quite possible that the crop will be less than this. Some large orchards show only from ten to fifteen per cent. of a full crop, while others will run as high as forty-five and even fifty per cent. Occasionally, certain varieties such as Admiral Dewey, Triumph, and, in rare cases, Early Crawford, will show higher percentages than this, but as a general rule there does not seem to be a great deal of difference in the crop prospects of the different varieties when they are averaged in different sections of the peninsula. There has been, unfortunately, a large number of peach trees killed by the past winter. We hope to obtain a more accurate estimate later on of the exact percentage killed than we would be able to give at the present time, but it is possible that this percentage will run close to ten per cent. Certainly it is not out of the way to say that a larger percentage than this have been injured

in some way by the long-continued cold weather of the past winter. The fruit borne on these injured trees is a questionable factor in estimating fruit prospects, since it is inevitable that some of these fruits will drop off and reduce the percentage. Only one real good crop of peaches was reported and this was along the Niagara River, on the farm of Mr. C. Howard Fisher, Queenston. Mr. A. Onslow, Niagara-on-the-Lake, reports about thirty per cent. of a crop. Crawfords are light in this vicinity, with Elbertas, Smocks and early, white-fleshed varieties most promising. Prospects are only fair right under the mountain at Queenston, but such farms as Mr. Hudson Usher's are nevertheless more favorably situated than others, and show a better crop because of this favorable location. In the Vineland and Jordan District, peaches are about the average for the Niagara Peninsula; some growers reporting fair crops while others have experienced considerable loss due to winter injury. At Grimsby the farm of Mr. Hamilton Fleming shows only about ten per cent. of a crop of peaches. The older trees, some of which were heavily pruned in mid-winter, being hit hardest. This was found to be true also in other orchards where January, February or March pruning had been practiced to severely head-back old trees. In these cases the older orchards were in bad shape.

Plums, generally speaking, will show from sixty to seventy-five per cent. of a full crop; certain varieties, notably Reine Claude, being very full of fruit. Little difference was noted in plum prospects in any part of the Niagara District. Generally speaking, however, Japanese plums are very, very light all over, while European plums will run about the percentage indicated above. Sour cherries will perhaps average fifty per cent. of a crop or better, although in some orchards in the vicinity of Grimsby the showing was good for no more than about forty per cent. A peculiar condition exists with regard to cherries and plums this year. At the time of our visit the drop should have been well over, but a frost had been experienced about three weeks previous, and on cherries and plums the trees bloomed and the fruit set heavily. However, after reaching the size of a very small pea, growth seemed to have stopped and instead of these small fruits falling off as would ordinarily be the case, they remained at a standstill, so that it is rather difficult to tell just what the crop will be since many of these fruits must inevitably drop off yet.

Sweet cherries bloomed very heavily, but there was some wet weather at the time of full bloom, and whatever the real cause may have been the trees now show an average of about ten or fifteen per cent. of a full crop. Black varieties are notably poor, showing in many cases less than five per cent. of a crop, while white varieties may go as high as fifteen or twenty per cent. on the average, with occasional trees running as high as sixty per cent. Grapes are more uniform than any other fruit crop in the district, running with fair evenness at what may be called a two-bunch crop, or about sixty-five per cent. of a full crop. There does not seem to be much difference among the various sections of the district. Blackberries have been badly hit by the winter; in fact, the crop will be very poor because of the injury done to the canes. Red raspberries look good, but the price should be very high because of the small strawberry crop and the injury to blackberries. The strawberry crop showed a fairly heavy bloom and the fruit appears to be setting well; in fact, a few crates were being shipped at the time of our visit. The acreage, however, was very small, due to the scarcity of labor, and in some places the plants did not run well last summer. In addition to this winter injury is reported from nearly every patch that was not covered during the past winter, the injury having occurred, we understand, in the month of December. Patches which were covered with straw or coarse manure have suffered little or no damage. In one section, at least, the Vineland section, the strawberry weevil has done considerable damage; in one instance having cut off nearly every blossom in a patch of average size. Canning factories have been offering, we understand, thirteen and a half cents for strawberries with crates and boxes returned, and one offer of fifteen cents was reported. Fifteen cents has been offered for raspberries as well, both of which are excellent prices and bespeak a scarcity of fruit in the estimation of the canners.

The apple crop of the Niagara District is not a large factor, considering the Province as a whole, but early varieties generally gave evidence of a full crop at blossom time, and this condition seems to obtain fairly generally as yet. Spraying, however, has been neglected to a considerable extent, even in the Niagara District. Pears for the most part showed very heavy bloom, and earlier in the season gave promise of a full crop. At the present time it is doubtful if pears will go more than fifty per cent. of a crop, and in some sections the percentage will be less.

Burlington District.

The Burlington District is not a peach district, although some peach trees have been planted. This year, however, we have it from Mr. A. W. Peart that there is practically no crop, and that about fifty per cent. of the trees have been killed by the past winter. Pears are grown in considerable quantity in the Burlington District, but the crop is very, very light. Mr. W. F. W. Fisher, one of the largest growers of pears in the district, and, in fact, in the Province of Ontario, has suffered a loss of from twenty to thirty per cent. of his trees in some orchards, particularly where the pear psylla was prevalent last fall. Mr. Fisher reports no loss in the young orchards except where some varieties have been top-worked on Keiffer. Generally speaking, Keiffer and Bartlett pears will show thirty-three per cent. of a crop, Anjou being about the best with forty

per cent., and Duchess showing about ten per cent. Apples show a fair crop for the most part; Duchess, Wealthy, Ribston, Greening, Cranberry, King and Blenheim running from fifty to sixty per cent. in some orchards. Baldwins will run from twenty-five to forty per cent., while Spys will go only from thirty to forty per cent. This variety bloomed very heavily, but continuous wet weather attended the blooming season and the set of fruit was small. Plums in the Burlington District will go about thirty-five per cent., according to Mr. Peart, Glass Seedling being about the best. Sweet cherries will run twenty per cent. perhaps, while sours may reach seventy-five per cent. Worden and Concord grapes will have seventy-five per cent. of a crop, while the green grapes have been badly injured, with the result that the prospects are for less than a quarter of a crop. Raspberries look well where protected, especially the Cuthbert which is a tender variety, but the canes in exposed plantations are badly frozen. As is the case in the Niagara District, strawberries which were unmulched over winter were badly injured. Currants and gooseberries promise half a crop or better, which condition will hold true, also, for the Niagara District.

Western Ontario.

The reports from Lambton County state that the prospect for an apple crop this year is fully one hundred per cent. better than for the year 1917. The weather was favorable at blossom time, and the prospects are good for a full crop. Peaches in this district are very light. One correspondent says that "In making a survey of the fruit-growing district I find that where orchards have not been properly sprayed the past two years and where there has been considerable Leaf Curl, that the frost did a great deal more damage, the leaf curl sapping the vitality of the trees. Winter injury is very prevalent in orchards where leaf curl has been bad. Winter-killing has been quite general, and in many instances farmers are destroying their peach orchards. I know of about 50 acres which have been pulled out by tractors this spring." Strawberries and raspberries show considerable winter-killing, with some good patches, while plums and cherries are variable. In Norfolk County, Greenings and Spys were reported on May 24 as showing a full bloom, early varieties full, and Baldwins fair, with not ten per cent. of the orchards receiving the same care as three years ago, through lack of help. On June 5 this condition still obtained, with the outlook for tree fruits very promising. Peaches have more bloom in sheltered sections than for the last two or three years, although many have suffered badly from winter-killing, as have also strawberries where no covered. Sour cherries promise a good crop, but sweet cherries are only medium to light. A good average crop of plums and pears is promised. It appears that there is indication of far more trees of all kinds being winter-killed than has occurred for several years, especially in the case of young trees. The Counties of Huron, Simcoe and Bruce report considerable winter-killing, especially on Baldwins, Ontario and Spy. This applies, of course, particularly to the Baldwin which is a tender variety. The early varieties show a very heavy bloom, including Snow, Colvert and Russet. The cherry and plum bloom in the vicinity of Goderich was very light, while at Clarksburg these fruits showed good bloom. At Clinton, cherries are more or less of a failure, and peaches also have been badly frozen back the past winter. Our correspondent says that some are considering pruning back to the live wood to give them another chance, but, generally speaking, they are too badly killed for anything to be done.

Eastern Ontario.

In Durham County the blossom was abundant on Russet, Ben Davis, Spy, Greenings, Duchess and Wealthy, while Snow, McIntosh and Stark were medium. Baldwins and all varieties of pears were badly winter injured; cherries partially injured. It is probable that a good average crop will be secured from early varieties of apples. Winter injury has been most prevalent where orchards were worked too late or where protection was lacking. In Northumberland County the bloom was very heavy on early varieties and on Greenings and Golden Russets; Baldwins are conspicuous for the number of trees injured. We understand, however, that there is more evidence of winter injury between Northumberland County and Toronto than in East Northumberland. Many cherry trees are reported to be dead in this county, and some plums. It is stated that only about ten per cent. of the orchards received second spray, and only about two per cent. of the first, or dormant, spray. The prospects in Prince Edward County are good for a crop of the hardier varieties of apples; the tender varieties may represent twenty per cent. of the districts of the County and are showing injury. Sour cherries will be a light crop, probably one-third of a full crop. Some injury is reported on strawberries. Ontario, Ben Davis, Pewaukee, and Spys have suffered intensely from winter injury. In Dundas County there is the appearance at present of being double the apples that there were last year. The fruit seems to be setting well and the weather conditions have been favorable so far. Pears and plums are only grown to a very limited extent, but pear trees have been severely injured. Apple orchards from five to six years of age have suffered from winter-killing, in some cases twenty-five per cent. of the trees having been completely killed. During the last week of November the thermometer went down as low as six below zero on three successive mornings, in the vicinity of Morrisburg, and this severe cold coming before the wood had thoroughly hardened for the winter caused the injury. Strawberries, raspberries and currants give promise of a heavy crop.

FARM BULLETIN.

Southern Counties Ayrshire Meeting.

A very pleasant and profitable day was spent by the members of the Southern Counties' Ayrshire Breeders' Club, on Friday, June 14. This was the occasion of the annual Field Day, held under the joint auspices of the Ontario Department of Agriculture and the Ayrshire Club. The meeting was held on the farm of Mr. C. C. Hawkins, Brownsville, Ont., whose spacious new barn, about 60 by 120 feet, provided ample space for the serving of a most bountiful and delicious lunch by the ladies, who were also in attendance. The barn was also used for the speaking which took place immediately after lunch. H. M. King, lecturer in animal husbandry, O. A. C., Guelph, was present and delivered an instructive address, and Mr. Alex. Hume, of Campbellford, Ont., a noted Ayrshire breeder and exhibitor, was sent by the Dominion Live Stock Branch to address the meeting and to take charge of the judging classes of Ayrshires. The animals in the judging classes were selected from the herds of Messrs. Adam Empey, Springfield; Mr. C. C. Hawkins, W. M. Hawkins, and E. A. Whaley, of Brownsville, with a few animals from the herds of other breeders in the vicinity.

The members of the Club present, held a short meeting previous to luncheon, in order to discuss some matters in connection with the consignment sale which will be held in December. The matter of paying for the cattle at the time of the sale was discussed rather fully with the idea of determining whether or not it would be best to have all payments made directly to the Club rather than to the individual sellers. The matter, however, was thought to be too important for hasty settlement and was left for further consideration. Mr. Hume complimented the Club on the splendid sales that have been conducted in the past, stating that although the Club to which he belonged, the Menie District Ayrshire Breeders' Club, was the oldest club in Canada, the Southern Counties Club is becoming very progressive in the matter of holding good sales. Mr. John McKee placed before those present the objects of the Association, stating them to be two in number; first, to hold meetings similar to that held at Brownsville, in order to enable younger breeders to appreciate the merits of the Ayrshire breed, and, by participation in the judging classes, to get more firmly fixed in their minds correct and uniform ideas of type and desirable conformation in the breed. Mr. McKee thought that the meetings were very useful indeed in this respect, since it was absolutely necessary that type accompany big records when success in dairy cattle breeding is sought for. Mr. McKee thought that men like Mr. Hume are in a position to help everybody and especially the younger men. The second object has to do with the public sales, it having been decided to hold two sales each year—one in December and another in the spring. As testimony to the value of former sales conducted by the Club, records in milk tests are to-day being held by cattle purchased at previous sales. Mr. Green, the District Representative for Oxford County, stated that he thought it would be a good idea if the Club were to fix the dates at which the sales were to be held so that they could be advertised ahead of time and given plenty of publicity. Mr. Green thought that there would be a brisk demand for good cattle after the war but that the poorer cattle would go in great quantities to the slaughter house before another year. A vote of thanks was tendered to Mr. C. C. Hawkins for the use of his premises, which certainly provided splendid accommodation and facilities for the occasion.

One of the most interesting features in connection with the Field Day was the opportunity enjoyed by many members of visiting a number of the more prominent herds of Ayrshires on the way to Brownsville. A few cars gathered at 9.30 in the morning at the farm of Mr. John McKee, Norwich. Mr. McKee is Secretary of the Club, and Brookside Farm, his home, has long been noted for good Ayrshires. An opportunity was afforded of looking over the splendid quality of cattle and the young stock, Mr. McKee having secured fifteen or sixteen heifers from Freertrader, his former herd sire, just allowed to go away from the farm this spring. It was interesting to see also, Sarah of Brookside, a remarkably well preserved foundation cow now fifteen years of age. From Mr. McKee's party visited the farm of Messrs. F. H. Harris & Son, of Mt. Elgin. At this farm opportunity was given to inspect the herd sire, Burnside Lucky Master Swell, a splendid type of Ayrshire sire that Mr. Harris may well be proud of. The young stock and the cows on pasture also gave evidence of some good breeding. Just a little farther up the road was the farm of Morrison Bros., where a splendid herd of matrons were in good pasture and in equally good condition. Across the fence from the main herd was Whitney's Lassie on test, and beside her was Topsy. The former has been on test for about six months and we understand has produced something more than 10,000 lbs. of 4.5 per cent. milk. The young sire was also inspected and shows splendid type and promise. This opportunity of visiting these farms made the day very interesting indeed and afforded a splendid opportunity of not only meeting together but of getting a great deal of education on matters relating to the breed.

The address of Mr. King had to do with the present live stock situation and the probable great demand for dairy cattle which will come from Northern Ontario as the north country develops, and the demand which will also come from European countries after the war. Mr. King urged that breeders pay more attention to the size of their cattle, and also to the use of pure-bred sires.

The practice of allowing yearling bulls of questionable parentage to run among the stock was not to be too strongly condemned. The speaker stated that he thought the greatest opportunity for the development and improvement of dairy cattle could be made through the sire, and further stated that high butter-fat production is just as heritable a quality as high milk production. High egg production, the speaker stated, is handed down through the sire to the extent of about ninety per cent. and while the percentage is probably not quite so high in dairy cattle, it does seem that we can attain quicker improvement through the selection of the sire than by any other single method of improvement.

Mr. Alex. Hume gave to those present a great deal of very practical information when he conducted the judging classes, in which all were invited to take part. There were classes of milch cows, dry cows, two-year-old heifers and bulls, and the discussions centering about the individual animals and their merits were very interesting. It was interesting to note the encouragement that was given both by Mr. Hume and the older breeders to the young boys of ten to twelve years of age, several of whom showed marked ability in recognizing dairy type and producing ability among the individuals brought into the ring.

Mr. Hume also gave an address on the subject of fitting and showing dairy cattle, in which was compacted a great deal of very profitable information regarding which we hope to say more later. The day was certainly most enjoyably and profitably spent, there being in the neighborhood of 150 or 200 people present, and the yard was filled with cars, some of which had brought their owners a distance of nearly fifty miles.

Standard Feeds Decided on.

In an endeavor to prevent if possible the recurrence of the feed shortage, which was experienced last winter, members of the Department of Agriculture, the Resources Committee, and representative stockmen have been endeavoring to compile a standard feed which would furnish a balanced ration and which could be purchased at a reasonable figure. As many will remember, it was almost impossible to get a variety of feeds last winter. A carload of corn would come in, then possibly a carload of shorts, bran or oil cake, the following week. Being out of concentrates, many feeders were forced to purchase the one feed and put their stock entirely on a single grain or concentrate. J. E. Brethour, a member of the Committee which has been working on the standard feed, believes that forty per cent. better results could be secured from feeding a proper mixture of feeds, than by a hit-and-miss method of feeding one concentrate one week and a different one the next. While there is not a particularly great demand for feed at the present time, it is anticipated that when the pastures begin to dry and the offspring from the large number of sows which were bred last fall require feed for finishing, there will be a big demand for various feeds. In past years the dealers, anticipating the farmers' wants, stocked up but they are not doing this to the same extent this year, owing to the uncertainty of conditions. Thus it has been felt that, if a mixture of various available feeds could be compounded that would contain the necessary ingredients and be perfectly safe to feed, it would be providing against shortage at a later date. A. Leitch of the Ontario Agricultural College, who has been devoting a good deal of time to this work and has interviewed various authorities on the subject in the United States, presented a dairy and a swine ration for the consideration of the Committee which met in Toronto on June 13. In considering the ration it was necessary to have the storage and keeping quality of the feed in mind, as it is well known that ground corn will not keep in large quantities and cotton-seed meal must be carefully fed. In order to soak up the free oil of the corn and cotton seed, it is necessary to add some kiln-dried substance.

The Committee have kept in mind the necessity of conserving the cereal grains for human consumption. Consequently, they have endeavored to work in as much of the by-products of the grains used in the manufacture of food as possible, combined with substances of a high protein content which must be procured across the line. The raw material for the ration is available in the United States, and on investigation the Committee found that import licenses could be obtained in order to secure a large quantity of such feeds for Canadian stockmen this fall. Cotton seed, hominy feed, corn, soy bean meal, velvet bean meal, etc., are the products to be secured from the neighboring country. The by-products of the manufacture of oatmeal, barley flour and wheat flour are obtainable in this country. It is necessary to bring these feeds to central points and there have them mixed in the proper proportions, in order to give a feed that will be satisfactory. To do this there must be a definite formula, and a certain analysis to which the feeds sent out by the various mixing stations must conform. The Committee in charge called the millers to their assistance as they already have a good deal of the necessary machinery for putting out the feeds. After considerable discussion, pro and con, as to the relative value of various ingredients suggested, and as to the cost of mixing and re-shipping the feed, an agreement was arrived at whereby the millers shall purchase the various articles or ingredients entering into the preparation of the ration and shall assemble them at convenient warehouses and mix and prepare them according to the formula prepared by the Organization of Resources Committee. They are to store the feed pending sale and delivery, and are to sell and distribute the same to such farmers' organizations and other persons as shall be satisfactory to the Committee. At all times the standard and quality of the feed must be according to the

formula supplied. The Committee retained the right to inspect the mills, warehouses, and other places of storage, as well as the books and invoices of the millers. It is also required that monthly statements of the quantities of feed purchased and distributed be supplied the Committee. The millers provide the funds wherewith to purchase, manufacture, mix, store, ship, carry and deliver the ingredients and feeds, and agree to sell at a price not in excess of five dollars per ton over the actual delivery cost. Where credit is given, or cartage service to be rendered, a reasonable increased charge is allowed. The Committee agree to arrange for the importation of such feeds as must be secured from the United States, and to assist in stimulating the sale and use of such feeds. An advisory committee of five persons, two of whom shall be appointed by the millers, two by the Resources Committee, with C. F. Bailey, Deputy Minister of Agriculture, as chairman, was appointed with power to determine all the questions arising under this contract.

The dairy ration agreed upon was that fifty-four per cent. of the total feed should consist of three or more of the following ingredients: oil cake, cotton-seed meal, soy bean meal, velvet bean meal, and gluten feed (not less than eighteen per cent. crude protein), but not more than twenty per cent. of any one of these feeds to be used. Sufficient hominy feed or corn meal to make fifteen per cent. of the total together with one or more of the following, corn feed, barley feed, oat feed, beet pulp, and wheat bran, or any other feeds that may be approved by the Resources Committee, provided that the completed feed contain not less than 24 per cent. crude protein, 4.5 per cent. fat, and 45 per cent. soluble carbohydrates, and not more than 10 per cent. crude fibre.

The formula drawn up by the Committee for a swine ration is as follows: It shall contain at least 6 per cent. tankage, 10 per cent. oil meal, 20 per cent. wheat or rye shorts, 33 per cent. corn or hominy, and the remainder to consist of corn feed, barley feed, wheat bran, and any other feeds that may from time to time be approved by the Resources Committee. A ration of the above nature should prove satisfactory for finishing hogs.

An endeavor is being made to have the swine ration in particular, ready for distribution at as early a date as possible, so as to aid in tiding over the feed shortage until the new crop is harvested. It is easier to get transportation at the present time than it will be when the new crop begins to move; consequently feeders who anticipate the need of extra feed might advisedly lay in their supply at an early date. So far as possible the aim is to sell to farmers' organizations in carload lots. This will bring the cost price to the minimum. The exact selling price has not been determined as it is difficult to do so owing to the fluctuation in the price of the various ingredients. Being able to buy the necessary feeds ready mixed should facilitate matters considerably for the feeder. Instead of being forced to purchase a single feed, as was the case last fall, he will have an opportunity of securing a high-quality feed on which his stock should thrive.

Plans Progressing For National Show.

At a meeting in Toronto on Tuesday, June 11, of the committee in charge of the proposed National Winter Show, plans were discussed and a working committee was named to carry these to fruition. W. A. Dryden was appointed Chairman of this sub-committee and Wm. Ballantyne, Vice Chairman. The remaining members are as follows: Representing heavy horses, Peter Christie; light horses, Geo. Pepper; beef cattle, L. O. Clifford; dairy cattle, D. C. Flatt; sheep, Jas. Douglas; swine, J. E. Brethour; poultry, J. H. Saunders; dairy produce and dairy equipment, G. G. Publow.

About 40 members were present at the meeting. The location of the show was discussed as well as manner of control. It was decided that the stockmen must dictate the policy of this exhibition and not allow it to be influenced by local or any interests apart from the industry which it is being created to foster.

Ayrshires at Hartford.

The New England Ayrshire Club held a very successful annual consignment sale at Charter Oak Park, Hartford, Conn., on June 11 and 12. The sale was largely attended and the bidding was brisk. The average price for all animals in the sale was \$400, the highest price for a single individual being \$4,200.

Canadian Ayrshire breeders were well represented. R. R. Ness, of Howick, Que., consigned six head which averaged \$890; one of them, Barleigh Right Kind (imp.), selling for \$1,225. Hunter Bros., of Grimsby, Ont., consigned six head which averaged \$1,200, Lockfergus Cherry (imp.), selling for \$3,750, and Lady Mary, bred by D. A. McFarlane, of Kelso, Que., selling for \$1,200. Gilbert McMillan, of Huntingdon, Que., consigned three head which averaged \$645, Grasmaller's Flora (imp.), selling for \$875.

The Tariff was made the big issue at the forty-seventh annual convention of the Canadian Manufacturers' Association held last week in Montreal. The President, S. R. Parsons, felt duty bound to declare the attitude of the manufacturers in this connection but in doing so he got no support from even the press married to the doctrine of protection.

Early varieties of apples promise a heavy crop in some sections. Thinning would no doubt be profitable with these early varieties on trees that are very heavily loaded.

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Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending June 13.

Receipts and Market Tops.

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

	CATTLE						SHEEP					
	Receipts			Top Price Good Steers (1,000-1,200)			Receipts			Top Price Good Calves		
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	4,112	3,797	3,187	\$16.50	\$11.75	\$16.00	1,530	938	1,475	\$16.50	\$14.50	\$16.00
Montreal (Pt. St. Charles)	565	631	359	16.00	11.50	15.75	2,262	1,342	2,398	16.00	13.00	13.50
Montreal (East End)	502	677	594	16.00	11.50	15.75	1,626	1,722	657	16.00	13.00	13.50
Winnipeg	2,723	2,836	2,344	13.50	11.40	16.50	257	228	154	15.75	13.00	16.50
Calgary	891	1,148	1,217	14.00	9.75	15.50						
Edmonton	423	309	632		9.75	14.25						
							51	20		15.00	9.00	

	HOGS						SHEEP					
	Receipts			Top Price Selects			Receipts			Top Price Good Lambs		
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	5,302	8,631	5,082	\$18.50	\$16.00	\$20.00	1,404	379	526	\$21.00	\$18.00	\$22.00
Montreal (Pt. St. Charles)	848	1,303	377	19.50	16.10	20.75	363	326	155	22.00	9.00	*14.00
Montreal (East End)	882	856	514	19.50	16.10	20.75	374	275	197	22.00	9.00	*14.00
Winnipeg	4,248	6,897	6,558	18.00	14.50	19.00	252	25	64	18.00	13.00	
Calgary	1,938	2,374	2,171	17.35	13.40	18.60	†511	24			12.50	
Edmonton	525	511	614	17.50	13.40	17.60	17		16			

*Each. †Billed through; not for sale.

Market Comments.

Toronto (Union Stock Yards).

Cattle sold at record prices on the local market during the past week. Only four thousand head were offered for sale and this number was scarcely sufficient to supply the increased demand; hence the higher quotations. Twenty-five hundred head were on sale on Monday and prices ruled from 40 to 50 cents per hundred above the closing prices of the previous week. On Tuesday, prices were steady, while on Wednesday, with seven hundred cattle on sale, prices made a further advance of 25 cents in a very active market. A brisk demand prevailed on Thursday. Only a limited number of heavy cattle were offered, a few loads being on the Monday market, and a few individual animals being included in the Wednesday offering. One choice load averaging barely twelve hundred pounds each, but nicely finished fed by W. F. W. Fisher of Burlington, Ontario, topped the market on Monday at \$17.15 per hundred, one load weighing thirteen hundred pounds sold at \$16.75, while other good sales were made from \$16 to \$16.50. On Wednesday, two head averaging thirteen hundred pounds sold at \$17.50 per hundred. Of steers between the weights of ten hundred to twelve hundred pounds, nine head sold at \$16.50, twenty-one head of eleven hundred and twenty pounds at \$16.25, and several loads at \$16, while most of the sales were made between \$15.25 and \$16 per hundred. Of the butcher cattle weighing under ten hundred pounds, one load of choicely finished heifers averaging eight hundred and fifty pounds sold on Monday at \$15.50 per hundred, while for mixed loads of steers and heifers within these weights, \$16.20, \$16.15, and \$16 per hundred, respectively, was realized in several instances; most of the sales of those of good quality were made between \$14.50 and \$15.50 per hundred, while loads of medium stock sold from \$12 to \$13, and common stock from \$9 to \$11. Cows and bulls sold at higher prices compared with the previous week's market. Choice bulls realized from \$12 to \$13.25 per hundred, medium quality bulls from \$10.50 to \$11.50, and common bulls from \$9 to \$10.50. Choice cows sold as high as \$14 per hundred, while numerous sales were made from \$12.50 to \$13.25. Cows of good quality sold from \$11 to \$12, those of medium quality from \$10 to \$10.75, and common cows from \$8.75 to \$9.50. There was little demand for stockers and feeders; good feeders sold from \$12 to \$13 and good stockers from \$11 to \$12. Several loads of feeders were shipped to United States points during the week, and a few odd loads went to Ontario points. A good demand prevailed for veal calves and prices advanced fifty cents per hundred, choice veal selling at \$16.50 per hundred and medium veal calves from \$14 to \$15. Calf prices have not advanced in the same proportion as have the prices of cattle and it is noteworthy that for the first time in the history of the local trade, dressed beef is selling higher than dressed veal. A similar condition exists between prices of calves and cattle, on foot, choice butcher cattle bringing about \$1.00 per hundred more than choice

CLASSIFICATION	TORONTO (Union Stock Yards)				MONTREAL (Pt. St. Charles)			
	No.	Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price
STEERS								
heavy finished	121	\$16.50	\$15.75-\$16.75	\$17.15				
STEERS good	547	15.78	15.00-16.25	16.50	45	\$15.50	\$15.00-\$16.00	\$16.00
1,000-1,200 common	51	13.94	13.25-15.00	15.00	4			
STEERS good	771	15.10	14.50-15.75	16.00	79	14.75	14.50-16.00	16.00
700-1,000 common	249	12.89	12.00-14.00	14.25	22	13.00	11.00-13.50	13.50
HEIFERS good	358	15.32	14.75-16.00	16.25	14	14.50	13.00-16.00	16.00
fair	193	13.31	12.75-13.75	13.75	14	11.50	11.00-12.50	12.50
common	15	11.83	11.00-12.50	12.50	23	10.25	10.00-11.00	11.00
COWS good	556	11.47	11.00-12.50	13.50	41	12.00	11.00-13.50	13.50
common	449	10.11	9.75-10.75	10.75	184	9.75	9.00-10.75	11.00
BULLS good	147	11.74	11.00-13.00	13.50	21	12.25	11.50-13.50	13.50
common	82	10.20	9.75-11.25	11.75	41	9.75	8.75-10.75	11.00
CANNERS & CUTTERS	136	7.00	6.75-7.25	7.50	23	7.00	6.00-7.50	7.50
OXEN					6			
CALVES veal	1,515	13.63	12.75-15.00	16.50	2,252	13.25	12.75-14.50	16.00
grass	15	8.00	7.00-9.00	10.00	10			
STOCKERS good	129	11.75	11.50-12.00	12.00				
450-800 fair	140	10.52	10.00-11.50	11.50				
FEEDERS good	84	13.00	12.75-13.25	13.25				
800-1,000 fair	84	12.37	12.00-12.75	12.75				
HOGS selects	4,958	18.23	18.00-18.50	18.50	737	19.35	19.25-19.50	19.50
heavies	19	18.21	18.00-18.50	18.50	9			
(fed and watered) lights	150	16.87	16.00-18.50	18.50	54	19.00	18.75-19.25	19.25
sows	166	16.63	16.00-17.50	17.50	46	16.35	16.25-16.50	16.50
stags	9	14.19	14.00-14.50	14.50	2			
LAMBS good	242	19.19	18.00-21.00	21.00	55	20.50	20.00-22.00	22.00
common	10	17.00	15.00-18.00	18.00				
SHEEP heavy	445	14.48	13.00-16.00	16.00	232	14.00	13.50-15.00	15.00
light	411	16.27	15.00-18.00	18.00	76	13.00	12.50-13.50	13.50
common	290	8.00	7.00-10.00	11.00				

calves. This should be an inducement to farmers to keep thrifty calves of beef breeding at home.

Lambs and sheep are beginning to move more freely. Prices held about steady with those of last week, choice yearlings selling up to \$20 per hundred, and choice light sheep up to \$18 per hundred. Spring lambs are worth from \$13 to \$17 each, or \$23 to \$24 per hundred. The price of hogs declined to \$18 per hundred for selects, fed and watered, from the prevailing price of \$18.50 of the previous week; this was about in keeping with the decline on the Buffalo market. The local market was a trifle firmer on Wednesday and Thursday, and there is a feeling among those active in the hog trade that the bottom has been about reached. The outlook appears to be for a steady to slightly stronger market.

Of the disposition from the Yards for the week ending June 6, Canadian packing houses bought 881 calves, 52 bulls, 60 heavy steers, 2,314 butcher cattle, 4,732 hogs, 145 sheep and 253 lambs. Local butchers purchased 499 calves, 213 butcher cattle, 312 hogs, 53 sheep and 92 lambs. Canadian shipments consisted of 44 calves, 81 milch cows, 94 butcher cattle, 246 stockers and 26 feeders. Shipments to United States

consisted of 136 butcher cattle, 35 stockers and 232 feeders.

The total receipts from January 1 to June 6, inclusive, were: 110,395 cattle, 29,924 calves, 171,038 hogs and 12,104 sheep; compared to 99,073 cattle, 24,711 calves, 226,798 hogs and 13,124 sheep, received during the corresponding period of 1917.

Montreal.

While the receipts of cattle were somewhat larger compared with those offered during the previous week they were not of sufficient volume to fill the local demand for beef for immediate consumption. The trade is being partly supplied through direct shipments to packers from country points and outside markets, and also through the usual receipts of dressed meats from Toronto and elsewhere, which make up a considerable portion of the Montreal normal supply. During the week, about two hundred head of butcher cattle were received from Toronto by a local firm. The receipts for the week were more than those of the previous week by three hundred and twenty-five cattle, three hundred and sixty-five sheep and five hundred and twenty-five hogs. There was no change in the receipts of calves. Of the cattle offered, about fifty per cent. were dry cows, twenty-five per cent. steers,

ten per cent. bulls, while heifers and milch cows were about equal in number. Prices for butcher cattle were easily 50 to 75 cents per hundred higher than those of the previous week, and higher than any prices that have ever been paid on the Montreal yards. This condition is not expected to continue and the trade is looking for somewhat easier prices within the next few weeks. The highest price of the week was \$16 per hundred, which was paid for sixteen head of butcher cattle averaging ten hundred and fifteen pounds, made up of ten good steers, two steers not so good, and four heifers. Twenty-nine head, averaging nine hundred and seventy-five pounds, made up of some good and some very common steers, sold at \$14.75; other small lots sold from \$14.50 to \$15.50. Fully one-half of the cattle offered were dry cows off the grass. Owing to the low quality of the general run of the stock a cow has to be pretty poor to be classed as a canner. The majority of the inferior quality cows fit for the butcher trade sold around \$9 to \$10 per hundred. Cows showing indications of some fat, but still not very heavy, sold as high as \$10.75 to \$11 per hundred, as compared with \$10 to \$10.50 paid during the previous week, while good fat cows of beef breeds

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 Capital Paid Up - - - 12,911,700
 Reserve Funds - - - 14,564,000
 Total Assets - - - - 321,000,000

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sold up to \$13.50. Bulls sold from \$8.50 to \$13.50, the price depending on quality rather than weight. In a lot of three bulls one weighed seventeen hundred and thirty pounds and sold for \$13.50; another weighed seven hundred and seventy pounds and sold for \$13.50, while the third which weighed eight hundred pounds sold for \$9. The prices for calves were fully as firm as those of the previous week, except on Wednesday when a few lots were sold at a slightly lower price. The best lots were weighed up at \$15 per hundred while one choice calf sold at \$16. A couple of lots of poor calves totalling a hundred head or more sold at \$10; the majority of the good calves sold from \$13.25 to \$14.25, while a few sales were made on Wednesday at \$12.75. The quality is becoming poorer and as grass calves arrive prices are expected to decline.

Receipts of sheep and lambs are steadily increasing and indications are that prices will be quite firm. Sheep sold around \$13 to \$15 per hundred. Spring lambs sold from \$20 to \$22 per hundred or from \$10 to \$14 each.

Hogs sold on Monday and Tuesday from \$19.50 to \$19.75 per hundred, off cars, the market being lower by 75 cents to \$1 than at the close of the previous week. A further decline subsequently occurred, offers being made at \$18.75 to \$19, off cars, on Wednesday and Thursday. Receipts are light and are likely to continue light until the market becomes more firmly established.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending June 6 Canadian packing houses and local butchers purchased 2,393 calves, 18 canners and cutters, 52 bulls, 236 butcher cattle, 690 hogs, 155 lambs and 28 milch cows. Canadian shipments consisted of 25 butcher cattle. There were no shipments to United States points during the week.

The total receipts from January 1 to June 6, inclusive, were 14,092 cattle, 32,142 calves, 27,318 hogs and 5,622 sheep; compared to 15,897 cattle, 31,388 calves, 40,342 hogs and 5,686 sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending June 6 Canadian packing houses and local butchers purchased 365 calves, 568 butcher cattle, 514 hogs and 197 lambs. Canadian shipments consisted of 292 calves, 26 butcher cattle, and 2 lambs. There were no shipments to United States points during the week.

The total receipts from January 1 to June 6, inclusive, were 12,375 cattle, 27,108 calves, 16,584 hogs and 5,587 sheep; compared to 16,496 cattle, 26,324 calves, 21,762 hogs and 6,972 sheep, received during the corresponding period of 1917.

Cheese Markets.

Montreal, finest easterns, 22½c. to 23c.; London, 22c.; Belleville, 22¼c.; St. Hyacinthe, Que., 22c.; Perth, 23¼c.; Watertown, N. Y., 22½c.; New York, specials, 23¼c. to 24c.; average run, 23½c.

Toronto Produce.

Live stock receipts at the Union Stock Yards, West Toronto, on Monday, June 17, consisted of 217 cars, 3,968 cattle, 662 calves, 1,590 hogs, 825 sheep and lambs. Trade was slow. Butcher steers and heifers were 50 cents lower; cows 50 cents to 75 cents lower; bulls, 50 cents lower; stockers and feeders, \$1 lower. Sheep and lambs were 50 cents to \$1 lower. Calves were 25 cents higher. Hogs, \$19, fed and watered.

Farm Produce.

Butter.—All classes of butter remained fairly stationary in price, selling as follows on the wholesales: Creamery, fresh-made, pound squares, at 45c. to 47c. per lb.; creamery solids, at 44c. to 45c. per lb.; dairy, 38c. to 40c. per lb.

Oleomargarine.—32c. to 33c. per lb.
 Eggs.—The egg market kept firm selling as follows, wholesale: No. 1's selling at 40c. to 41c. per doz., and selects at 43c. per dozen.

Cheese.—Cheese sold at unchanged prices during the past week: Both old and new varieties selling at 24c. to 25c. per lb., wholesale.

Beans.—There is still a very limited supply of beans, but practically no demand, the price keeping stationary at \$6.25 per bushel for Japanese hand picked.

Poultry.—Receipts of hens have been quite heavy during the past week, and prices on this class slightly lower. The following prices were quoted for live weight: Spring chickens, 50c. per lb.; roosters, 25c. per lb.; fowl, 25c. to 28c. per lb.; ducklings, per lb., 30c.; turkeys, per lb., 30c.; turkeys, old, per lb., 25c.

Potatoes.—Old potatoes have been quite scarce, Ontario selling at \$1.60 per bag. The few New Brunswicks offered bringing \$1.75 per bag; new potatoes selling at \$6 to \$7.50 per bbl.

Breadstuffs.

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

Oats.—(According to freights outside) Ontario, No. 2 white, 80c. to 81c., nominal, No. 3 white, 79c. to 80c., nominal. Manitoba oats, No. 2 C. W., 85½c., No. 3, C. W., 82½c. (in store, Fort William); extra No. 1 feed, 82½c.; No. 1 feed, 75½c.

Barley.—Malting, \$1.31 to \$1.33, nominal.

Peas.—According to freights outside; No. 2, nominal.

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

Rye.—No. 2, \$2, nominal.
 Flour.—Manitoba flour, war quality, \$10.95. Ontario flour, war quality, \$10.65 in bags, Montreal; \$10.65, in bags, Toronto.

Hay and Millfeed.

Hay.—Track, Toronto, No. 1, \$15.50 to \$16.50 per ton; mixed per ton, \$13 to \$14.

Straw.—Car lots, per ton, \$8 to \$8.50, track, Toronto.

Bran.—Per ton, \$35.
 Shorts.—Per ton, \$40.

Hides and Skins.

Prices delivered, Toronto:
 City Hides.—City butcher hides, green,

flat, 13½c.; calf skins, green, flat, 30c.; veal kip, 22c.; horse hides, city take-off, \$6 to \$7; sheep, \$3.50 to \$5.50.

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

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

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

Montreal.

Horses.—The market was very dull during last week, but dealers continued to quote as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light draft, weighing 1,400 lbs., \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75 each; fine saddle and carriage horses, \$175 to \$250 each.

Dressed Hogs.—Although the market for live hogs at outside points showed an easier tone, dressed hogs continued to change hands here at the same price, being 29c. to 29½c. per lb. for abattoir fresh-killed stock.

Maple Syrup.—No change was reported in the market for maple syrup. Demand was moderate, and prices were steady, with 15 to 20 gallons barrels of syrup selling at \$1.80 per gal.; 5 gal. tin; at \$1.85 per gal.; and 1 gal. at \$2 to \$2.15. Maple sugar was in fair demand, at 23c. to 23½c. per lb.

Potatoes.—Imported potatoes are becoming somewhat more plentiful owing to the falling off in the quality of the stock Canadian potatoes. Prices of the latter were steady, with Green Mountains quoted at \$1.80; reds \$1.70; and McIntyre's \$1.60 per bag of 90 lbs., ex-store, while car-load prices were about 20c. to 25c. under these figures, ex-track.

Eggs.—The quality of the stock offered in the local market was none too good, and quite a little complaint has been heard on this account. The weather was quite cool, and this tended to prevent further deterioration, although it is unlikely that at this time of year any improvement can take place. Prices held steady, with selected new laid eggs quoted at 44c. to 45c. per doz., and new laid stock at 42c. No. 1 eggs were quoted at 40c. and No. 2 at 38c. per doz.

Butter.—The make of creamery is now large, and the quality is particularly good. Demand continued to absorb everything offering, however, and wholesale prices were quoted as follows:—finest creamery 43½c.; and fine ½c. under; dairies 36½c. to 38c. according to quality.

Cheese.—The Dairy Produce Commission prices were as follows:—No. 1 cheese, 23c.; No. 2 cheese, 22½c.; No. 3, 22c. per lb.

Grain.—The market for oats advanced during the past week. Car lots of No. 3 Canadian Western were quoted at 76½c. per bushel, ex-store, with tough No. 2, and extra No. 1 feed, quoted at 94½c.; No. 1 feed 90½c., and No. 2 feed 87½c. Manitoba barley held firm, and rejected was quoted at \$1.34, while feed was \$1.26. No. 3 American yellow corn was \$1.75 to

\$1.80, and No. 4 yellow \$1.70 to \$1.75 per bushel, ex-store.

Flour.—Arrangements are now completed for the milling of 20,000 bushels of corn, daily, and as a consequence the increase in consumption of corn flour is expected. The price was \$12 per barrel, in bags. Rye flour was \$16.50 to \$17; and barley flour, \$13.50, grain flour being \$11.05. Standard Manitoba spring wheat flour in car lots was \$10.95 per barrel, in bags, f.o.b. cars, Montreal, with 10c. more delivered to bakers. Winter wheat flour was steady at \$11.40 to \$11.50 per barrel, in new cotton bags.

Millfeed.—Bran was steady at \$35 per ton, including bags; shorts being \$40; mixed mouille, \$51; barley feed, \$62; feed cornmeal, \$68; pure grain mouille, \$72.

Baled Hay.—The market for baled hay was steady last week, and car lots of No. 2 were quoted at \$15.50; No. 3 hay being \$13.50 to \$14.50, and clover mixed, \$6 to \$8 per ton, ex-track.

Hides.—Trade was better than for a year past. Spring lamb skins were 75c. each; clipped sheep skins, \$1 each; cow hides, 18c. per lb.; bulls, 16c. and steers 22c. flat, while 20c., 19c. and 18c. were the quotations for Montreal inspection. Veal skins advanced to 50c. Horse hides were \$5 to \$6.50 each; tallow, 3½c. per lb. for scrap fat; 8c. for abattoir fat; 16c. to 16½c. for rendered.

Buffalo.

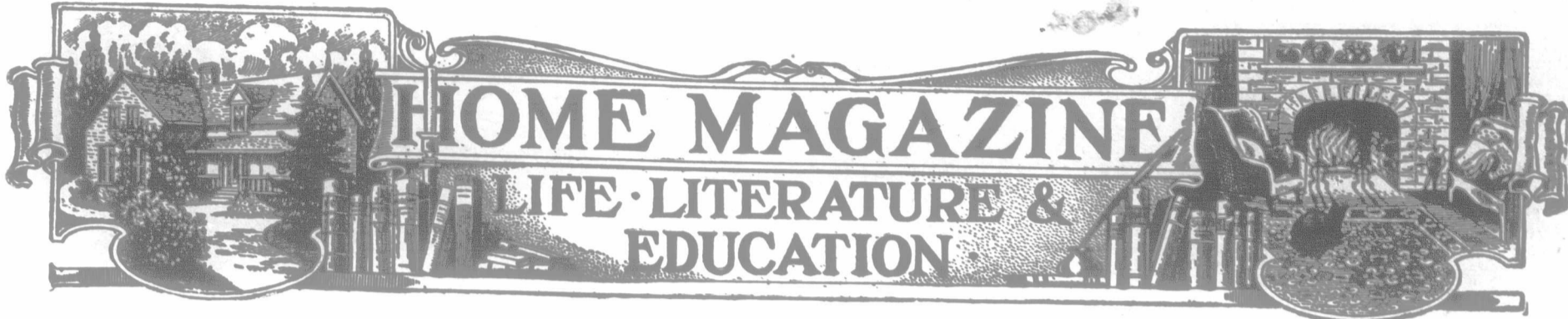
Cattle.—Dry-fed cattle on the desirable order sold a shade stronger at Buffalo last week, while grassers generally moved at prices mostly a quarter lower. Receipts were stronger and the demand showed as much strength as for any time this year. Outlet was especially strong for shipping steers, of which there were around forty cars and there were in the neighborhood of twenty-five loads of Canadians. Best shipping steers ranged from \$17.75 to \$18.15, more steers selling the past week on a range of from \$18 to \$18.15 than for any week this year. Choice butchering steers sold up to \$17.25 to \$17.50, no yearlings to speak of were offered. In the grass line, receipts were liberal and these ran mostly to the medium and common order. The first run of grass cattle invariably kill yellow and the result is that killers show marked discrimination against them. They sold last week at least a dollar to a dollar and a half under dry-feds of the same quality. Stockers and feeders were in light supply and sold strong. Bulls of all classes firm, best milk cows and springers selling higher, medium and common lower. A record price of \$250 was paid for a four-year-old springer. Offerings for the week totaled 5,600 head, as against 4,725 head for the week before and as against 3,825 head for the corresponding week a year ago.

Quotations:
 Shipping Steers—Natives—Choice to prime, \$17.65 to \$18.15; fair to good, \$16.75 to \$17.25; plain and medium, \$16 to \$16.50; coarse and common, \$14.50 to \$15.75.

Shipping Steers—Canadians—Best, \$16.35 to \$16.60; fair to good, \$15.75 to \$16; common and plain, \$14 to \$14.75.

Butchering Steers—Choice heavy, \$17 to \$17.50; fair to good, \$16.25 to \$16.75; best handy, \$15.50 to \$16.50; fair to good, \$14.50 to \$15; light and common, \$12 to \$13; yearlings, choice to prime, \$16.25 to \$16.75; fair to good, \$13.50 to \$14.75.

Continued on page 1066.



On Rest.

BY DAN MCARTHUR.

The long white road runs up and down,
By hills that are fair to see;
Marked in patches of green and brown,
And here in the valley a red-roofed town
Slumbering peacefully.

O, the sky of France is warm and blue,
The blossoms are on the tree,
The birds are singing the long day thru',
Singing because the world is new,
Just as the world should be.

Up and down the long white road,
All thru' the pleasant day,
Soldiers march with their heavy load,
By rumbling lorries, where shells are
stowed,
Over the hills and away.

Over the hills and far away,
Where all the land is dead,—
The hills are ugly, and bare, and gray,
The villages lie in a dull decay,
Ashes and dust instead.

The leaves will never open there,
The blossoms bloom no more,
All that was peaceful, good and fair,
Died in the heavy, poisoned air,
In the desolate trail of war.

But the grass is green, and the sun is
bright,
Happily live we here:
Only the muttering guns at night,
And the high balloons in the evening light
Tell us that war is near.
May 16th, 1918.

'Taint All Rough.

BY ERNEST H. A. HOME.

Some say this be a happy world,
An' some a world o' pain;
Some say a place o' losses,
An' some a place o' gain;
An' others what ye make it—
Just that, an' nothin' more,—
An' I opine they're friends o' mine,
These latter uns, for sure!
For 'tis what ye make it—
'Tis, sure enough!
If 'taint all soft an' smooth,
'Taint all rough.
Some folk be aye complaining
An' talking o' their woes—
Why, if it weren't for raining
There'd never be a rose.
An' if it weren't for sorrows
That hurt us mighty bad
An' crush us low, we'd never know
The joy o' being glad.
So smile an' be cherry!
Don't look so blue;
If 'taint all honey-sweet,
'Taint all rue.

The Wild Flowers of Quebec.

BY RUTH KNIGHT.

THE pleasure of a walk in the fields and woods is greatly increased by some little knowledge of the flowers which we meet at every turn. Their names alone serve as a clew to their histories, giving us that sense of companionship with our surroundings which is so necessary to the full enjoyment of out-door life. If we would know the wild flowers of Quebec we must start early in the spring to look out for them. Long before the snow has disappeared the pussy willow appears, as the advance agent of spring. There is said to be forty-seven kinds of Canadian willows, closely resembling each other, the flowers appearing before the leaves. The delicate beauty of early flowering trees is too rarely noticed to be appreciated. We should look up as well as down when taking early spring rambles, if we would see all the spring flowers. Even in early April the red maple

is a pillar of coral to those who have eyes to see it. Before even a leaf appears every twig is covered with exquisite clusters of tiny red blossoms. In the sugar maple the blossoms appear a little later than the leaves, of greenish yellow clusters, gracefully drooping on slender stalks. There is one peculiarity not always noticed in the sugar maple, this is that it has three kinds of blossoms, all on the same tree. One has no pistil, another has no stamens, while the third possesses both. They all have one feature

bearing flowers contribute very bountifully their sweets for our tables.

The elm is another tree which by one writer has been pronounced the most beautiful of Canadian trees. This too, blooms before the leaves appear, its slender drooping stalks fringing the sides of the branches with reddish hues.

It would seem that it was the intent of nature in producing these delicate flowers, before putting on her substantial dress of leaves, to enable us to see her jewels at best advantage.

The oak though generally regarded as an English tree has eleven species growing in Canada. The red oak is, however, the best known species. When the leaves are budding on the oaks, the yellowish-green catkins also unfold which gives an appearance of yellowish mist.

Chestnuts and beeches belong to the oak family and have similar blossoms. Pollen is carried to the pistils by the wind in all trees belonging to the oak family. In most cases where flowers are not brilliant or fragrant enough to attract bees, who should distribute the pollen, the wind does the work of fertilization. I have dwelt at some length on the blossoms of our common trees, as they can be seen by any busy housewife, in early spring, who may not have the opportunity to go to the woods or fields to find the more hidden flowers.

IT is true that we enjoy that which is most familiar, as we all like the old familiar tunes. We enjoy the best known flowers and added knowledge

to put its shiny brownish-purple head out of the ground before the willow opens its buds. In spite of its repellent smell the plant is said to be visited by bees, who by some chemical process, known only to themselves, change the offensive flavor, so it is not tasted in the honey.

The trailing arbutus is one of the early flowers which is quite general in its distribution, though not growing abundantly



LADY'S SLIPPER

One of Our Orchids.

(*Cypripedium hirsutum*). Flower white, stained with magenta. Bogs.

in common, however, the cup-shaped calyx, divided into five sepals. The fruit of the trees are the maple keys scattered so freely over the ground in early summer, suggesting to some youthful minds the pie forks with which our mothers took hot pies from the oven.

The basswood or American linden, growing throughout Eastern Canada, from New Brunswick to Lake Winnipeg makes its contribution to the joys of spring though pleasing more the sense of smell than that of sight. Linden blossoms are rather modest in color and unobtrusive; but the fragrant laden breeze reveals them to the bees. These honey



Ram's Head Lady's Slipper.

One of the rarest of our orchids.

brings added enjoyment in their annual arrival. The subject of tree blossoms even in one locality will be most fascinating to one who will follow it and many discoveries are yet to be made.

Now we must come out of the tree tops and down to the earth and see what can be found under the trees and in the fields and fence corners.

A stranger coming to Quebec might not expect to find much of interest in the flora of this land poetically referred to as "My Lady of the Snows". But he will find, if he brings to his task a keen eye, that there is quite as much to be found here as in warmer climates.

It is maintained by students of the subject that a higher morality is found among people living in cold climates than among those of tropical lands. This suggests the thought that in the colder climes flowers maintain a hardihood and give forth a fragrance not possessed by those of warmer zones. We may say if a flower can grow at all in Canada it is bound to have some peculiar virtue, either of beauty, fragrance or medicinal quality. In some instances our wild flowers combine all these virtues.

The skunk cabbage is as ambitious as the pussy willow and is said by some



Showy Orchid.

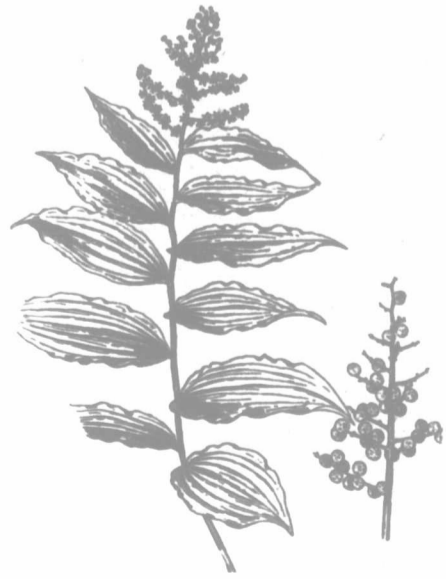
(*Orchis spectabilis*). Flowers magenta, lower lip almost white.



Solomon's Seal.

(*Polygonatum biflorum*). Showing "scals" on the root stalk. Flowers greenish white.

only in certain localities. It blooms in late April and early May, its favorite haunts being around old stumps, sheltered hollows and on moss-grown knolls. Its scientific name means creeping upon the earth. The finding of this flower on the Massachusetts coast, is said by the poet Whittier to have cheered the hearts of the Pilgrim fathers after their fearful winter. A constant reminder of the good ship which bore them in safety to the New Land, also each spring refreshing their memory of the Motherland where the mayflower also blooms. Whittier in his poem entitled the "Mayflower" says,— Yet "God be praised", the Pilgrim said. Who saw the blossoms peer Above the brown leaves, dry and dead "Behold our Mayflower here!"



False Solomon's Seal.

(*Smilacina racemosa*). Also known as False Spikenard. Flowers white.

Perhaps the best known and most loved by the children, at least, in the Province of Quebec, is the spring beauty, with its tongue-shaped, dark green leaves and clusters of delicate pink and white flowers of fine petals, daintly veined with rose color. It is a flower of moods and opens only when the sun shines. When in shadow it closes and its head droops.

The hepatica, another early flower that dots the hills with delicate coloring of pinkish-purple, blue and white blossoms, bursting from their furry buds, supported by hairy stems above a cluster of rusty brown leaves. Only two distinct species of hepatica are found in Canada.

It may be of interest to know that this early flower belongs to the later buttercup family.

The bloodroot with its blossoms as frail as they are beautiful gives one only blood-stained fingers to repay them for the trouble of gathering.

Squirrel corn and dutchman's breeches, with their fern-like foliage, mingled with the pure white of the saxifrage, another early flower, would provide a rare bouquet of bridal charm which their fragile beauty suggests.

The delicacy of these spring flowers plays upon the fancy and we think of them as the fairy children of the Frost King, so recently banished from his realm.

A little later from the swampy meadows and the edge of brooks we catch glimpses of the more substantial flowers of the cowslip or marsh marigold, with its round, sturdy leaf which is edible, as many know. When this flower appears we are sure the sun has completely routed old winter and the less fragile flowers are appearing in field and woods.

The trillium seems to be quite a distinguished member of the flower family in Quebec, as one of the floral committee

of the exhibition of wild flowers at the world's fair in Chicago made the trip to Montreal in May to get a specimen of the royal trillium for the exhibit. The trillium ranges from the royal and rare specimen to the dingy red one, known as the poor relation of the trillium family.

Then there is the jack in the pulpit, who selects a rich dark mold in a well shaded spot, where under his striped canopy he holds forth. This same jack has his practical use and the root, known as Indian turnip, was boiled and eaten as a relish by the Indians.

When we begin to tell of the violets it bewilders us to know where to begin as there are said to be twenty varieties in Canada. Whether all of them are found in Quebec, I am unable to say. The queen of all violets is the Canadian violet and a credit to its name. First to recommend it is its fragrance, which resembles its cultivated sister the pansy. It often grows a foot in height, taller than all other violets, has large white flowers, delicately veined with purple and mauve and can readily take the palm from all other species. It can be transplanted into our gardens and made to conform to domestication.

Tempting as it is to linger over the first arrivals, to tell of their habits, and dress we must hurry on and in the words of the society reporters only say there were also present at this spring festival the anemones or wind flowers, so called by the Greeks because of their continuous dancing at the tune of every passing breeze. Its cousin is the marsh marigold we have already mentioned.

The dog-tooth violet belongs to the lily family and not to the violet as its name would indicate, another name being adder's tongue, because of the spotted tongue-shaped leaf.

Solomon seal has its flowers gracefully hanging under the stem like a row of bells, which are later succeeded by a fringe of pretty dark blue berries.

The wild spikenard is sometimes called the false Solomon's seal, though it bears little resemblance to the true plant.

We have dwelt so long on our talk of early comers that we can only mention a few of the later ones. Only the most intimate friends such as the fluffy dandelion, whose yellow locks turn from gold to gray and mark the flight of summer; the daisy, with its swirling skirt of white; black-eyed Susan, who beckons from every field and roadside; the golden rod, which we can no longer think of as a fall flower, as some of the nearly fifty varieties of golden rod begin to bloom late in July.

Among the swamp flowers best known are the orchids, 60 species growing in in Canada. Because of their comparative and mysterious habits they have been called the floral aristocrats. In the same locality with the orchid, the blue flag is often found growing in clumps, one variety of which has a fragrant, edible root. It is not quite fair to leave one's friends in a swamp and yet what is more interesting than a swamp with its hidden treasures.

I have only mentioned some of the best known flowers of Quebec, believing that if any were to be left out, it should be those with which we have the least acquaintance.

Serious Predicament.—Eager Lady—"But what if your engine stops in the air—what happens? Can't you get down?" Aviator—"That's just what 'appens, mum. There's two Germans up over in France now with their engines stopped. They can't get down, so they're starving to death."—California Pelican.

Hope's Quiet Hour.

Desire the Greater Gifts.

Desire earnestly the greater gifts.—1 Cor. 12:31 (R. V.)

"Gracious Spirit, Holy Ghost, Taught by Thee, we covet most Of Thy gifts at Pentecost, Holy, heavenly love."

St. Paul had been speaking of the Church as the body of Christ, in which each member had special work to do for the welfare of the whole body. As in a man's body the eye, the ear, the foot, and all the other members are necessary—yet all have special work to do—so we must not be surprised or disappointed if our work for God is different from the special task of our neighbor. "God hath set some in the church, first apostles, secondly prophets, thirdly teachers, then miracles, then gifts of healings, helps, governments, divers kinds of tongues." It is like an army. If all the soldiers went to be aviators or officers, who will guard the trenches or convoy the food supplies?

St. Paul ends his list of the more striking gifts of the Holy Spirit by the advice: "Desire earnestly the greater gifts." Then he describes in glowing, living words the greatest gift of all—Love—and declares that one who has mighty faith, who gives all his goods to the poor and lays down his life as a martyr, will find that, unless he has love, these "great" things will be profitless.

There is an old story of a Christian who was facing a martyr's death. While in prison, waiting calmly for the expected torture, he had a vivid dream. He thought he was in Paradise. Everyone about him was pure as crystal, but he noticed that they all shrank from him in horror. Looking down at himself he saw that he also was as clear as crystal, except for a dreadful stain in his heart. He tried to cover the spot with his hands, but they were like glass and the spot showed through. Then he awoke and at once remembered that he was bearing a grudge against a fellow Christian, so he sent for him and humbly asked for pardon. He had been ready to die for Christ, yet had refused the greater gift of the Spirit—the gift of love.

While we are eager to do some great thing—in this day of great deeds—let us desire earnestly the greatest gift of God. Let us pray for Love.

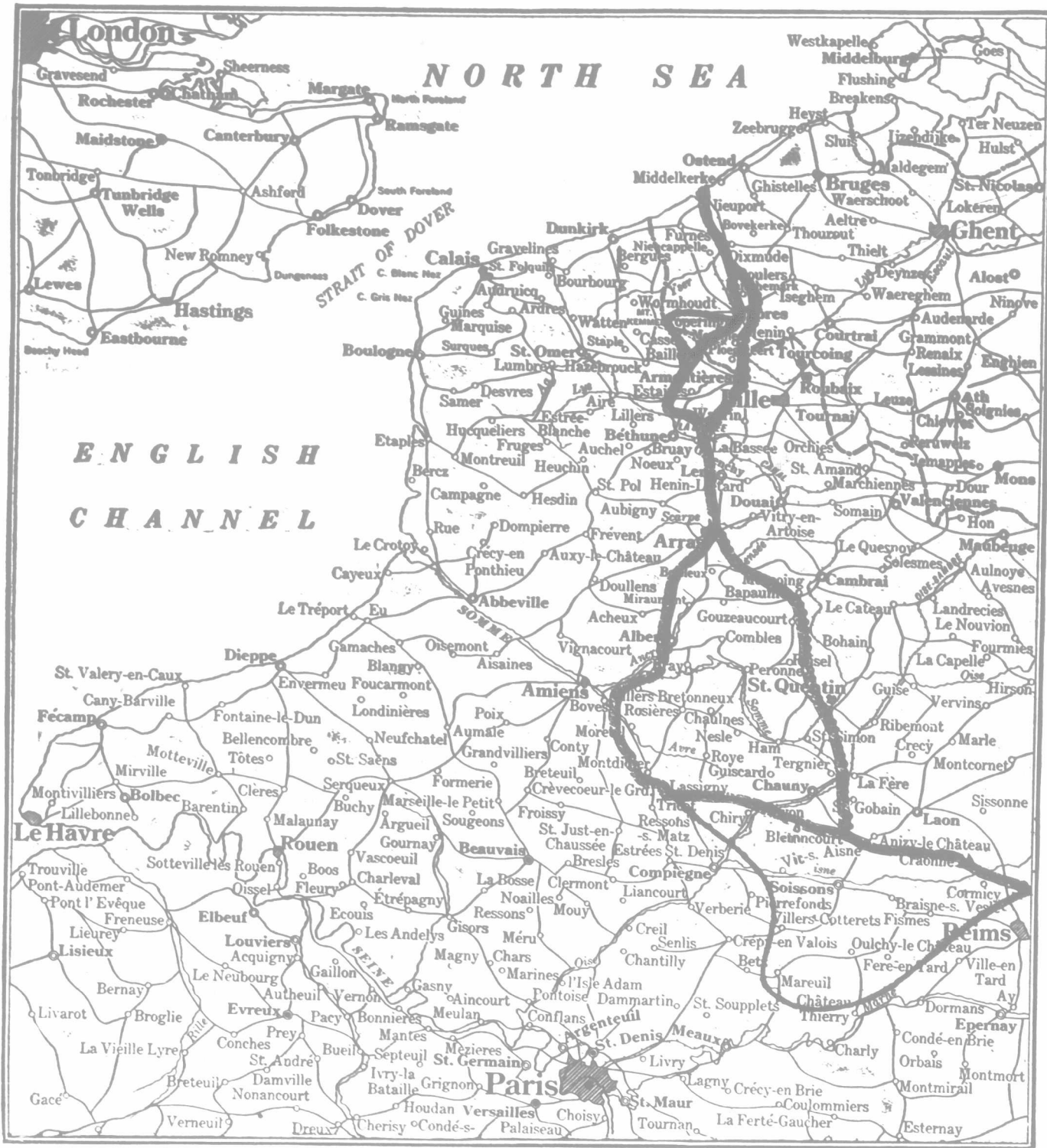
We may be summoned any day into the presence of our King—even though we are not likely to have bombs dropped on us from the sky. Dare we stain and poison our souls by cutting ourselves off from Him Who is Love? Light and darkness can't live together. If we live in darkness, fastening the door of our hearts against the light of love, we may well fear death. How can we face God if a black spot of illwill is eating its terrible way into our hearts?

We have not all the opportunity of doing what the world calls "great" deeds, but we may all win God's "great" gifts, if we desire them earnestly and seek them with persistent prayerfulness.

When Mary Roberts Rinehart was "somewhere in France" she was greatly touched by the sight of men unloading a British hospital train. The stretchers were cautiously worked over the window sill and received by strong men outside with marvellous gentleness. The silent, suffering men were showing forth the great gift of patient endurance. The strong men, who were lifting them so tenderly, were showing forth that other priceless gift of lovingkindness and practical sympathy. Don't let us grow dissatisfied with our opportunities while we can cultivate such priceless graces as these. They are far greater than gifts of healing or speaking with tongues.

Then think of the courage shown by countless people who are far from the wild excitement of the battle line. There is the quiet attention to commonplace duty when the heart is almost breaking. We see the smiling face and hear the cheerful word; but God sees daily battles and daily victories. Have you been one of the victors? Or are you allowing nervous fear and selfish gloom to poison your soul and body, and make life harder than it need be for those around you?

The men and women who are greatest in God's eyes are often despised by the



The Western Battle Front.

The battle line may have changed somewhat before this reaches its readers, but as shown it represents, with fair accuracy, the situation on June 15th. The heavy line to the extreme right was the front on March 21st.

world. with sores, rich man him in life. Yet he was to this day we only know shining and There are

"None know Blackened brunt, Hotly ye front, That v

What is can give to you pressing pleasure, that life will of "learning" a man to v (which will hand of dea gift of all— Even in on the great fested Love we see the a life of se self-forgetti fog of race-age of brot

"Love, whic Age by a Till angers And sorro

In 1884 a from the b opening out life to save child was terrible grip pipe was o was blocke matter. Th through a t risking his o worked on h life to save many have Was it not nobly than t But, after world is not many days one day in earnestly th ing Spirit of form our eve presence.

A girl, wh factory, die girls asked t on a shelf i to read her E that her life v She was the reading ever to read abo seen someth humble, hap Christlike we desire it He may abid Or are we on Him.

Let us rem I will be as t grow as the as Lebanon, neither have the strength With His L make steady fix our hear of desiring t must keep o desires toward

Gift

The Q. H. Two dollars, was sent esp the broken v quite overw and letter re broken wrist or Bible class "Doris" a right, "Doris" Christmas for and Mrs. J. Twelve dollar one week! He out (to six far the congesti kind friend se and skirt—w girl very hap

world. Think of the beggar, covered with sores, lying helplessly at the gate of a rich man! How little the world cared for him in life or troubled about his death. Yet he was honored by the angels. Even to this day we are ignorant of his virtues, we only know that they must have been shining and beautiful in the sight of God. There are many to whom it may be said:

"None knows your name,
Blackened and blurred in the wild battle's
brunt,
Hotly ye fell with all your wounds in
front,
That was your fame."

What is the greatest prize this life can give to the most successful? Are you pressing eagerly after money, fame, pleasure, admiration? Browning said that life was just our chance of the prize of "learning love." What shall it profit a man to win all earth's glittering prizes (which will wither when touched by the hand of death) and yet miss this greatest gift of all—Love?

Even in the midst of war our eyes are on the great Ideal—the Life which manifested Love perfectly. More and more we see the beauty and attractiveness of a life of selfless service and a death of self-forgetting glory. Through the black fog of race-hatred we can see the coming age of brotherhood and love.

"Love, which is sunlight of peace,
Age by age to increase,
Till angers and hatreds are dead
And sorrow and death shall cease."

In 1884 a young doctor, turned quietly from the brilliant career which seemed opening out before him, and gave up his life to save a poor little child. The child was choking to death under the terrible grip of diphtheria. The wind-pipe was opened, but still the passage was blocked by the deadly diphtheria matter. The doctor sucked it away through a tube, knowing well that he was risking his own life, and no miracle was worked on his behalf. He laid down his life to save the life of another—as so many have done during the Great War. Was it not a far greater thing to die nobly than to win many earthly honors? But, after all, our chief business in this world is not to die but to live. We have many days in which to live, and only one day in which to die. If we desire earnestly the greater gifts of the sanctifying Spirit of God, let us ask Him to transform our everyday lives by His indwelling presence.

A girl, who had been working in a big factory, died; and some of the other girls asked that her Bible might be kept on a shelf in the factory. They wanted to read her Book because they saw plainly that her life was "of a piece with the Book." She was the letter of God they had been reading every day for years. They wanted to read about Christ because they had seen something of His loveliness in her humble, happy life. That great gift of Christlikeness is offered to us all. Do we desire it earnestly? Do we pray that He may abide in us and work through us? Or are we only anxious to be thought like Him.

Let us remember the beautiful promise: I will be as the dew unto Israel: he shall grow as the lily, and cast forth his roots as Lebanon." Without God we can neither have the beauty of the lily nor the strength of the cedar of Lebanon. With His Life abiding in us we can make steady progress. But we must fix our hearts on great gifts. Instead of desiring to win the favor of men we must keep our eyes on God and our desires towards Him.

Gifts for the Needy.

The Q. H. P. filled up rapidly last week. Two dollars, from W. B., Millbank, Ont., was sent especially for "our friend with the broken wrist." "Our friend" was quite overwhelmed when the money and letter reached her. In spite of the broken wrist she has never missed church or Bible class, since the accident.

"Doris" also sent two dollars—all right, "Doris", I will keep the card until Christmas for you.) J. J. H. sent \$5.00, and Mrs. J. H., Huron Co. sent \$3.00. Twelve dollars poured into the purse in one week! However, as eight dollars went out (to six families) during the same time, the congestion is not serious. One kind friend sent a beautiful white middie and skirt—which made one poor little girl very happy indeed—and the S. S.

papers have come in so rapidly that I have been almost snowed under. However, I shall come up on top again in good time.

Very many thanks to you all for your words and acts of kindness.

DORA FARNCOMB,
6 West Ave., Toronto.

The Glorious Day.

Oh, say! won't it be heartening
When the war-clouds roll away
And the victory is won for ages,
And our boys come home to stay?
When the Prussian power is broken
And the nations no more feel
The oppression of the Kaiser
With his cruel iron heel.
When autocracy has vanished
And each nation rules her own,
And democracy is established
In every realm and home,
When men with heads and hearts
That are clear and pure and strong,
Can see what's pure and holy
And can overthrow the wrong.

When the Achan is discovered
With his garment and his gold,
And the Lord metes out his justice
As he did in days of old,
When "king alcohol" is captured
And all the nations see
That the monster must be conquered
Before the world is free.
When each peer and every peasant,
Shall see the flagrant wrong,
And follow the example
Of our monarch brave and strong.
Yes, the day will then be drawing
When the wolf and little lamb
Will both lie down together
In the evening still and calm;
And the sly old leopard doses
While the kids about him play,
And the Lion and the calf
Together love to stay,
And the little child shall lead them
In pure and gentle love,—
Then none shall ask his brother
If he knows the Lord above.

JOHN J. HAMMOND.

R. R. No. 1, Atwood P. O., Ont.

The Ingle Nook

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

DEAR Ingle Nook Friends.—Just a little letter to you this time, made up of a few odds and ends.

First I want to tell you that recently we had the pleasure of visiting your ward at the Byron Military Hospital, and I wish all of you could have been with us, for I am sure you would have been delighted with it.

Dr. Kibbe, the new doctor in charge at the sanitarium, conducted us, up the elevator and then on to the right until ward 26 was reached, the little brass plate on the door proclaiming that one the ward furnished by "Readers of the Farmer's Advocate and Home Magazine;" and our first thought, on entering it, was, "How very bright and airy!"—For the ward is at the northwest corner and has windows opening both to west and north—whole rows of windows, which are kept open, so that part of the wall itself seems to have dropped out of sight. You can imagine how the breezes enter and what a flood of sunshine pours in upon the white floors and whiter cots on sun-shiny afternoons.

"Around the bend"—for the ward is somewhat in an L-shape—a sick soldier was in one of the cots, but as some friends were visiting him we did not stop to talk with him. The other two cots—and how lovely and comfortable they looked with their snowy sheets and counterpanes—were empty just then, since their occupants were out somewhere else in the building. Those who are able, you see, go down to the very well-equipped dining-room for meals, and into lecture-rooms to hear short lectures on how to take care of themselves, and out-of-doors to take sun-baths or to roam about the

delightful grounds. Some of them even do light gardening if they choose.

I am very sure, if you saw it all, and the great comfort such a place can give to our returned soldiers who are not yet able to take up the burdens of life, you would be glad and thankful that your money helped to do a little towards making such a place possible.

Before closing I want to tell you, too, how delightful it was to wander about the halls and see the number of brass plates indicating wards that have been furnished by Women's Institutes. There were 7 in all. What do you think of that?

And now just a word to those of you who live in the vicinity and go past when driving or motoring into the city.—If you have beautiful flowers don't forget to leave a bouquet or two in at the sanitarium. They are needed for the dining-room and the library, and are the only decoration permitted in the wards—which must be, of course, kept so plain as to give opportunity for absolutely scientific cleanliness.

But with plenty of flowers no place can look bare. . . . Also,—"The men love them," says Dr. Kibbe. . . . That should be enough.

I did not know when writing you a short time ago, that Dr. Cody was to be announced as the new Minister of Education within a fortnight or so later. Now I am glad I was a little ahead of time in introducing him to you. One may hope for great things from Dr. Cody in his new position. He is eminently sensible and practical, but is also a man of high ideals,—a combination that is just about right, is it not? Moreover, he is greatly interested in agriculture,—which is another consideration in a country which numbers so many farmers and ranks agriculture as its leading industry.

It will be interesting to watch the development of education under the new regime, and it is surely "up to" the whole of the rest of us to help, so far as we can, in any progressive measure that may be launched.

Perhaps the most immediate way in which we can begin to do this, is to follow out the suggestion given by Dr. Cody in his address after nomination, a few weeks ago in Toronto. No teacher, he said, can do good work if he or she is in low spirits, therefore, the community should give substantial support to his or her efforts.

In that address, Dr. Cody foreshadowed a larger measure of technical education (which, so far as the country is concerned, means agriculture) to enable the rising generation to hold their own in the world. To attain this, part-time vocational training is necessary,—the plan, you will remember, advocated by the great Russian, Tolstoy, who found that he did his purely intellectual work better when part of his time was devoted to useful work with his hands. We need more teaching on agriculture in the schools but it should be the teaching of "experts", so far as the curriculum covers.

Also it must not be shoved in to the exclusion of a broad general education. The curriculum must always be kept broad enough to enable every child to find out just what he is good for. Any other system can only make scores of misfits. People should do what they love to do, for that is what they can do well. In a neighboring state, some time ago, technical education was introduced too much to the exclusion of other things, and presently the people objected, saying that the system tended to make one part of the people fit only to be tools of the other. My own opinion is that agriculture should be taught in city schools also, since there are numbers of city people fitted for agriculture, just as there are numbers of country people fitted to be doctors or lawyers. All this, however, the new Minister of Education will probably keep in mind.

Dr. Cody also spoke favorably of consolidation of small schools, and the keeping up of a definite effort "to help the pupils to realize the splendor of rural life."

But in all education; he took pains to emphasize, the making of "good citizens and good men and women" must be the ultimate object. And, indeed, what aim could be better?

So we welcome the new Minister of Education, do we not? for we, too, know what education, in its broadest and best sense, means to every boy and girl, man and woman, in this new and strenuous era of the world in which we find ourselves.

JUNIA.

Garden Talk.

THE best recipe I know for stopping gossip is—gardening. And Why? Because it supplies such a fund of other things to talk about,—that's why.

I don't know what it is about gardens that makes them such "chummy" things, but there is certainly something. Neighbors scrap over children—they come together over gardens. Let them be ever so far apart from the neighborly standpoint, as soon as each begins to grow a garden they begin to talk about it. Next thing they are trotting back and forth to see each other's stuff; and how generous they are with admiration—never once thinking of being jealous. A step further and they are exchanging plants and seeds,—and lo a friendship is established!—All this, of course, provided there are no encroaching cows and hens to make trouble. But it is usually the fellow who hasn't a garden who is careless about letting his cows and hens get into other folk's gardens. If he has one of his own he knows too well just what it means, and just how close in the affections are the little baby-plants growing up so sturdily into lusty vegetables.

But a fortnight or so ago, in planting time, I saw the very chummiest garden I ever saw in my life. For the sake of those of you who know London, Ont.,—for "local" interest is always worth while—I may say that it was on the river flat below the hill and street known as the Ridgeway. Everyone on the Ridgeway (almost) has a garden on the flat this year, and I should imagine that the situation is particularly good since the soil must be to some extent alluvial. However, of one thing I am sure—that it is absolutely filled with twitch-grass.

—Perhaps some of you have had experience with twitch-grass. If so you will know just what awful stuff it is. In all my gardening experience I have never come up against that particular form of pestiferousness, but as I watched the gardeners that evening, my sympathies were aroused. "Pusley", round-leaved mallow, pigweed, sow thistles are nothing to it. Dig down deeper!" shouted one of the gardeners, laughingly, to a friend of mine who was making the earth fly. "Deeper?" she returned, "I'm digging to the very center of the earth!"—and every inch of the ground had to be dug over and over and the roots thrown aside and even picked out by hand—for even a very small bit will grow.

BUT I am getting ahead of my story. . . . Not a single fence stands between all these gardens, and so, in the spring a man was engaged to plough and prepare the ground.—The plough, however, didn't take out the twitch-grass, and that was the why of the incessant digging afterwards. On the evening of my visit everyone on The Ridgeway seemed to be at work—men and women—and the whole talk, from plot to plot, was "gardening." Experts, too, were some of these city gardeners—those who had been at it for two or three years—and very good they were at instructing the greenhorns.

In some of the gardens, which had been planted early, most of the things were well on, and I noticed that the seed had been planted in the most approved fashion, in long rows. Even the beans had been put in in this way; there were no hills. And up and down the rows one of the men was going briskly with a wheel-hoe.

Now I wonder if you—out on the farms—have wheel hoes.

"It's worth its weight in gold", said the man, and as I watched him I felt that it must be so. Perhaps on very heavy soil it would be difficult to push. But then a garden should never be heavy; if the soil is so it should be made mellow with rotted manure and friable with sand.

I am sure you know that the garden should be cultivated at least twice a week and always shortly after a rain. If this is done very little watering will be necessary, except in case of long drouth. The reason is that cultivation keeps a dust mulch on the surface of the soil, and the dust-mulch acts as a cap to keep the moisture from below back about the roots of the plants. If it is not there the moisture comes to the top and passes away by evaporation. Whenever it is absolutely necessary to water, care should be taken to pour on enough to go down right below the roots. If this is not done it is better not

to water at all, as if just enough is poured on to wet the surface of the ground the roots will turn and come up towards the moisture—just like "folks" going for a drink. Next thing, out comes the sun, which is too hot for the delicate little root-tips, and so the plant both wastes energy and is injured by the heat. But if plenty of water is given, in the evening, the effect is good, especially if the wash-water is used, as the soapsuds contain potash, a plant-food of some value. If the water is too strong with soap it may be diluted, especially if it is to be put on tiny baby-plants.

Speaking of garden implements, I noticed that a digging-fork—a thing too seldom seen in farm gardens—was used, and a very good thing it is.—Certainly suitable tools make gardening very much easier, saving time as well as strength.—Among other things that may be mentioned are a light, pointed hoe and a little claw weeder or cultivator. Were it earlier in the season one might add a little seed-drill. A trowel for transplanting and working about plants is very useful, and, of course, a sprayer of some kind.—And don't forget to keep the hoes and things sharpened on the grindstone.

Insecticides.

THE spray-pump, now that birds are not plentiful enough to keep the insects in check, must be used more and more. It is used to apply mixtures for fungous diseases as well as insects, Bordeaux mixture being used for the diseases of such plants as potatoes, tomatoes, melons, cucumbers and beans, while poisons are put on for the insects.

To make Bordeaux in small quantity for the garden is not difficult. Into a 2-quart jar suspend $\frac{1}{2}$ lb. copper sulphate tied in a piece of cloth. In another vessel put $\frac{1}{2}$ lb. quicklime; add warm water till it is dissolved, and, when stirred, about like cream in consistency. Pour the copper solution into a wooden or earthen vessel which will hold 3 gallons. Strain the lime through a cloth into it and mix well, then fill up to make the 3 gallons. Stir well before using. For potatoes add 1 quart water to each quart of the solution; for beans or cucumber vines add 3 pints water to a quart. Apply on a clear day, being sure that all parts of the plant are covered.

Paris green used to be the chief poison used for insects, but in many places arsenate of lead is now used instead as it is stronger and sticks better. Buy the powder and either spray or dust on from a tin box with holes punched in it when the plants are damp. If used as a spray add a heaping tablespoonful to a gallon of water. Always remember that arsenate is a strong poison, and be very careful with it.

All insects that bite are checked by this poison. It should never be used on cabbages and cauliflowers, which are to be eaten as food, except when quite young. For these hellebore, also used on currants and gooseberries, is much safer. It may be shaken on in powder, or sprayed.

Sucking insects, such as lice, found sometimes in great numbers on turnips, cabbages, cauliflowers and peas, may be treated with tobacco powder, Persian insect powder, or kerosene emulsion. To make this shave $\frac{1}{4}$ lb. soap in 2 quarts water. Place a gallon of kerosene in a large enough vessel, and into it pour the soap water, boiling hot, and stir vigorously until creamy. When needed for use mix a cupful with a gallon of water and spray forcefully every three days, if necessary, using a spray of clear water between. Tobacco powder, by the way, may be bought all ready for use under various names. Or liquid nicotine may be used. It is rather costly per bottle, but one bottle will make gallons of spray.

To conquer cutworm mix a teaspoonful of powdered arsenate of lead with a quart of bran and make to a paste with sweetened water, then sprinkle over the soil in small doses about a yard apart.

And now how far afield we have roved from the "chumminess" of a garden! But I rather suspect that our friends of The Ridgeway—and you too—may be finding, by this time, as a new topic for conversation,—insecticides.

JUNIA.

Needle Points of Thought.

"A sound education is the root of things."—Dr. Cody.

"Knowledge is incompatible with slavery."—Shelley.

"I urge that teachers and other school officers increase the time and attention devoted to instruction bearing directly on the problems of community and national life."—President Wilson.

"The day has gone by when a taxpayer can grip his money for money's sake and ask a woman to teach his children from love of the dear children. The place for love of the children, and his pocketbook is the measure of his love for his children when it comes to school problems."—Journal of Education.

War Time Cookery.

Cornmeal Wafers.—Take $1\frac{1}{4}$ cups cornmeal, 1 cup milk, 2 eggs, 1 teaspoon salt, 1 tablespoon melted butter, 4 tablespoons sugar, 4 teaspoons baking-powder. Put the meal and milk in a mixing-bowl; add the beaten eggs, butter, salt and sugar, and beat 5 minutes. Add the baking-powder and mix quickly. Drop in spoonfuls on a buttered pan and bake in a hot oven until the edges are brown and crisp.

Oatmeal Wafers.—One cup oatmeal, $\frac{1}{2}$ teaspoon salt, 2 beaten eggs, 1 tablespoon melted butter. Mix in the order given and drop in spoonfuls on a greased pan.

Oat Bread.—Put 3 cups rolled oats through the mincer, using the finest knife. Add 1 quart lukewarm water, $1\frac{1}{2}$ cakes Royal yeast, 1 tablespoon salt, 1 tablespoon brown sugar, and 1 tablespoon dripping. Mix into a firm dough, adding a little white or Graham flour. Let rise over night or from morning to late afternoon, then bake about an hour. Left over porridge may be used for this instead of the oatmeal, but add less water.

Eggless, Milkless, Butterless Cake.—One cup brown sugar, $1\frac{1}{4}$ cups water, 1 cup seeded raisins, 2 oz. citron peel cut fine, one-third cup shortening, 1 teaspoon nutmeg, 1 teaspoon cinnamon, $\frac{1}{2}$ teaspoon salt, 2 cups flour, 5 level teaspoons baking-powder. Boil sugar, water, fruit, shortening, salt and spices together for 3 minutes. When cool add flour and baking-powder, sifted together. Mix well and bake in a loaf pan in a moderate oven for about 45 minutes.

Strawberry Delicacies.

IN hot weather," says Marion Harris Neil, "the pores of the skin are very active and eliminate from the system many noxious matters. All kinds of acids are passed out by the thousands of sweat-channels, and the blood is depleted not only of bad acids which, stored up in the body, would cause gout and rheumatism, but of valuable acids also. Once more to the aid of the body comes the strawberry, bringing quite a small medicine chest of salts and acids for the jaded blood. It has absorbed much oxygen, and in its substance is found a trace of iron drawn out of the earth itself. Minute traces of magnesium and potash are among the salts. Iron is given to anaemics, so this berry is naturally a foe to anaemia."

All of which goes to show that the strawberry should be served on our tables plentifully. In no way is it nicer than with sugar and rich cream, but there are many other ways that are exceedingly nice for a change.

Strawberry Cake.—Make any light layer cake and bake in two layers. Crush the berries, sweetening well, and put between the layers about an inch thick, also on top. Serve as pudding for dinner with or without whipped cream.

Strawberry Pie.—Make the pie crust as usual and fill with the berries, sprinkling liberally with sugar. Add a few drops lemon juice, a teaspoon of flour, 2 tablespoons water and some bits of butter. Put pastry or pastry "criss-cross" over the top and bake in a moderate oven half an hour.

Strawberry Salad.—Remove the stems from the berries, if large cut them into halves or quarters and put into a dish. Sprinkle with sugar, 1 tablespoon lemon juice, and add some strawberry syrup. Set on crushed ice or in cold water until quite cold, then put in a cone-shaped pile in a glass dish and put whipped cream, sweetened slightly and flavored with

vanilla, all round. Another way is to place unhulled berries on lettuce about a little pile of sugar, the berries to be dipped in the sugar by the stem and eaten from the fingers.

Strawberry Mousse.—Take 2 cups berries, 1 tablespoon powdered gelatine, 1 cup sugar, 4 tablespoons boiling water, 2 cups whipping cream. Mash the berries, sprinkle the sugar over and leave in a cool place 2 hours. Next put them through a ricer, and add the gelatine dissolved in the water. When cool fold in the stiffly beaten cream, turn into a mould and pack in ice and salt for 6 hours. Turn out of the mould and decorate with whole berries and chopped nuts.

Strawberry Pudding.—Berries, 2 cups flour, 12 teaspoons sugar, 3 teaspoons (level) baking-powder, $\frac{1}{4}$ teaspoon salt, milk. Sift flour, baking-powder and salt together. Make into a soft dough with milk. Have ready 6 buttered baking cups. Place in each a tablespoon of the mixture, then add a layer of berries, 2 teaspoons sugar and lastly another layer of the dough. Cover the cups with greased paper and steam 40 minutes. Turn out and serve hot with sweet sauce flavored with strawberry syrup or extract. Whipped cream will do instead.

Strawberry Jam.—Six lbs. berries, 5 lbs. sugar, rhubarb if desired. Boil the fruit alone for 20 minutes. Add the sugar and boil half an hour, stirring well. May add rhubarb.

The Scrap Bag.

Making the Garden Yield Double.

By using one's head in regard to the garden, many portions may be made to yield double crops. For instance, early potatoes may be followed by Brussels sprouts, kale and celery. In any vacant spot, no matter how small, such as that left when the early multiplier onions are taken out, may be sown lettuce, radishes and beets to form "young beets" for canning, etc.

Sugar Not Needed.

At the very beginning of the canning season this year it is well to understand that fruit may be put up absolutely without sugar and will keep quite as well as with it. Sugar is scarce just now, and, besides, it is needed for the soldiers; it may be cheaper and more plentiful when it is time to use the fruit next winter and spring. Perfectly sterilized jars, filled to overflowing with the boiling fruit and sealed air-tight, will keep anything. It is very necessary, however, to use new rubbers of good quality. They should not be too hard, nor yet too stretchy, but just yielding enough to have to be stretched a little when putting them on the jars. Some put them in place before sterilizing the empty jars; others dip them several times in boiling water and put them on the jars just before filling up with fruit.

Jellied Salad Mixtures.

There are endless possibilities in lemon jelly powder. Dissolve as usual and add vegetables or fruit as wanted. For vegetable salad add cooked peas, bits of celery, beet, anything liked, or any mixture. For fruit salad add bits of raw orange, banana or pineapple, ripe strawberries, mixing the fruit according to your taste. Nuts also may be added to either fruit or vegetables. Probably the additions will sink to the bottom, so when the jelly has partly solidified it may be well to turn them gently through the mixture. Serve on lettuce, with salad dressing or whipped cream as desired. The jelly may be cooled in individual moulds, into which, before pouring it in, have been pressed stripes of pimento, slices of hard-boiled egg, whole nut meats, or anything else that will look pretty when the jelly is turned out of the moulds.

Beet Syrup and Sugar.

One of the bulletins issued by the U. S. Department of Agriculture, says that sugar and syrup may be made from the sugar beet as follows: Slice the sugar beets very thin, cover with hot water and leave to soak for an hour. Next strain through several thicknesses of cheesecloth, heat very slowly and boil down. The product is strong and dark, but palatable to some people.

An Iceless Refrigerator.

A real refrigerator is a godsend to any home, as it not only keeps food more palatable and prevents loss by spoiling, but also keeps the food in fit condition to be taken into the stomach. Fermented or tainted food is never safe and is a frequent cause of "summer complaint" and dysentery. If, however, one has not a refrigerator and cannot get ice, one may manufacture homemade makeshifts that are a great deal better than nothing. One of these is to take a stout box of sufficient size and place it in the coolest spot available. In the bottom put a thick layer of salt, then place a sheet of zinc over upon which to place the covered vessels containing the food. Keep the salt slightly damp all the time. Another arrangement is the following: Make a wooden frame with a top and two shelves, supported to the legs but minus sides or ends. Next make a covering of white Canton flannel or white duck to fit the frame, leaving the front in a loose flap to act as a door, but leaving it large enough to overlap to exclude the outside air. Place on top a pan of enamel ware, which will not rust, and keep it filled with water. Take two double of the material, half the width of each side and sew them to the top of each side covering, letting the other ends extend about 3 inches into the pan of water. They will carry the water along as a lamp wick does oil. Place the cooler in a large pan to catch the drip, having the cover reach to the bottom of the pan. Keep in an airy, breezy yet shaded spot. The evaporation will keep the inside of the cooler at a quite low temperature. The water should seep through the covering continually and must be renewed in the pan above as it is carried off.

A Canadian "Hustler."

(By F. A. McKenzie, in the "Daily Mail," London.)

General A. D. McRae, the Canadian Quartermaster-General, has been appointed Director of Organization in the new Ministry of Information. "Who's McRae?" men ask. "Why should a Canadian be chosen to organize Imperial propaganda?"

Tall, clean shaven, well built, with shining head, somewhat long face, a ready smile, and a slight mid-American accent—that is McRae. Forty-three years of age, he was born in Glencoe, Ontario, of Scottish-Canadian descent. When he was 19 he went to Duluth with £200 to make his fortune. He spent the £200 and then began work in earnest. Before long he had built up one of the biggest insurance enterprises in the West. He helped to establish a group of rural banks, and when he was 29 he returned to Canada at the head of land enterprises.

The West was then at the height of its "boom", and McRae rode on the crest of the boom. He organized the immigration of American farmers into the West—largely in connection with the Canadian Northern Railway—running special trains and selling them land. He is said to have settled more men in the West in recent years than anyone outside the Dominion Government itself. In due course he went to the Pacific coast and made his home at Vancouver. Here he became head of many enterprises, notably deep-sea fishing. Characteristically, he kept all his old work, from insurance to land development, going at the same time. He controls the Fraser River mills, the largest lumbering enterprise of the West. His ships hunt whales in the Arctic.

Then came the war. McRae's one passionate hobby is horses. The Canadian Government needed horses, and he was asked to become one of the buyers. Later he was sent to England to look into the horse situation here. He cleaned it up in a very remarkable way and was asked to do more.

Canadian supplies and transport were in a very disorganized condition. Would he see what could be done with them? One incident may show his methods. He found that the troops were having too much food and that much of it was wasted. Accordingly he started to have men trained to cook properly and cut the ration of meat from a pound a man a day to three-quarters. There came immediate trouble, not from the soldiers but from the higher British authorities. "A pound a day was the allowance. It

must be used." But he overcame even the British authorities.

There was still waste. So he established the famous Canadian Army ration system. He had fish brought over wholesale from Canada; he directed what every meal was to be, how it was to be cooked, and how the waste was to be utilized. The Canadian Army to-day is the best fed and the most economically fed army in Europe.

In the big Canadian reorganization of December 1916, McRae became Quartermaster-General. He now carried out the same principles on a bigger scale. For example, he found enormous quantities of surplus and obsolete stores. Why leave them till the end of the war? He negotiated with Governments, fixed deals with contractors, and obtained for them four or five times what they would fetch when the war is over.

The Imperial Government began to mark him, as it is noting a number of other young men from the Dominions to-day. It was notorious that the different departments of propaganda needed a business organizer badly. They have got him now. Incidentally he likes the job so much that he is paying his own salary.

The Meat o' the Meatless Day.

What? Treatin' yerself to bacon?
Ye "have earned it" ye hotly say?
Now, pardner, it ain't a question
To be answered that-a-way!
Just think, would ye dip in the mess-tin
O' the lad that is far away,
An' filch while he wasn't lookin'
O' the food that's his one bright ray?
At most we can give but little;
He's giv'n youth—that is sartin!—may
Give his life—he is ready. Now, then,
Reef the belt that's been broad alway,
An' yer fill o' beans or porridge
But—this is a meatless day!

Yer bread?—white an' best o' the bake-shop?
"Can afford it" ye proudly say?
Nay, lady, it ain't a matter
O' money; it's long delay;
The struggle confused an' lengthened;
Men crouched in the cold, who pray,
Dead weary in brain an' body
For an end to the ghastly fray,
Who think o' the home-folks fondly
As their anchorage an' stay;
It's youths, here to-day in the homeland,
Huddled dead, some far mornin' gray—
To save them, a slice o' hunger,
But keep it a wheatless day!

Ye've always been used to better?
An' ye're tired o' this coarse-grub lay?
Say, people, it ain't a factor—
Would it matter what you might say
O' comfort had once the invaders
Got through there, to old Calais?
We hadn't done any fightin'—
None at all up to that big day,
Nor so much to brag o' sense then—
We here that at home must stay
An' fight w' our forks an' platters.
There! No hint o' complaint betray!
Let's do more than the Allies are askin',
Let us make it a bleatless day!
M. S. W., in "Wireless."

Doing One's Bit.

BY LILIAN D. MILNER.

When some years ago I found that my work, consisting mainly of typewriting, was the cause of recurring attacks of nervous exhaustion necessitating my spending six months of every year on a farm, an enforced holiday I could ill afford, I acted on the advice of the specialist for nervous diseases whom I had consulted, and tried a change of work. During my first visit to the farm I became enamored with country life, which I found was not, or need not be, a round of endless drudgery, for city life with its restricted views, dingy offices, stupid, routine work and, last but not least, lack of friendly neighborliness can be much more monotonous. Let the girl who thinks housekeeping is doing the same things over and over again, continual preparation of meals and washing of dishes, try typewriting for a while, with, in these days of dictaphones, not even a change to shorthand, and she will beg to go back to her dish-washing, bed-making and cooking.

Had I followed my own inclinations I should have stayed on the farm for the rest of my life but there were others in-



HERE IS THE DAY YOU REGISTER,

ON June 22nd, Saturday, every man and woman, resident in Canada, who is 16

years and over, must attend at one of the places provided for registration, between the hours of 7 a.m. and 10 p.m., and there truthfully answer all the questions set forth upon the registration card.

Upon signing the card, vouching for the accuracy of the answers, the man or woman will receive a Registration Certificate, as shown below, which must be carried upon the person thereafter.

Why the Certificate is so Important

For failure to register a maximum fine of \$100 and one month's imprisonment is provided, also an added penalty of \$10 for each day the person remains unregistered after June 22nd.

Persons remaining unregistered cannot lawfully be employed, and cannot draw wages for work done after June 22nd. Employers who keep unregistered persons in their employ will be liable for fines equal in amount to those recoverable from the unregistered employees.

Unregistered persons cannot lawfully purchase transportation tickets, and may find themselves barred from traveling on railroads, steamboats, etc. Similarly they may be denied board and lodging at any hotel, restaurant, public house or boarding house.

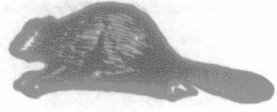
In a word—All persons remaining unregistered, and all persons having dealings with unregistered persons, knowing them to be such, incur heavy penalties under the law.

REGISTRATION IS LAW— Don't Fail to Register

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A Paid-up Life Policy

if the assured so desires: and this Paid-up Life policy will earn profits which will be payable in cash annually. If the assured does not wish a Paid-up Contract he can continue to pay the regular premium until the total of the reserve and accumulated profits equals the face value of the policy, which thus becomes

A Matured Endowment

payable in cash if so desired. If neither of these options is selected, the profits will continue to accumulate and will be payable at the termination of the contract, if not previously withdrawn.

Thus an Ordinary Life Policy may develop into a Paid-up Life Contract, or a Matured Endowment, or an increasingly valuable investment.

The length of time required to develop the "Paid-up" feature or the "Maturity" feature depends partly upon the age of the assured but chiefly on the dividend-earning power of the Company, and, as "all the world" knows, the dividend-earning power of the Mutual of Canada is unsurpassed.

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terested in the arrival of my monthly pay cheque; so I sought and obtained work of a clerical nature. The efficiency expert, whose duty it was to find out just what each member of the staff was best fitted for, finally placed me in the accountant's office, where, having shown, even as a child, a gift for rapid figuring, I proved his decision to be a wise one. I realized for the first time the joy of earning one's living at work which one really likes to do, a state of things I had wrongly imagined would exist only during the millennium, and had the pleasure of knowing that I was now a really valuable addition to the office staff.

With the industrial and business worlds turned topsy turvy; with women engaged in tasks previously performed by men only; with the entry of formerly "stay-at-home" girls into office work, and with the women and girls who still stay at home devoting two or three hours a day to some work of a patriotic nature, it behooves us to give as much thought to what we shall do and what we can do best, as to the conservation of food and fuel, and other matters of national and international interest brought into prominence by the war. The National Service Commission, the Public School Committees and the installation of efficiency experts by large employers of labor are solving this problem for men, but we women of Canada must solve it for ourselves.

As an instance—a girl friend, one of "the salt of the earth," brimful of energy and enthusiasm and patriotism, spent her spare time, during the early stages of the war, typewriting directions how to knit socks, wristlets, scarfs, etc., for the branch of the Red Cross Society in her city. She did splendid work and as the demand for instructions became greater, proved her possession of executive ability by getting other stenographers interested and keeping up the supply. When the Red Cross Society decided to have the directions printed instead of typed, she turned her attention to knitting and, being an expert knitter, again rendered excellent service. Last year she became interested in greater production, and, having leased a small bungalow and the greater part of two lots, planted a garden.

She knew as much about gardening as I did. A few years ago, while spending a vacation on a farm, I offered to help the good lady of the house in her preparations for dinner by going to the garden for some early cucumbers. Returning, rejoicing in the sensation of having gathered growing garden stuff for the first time, I displayed, to her horror—not the cucumbers, but the only melons they had expected to amount to anything!

I advised my friend to plant tomatoes, partly with the recollection of my dreadful mistake in mind. No one could mistake tomatoes for anything else, and as she was rather late commencing gardening operations, she would, I assured her, have a good crop of green ones for pickles at least. With her usual enthusiasm she informed numerous acquaintances of her intention of "doing her bit" in the gardening line, and, with customary generosity, promised various house-keeping friends the surplus of her crop.

None of her friends saw very much of her last summer. Occasionally I descended upon the cottage and carried her off by sheer force for a paddle in my canoe, but most of her evenings were spent carrying endless pails of water from the village pump, nearly half a mile away, to her tomato plants and in otherwise tending her garden. She had filled flower beds with asters, marigolds and cosmos, and had sown sweet peas near the wall. She had promised to keep her church pulpit supplied with flowers, and she did—via the florists.

The results of her expenditure on plants and flowers were one medium-sized, ripe tomato and about a dozen small green ones; a few tiny deformed asters and one very small cosmos which bloomed on top of a stalk which had grown like the beanstalk of fairy lore. The sole edible tomato was given by her as a bribe to a man in her office who persisted in asking her if she had gotten into communication yet with a firm of canners re the purchase of the surplus of her crop. The mention of her attempt at gardening has somewhat the same effect upon her as a red rag has on a bull. With renewed enthusiasm she has taken up Red Cross work, and she says as she knits, her needles flashing in and out as if she were trying to make up for the time wasted in worshipping at the shrine of the tomato: "Well, I was a square peg in a round hole

but thank goodness I had the sense to get out!"

The experience of another friend, whose husband is "overseas", and who has a well-stocked cellar this winter as a result of planting a small garden last summer; who has no gift for knitting or sewing but certainly knows how to make her gardening yield results, shows just how much can be done by the women of Canada if we spend most of our time doing the work we are best fitted for.

One has only to visit the packing-rooms at the headquarters of the Red Cross Society in the larger cities and see the amount of work which has to be unripped and done over again to realize that time spent in doing the work one can do best, even if it is not work of a directly patriotic nature, is time well spent and, though it may sound paradoxical, time conserved. The importance of spending one's spare time knitting, or learning to knit, cannot be too strongly emphasized; the average life of a pair of socks in the fighting line being three days. I would not discourage any one from knitting or trying to knit, but there are some people who cannot knit well, just as there are some who cannot do office work well. Repeated efforts on my own part to economize by making my own clothes have shown me that I have no gift for dressmaking, although I can knit and darn well.

Last winter I was at one of the relief centres where a woman cut up the greater part of a bolt of flannelette into small garments. I stood and watched her with silent admiration of the capable way she tackled work I was afraid to do, but when I saw, some days later, the work other helpers had cutting over again and piecing, through her faulty cutting, I came to the conclusion that my admiration had been wasted, and that the original cutter's time would have been better occupied elsewhere. Such incidents are regrettable, and no enthusiasm or patriotism, however commendable, can justify waste of material and time and labor in war-time.

Some people may say, "Oh, everyone can knit," but it is not so. I have two classes engaged in Red Cross work, the one a Saturday afternoon class of little girls from five to twelve years old—the other a Monday evening class of business girls. The smaller children of my Saturday class knit squares for soldiers' comforts from small balls of yarn which are no use for anything else—the older girls knit socks. It is a fact that some of my ten-year-old girls knit better fitting socks than some of my business girls. One of the latter brought me a sock for inspection a few days ago. The leg was fairly well knitted and of the proper measurement, but the foot was twice as wide as the leg. When I explained the fault in the sock to her, she turned away with the remark: "Oh, he'll be glad to get it anyway." I do not think that "he" will be glad to get it. I can imagine that a man whose socks were soaking wet would prefer to keep on wearing a wet, properly-fitting sock to one which would have to be "bunched up" in his boot because it was so much too large, or would need something of the nature of a shoe-horn to get it on because it was too small.

As I have said, the importance of knitting cannot be too strongly emphasized, and few women are so busy that they cannot find spare moments for this work, particularly when knitting at lectures, meetings, and while paying calls, is not only allowed but encouraged. For the woman who has just time for pick-up work knitting is excellent, but if you can spare several hours a day and can run a sewing machine, don't devote all your time to knitting socks. There are many women, physically handicapped, who cannot run a machine, who can knit socks, make buttonholes, and do the little hand sewing needed. If you are a rapid, legible writer, make enquiries of the local branches of your patriotic societies and see if they are in need of clerical assistance before sitting down to sew or knit. You may be able to secure work for which you will receive a small remuneration, which you can donate to your Red Cross Society if you wish.

If you can make cakes better than you can do anything else, why not try some experiments in saving wheat flour and pass on the new recipes to your neighbors? You can make cakes and send them to the boys overseas, or in the hospitals here, and, last but not least, you can offer your cake-making services sometimes to a neighbor who is a real asset to your Red Cross Society.

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Antonio no mistake guardhouse day-appear greeted with "Tra-la-l body's Ma

We will Gwand Du whiskers th bia Record.

One of the things I like to hear over the rural telephone is a farmer's wife calling up another and saying, "Oh, would you come over and make a batch of lemon biscuits for me? I never get them like yours, and if you'll bring over that dress you were wanting to make, I'll cut it out and run it up for you." We help one another at threshing time, and at corn-cutting time—why not all the time?

I paid a visit a short time ago to a Woman's Exchange recently opened in the city. I wanted to buy some homemade cookies and candy for my overseas boxes, and I also hoped to get some knitted comforts, for I never seem to have time to do all I want to send over to the fighting line. I found an array of exquisite—and I almost said useless—needlework at prohibitive prices. It has its place, but as I looked around at the numerous heavily embroidered tea-cloths and centre-pieces—there seemed to be nothing else—I could have wept over the needs of our boys in the trenches, and of sorely-stricken Europe.

Why should not each village have a Woman's Exchange—an exchange—not for making money, but a market for the exchange of talents and labor? I know there are many things my neighbors can do much better than I can, things I cannot buy in a general way.

If Mrs. A. makes better lemon pie than anyone else in the village, as is evinced by the demand for it at church socials and picnic socials, or if Mrs. B. makes a most delicious salad dressing, or Mrs. C., who never took a lesson in dress-making in her life, has a knack at making dainty, durable dresses for children, let them do these things. If Mrs. D, who loves to knit, and has no gift for cooking, can go home with a supply of salad dressing, or pies or cookies, bought at the cost of the ingredients and fuel for making, and a small allowance for time and labor, she can sit down to her Red Cross work with a much lighter heart, knowing that she need not worry as to whether her cooking will turn out well. In the meantime Mrs. B, who made the dressing, or cake, or cookies, will find that the small allowance for her time and labor, soon amounts to quite a respectable sum which she can hand over to the Red Cross Society, or some other similar institution and feel that she, too, is doing her share in the great work.

Why not have a weekly, or semi-weekly, or even daily, sale in one of the public meeting places, which, I am sure, can be easily secured for the purpose? Have volunteer workers in attendance, so that there will be no running expenses, and let each member remember that the exchange is not being run to make money, but to give all a chance at doing their best at work which they really like doing in the interests of patriotism.

With the calcium light of the world turned on food and fuel conservation, shall we not also think of time, energy and talent conservation, with the thought in mind that it is doing one's best, and not one's bit, that is going to win this war?

[Since the above article was received, Miss Milner writes us that a Woman's Exchange, such as she suggested, was instituted in the village of Chelsea, P. Q., with excellent results.—Editor.]

Antonio was overawed by his surroundings when the first draft sent him to the cantonment. And he continued to live in awe, particularly of all officers, during the early days of his training. While standing guard one night he was in such a flutter when the corporal of the guard approached that he made his challenge in a low voice which the non-com. could not hear.

"You'll have to speak up, my man," said the corporal, "or you'll get into trouble. I'll take your word for it that you challenged me, but when the officer of the day comes around, you'll have to sing it out or you'll get a trip to the guardhouse. Remember, sing it out, and sing it out loud."

Antonio vowed that he would make no mistake that would get him in the guardhouse, and when the officer of the day appeared a half hour later he was greeted with—

"Tra-la-la, who coma dere?"—"Everybody's Magazine."

We will say this for the Czar and the Grand Duke, they had better-looking whiskers than the Bolsheviks.—"Columbia Record."

... what these ... acres ... produced."

One Fencing Experience.

At a point between Oshawa and Bowmanville last week I was given one exceedingly practical lesson in the matter of fence building, even in the face of high prices for wire.

Last winter Mr. A. Ayre of Darlington, sold the rails in an old roadside fence as fuel in the town of Oshawa for \$62. The wire erected last week in place of the rails cost \$56.60. The new fence required only one-third the number of posts used in the old one and the posts saved, in Mr. Ayre's opinion, fully equalled the value of the labor expended in erecting the new fence. In addition to this Mr. Ayre receives the usual subsidy, allowed by his township council, for erecting a wire fence along the roadside and thus reducing the amount of drifting on the road in winter.

Thus Mr. Ayre has an attractive fence in place of an unsightly one, he has a fence that is a protection to his fields instead of one through which cattle could break, and the change, instead of involving an expenditure, has actually been made at a profit.

50 Acres of Wheat on One Farm.

"In spite of the ... I believe ... in Ontario ... to the ... said ... the ... alone I ... there will ... percent, in acreage over ... Mr. Mark Crawford ... farmers, has 50 ... on a 200-acre holding. I ... in as general ... in as general ... as it is just now. I ... usual average in ... ers who have ... illing these, but those ... in corn for the ... plant as much ...

Page Fencing— A "Real" Barrier

SOME new Fences look like Page Fences. But most Fences, after a few years of service, cannot favorably compare with a Page Fence erected at the same time. A cheap Fence after a few years of service will look very different to a Page Fence after it has been up 10 years. Page Fencing never sags—never breaks—always withstands the weather.

WHY PAGE FENCING STANDS THE TEST

Because we first carefully select extra long wires—heavily galvanize them—and weave them on the Page looms, which are so perfect in their action as to insure uniformity. Every wire has exactly the same tension—with extra strong wires top and bottom. This gives the Fence elasticity; so that no matter how hard the "bunt," the Fence springs back into place. No poor or weak wires—no rust.

Every joint is carefully locked together with No. 9 full gauge wire.

Every wire is securely held in place.

Most Canadian farmers know they cannot afford to buy a fencing less efficient than Page.

Page Fencing prices have been reduced. Owing to the installing of labor-saving systems in our factory, we have been able to reduce the price of our fencing materially.

SHIPPING TERMS

Freight allowed on all shipments of 200 lbs. or more to any place in Old Ontario or Quebec, when cash is sent with order.

MADE PROFIT OUT OF OLD RAIL FENCE

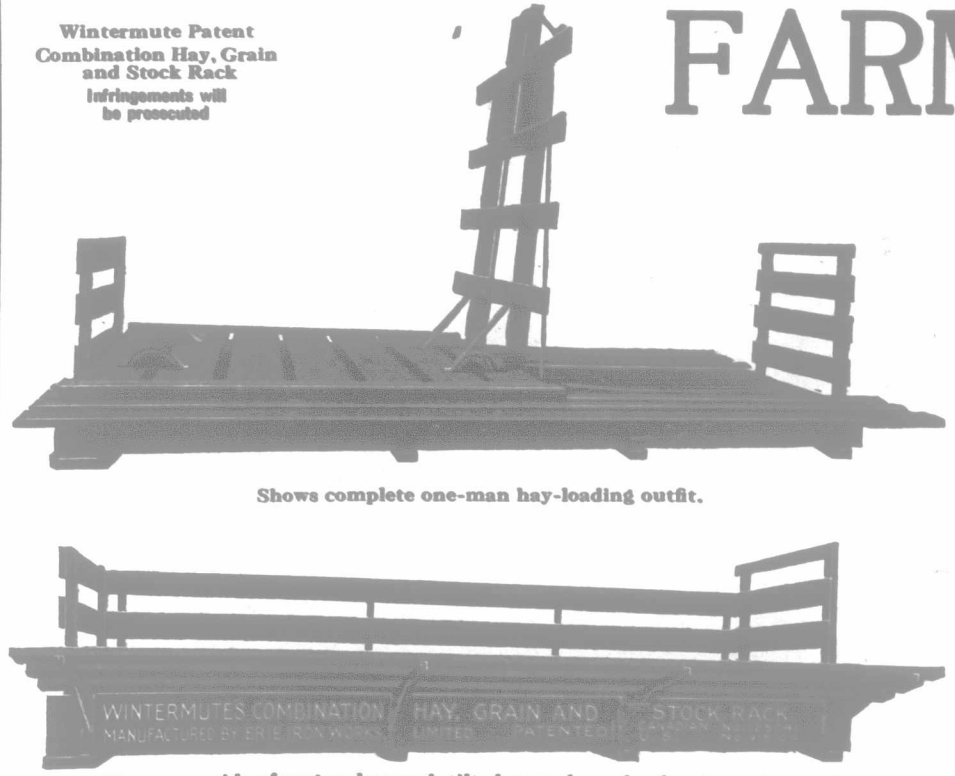
Just to impress upon you how much cheaper and better the modern fence is than the old, tumbledown rail fence, we want you to read for yourself one man's experience, as quoted in the above item from the Toronto "Globe." All that is here said about wire fencing in general applies with special force to Page Fencing, because the Page kind is just as much superior to ordinary wire fencing as ordinary wire fencing is superior to a rail fence.

THE PAGE WIRE FENCE COMPANY OF CANADA

SALES OFFICES:
MONTREAL
519 Notre Dame St. West

TORONTO
183 King St. East

LIMITED
ST. JOHN
11 Water Street



FARMERS!

YOU are short of help. We have a proposition for haying. Get in touch with our one-man hay rack. This rack will save the services and expense of one man during haying. The rack is also an all-year-round rack, common wagon box, stock rack, grain or sheaf rack, and combination hay rack for one man.

Ask for particulars from THE ERIE IRON WORKS, LIMITED ST. THOMAS . . . Makers

Shows complete one-man hay-loading outfit.

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

Extract from Toronto Globe
'WARE POTATO BUGS.
 Unless gardeners are vigilant to a degree, this year's potato crop is going to be ruined by potato bugs. Myriads of these pests have already appeared and are laying their eggs on the tender shoots of plants that are barely above ground. Extermination one by one is the price of safety. Trusting to Paris green will not avail to save a crop that is more vital this year than ever before, and the crushing of the enemy, which has appeared unusually early, must begin to-day.

The Surest Exterminator
Acco Spray Powder

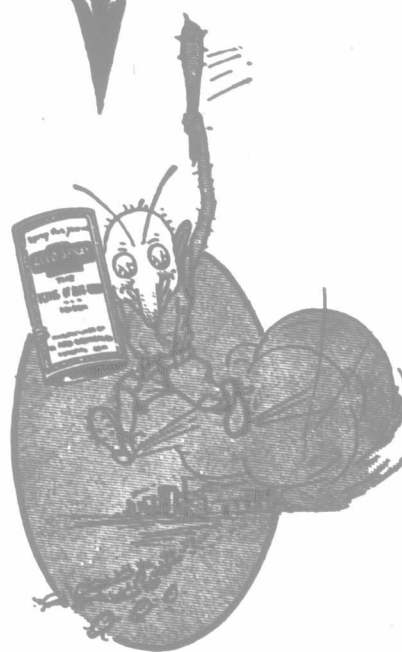
THE KING OF BUG KILLERS

Cheaper than Paris Green

Sold at all Seed and Drug Stores

HAROLD F. RITCHIE CO., LIMITED

Sole Agents for Canada
 10 McCaul St., Toronto



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The Windrow.

Dr. Alexis Carrel, of the Rockefeller Institute, New York, who is at present serving in a hospital behind the lines in Europe, has been promoted by the French Government to the rank of Commander of the Legion of Honor. Dr. Carrel has made several very valuable discoveries in the art of healing.

In "In Salonika with Our Army," Mr. Harold Lake tells something of the scene of the enterprise which the name Salonika has come to summarise. The Macedonia for which Serbians, Bulgarians, Greeks, and Turks have contended so bitterly is, he says, nothing but a parched, stony wilderness, bristling with thistles, swarming with mosquitoes, and sparsely peopled by secretive and suspicious natives. "For this is the law of Macedonia, that you shall not build yourself a secure and costly home, which your enemy may at any time destroy or take for himself; you shall not plant great fields or any more than is strictly necessary for yourself, lest your enemy come and reap your rich harvest; you shall not make an easy road to your home, lest your enemy come down it swiftly to your destruction. It is better and safer to have so poor a house that it is not worth the burning, so small a crop that it is not worth the gathering, so painful a road that it is not worth the travelling."

In China there are now 6,435 miles of railway open to traffic; 1,629 miles are under construction, and loans have been negotiated for 7,425 more. Smelting works and manufactories of all kinds are springing up all over the country.

There appeared recently on the walls of Warsaw the following proclamation: "The Government suggests that mothers having children should send them to Germany to be brought up and educated. Mothers who are willing to make this arrangement will receive the sum of 150 marks for a boy and 100 marks for a girl. No other aid will be given."

The proclamation was signed by Governor General von Beseler.

Germany is suffering from a huge drainage in population. The death rate far exceeds the birth rate, the former having risen tremendously and the latter declined in alarming proportion. This explains the brutal bid to Polish motherhood for its children.

A boy is worth 50 marks more than a girl to Germany, because a boy can be made a soldier in time, while a girl can be only a mother. The cool commercialism of this discrimination in price stamps the plan for what it is—a shameless traffic in human flesh. Our only wonder is that a flat rate should be offered rather than one based on weight, physical condition and age.

Note the cruel lash of the final sentence: "No other aid will be given." In plain words, "If you will not sell your children, then you and they may starve to death."

This is Germany.—Chicago Evening Post.

A surplus of women has always been one of Germany's embarrassing social problems, and a German mathematician proposes an insurance scheme to guarantee girls against the possible poverty of husbandless days.

Girls may either take out the insurance themselves, or it may be taken out for them by their parents. It is intended that premiums shall be paid when a girl is still in her babyhood or at the flapper stage, so that this extra cost of bringing her up may fall upon her parents at a period when educational costs are at the lowest point. Premiums are payable up to the twentieth year of the insured person. If the young woman has not married by the time she is 37 she will thenceforward be entitled to draw an annuity, which will be paid in quarterly instalments. She will continue to derive this income even if she finds a husband after passing her 37th birthday.

If the insured weds before reaching 37 she cannot claim an annuity, but may recover with interest the total amount of premiums paid in on her behalf. If the insured dies before becoming 37 the accumulated "cash value" of her policy will go to her legal heirs. If it is pointed out that this plan not only

guarantees spinsters against economic distress, but also increases their matrimonial prospects. It will also prevent girls from marrying in haste, because their future is assured whether they take husbands or not.—Tit-Bits.

"Chew your food until it is rendered to a creamy consistency. After a month of this practise you will feel like a magazine interview of yourself."—William Brady, M. D.

The sun travels through the universe at the rate of 12 miles a second, or more than 1,000,000 miles a day, the earth and other plants belonging to its system moving with it.

Sixty Americans who volunteered to be inoculated with trench fever so that scientists might study it, are now at a British Base Hospital in Northern France. They have been inoculated both by lice, and with blood taken from soldiers suffering with the fever.

The Turnverein Club of Joplin, Missouri, has presented its property, valued at \$25,000 to the Red Cross. The reason for the gift is presented in the following statement, given by the members of the Society: "We left one country. Why? Because we were not satisfied with the conditions. We entered another country with the full knowledge (unless we were lunatics) that we had to abide by the rules and conditions imposed by the new country. The new country was very lenient with us. We hardly knew that we were being governed. To us this war comes like a bolt of lightning out of a clear sky. We are awakened from a dream, awakened to the realization that when we changed countries it was also our duty to change our sentiments and sympathies. The object of the Verein is to advance German customs, German habits, and the German language. This is, under the conditions which have arisen, intolerable and impossible. Our countrymen can not and will not and should not be expected to countenance the existence of our Verein."—Literary Digest.

The American soldiers in France have affectionately nicknamed the French soldiers "didonks". The word has been coined from the phrase "Dis donc!"—equivalent of our prelude "say"—with which the *poilu* usually begins everything he says.

England and France are both to erect monuments in honor of the memory of Edith Cavell.

Over the main door of the wonderful Washington Irving High School in New York, placed on the outside so that it is to be read as one enters, are the words, "We Enter to Learn". Above the inside of the door, so that it is to be read as one leaves is the motto, "We Leave to Serve". It is almost to be expected that a school which tries to live up to such maxims should present a record in war work. During 7 months the pupils bought \$42,000 of Liberty Bonds and \$4,600 War Savings Stamps, and also made and collected 79,119 articles for the soldiers overseas,—surgical shirts, fracture pillows, pajamas, knitted articles, etc.

Madame Leona Bothkareva, leader of the Russian "Women's Battalion of Death", recently passed through the United States from San Francisco on her way to London, Eng., where she has gone on the invitation of the British Government. When Kerensky was overthrown she escaped across Siberia to Vladivostok. While in London she will undergo an operation to have a piece of shrapnel removed from her back.

Nurses at the front are now supplied with gas masks, as, under German methods of warfare, no hospital is safe from attack.

The daily airplane mail service between Washington and New York has now become regularly established. H. P. Culver carried the first post to New York and Lieut. Webb the first sack of mail to Washington.

During the first years of the war every year saw the death of some 20,000 young Britons and Frenchmen who died from shock. Instead of rallying when his wounds—not necessarily fatal of themselves—were dressed, the patient would

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collapse. The case was put before the Rockefeller Institute for Medical Research in New York, and the result was that the problem has been completely solved, both cause and cure for the shock having been found. The Allies and the world owe much to this great Institute.

English and American Quakers, although they will not fight, are helping splendidly in the war, the young men running as many dangers as the soldiers while carrying on Red Cross and ambulance work, while the women and older men are carrying on relief work behind the lines and helping the people in towns that have been devastated, to rebuild their homes.

Current Events

The Cunard liner "Ausonina", a British transport, was torpedoed and sunk in the Atlantic. Ninety of her crew were landed in Ireland; 180 officers and men are missing.

Sir Eric Geddes, First Lord of the Admiralty states that the Allied navies are sinking German submarines faster than the Germans can build them.

Two small Italian motor craft on June 12 attacked an Austrian squadron, succeeding in torpedoing and sinking two Dreadnoughts. Commander Rizzo is given great praise for the feat.

Gen. Bridges of the British Military Mission to Washington states that United States troops are going into Europe at the rate of a quarter of a million a month. Already there are over 700,000 United States troops in France.

The Italians are now said to be using a sea-tank, fitted with barbs to cut nets and other obstacles, and propelled by electricity.

During the week British airmen bombed the station at Treves, the factories at Dillingen, and the bases at Zeebrugge and Ostend, also the city of Bruges.

Prince Lichnowsky has arrived in Switzerland. Hitherto, on account of his revelations against Germany, he has been virtually a prisoner in his chateau in Silesia. In Switzerland also is Dr. Muehlon, who was head of Krupps at the outbreak of the war. He also has issued documents in which he affirms that the war was imposed by the Kaiser's personal military policy.

At time of going to press the Battle of the Oise is practically over, and the Allied armies await the next drive. For the present Paris breathes freely again, but it is not known against what point the Germans will direct their next drive; some of the war experts think it may be against the British lines. The Germans, however, have suffered terribly in their unsuccessful effort towards Paris, and it may take some time for them to regain their fighting strength. During the past week or so terrific fighting has taken place, with tanks and airplanes freely used among all the armies, but the French, assisted at some points—especially about Chateau Thierry—by the Americans, succeeded in holding all important points, and even in driving the enemy back over several important areas east of Mery, southwest of Montdidier, and northwest of Chateau Thierry. On June 10 and 11 the French struck the enemy, under Gen. Hutier, a hard blow along a front of 7 1/2 miles, recapturing Belloy and a wood and heights between Courcelles and Mortemer, taking 1,000 prisoners and several guns. On June 11 negro troops, assisted by tanks, distinguished themselves by taking an important crest. Although Compiègne has been evacuated, by the civil population and a salient on the East bank of the Oise, by the troops, the withdrawal of the French, was made with a purpose, in perfect order, the palm of Gen. Foch evidently being to save his men as much as possible, reserving his great strength for the most important issues. In the meantime the Allies rejoice that the immediate aim of the enemy in the Battle of the Oise,—to drive a wedge between the British on the north and the French and Americans on the south—has been again frustrated. During the week

fighting again took place in Italy, where the Italians resisted successfully at Monte Como.

The Dollar Chain

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

Contributions from June 7 to June 14: H. P. Wilson, Dundas, Ont., 50 cents; Howard Gardener, Newbury, Ont., \$3.50; "Leaholme," 25 cents, Wm. Jamieson, Tara, Ont., \$3.50.

Previously acknowledged.....\$5,538.25

Total to June 14th.....\$5,546.00

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

While others are giving life and limbs, what are you giving?

Training Little Children.

Build up Virtues and Faults Will Disappear; Praise Will Do More Good Than a Dozen Scoldings.

ARTICLE X—BY MRS. ELVIRA HYATT.

It pays to have high ideals for our children, and to respect their individuality. Much can be accomplished by expecting children to be good, and by showing them that we trust them.

We should never call a child "bad", never wound his self-respect. This does not mean that his naughty actions should be "glossed over", but, as one wise educator has expressed it, we should realize that every fault is simply the absence of some virtue and we should try to build up that quality in which the child is deficient rather than condemn him for that which he has not.

Build up the virtues and the faults will disappear. If a child is selfish we should dwell on unselfishness; if the child is untidy, on neatness; if slow, on quickness; and we should always remember to praise even the slightest sign of the virtue we are working to cultivate. A child will try to live up to the thing for which he is praised. "How quiet and helpful my little Peggy is to-day," will do more good than a dozen scoldings about noise and mischief.

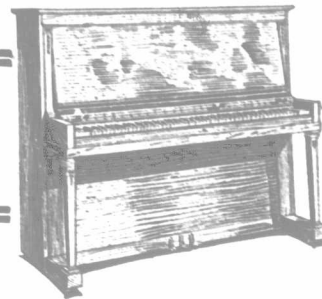
Stories can be told to arouse and stimulate high ideals. Stories have a wonderful educational value and almost any lesson can be taught in story form. Tell stories about birds, trees, flowers, animals, great and good men, simple stories of home and family life, stories from history and from the Bible. The eager little minds are ready for anything you wish to give them, and if you are a natural story-teller great indeed is your opportunity. Ideals of right conduct, love of family and sympathy with every living thing can all be given through the right use of stories.

Much has been said and written about pre-natal influence, but volumes more are needed on post-natal influences. One of the first things a baby learns is to "smile back" at his mother, and in all his earliest years the child reflects the attitude of those around him. He imitates the things which he sees and hears, in order to understand them, and "As the twig is bent, the tree's inclined."

A true mother leads a consecrated life. She will always be absolutely truthful and will keep every promise made to her child. She will recognize the good in all things and will never speak ill of anyone in her child's presence. She will keep away all thoughts of fear, and will awaken a spirit of loving service toward others and a growing belief in the Power which is within himself, until at last he grows into a recognition of the universal love and goodness which underlie the whole life.—Sel.

Gasoline Manners.—"In the olden days a gentleman used to call upon a lady with much formality and stately ceremony." "Well?" "Now he merely drives up and honks for her to come out."—Kansas City Star.

THE LANSDOWNE



BUILT BY NORDHEIMER'S

THE LANSDOWNE possesses a tone of good volume and refined quality. It is built on the new LANSDOWNE Scale, which although different from the Nordheimer Scale, possesses many of the characteristics found in Nordheimer instruments.

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

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

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

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CAREFULLY SEALED IN GERM PROOF TUBES

PURITY OATS

BRINGS TO YOUR TABLE THE DELICIOUS NUT LIKE FLAVOUR OF THE FAMOUS ALBERTA OATS

MANUFACTURED BY Western Canada Flour Mills Co. Limited

Churn Butter in One Minute

The Last Word in Butter-Making



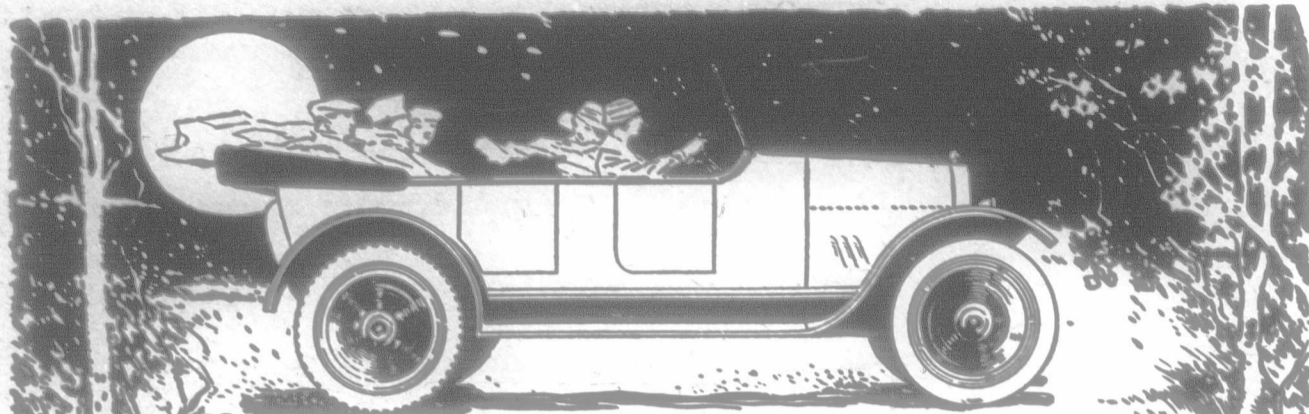
One Minute

- Self-cleaning in 10 seconds. No scrubbing, etc. Makes the most perfect butter in from one to three minutes. Gets the maximum of butterfat out of your cream. Operates with a slight pressure of finger. No power required. Vibration of oil tempered steel springs does the work. A child can operate this churn easily. Thorough washing of the butter in the churn in a few seconds. Most sanitary churn in the world. Nothing but glass touches the cream. No dashers, paddle-wheels, etc., no corners, cracks or crevices to scrub or clean.

FREE You owe it to yourself to at least investigate this marvelous time, trouble and labor-saving churn.

Write to-day for free literature which fully illustrates and describes this one-minute butter-maker. Don't wait. Get posted—NOW!

The Hamilton Automatic Churn Company, Limited 41 King William St., Hamilton, Ont.



BRISCOE POWER—
An Abundance of Energy
That Finds No Task Too Great

THE Briscoe Half-Million Dollar Motor—quick, responsive, silent—turns a small quantity of gasoline into a tremendous lot of power. Thus you have quick pick-up of speed, an even flow of power, and many miles of travel on a gallon of fuel. A low-cost car possessing high-priced features.

THE CANADIAN BRISCOE MOTOR COMPANY, Limited
 Factory—BROCKVILLE Head Office—TORONTO

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

The BRISCOE Car \$1095.00

POULTRY AND EGGS

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

BABY CHICKS FOR SALE—I AM A specialist in baby chicks, and I have at all times thousands of chicks for sale. My chicks will fill the egg basket at a time when others fail, because they are bred along scientific lines of egg production. June prices: Single-comb White Leghorns, Wyckoff strain, 20 cents each; Barron strain, 23 cents each, \$22 per hundred; White Wyandottes, 28 cents each, \$25 per hundred; Barred Rocks and Rhode Island Reds, 25 cents each, \$23 per hundred. Fred. J. Hind, 364 Broadview Ave., Toronto.

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

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

TILT STRAIN PURE-BRED ROUEN DUCK eggs, \$1.25 per eleven. A. F. Thornton Thamesford, Ont.

WANTED

Live Fowl

Waller's, 704 Spadina Ave., Toronto
 WRITE FOR PRICE LIST

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

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

Cabbage Plants

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

Herold's Farms, Fruitland, Ontario
 Dept. E. Niagara District

Lochabar Stock Farm is offering two right good Scotch Shorthorn bulls, 12 and 18 months; a roan and a red; also some females. D. A. Graham, R. R. 4, Parkhill, Ont.

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SHIP IT DIRECT TO US

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He receives the highest obtainable prices. He saves the MIDDLEMEN'S PROFITS.

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It costs nothing to write, and means money in your pocket if you do.

We have been buying wool for over 30 years, and know the market from the ground up.

Prices now are very high, and we strongly recommend you to ship to us as soon as possible.

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WOOL FURS HIDES

LIVE POULTRY

We are open to handle large quantities of live spring chickens or live poultry of any kind; highest market prices paid according to quality. Write us for quotations; Prompt returns. Henry Gatehouse & Son, 348 Dorchester St. W., Montreal

When writing please mention this paper

Questions and Answers. Miscellaneous.

Feeding Habits of the Skunk.
 I desire to get some information on the habits and life of the skunk. I would like to know what comprises their diet, etc.
 J. A. G.

Ans.—The skunk is an American carnivorous mammal of the weasel family. They are nocturnal and feed on animal substances. It sometimes commits havoc among hens and eggs, but is less injurious than the mink or weasel. It is rather a clumsy, slow-moving animal, and is more easily detected than are other members of the weasel family. Small quadrupeds, birds, reptiles, insects, etc., make up a large portion of its diet. The skunk remains in its burrow from December to about the middle of February, laying up no winter store but retiring in a very fat condition.

Sow With a Cough.
 I have a young sow which is apparently thriving, has a good appetite, and appears healthy except that she has a cough. What is the cause and remedy for same?
 J. E. W.

Ans.—From the symptoms given it is rather difficult to definitely diagnose the case. A pig suffering from bronchitis will very often have a distressing cough. A cough is also a symptom of a hog suffering from tuberculosis, especially if the lungs are affected. Lung worms also cause a spasmodic cough. There is little that can be done for any of these diseases. Keeping the pen clean, dry, free from draft, and using disinfectants frequently, are preventive measures.

Threshing Gangs.

At the present time the movement is under way to organize threshing gangs to do the threshing this fall so that the farmer will not have to leave his plowing and other fall work to assist his neighbor with the threshing. This system is not an untried experiment in Ontario, as in several counties these gangs have been employed and have proven successful. There are difficulties in the way, as might be expected; for instance, there is liable to be a considerable loss of time during the early part of the season when but a few crops are to be threshed. However, when the threshing season opens there need be little idleness, provided the moves between farms are not too great. Loss of time will be reduced to a minimum if the farms could be threshed out in rotation, and the work in one community finished before a move was made to another. Providing sleeping quarters for the number of men necessary to do the threshing would be an embarrassing feature to many farmers. This difficulty could be overcome by the thresher providing a sleeping barn for his gang, as is done in the West. A structure 10 by 12 feet, built on trucks, wind and rain-proof, and with two tiers of bunks on each side, would provide accommodation for the number of men required at an Ontario threshing. As the men would require their wages each week, it would only be fair that the farmer make prompt settlement with the threshers. The higher rates which must of necessity be charged in order to cover the expense of extra men and board will loom large in the eyes of some who are not in the habit of placing a cash value on their own time and labor. It is not uncommon for a man to spend between two and three weeks assisting his neighbors at threshing. Where a man is alone on the farm, he is required to work long hours in order to do the chores night and morning and be at the threshing on time. When he is away, his two, three or four-horse team is standing idle, and as a result it may mean that anywhere from ten to twenty acres less plowing is done in the fall than would be the case were it not for the time taken in threshing and silo-filling. It would require eight or nine men in the gang, without counting anyone to look after the straw or assist in carrying away the grain. An effort is being made to secure men for threshing through W. A. Riddell, Superintendent of the Ontario Trades and Labor Branch, Toronto. It is suggested that arrangements be made early if a threshing gang is required. Applications for men should reach Dr. Riddell's office not later than July 10. The plan is to fill each application in the order in which it arrives.

Oak Park H.

The Oak Park Hamilton sals breeders with animals having show type and of the animal with considerable blood, which, of the most popular cattle. A most of the young sires junior sire at 62 1/2 per cent. May Echo Sy twenty of his 32.95 lbs. of butter in seven days. Hengerveld, th has a daughter is very well known at least, it is attention to the grand champion in 1916 and 19 quarter brother Artis, 43.06 lbs. Lakeview Dutch dian champion

The Riverside

A distinguished ment from Riverside the Hamilton s are all sired by Johanna Pontia known that in dividuality his giving the best seven tested d neighborhood of Included in th Johanna Pontia brother of Toi lbs. milk; 1,057 and former Ca His dam is a 25 Rue 4th's Lad. retained as juni side herd. The also show anima Johanna Kornduced as a juni butter, 568.2 lbs 48.90 lbs. butt fourteen days. castic produced junior two-year Sarcastic Rue, side Pontiac D Kol of Riversie sister of Jemima 32.32; Johanna 32.30 lbs., and will pay to look the sale.

Bronte Holstein

The contribu Farms, Bronte Holstein Sale at well described i pearing elsewhere need little intro for it is well kn made and broken and owned at Lakeview Dutch veloped into Ca and the same s on the part of the which made th been exercised animals consigne Two daughters o of the great cow signed—look for Lakeview Rattl champion, which of her daughters in the advertisem strain of Holsteir foremost produc sold at the b Daisy is another Bronte Farm, a daughters with c as her son sired Mona, making Lakeview Dutch 43-lb. cow. Onl from the Lakevie mentioned. As s detailed review pective purchas to write at once to Bronte, Ont., an regard to the of high quality and

Gossip.

Oak Park Holsteins at Hamilton.

The Oak Park consignment to the Hamilton sale will provide Holstein breeders with an opportunity to select animals having a strong combination of show type and record production. Three of the animals offered furnish the sale with considerable May Echo Sylvia blood, which, perhaps, is at this time one of the most popular blood lines in Holstein cattle. A most pleasing individual among the young sires is King Sylvia Keyes, the junior sire at Oak Park, who brings this blood into the offering since he carries 62½ per cent. of the same breeding as May Echo Sylvia herself and, besides, twenty of his nearest relatives average 32.95 lbs. of butter and 641 lbs. of milk in seven days. Lakeview Dutchland Hengerveld, the senior sire at Oak Park, has a daughter selling and, since this sire is very well known among Ontario breeders at least, it is scarcely necessary to call attention to the fact again that he was grand champion at Toronto and London in 1916 and 1917, or that he is a three-quarter brother to Lakeview Dutchland Artis, 43.06 lbs. in seven days, and also Lakeview Dutchland Wayne Rose, Canadian champion senior two-year-old.

The Riverside Holsteins at Hamilton.

A distinguishing feature of the consignment from Riverside Farms, Caledonia, to the Hamilton sale, is the fact that they are all sired by the noted herd sire, King Johanna Pontiac Korndyke. It is well known that in type, production and individuality his sons and daughters are giving the best of satisfaction. Twenty-seven tested daughters average in the neighborhood of four per cent. butter-fat. Included in the offering is Riverside Johanna Pontiac, a yearling bull and a brother of Toitilla of Riverside, 24,094 lbs. milk; 1,057.5 lbs. butter in one year, and former Canadian R.O.P. champion. His dam is a 29-lb. daughter of Johanna Rue 4th's Lad. His twin brother is being retained as junior herd sire in the Riverside herd. The three females offered are also show animals and have been tested. Johanna Korndyke Luraine has just produced as a junior four-year-old 26.12 lbs. butter, 568.2 lbs. milk in seven days; and 48.90 lbs. butter, 1,070.7 lbs. milk in fourteen days. Riverside Pontiac Sarcastic produced 14.09 lbs. butter as a junior two-year-old, and is out of Toitilla Sarcastic Rue, butter 28.88 lbs. Riverside Pontiac Daisy is out of Daisy De Kol of Riverside, butter 27.25 lbs. A sister of Jemima Johanna Wayne, butter 32.32; Johanna Rue Luraine 2nd, butter 32.30 lbs., and Toitilla of Riverside. It will pay to look up this consignment at the sale.

Bronte Holsteins Selling at Hamilton.

The contribution of Lakeview Stock Farms, Bronte, Ont., to the grand 30-lb. Holstein Sale at Hamilton on June 25, is well described in the advertisement appearing elsewhere in this issue. Readers need little introduction to the herd itself, for it is well known through the records made and broken by the individuals bred and owned at Lakeview Stock Farms. Lakeview Dutchland Artis has been developed into Canada's only 43-lb. cow, and the same skill and good judgment on the part of the manager, T. A. Dawson, which made this record possible, has been exercised in connection with the animals consigned to the sale on June 25. Two daughters and a full-blooded sister of the great cow mentioned will be consigned—look for them. Then there is Lakeview Rattler, another Canadian champion, which is accompanied by two of her daughters whose records are given in the advertisement. The Rattler family strain of Holsteins is highly esteemed, and foremost producers of this family will be sold at the buyer's price. Lakeview Daisy is another of the good ones from the Bronte Farm, and with her goes two daughters with creditable records as well as her son sired by Dutchland Col. Sir Mona, making him a half-brother of Lakeview Dutchland Artis, Canada's only 43-lb. cow. Only a few of the good ones from the Lakeview Stock Farms have been mentioned. As space will not permit of a detailed review we would advise prospective purchasers and bidders at the sale to write at once to Lakeview Stock Farms, Bronte, Ont., and get full particulars in regard to the offering. If in search of high quality and heavy producing Hol-

steins the Bronte consignment will supply it, and the reply to your request will give you the information to verify this statement.

The Manor Farm Consignment.

As will be noted in Mr. Gooderham's advertisement appearing elsewhere in these columns, Manor Farm's consignment of ten females and two bulls to the Hamilton sale are of the sort that would add interest to the best that the great Black and White breed can produce. A large percentage of the mature cows listed, including the 30.59-lb. six-year-old cow Manor P. H. Flower, are granddaughters of that great old sire King of the Pontiacs, which many breeders refer to as the greatest bull living or dead. That these granddaughters of King of the Pontiacs, even if untested, would prove one of the strongest drawing cards in any sale-ring goes almost without saying, and in this case as each one has an excellent official record attached, ranging up as high as 30.59 lbs. of butter in 7 days, Mr. Gooderham may well feel certain that this part of his consignment will be well received. Of the younger breeding females in the offering it will be noted that on their dam's side they are of practically the same breeding as the cows just mentioned. The majority of their dams, in fact, are sisters to the 30-lb. cow mentioned, while their sire is King Segis Pontiac Posch, the young son of the 32.59-lb. four-year-old Fairmont Netherland Posch and King Segis Pontiac Alcartra (the \$50,000 bull). Of the daughters of King Segis Pontiac Posch selling, Manor K. S. Segis is the highest one. She has a 21.39-lb., 2-year-old record from 424 lbs. of milk and is the first of the daughters to be offered for sale. These heifers reach almost the high water mark in Holstein breeding, and they are again bred to the present junior sire at Manor Farm, King Korndyke Sadie Keyes, whose dam, Lulu Keyes with 36.05 lbs. of butter in 7 days, was one of the most perfect types of all of the breed's high record cows. His sire, Sir Sadie Segis Korndyke, was a brother of the 4-year-old Mabel Segis Korndyke with 40.32 lbs. of butter in 7 days. Holstein breeders will not only note that this is not only three crosses with record production throughout but also that it includes the families that are to-day the most popular throughout the United States and Canada. In males, only two are included in this offering. The first a 6 months son of King Korndyke Saddie Keyes, is one of the first sons of the junior sire to be offered for sale. His individuality is all that one could wish for in a 6 months youngster, and assures the success of the junior sire at Manor Farm. The dam and sire's dam of this calf average 30.55 lbs. of butter in 7 days, while calf No. 2 is a grandson of Pontiac Korndyke, with his dam and sire's dam averaging 30.90 lbs. of butter in 7 days. The full particulars regarding Mr. Gooderham's entire offering, as given in the catalogue issued for Canada's first club sale of 30-lb. blood, will interest all and should bring a large number of breeders who are prospective buyers of the best, to Hamilton on June 25th. Just as we go to press we are advised that the catalogues promise to be late in leaving the printers, and breeders who do not receive their copy requested are asked to kindly overlook the delay, and are promised that in either pedigrees or cattle there will be no disappointments on sale day.

A Long Talk.—Dr. Wiley tells the following story: Sleepily, after a night off, a certain intern hastened to his hospital ward. The first patient was a stout old Irishman.

"How goes it?" he inquired.
 "Faith, it'sh me breathin', doctor. I can't get me breath at all, at all."
 "Why, your pulse is normal. Let me examine the lung-action," replied the doctor, kneeling beside the cot, and laying his head on the ample chest.
 "Now, let's hear you talk," he continued, closing his eyes and listening.
 "What'll Oi be sayin', doctor?"
 "Oh, say anything. Count one, two, three, and up," murmured the intern, drowsily.
 "Wan, two, three, four, five, six," began the patient. When the young doctor, with a start, opened his eyes, he was counting huskily, "Tin hundred an' sixty-nine, tin hundred an' sivity, tin hundred an' sivity-wan."—Christian Register.

Canadian National Exhibition

TORONTO

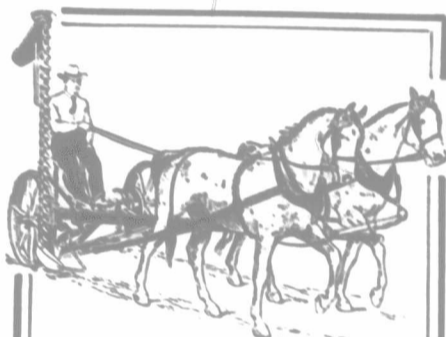
AUGUST 26th—SEPTEMBER 7th

The Largest Prize List Ever Offered for Horses, Cattle, Sheep, Swine and Poultry.

New and Better Classifications in all Departments.

A Win at Toronto Places You in the Front Rank of Breeders and Brings Many Buyers.

Write Now for Prize List to:
JOHN G. KENT, General Manager, 36 KING STREET EAST.



Save Precious Moments In Haying Time

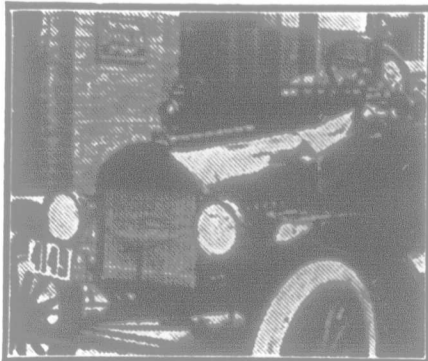
by using a PETER HAMILTON MOWER. Its great strength, absence of side draft, clean cutting and ease of handling enables you to cut surely and quickly the heaviest crops you grow.

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

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

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

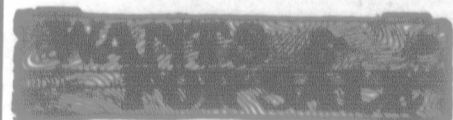
The Peter Hamilton Company, Limited
Peterborough, Ontario



\$14.75 FORD STREAMLINE HOOD

Covers the Brass Radiator.
 Write for Circular.
BURROWES MFG. CO., TORONTO
 609 King St. West

When writing please mention "Advocate"



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

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

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

WANTED—EXPERIENCED AND TRUST-WORTHY married man to take charge of small herd of Holsteins and farm of 25 acres, and to supply one extra milker. Apply to R. O. P., Farmer's Advocate, London, Ont.

WANTED—BY EXPERIENCED HERDSMAN engagement by year, Canadian, married. Box "B", Farmer's Advocate, London, Ont.

CREAM

We buy cream every day in the year except Sundays and Xmas. We have been engaged in creamery work twenty-five years and have established extensive business connections. Our trade is growing. We simply must have cream and are prepared to PAY THE PRICE and in addition guarantee a satisfactory service.

One of our regular shippers east of Toronto milked 12 Ayrshires last year and received from the TORONTO CREAMERY CO. LTD. \$1,922.00 for his cream. Another regular shipper west of Toronto milked 11 Holsteins, 6 of which were heifers freshened for the first time, and his receipts from the Toronto Creamery Co. Ltd. were \$1,505.54. In addition, he sold some milk locally and vealed some calves on whole milk for which he received \$235.00, making a total herd cash receipt of \$1,740.54. The skim milk is not included in either case. Think it over! Neither of these men are new shippers. They have shipped to us for years. If these figures interest you, write for particulars of our service. The Toronto Creamery Company, Ltd., Church Street, Toronto.

GRAND TRUNK RAILWAY SYSTEM

Time Table Changes

A change of time will be made on

June 23rd, 1918

Information now in Agents' hands

Riverside Farms

WILL BE REPRESENTED AT

Hamilton Consignment Sale

June 25th, 1918

By **ONE SON** (fit for service and a brother of Toitilla of Riverside, former Canadian R. O. P. Champion) and

THREE TESTED DAUGHTERS

of King Johanna Pontiac Korndyke, the sire of 27 tested daughters, averaging around 4%. A grandson of Colantha Johanna Lad and Pontiac Korndyke, and a brother of Pontiac Lady Korndyke, butter 38.03. His breeding is hard to equal.

J. W. RICHARDSON, Caledonia, Ontario

MAY ECHO SYLVIA BLOOD AT HAMILTON

The Oak Park Consignment

No. 1. **Premier Abbekerk Keyes**, a three-months son of a 20-lb. 2-year-old sister of Madam Posch Pauline. He is an exceptionally choice calf and sired by our junior herd sire, King Sylvia Keyes, who is a $\frac{1}{4}$ brother to world's champion milk producer, May Echo Sylvia.

No. 2. **Canary Colantha Abbekerk**, a two-year-old daughter of a 26.15-lb. cow, average test 4.85. Due in October to our junior herd sire, King Sylvia Keyes.

No. 3. **Laura Hengerveld of Oak Park**, an 18-months show heifer, by our senior sire, Lakeview Dutchland Hengerveld, Grand Champion, Toronto and London, 1916-1917.

No. 4. **Premier Johanna Posch**, a 7-months-old heifer, from a 29.01-lb. daughter of Johanna Mercedes of Riverside, an 84-lb. per day cow, with a 25.85 lb. 7-day butter record.

No. 5. **Premier Pauline Sylvia**, a two-months-old daughter of King Sylvia Keyes, our junior herd sire, and from a 26.66-lb. junior 4-year-old cow, who milked up to 93 lbs. per day.

Look up these pedigrees in the catalogue and come early to inspect them before the opening of the sale.

W. G. BAILEY Oak Park Farm PARIS, ONTARIO
HAMILTON SALE—JUNE 25TH.

FOR SALE—ONE 8-16

EVERY TRACTOR

in good working condition. Apply—

C. A. Moffit, Bow Park Farm, Brantford, Ontario

The ANNUAL FIELD MEETING

of the New England Shorthorn Breeders' Association will be held at

Flintstone Farm, Dalton, Mass.

on WEDNESDAY, JUNE 26th.

All interested are cordially invited

Please mention this paper

WOOL

When ready to sell, write us for prices or ship your wool in. We pay highest prices and make prompt returns. Try us.

William Stone Sons
LIMITED
Woodstock, Ontario

Markets

Continued from page 1054.

Cows and Heifers—Best heavy heifers, \$14 to \$14.50; good butchering heifers, \$13.75 to \$14.25; fair butchering heifers, \$11.50 to \$12; common, \$8 to \$9; very fancy fat cows, \$12.50 to \$13.50; best heavy fat cows, \$11.50 to \$12; good butchering cows, \$9.50 to \$10.50; medium to fair, \$8.50 to \$9; cutters, \$7.25 to \$8; canners, \$6.50 to \$7.25.

Bulls—Best heavy, \$11.50 to \$12.50; good butchering, \$10.50 to \$11.50; sausage \$9.50 to \$10.50; light bulls, \$7.50 to \$8.50; oxen, \$10 to \$12.

Stockers and feeders—Best feeders—\$10.50 to \$11; common to fair, \$9 to \$9.75; best stockers, \$9.50 to \$10; fair to good, \$8.75 to \$9.25; common, \$7.50 to \$8.

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

Hogs—Receipts were quite liberal last week and prices showed a heavy decline. Monday values on good hogs went off forty cents and pigs were declined \$1, compared with the previous week's close. On the opening-day of the week pigs sold from \$17.60 to \$17.75 and the better weight grades landed generally at \$17.60, with some extreme heavies down to \$17.25. Tuesday pigs sold at \$17.60 and other grades landed mostly at \$17.50, Wednesday's top, which was on pig weights, was \$17.50 and packers got their kinds mostly at \$17.25, Thursday's trade was about steady with Wednesday and Friday prices still lower, pigs selling at \$17.25 to \$17.35, top for yorkers was \$17.25 and packers grades landed at \$17.10 to \$17.15. Roughts brought around \$15 and stags mostly \$11 down. For the past week receipts were 23,800 head, as compared with 11,500 head for the week before and 20,000 head for the same week a year ago.

Sheep and lambs—A very light supply was offered last week, grand total being 4,800 head. Offerings were against 9,045 head for the week previous and 3,500 head for the same week a year ago. The week opened with spring lambs selling up to \$23, top dry-fed yearling lambs reached \$18.75 and \$19 and grassy kinds went from \$18.25 down, inferior to good culls selling from \$10 to \$16. Wethers were quoted up to \$15 and ewes reached \$13.50 and \$14. Receipts after Monday consisted mostly of a common to fair kind and the trade was lower. While no yearling lambs sold the next four days above \$18, choice ones were quoted up to \$18.50. Wednesday's trade on sheep was from 50 cents to \$1 lower than Monday, and before the week was out most of the decline had been regained. Friday yearlings sold at \$16, some wether sheep brought \$15 and ewes went from \$13 down.

Calves—Prices, under a very strong demand, were higher every day the last week. Monday top veals sold at \$17, with culls \$16 down, Tuesday the bulk of the tops brought \$17.25, Wednesday the best lots landed at \$17.75, Thursday's top was \$18.25 and Friday choice lots sold mostly at \$18.50, with culls up to \$17. The past week's receipts were 4,750 head, as against 4,595 head for the week before and 3,350 head for the same week a year ago.

Chicago.

Hogs—Butchers', \$16.45 to \$16.75; packing, \$16 to \$16.40; light, \$16.65 to \$16.80; rough, \$15.50 to \$15.85; pigs, \$16.25 to \$16.75.

Sheep—Quotations unchanged.

Peat and Its Possibilities.

EDITOR "THE FARMER'S ADVOCATE":

In damp, swampy countries, vegetable matter decays and forms a black, coal-like substance that burns very easily. This is peat, which is one of the low-grade, solid fuels. It is the first-formed strata in the natural coal formations, anthracite or hard coal being at the other end of the carbon scale. Peat exists the world over, and has been the fuel of the poor people in all ages. Peat is formed by the agglomeration of vegetable debris—it is a mass of decayed roots and grasses and holds a great deal of water which must be driven off by heat before it will burn. The composition of peat and wood is almost identical, there being a little

less oxygen and more carbon in the peat. The point of combustion in peat, however, is lower than that of coal or lignite.

Peat is found in a soft, plastic condition in the older and deeper deposits and of a spongy texture nearer the surface of the earth. It varies in color from light brown to dark brown, and at greater depths it becomes denser and nearly black and, in many cases, turns to lignite. Peat is wholly root and vegetable fibre and contains mosses, sedge and other herbaceous plants which grow in bogs or on marshy ground and at the shallow borders of ponds. Then as these plants mature they fall over, in the autumn, and are covered by the water where they grew, and in the course of ages there is a great accumulation of material. The bog-water excludes the air and so decay is slow and is further delayed by certain antiseptic properties that result from peat formation. Thus in course of time great aggregations of peat result. Peat is never found in arid regions and the largest peat accumulations are in Northern Europe and occur in small deposits, sometimes at a depth of 40 feet though 10 to 20 feet are common. Peat is only found in the northern and temperate regions, and especially in the north where a species of sphagnum moss grows. The reason there can be no peat in warm countries is owing to the rapid decay of vegetation. Peat formation is a slow process. Ireland alone has $1\frac{1}{4}$ million acres of peat. Norway, Sweden, Denmark, Holland, France, England and Russia have thousands of acres, and in Canada and the United States are enormous deposits. In peat bogs are present tannin, organic acids and various salts and iron which account for the antiseptic conditions, and so plants are often found in the peat formations so well preserved that they can be readily identified, and even small animal bodies are found in a good state of preservation.

Coal is, of course, our best fuel, but its scarcity indicates that we must find other supplies and so an impetus has been given to the peat industry, for peat is an excellent fuel where other kinds are not available. It is easily gotten at in the earth, for its only covering is the moss and fallen vegetation which grew there and have not lain long enough to change to peat.

To gather peat is simple enough, but it is hard, dirty work. The first step is to drain the bog and throw back the layer of dead vegetation, for this ordinary shovels are used but for cutting the peat or "turfs" a peculiar-shaped spade called a "slane" is used. This spade has the blade bent longitudinally at right angles and cuts sods from 3 to 4 feet long. When one layer of sods has been removed another is dug, and so on. Often it is necessary to do the digging in water. Then long-handled "slanes" are used.

Peat contains much water in its composition and so these large blocks are placed in the open to dry, but peat prepared in this way is liable to crumble in handling and in that state makes a miserable, smoldering, smoky fire, so a process has been found whereby the peat is ground up while wet and pressed into small blocks, and these shrink so in drying that when they are dry they have very nearly the hardness of mineral coal and are excellent in either closed or open grates, or stoves for that matter. There is always a large residue of ash and some earth after a peat fire. Peat is light, clean and easy to use for fuel, and does not clinker. Two and one-half pounds of peat are equal to 1 pound of coal, and one pound of dry peat will give enough heat to evaporate six pounds of water.

The preparation of the peat for burning takes some time, for as it comes from the bog it is non-combustible, due to the amount of water it contains. The cutting, drying and pressing into bricks brings the cost up to \$2.00 a ton, more or less depending on the country where it is dug.

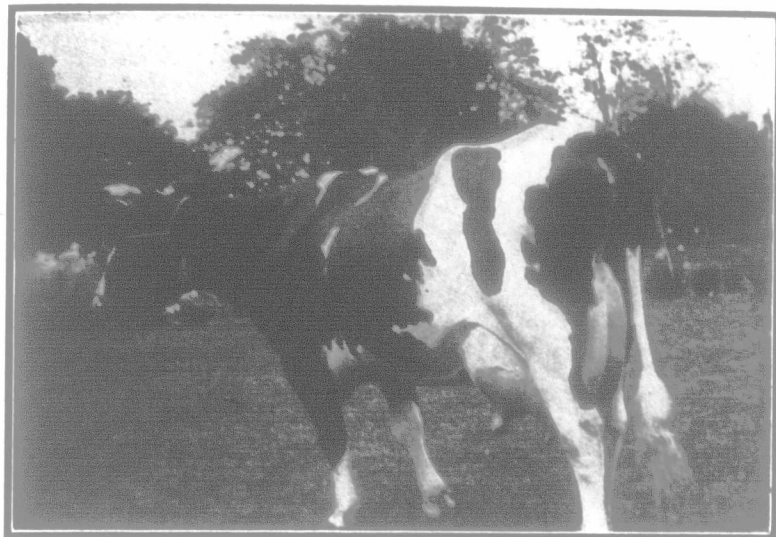
I have burned the little flower-pot shaped, porous clods of peat and they are very good. Gas is also made from peat and it has a very high heat value, and the energy can be economically and satisfactorily changed into heat units to fire steam boilers, kilns (pottery, lime, cement) and is used in foundries, glass works, furnaces, etc.

Peat fuel is especially useful in all metallurgical work, because it is lower in sulphur than either coke or coal. Though, when peat comes from a brackish region it often contains much sulphur, and some is sure to be present in the gas produced.

F. M. CHRISTIANSON.

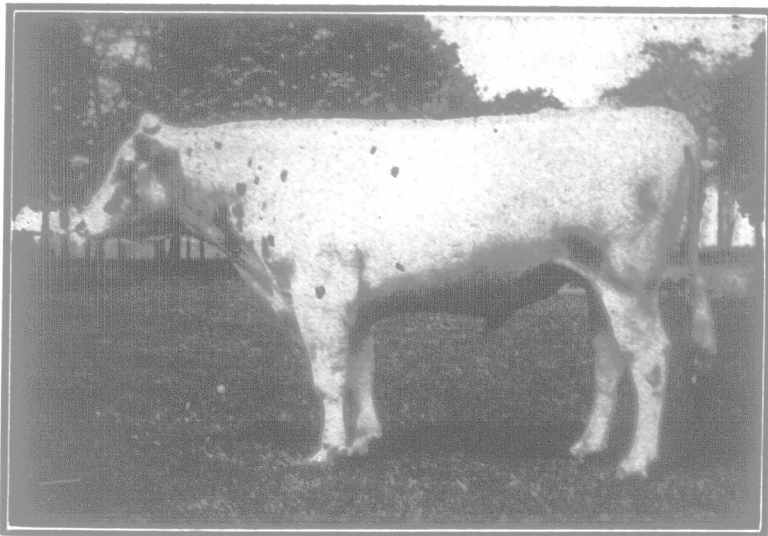
LAKEVIEW FARMS The Home of Lakeview Dutchland Artis

CANADA'S ONLY 43-LB. COW



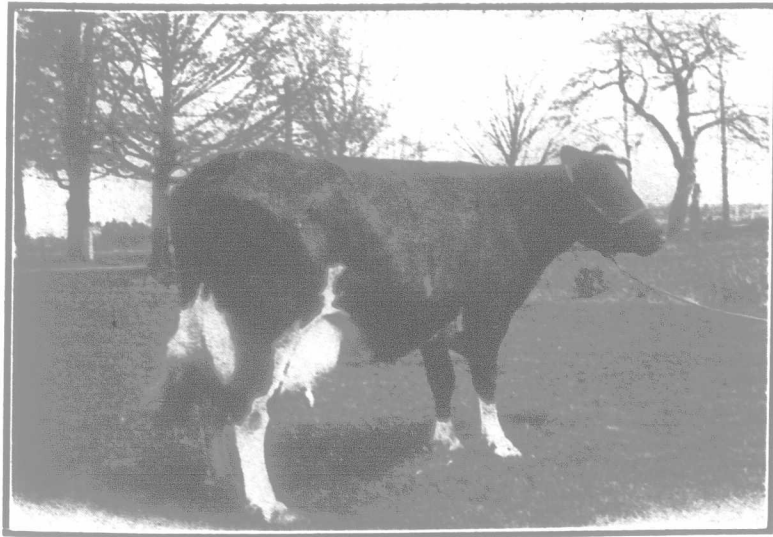
LAKEVIEW DUTCHLAND ARTIS
Canada's only 43-lb. Cow.

Milk, 654.5 lbs in 7 days; butter, 43.06 lbs. in 7 days. Also holds Can. champion senior 3-yr.-old record—milk, 567.9 lbs. in 7 days; butter, 34.66 lbs. in 7 days.



LAKEVIEW LESTRANGE DUTCHLAND

Sire, Dutchland Col. Sir Mona 2078. Dam, Lakeview Lestrangle, 741.9 lbs. milk and 38.05 lbs. butter. He is a brother to Lakeview Dut. Artis, Can. champion mature cow, 43.06 lbs. butter from 654.5 lbs. milk; also Lakeview Dut. Col. Rose, 31.71 lb. world's champion 2-year-old with 1st calf. The highest-record bull ever listed in a Canadian auction.



LAKEVIEW RATTLER
Canadian Champion in 1916

Milk, 724.0; butter, 37.54. Present Canadian champ. 8 months after calving, 30-day division—milk, 1409.7; butter, 61.20.

Consigns to the Hamilton Sale
Tuesday, June 25th, 1918

TWO DAUGHTERS OF THIS GREAT COW

In addition to these two daughters there is also a full-blooded sister of this great 43-lb. champion, together with her daughter, who is in calf to Dutchland Colantha Sir Mona; also

LAKEVIEW RATTLER, 37.54

SHE SELLS WITH HER TWO DAUGHTERS

Lakeview Rattler, 37.54 lbs. in 7 days, with 724 lbs. of milk, is not only one of the most perfect types of all the breed's high-record cows, but her 30-day record of 61.20 lbs. of butter and 1409.7 lbs. of milk, nine months after calving, is still the Canadian champion record of this division. She sells with two daughters, Lakeview Rattler 5th and Lakeview Rattler 6th. The former has a 19.16-lb. 3-year-old record, and the latter a 16.35-lb. 2-year-old record. There is no more popular blood in Canada to-day than that of the great Rattler family. As well as

LAKEVIEW DAISY, 34.26

AND HER TWO DAUGHTERS

Lakeview Daisy, 34.26 lbs. of butter and 696 lbs. of milk in 7 days, and 17,177 lbs. of milk in 9 months is, as her name indicates, also a "Lakeview" product, and one of the best we have ever bred. She and her two daughters would add strength to any offering. And

LAKEVIEW CANARY COUNTESS, 31.46

A THREE-YEAR-OLD DAUGHTER OF PET CANARY COUNTESS 2nd

Lakeview Canary Countess, the great 31.46-lb. 3-year-old daughter of Pet Canary Countess, 27.73 lbs., is a half sister to Lakeview Lestrangle, 38.06 lbs. of butter and 741.9 lbs. of milk in 7 days, and we think she is one of the greatest females we have seen in any sale ring. Keep her in mind when looking them over on sale day. These are, perhaps, the tops of our females, but our entire offering of mature cows, as well as heifers, are of similar breeding throughout, and nearly all were bred at Lakeview.

IN BULLS

LAKEVIEW LESTRANGE DUTCHLAND

A SON OF OUR 38-LB. COW, LAKEVIEW LESTRANGE

has the honor to be the first 38-lb. bull ever offered by auction in Canada. His dam also has 741.9 lbs. of milk for the 7 days, and besides this great milk-and-butter combination, he, as his photo indicates, is one of the strongest show bulls that will be offered this year. Stronger herd sire material is not to be found in Canada to-day. Neither are they plentiful in any of the States throughout the Union.

See catalogue for our other bulls listed, and don't fail to be with us on June 25th.

Look us up early and ask to see our entire Consignment.

LAKEVIEW STOCK FARMS, Bronte, Ont. MAJOR E. F. OSLER, Owner
T. A. DAWSON, MANAGER

THE BIG 12

At Hamilton

Tuesday, June 25th, 1918

MANOR FARM Sends all lovers of the "Black and Whites" a hearty invitation to be present, when every attention will be given them. All come.

- MANOR P. H. FLOWER** A magnificent individual, with a record at 5 years of 30.59 lbs. butter and 603.4 milk in 7 days.
- MANOR P. H. BELLE** Granddaughter of King of the Pontiacs, with a junior 4-year-old record of 28.15 lbs. butter and 528 lbs. milk in 7 days.
- MANOR P. H. MAUD** Granddaughter of King of the Pontiacs, with a record at 5 years of 24.66 lbs. butter and 495 lbs. milk in 7 days.
- MANOR P. H. RUE** Also a granddaughter of King of the Pontiacs, with a record at 2 years of 18.55 lbs. butter and 326.6 lbs. milk in 7 days.
- MANOR K. S. SEGIS** Daughter of K. S. P. Posch (son of the \$50,000 bull), with a record at 2 years of 21.39 lbs. butter and 424 lbs. milk in 7 days.
- MANOR K. S. NICOLO** 2 years, 16.32, daughter of King Segis Pontiac Posch, son of the \$50,000 bull (King Segis Pontiac Alcartra).
- AAGGIE PONTIAC WALKER** 20.77-lb. 2-year-old daughter of Aaggie Faforit Johanna, 30.68 lbs. butter. Best day's milk, 100.4.
- AAGGIE WAYNE KORNDYKE** An untested daughter of a 30-lb. cow. Bred to King Korndyke Sadie Keyes.
- MANOR SEGIS LADY** A yearling heifer of K. S. P. Posch, out of a 26-lb.-3-year-old; a fine individual.
- MANOR PONTIAC CALAMITY** Another fine 2-year-old heifer from the great show cow, Homestead Houwtje Calamity.
- KING NICOLO SADIE KEYES**
KING PONTIAC SADIE KEYES Here are two young sires, almost ready for service; both sired by my junior sire, King Korndyke Sadie Keyes (dam, Lulu Keyes, 36.05 lbs. butter in 7 days). One is from a 26-lb. 3-year-old daughter of Pontiac Korndyke, the other from a 25-lb. daughter of King of the Pontiacs.

LOOK THESE UP IN YOUR CATALOGUE

GORDON S. GOODERHAM

MANOR FARM

CLARKSON, ONTARIO

THE LAST ANNOUNCEMENT
OF THE GREAT

Hamilton Holstein Sale

Canada's First Annual Club Sale of Thirty-Pound Blood
SELLING AT THE JOCKEY CLUB
HAMILTON, ONTARIO

Tuesday, June 25th, 1918

SIXTY HEAD OF THE BREED'S BEST

THE first time in the history of Canada that sons and daughters of 36- to 43-lb. cows have ever been offered for sale, either by private or public auction. Every animal tuberculin tested and fully guaranteed. In no Canadian sale ring has there ever appeared so large a number of 30-lb. cows and descendants of 30-lb. cows. There are daughters and granddaughters, sons and grandsons of such noted sires as King of the Pontiacs, King Segis, Pontiac Korndyke, Colantha Johanna Lad, Dutchland Colantha Sir Mona, King Segis Pontiac Alcartra, King Segis Pontiac Posch, King Korndyke Sadie Keyes, and others equally as great. Among these are cows with records up as high as 37.54 lbs. of butter and 724 lbs. of milk in 7 days; several of which are now holding Canadian Championship records. With but one or two exceptions every 30-lb. cow selling will have a son or daughter also listed. As will be noted by the

catalogue, nearly everything consigned by each individual breeder was bred by him. It is, therefore, a breeders' sale throughout. They are offering the best their herds command, and are backing them with the most liberal guarantee ever attached to a public offering in the Dominion. Every one of the sixty lots listed should appeal strongly to buyers of the best.

The following breeders make up the contribution:—

Lakeview Stock Farm, Bronte, Ontario.
Manor Farm, Clarkson, Ontario.
Ridgedale Stock Farm, Freeman, Ontario.
Oak Park Farm, Paris, Ontario.
Riverside Stock Farm, Caledonia, Ontario.
Herd of G. Cox, Winona, Ontario.
Herd of H. Dymont, Dundas, Ontario.

FOR CATALOGUES APPLY TO THE SALE MANAGERS

AUCTIONEERS:—

R. E. HAEGER, ALGONQUIN, ILL.
B. V. KELLY, SYRACUSE, N. Y.

GORDON S. GOODERHAM, CLARKSON, ONTARIO
T. A. DAWSON, BRONTE, ONTARIO

N. B. Remember, it is distinctly a sale of 30-pound blood.

Tractors, Automobiles, Aeroplanes, Trucks and Motor Boats give better service and last longer when lubricated with En-ar-co National Motor Oil.



Oils Excel As Do the Men Who Make Them

Scientific Refining Made a Reality By En-ar-co Graduate Workmen

Lubrication satisfaction depends upon one vital factor—the workmen between the raw material and the finished product. To them is entrusted the task of refining the crude; the production of lubricants which mean success or failure to *your* motor.

En-ar-co refiners are graduate workmen. Each man has passed the rigid requirements of the efficiency standards set by En-ar-co experts. He has successfully completed the several grades of specialized training. Each man seeks to merit his master degree, for responsible tasks are entrusted to graduate workmen only.

Scientific Refining, as originated by the Canadian Oil Companies, consists of more than mechanical processes. It is more than laboratory formulas and standardized methods. It is all these, combined with the highest development of skilled training.

En-ar-co National Motor Oil The Scientific Lubricant

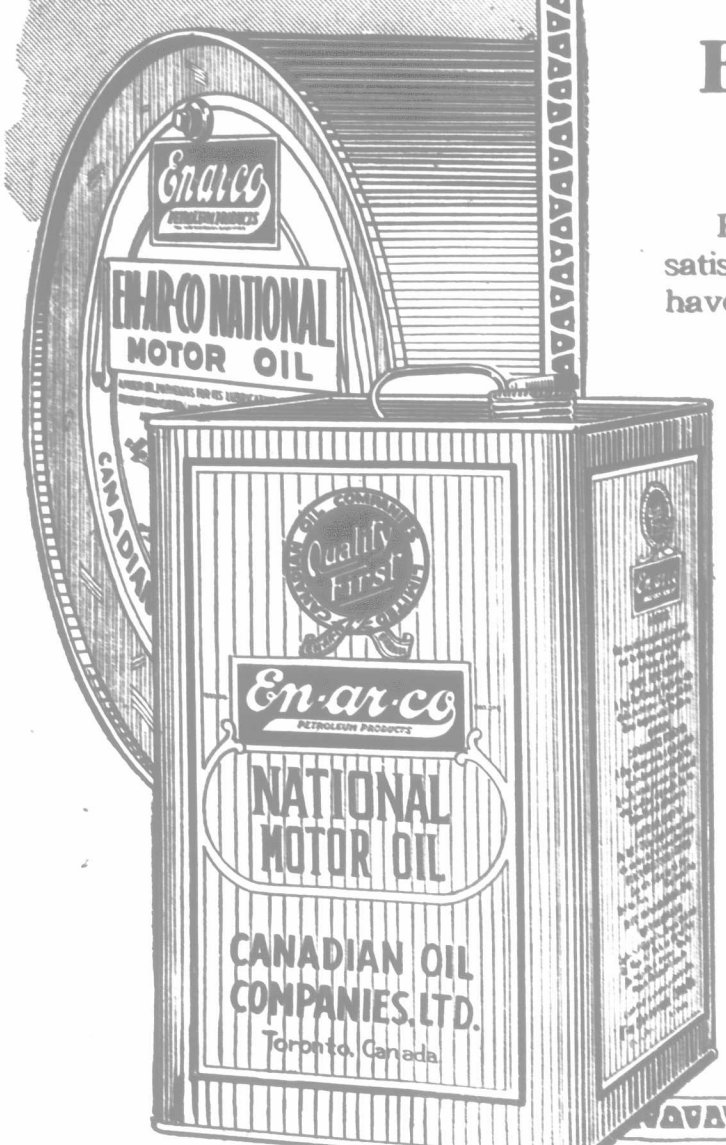
For nearly 40 years, En-ar-co National Brands have given utmost satisfaction by reason of the higher quality that En-ar-co methods have produced.

Leaders and authorities recommend its constant use. Thousands of users proclaim its excellence. Experience has taught them that En-ar-co means power conservation—it means that any motor will perform its duty in the most efficient manner.

Let this satisfaction be yours. ⁷ Decide *now* to get better results by always using this scientific lubricant, made by graduate workmen.

Send This Coupon for FREE Handy Oil Can

Get this long spouted can that enables you to oil the hard to reach parts.



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Canadian Oil Companies, Limited, Dept. L-5
2-12 Strachan Ave., Toronto, Ont.

I own..... (Give name above)
..... automobile or tractor and enclose two 3-cent stamps. Send me Handy Oil Can FREE. Please give nearest shipping point in this province and quote prices on the items I have marked. I will be in the market about..... (Give date above)

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I use..... gals. motor oil per year I use..... gals. kerosene per year
I use..... lbs. axle grease per year I use..... gals. tractor oil per year

My Name is.....
Address.....
Postoffice..... Province.....

Tear or Cut Out — Mail Today

NOTE: This can will not be sent unless you give make of your auto or tractor.

JUNE 2
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Are You Saving Up?

If you are we can help you, and if you are not now is the time to begin.

If you want a .22 rifle, a bicycle, or any of the things all boys like to have, you can earn it yourself in spare time, instead of waiting for someone to make you a present.

One of our boy agents earned \$2.50 the first afternoon he tried our plan to help him make money, and a girl of ten made \$8.00 in fifteen days. Another boy made \$30.00 in two months in his spare time.

Lots of others are doing as well and better than the instances given.

You Can Do as Well

It doesn't require anything more than a little work, which you can do at odd times. Any boy or girl with average ability and the desire to succeed can earn enough by securing new subscribers to the Farmer's Advocate and Home Magazine to be able to buy any of the things you have been saving up for.

From Nova Scotia to British Columbia

Boys, girls, and older people too, are helping the work of The Farmer's Advocate and getting money to buy things they want by seeing one or two people each day and telling them about the paper which has been fighting the farmer's battles for over fifty years.

If You Want Some Money

Cut out the coupon and send it to us and we will give you full information and instructions.

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

Gentlemen:—I want to earn money by securing new subscribers to The Farmer's Advocate. Please send me instructions.

Name..... Age.....

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Factory Equipment on more than 1 1/2 million Fords.

The Ford car has been developed from the point of engine efficiency.

Champion

Dependable Spark Plugs are factory equipment on all Ford cars as an important part of that efficiency. Every Ford owner who would preserve that efficiency should insist that his replacements be Champion "X" plugs. The patented asbestos-lined copper gaskets, an exclusive feature in all Champions, protects the porcelain and gives long and dependable service. Look for the name "CHAMPION" on the porcelain. It guarantees "Absolute satisfaction to the user, or free repair or replacement will be made."

Sold by dealers everywhere.

The following is quoted from the instruction book in each Ford car:

"There is nothing to be gained by experimenting with different makes of plugs. The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor."

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

Champion "X" for Ford Cars Price, \$0.75

Machinery to Save Man Labor.

Necessity is said to be the mother of invention and this fact is being proven in this time of labor scarcity. Not only are larger machines used on the farms to do the work but every industry is finding ways of using machinery to replace man power. At some railroad terminals where a large number of men were required to handle the immense quantities of freight the electric tractor or what is sometimes called the "trackless" train is being used to advantage. The following paragraphs appeared in "Marine Engineering."

"An interesting example of the unusual practicability of these machines is at Piers 4 and 5, the Pennsylvania freight terminal, in New York, which was one of the most congested railroad freight terminals in the country. Here the installation of the tractors and the 'trackless-train' method of industrial haulage has almost doubled the capacity of this terminal, and the increased tonnage is now handled with about half as many men as were formerly required.

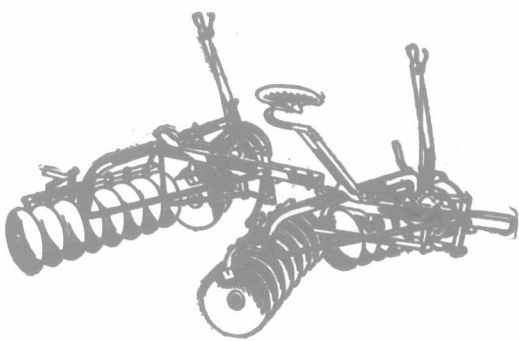
"This remarkable change was brought about by the employment of four small electric industrial tractors and 225 trailer-trucks, rebuilt from the old four-wheeled hand-trucks formerly used, and the utilization of the 'trackless-train' method of haulage, which is in its essentials the same as that of a railroad, the difference being that this system is not—as is the railroad—restricted to rails, and as a consequence is more flexible, and so more efficient.

"Under the old system of hand-trucking, 105 men were required to move about twenty-five car-loads of freight across the platforms and into the cars themselves. Now, with the new system in operation, only one hundred men are needed to load forty cars with 440 tons of freight in the same time.

"Being convinced of the soundness of the 'trackless-train' method, the officials in charge of these piers laid out the work in conformity with the method, and again the railroad system, in a general way, was used. They realized that to make the tractors most efficient they must be

"Bissell" Disk Harrows

The Bissell Disk Harrows have great capacity for hard work, the disk entering the ground naturally and leaving behind it a finely pulverized soil. This is the secret of good tillage.



The frame on the Bissell Harrow is directly over the gangs, the draught being well back where the work is being done. The horses do not have to carry the weight of the pole, levers, braces or frame. This feature is important, and herein lies one great advantage of Bissell Disk Harrows.

For over a quarter of a century the manufacturers of Bissell Disk Harrows have made a special study of this particular implement and spent years of time and effort in perfecting the present Bissell Disk Harrow. The result is that to-day it is acknowledged to be far in advance of any other similar implement for cultivation.

THE ESSENTIAL FEATURES

The Bissell Disk Harrows combine the important features of great capacity for hard work, thoroughness of cultivation, lightness of draught, ease on the horses, and strong, substantial, durable construction. Built also in sizes suitable for use with Tractors.

T. E. BISSELL CO., LTD., ELORA, ONT.

kept busy, so regular schedules were established and retained. Trailers were loaded at the point of origin and prepared for the tractor, which picked them up and deposited them at the destination, returning to the point of origin with empties, which were dropped and a new and loaded train pulled away to its destination, and so on interminably. The tractor was always busy, and because of this fact reached and retained a point of high efficiency.

"The tractors in this instance not only reduced the number of men required for the work, but cut operating costs in increasing capacity, and relieved congestion, which had, prior to this time, greatly handicapped the work.

"Examples of 'trackless-train' efficiency such as this are numerous and are not confined to any one industry, for the system and equipment are practical for almost any case where haulage is to be done either in shipyards or at terminals.

"The cost of operating the tractors themselves is about equal to one man's wages, \$3 to \$3.50 per day, and such trifling expense is inconsiderable when compared to the savings possible."


Kirsty Macdonald, who lived in a remote Highland parish, had a visit from her Edinburgh nieces, who were to spend a week or two with the old lady. So she determined to show them off on Sunday at the village kirk of Lochaber. The young ladies wore costumes of the purest snowy white. At one point of his sermon, the minister, in speaking of the angels of heaven, said: "And who are they in white array?" To the consternation of the congregation, Kirsty said: "It's ma two nieces, sir, from Edinburgh."

Gen. Sir William Robertson has been appointed to command the forces in Great Britain in succession to Field Marshal Lord French who has been appointed Lord-Lieutenant of Ireland.

Clydesdales AND Shorthorns Wanted

A number of Registered Clydesdales—fillies, stallions and mares—ages rising one to five years; must be fair size, with quality. Shorthorn heifers, one to three years old; must have size and quality. Anyone with above-mentioned kind of stock for sale should communicate at once. Mention county and station when writing.

W. J. McCallum, Clydesdale Importer
Brampton, Ontario



ABSORBINE

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

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is a **SAFE ANTISEPTIC AND GERMICIDE**

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.50 a bottle, delivered. Describe your case for special instructions and Book 5 R free. ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price \$1.25 per bottle at dealers or delivered. W. F. YOUNG, P. O. F., 258 Lyman's Bldg., Montreal.

DR. PAGE'S SPAVIN CURE

Cures the lameness from Bone-Spavins, Side-Bones, Ringbones, Curbs, Splints, etc., and absorbs the bunnies, does not kill the hair, absorbs Capped Hocks, Bog-spavins, thick pastern joints; cures lameness in tendons; most powerful absorbent known; guaranteed or money refunded.



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SUNNYSIDE HEREFORDS

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

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

Alloway Lodge Stock Farm

Angus - Southdowns - Collies

SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edward 1st prize, Indiana State Fair.

Robt. McEwen, R. R. 4, London, Ont.

SUNNY ACRES ABERDEEN-ANGUS

Bulls of serviceable age and females not akin.

WM. CHANNON & SON
P.O. and Phone Oakwood, Ont.
Stations—Lindsay, G.T.R. and C.P.R.

Balmedie Aberdeen-Angus

Get high-class Angus bull and breed the champion steers. I have show-ring quality bulls from 10 to 24 months of age; also choice 1 and 3-year-old heifers. T. B. BROADFOOT, FERGUS, ONT.

"MAPLE LEAF FARM"

SHORTHORNS SHROPSHIRE
CLYDESDALES BERKSHIRE
John Baker, R.No.1, Hampton, Ont. Bell Phone Solina, C.N.R., Bowmanville, G.T.R. and C.P.R.

ABERDEEN-ANGUS

Alonso Matthews, Manager, Forest, Ontario
H. Fraleigh, Proprietor, Meadowdale Farm, Forest, Ont.

Brownlee Shorthorns. Offers a choice lot of young bulls, ranging in ages up to nine months, and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. Douglas Brown, Bight, Ont., R. R. 3, Ayr Station, C. P. R.

Operation on a Horse.

An operation which is believed to be unique in veterinary science has been performed on an army cast mare of the roadster breed by J. G. Reynard, V. S., Perth. The mare which was bought from Messrs. Patrick, horse dealers, by John Lorimer, butcher, Perth, without warrant, had a hard substance of an extraordinary character under the skin on the right thigh. The owner having consulted Mr. Reynard, the latter, from the shape and position of the foreign body in the leg, concluded that a piece of shrapnel had somehow obtained lodgment. An old wound in the flank seemed to confirm this diagnosis. The mare was placed in the stocks at Mr. McEwan's smithy, Canal St., where the operation was performed. Four grains of cocaine having been administered, the necessary incision was made, the operation being performed with the greatest skill and success. To the obvious surprise of the operator, the foreign body was found not to be a piece of shrapnel, but a growing flat bone, like a shoulder or pelvic bone, the substance being about eight inches long, and from three inches at the lower part extracted to nearly two inches at the top. The thickness of the bone was from one-eighth of an inch at the sides to one-half inch in the middle. The mare which is about nine years old stood the operation remarkably well, and comparatively little blood was lost. Three large stitches were made in the wound from which the bone had been excised. The veterinary surgeon told your correspondent that the bone, in many respects, resembles the scapula of a horse. Mr. Reynard has forwarded the extracted body to the Veterinary College, Edinburgh, with notes on the case which, in fully twenty years' professional experience, is the first of the kind he has come across, and is believed by him not only to be rare but unique in veterinary surgery. The operator has no doubt that the extraction of the bone will give the mare relief and have the result desired. Asked his opinion regarding how a growing bone which had to be cut away from the live tissues of the leg at a part where the muscles are the strongest, came to be where it was, Mr. Reynard said his theory was that a small piece of bone, as a result of a bullet or shrapnel, had been blown off the innominate or pelvic bone and had lodged in this part with a piece of the periosteum still adhering to the main bone and to the part broken off. This would be enough to set up the bony growth found by Mr. Reynard. "This, however," added the operator, "is only my theory, but, I think, the only plausible theory." He pointed out that the piece differed from the scapula inasmuch as the broad end was at the bottom. The operation was a much bigger thing than Mr. Reynard had anticipated, the foreign body adhering to tissues and having to be dissected therefrom all the way round. ALBION.

The Winning Way.

Just a little bit of lovin', and a little bit of song,
And some pride to sort of make it straight and true and clear and strong,
And the work that you're a-doin' pretty near before you know,
Will have set the world a-talkin', and the little winds that blow
Will bring echoes of it to you, and you'll see that you have done
More than you had dreamed or hoped for when the task was first begun.
And you'll find the bit of lovin' you have put into the same
Has come back to you in lovin' and come back to you in fame.
B. M. CHANDLER.

A dean of Westminster used to relate that a gentleman once called to tell him that he had been to the abbey and had knelt down to pray, when one of the vergers came to up him and told him he must not kneel there. Upon asking the reason why, the verger replied: "Well, sir, if I was to allow it, we should have them praying all over the place!" This recalls the story of a gentleman who visited a church and asked the sexton if people ever used it for private prayer. "I ketcht two of 'em at it once!" was the reply he received.

Made in Canada Tarvia Preserves Roads Prevents Dust

A Tarvia Road to Market—

What the steel rails are to trolley-traffic, the Tarvia road beside it is to horse- and motor-traffic.

Over a Tarvia road, like that shown below, farm products can come to market in any sort of weather with full loads and at good speed.

The use of Tarvia makes a macadam road dustless, mudless, frost-proof, and automobile-proof, and costs so little additional that the savings in annual maintenance charges will more than make it up.

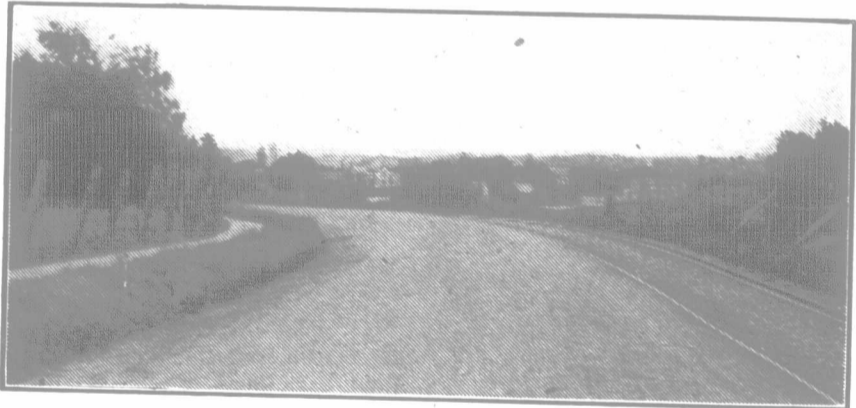
A coating of Tarvia in time will arrest the deterioration of plain macadam and add years to the life of a road at much less expense than any other method.

Many road engineers everywhere, in Canada and the States, have settled down to the regular use of Tarvia on their principal thoroughfares because they find it gives them better roads and at the same time materially reduces maintenance costs.

Booklet telling about the various Tarvia treatments free on request.

The Barrett Company LIMITED

MONTREAL TORONTO WINNIPEG VANCOUVER
ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.



This is Merriton Road in St. Catharines, an important thoroughfare running through the manufacturing district between St. Catharines and Merriton, resurfaced with "Tarvia-A," and with "Tarvia-B" seal-coat in 1917

Clydesdales and Shorthorns

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

Dual-Purpose Shorthorns

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

JNO. ELDER, Hensall, Ontario

SEVENTY-THREE HEAD OF SHORTHORNS

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

Here at Present—TEN IMPORTED BULLS

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

SHORTHORN BULLS Will. A. Dryden

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

SALEM SHORTHORNS

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

ESCANA FARM SHORTHORNS

Five Bulls for Sale. One roan senior yearling; one choice twelve months white calf, by Right Sort (Imp.); one select, dark roan, ten months calf; one roan yearling, by Raphael (Imp.); one red roan yearling, for grade herd. Farm 1/4 mile from Burlington Jct., G.T.R. J. F. MITCHELL, Limited BURLINGTON, ONTARIO

SPRING VALLEY SHORTHORNS

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

Shorthorns Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head.

A. G. FARRROW (between Toronto and Hamilton), Oakville, Ont.

WHEN YOU GO WEST

WE HAVE

THE LOWEST FARE

THE MODERN TRAIN

THE SCENIC ROUTE

AND THE SERVICE, TOO

For information, literature, tickets and reservations, apply to nearest C.N.R. Ticket Agent, or write General Passenger Dept., 226 St. James Street, Montreal, or 68 King St. E., Toronto, 92

CANADIAN NORTHERN

Scratches and Stocking

—Are prevalent in cold weather irregular work and overfed induces both. A system tonic and blood purifier, such as

FLEMING'S TONIC HEAVE REMEDY

will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. For box, \$1.

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75 Church St., Toronto

FLINTSTONE FARM

Breeders of—

Milking Shorthorn Cattle
Belgian Draft Horses
Berkshire Swine

A cordial invitation is extended to all interested to be present at the joint Field Day of the Massachusetts Swine Breeders' Association, the New England Shorthorn Breeders' Association, the New England Berkshire Club and the Berkshire County Farm Bureau to be held here at Flintstone Farm on Wednesday, June 26th. Prominent speakers will give short talks on farming problems of current interest. Cattle, Horses, and Swine will be judged.

Dalton, Massachusetts

Mardella Shorthorns

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

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

SHORTHORNS

FOR SALE

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

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

Evergreen Hill R.O.P. Shorthorns

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

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

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

Stewart M. Graham, Lindsay, Ontario

Shorthorns Pail-fillers for sale. Young bull and heifers out of high record cows. A few young cows and bulls with extra good breeding and quality.

PETER CHRISTIE & SON
Manchester P.O. Port Perry, Ont. Co.

Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

Ball Mustard.

What is the name of the enclosed weed which we have found growing in our fall wheat?

G. E. M.

Ans.—The enclosed plant is what is known as "Ball Mustard", a weed which is quite prevalent in the Prairie Provinces and is occasionally found throughout Ontario. Disking or cultivating as soon as the grain crop is off, late fall and early spring cultivation are means of eradicating this weed once it becomes established. However, where only a few plants appear, it is advisable to go through the field and pull them by hand.

Thriftiness of Pigs.

Are Tamworth pigs any harder to feed than some of the other breeds? Which breed would be the best to keep to be ready to kill at six months of age?

E. B. B.

Ans.—Feeding tests have gone to show that the rate of gain depends on the quality of the pigs and the ability of the feeder more than on the breed. In experiments representatives of one breed made the best gains at one time, while representatives of another breed may be ahead the next time. Practically any of the well known breeds can be made ready to kill at six months, at which age they weigh from 180 to 200 lbs.

Cow With Hard Cough.

I have a cow in fairly good condition that is out on grass and gets a pail of bran mash once a day. She has a hard, dry cough. What is the cause of same and what remedy would you recommend?

W. A. H.

Ans.—The dry cough might indicate that the cow is affected with tuberculosis. It frequently happens that an animal will be infected with this disease and yet remain in fairly good condition for a considerable time, but sooner or later she will begin to fail. Medical treatment is not effective for tuberculosis. Of course we cannot say definitely from the symptoms given that the cow is affected, and would advise having your veterinarian conduct a tuberculin test so as to determine definitely whether or not infection is present. It is well to dispose of an animal affected with tuberculosis, but under no circumstances should it be sold for breeding purposes.

Speaking of her American experiences, Mrs. Langtry remarked recently that what struck her most was the independence, almost amounting to indifference, shown by the boys and girls over there towards their parents.

"I hope though", continued the famous actress, "that the story a New York broker told me is exaggerated.

"Where have you been lately, Mary?" he once said to a young lady of eighteen or thereabouts, whom he had not seen for some little time.


"I have been to Rochester to see my father and mother", the girl replied.

"By Jove!" the broker exclaimed.

"And how did you find them?"

"Oh," said the girl, "I knew where they lived."

Mr. Tompkins was obliged to stop overnight at a small country hotel. He was shown to his room by the one boy the place afforded, a colored lad. "I am glad there's a rope here in case of fire," commented Mr. Tompkins, as he surveyed the room, "but what's the idea of putting a Bible in the room in such a prominent place?" "Dat am intended for use, sah," replied the boy, "in case de fire am too far advanced foh yo' to make yo' escape, sah."



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give you running water anywhere on the farm—in the house, the barn, the milk house or in the field—and help to increase production. They are made in several sizes—one to suit your needs. Whether you want the hand pump outfit for residence use or one of the larger power plants, a Fairbanks Pneumatic Water System guarantees the best. Write today. Tell us your needs and we will give you full details of what running water will do on your farm.

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SHORTHORNS, SHROPSHIRE

Four richly-bred Lavinia females for sale. Grand lot of bull calves sired by Lochiel (Imp.) for next fall's business. Also nice bunch of Shropshire lambs, sired by Miller ram. Come and see them. Wm. D. Dyer, R No. 3, Oshawa, Ont. 2½ miles from Brooklin, G.T.R.; 4 miles from Brooklin, C.N.R., or Myrtle, C.P.R.

CREEKSIDE SCOTCH SHORTHORNS

Herd headed by Gay Monarch 79611; dam, Sally 8th imp., and sire, the great Gold Sultan 75411. My present offering of young bulls includes several 7 to 14 months' youngsters, all thick, mellow well-grown fellows—reds and roans—and priced right. Can also supply females in most any numbers. Geo. Ferguson, Elora Station, C.P.R., G.T.R.—Salem, Ont.

WILLOW BANK STOCK FARM

SHORTHORN CATTLE and LEICESTER SHEEP. HERD ESTABLISHED 1855—FLOCK, 1848. The great show and breeding bull, Browndale = 80112 =, by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of Leicester rams, mostly from Imp. ewes. JAMES DOUGLAS CALEDONIA, ONTARIO

NICHOLSON'S SHORTHORNS

We have about a dozen young bulls (ages 8 months and upwards), sired by our herd headers. Best Boy = 85552 = and Browndale Winner = 106217 =. Write or come and see. R. and S. Nicholson, Parkhill, Ontario

BLAIRGOWRIE SHORTHORNS

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

MAPLE HALL SHORTHORNS

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

IMPORTED SCOTCH SHORTHORNS

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

GLENGOW SHORTHORNS

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

Robert Miller, Stouffville, Ontario

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.

Write for anything in Shorthorns. One hour from Toronto.

PLEASANT VALLEY FARMS

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



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The desk pictured above—the "Efficiency Desk" will do for you, in your record-keeping, what the automobile and the modern tractor have done in the field of actual farm development.

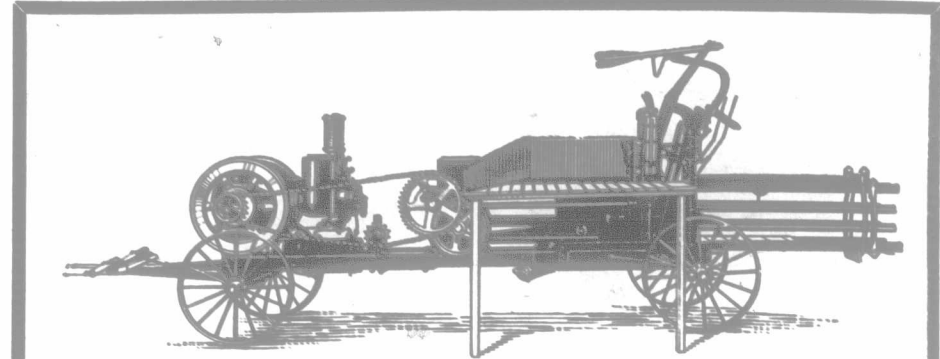
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Own and Use an International Press

WHETHER your hay crop is large or small, it pays to bale it with an INTERNATIONAL hay press. That means profitable marketing, easy and rapid handling and saving in storage space. A one-horse press with a 14x18 bale chamber turns out a daily average of 6 to 10 tons of baled hay. A two-horse press gives you 8 to 15 tons in bales. The motor press averages up to 20 tons, and the belt power press up to 30 tons—smooth, well-tied marketable bales. The bale chamber sizes are uniform and standard, 14x18, 16x18 and 17x22.

Some of the popular features of INTERNATIONAL hay presses—the low bale chamber that saves time and labor in the tying of bales, the spring roller tucker that makes the bales smooth, the block setters, the end delivery of bales, the low step-over of the horse presses, the power economy of all the INTERNATIONAL presses—these are features you should know about before you buy a hay press.

A card to the nearest branch named below, asking for INTERNATIONAL hay press information, will bring you a complete illustrated description of every press in the line, and bring it promptly. Write us now, while you think of it.

International Harvester Company of Canada, Limited

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

Questions and Answers. Miscellaneous.

O. P. V. Silage.

At what stage of maturity should oats, peas and vetch be when cut to be ensiled? I have been informed that this mixture will not keep as silage unless it is heavily weighted. J. W. M.

Ans.—This mixture is usually cut when the oats are in the dough stage. The mixture has made very good silage. It is not necessary to weight it in the silo if it is thoroughly tramped at the time it is ensiled.

Tanning Sheepskins.

I have a sheepskin with the wool on, which has been taken care of. I would like to have it tanned and dyed for household use. How should I go about the matter? W. D.

Ans.—There are recipes for tanning hides but we are not familiar with the method of dyeing wool on the hide. We would advise you sending it to a tannery if there is one in your locality. There is a tannery in London, and we believe there is one in Delhi, as well as numerous other places.

Testing Herd.

1. Where can I secure a man to test my herd for tuberculosis?
2. If some of the cattle react, should they be killed?

3. Do I lose the stock if they have to be slaughtered, or does the Government pay part of the loss? C. G.

Ans. 1. You might write to the Veterinary Director General, at Ottawa, or your local veterinarian should be able to test the herd.

2. Unless the cattle are very badly diseased it is not absolutely essential that they be slaughtered, although it may be advisable. Diseased animals spread infection to the healthy animals in the herd. If it were possible to isolate the ones that react, they might be kept, and their offspring, if taken away as soon as dropped and fed on milk from healthy cows, would be free from disease.

3. So far as we are aware the Government does not make any remuneration for animals destroyed because of infection with tuberculosis.

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Size, quick growth, rapid fattening on pasture or in stable, high dressing percentage, prepotency, hardiness, docility, popularity, superior milking qualities, are characteristic of

SHORTHORNS

THE BREED FOR FARM OR RANCH
DOMINION SHORTHORN BREEDERS' ASSOCIATION
W. A. DRYDEN, Pres., G. E. DAY, Sec.,
Brooklin, Ont. Guelph, Ont.



Milking Shorthorns

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

Weldwood Farm, Farmer's Advocate, London, Ontario

SHORTHORNS LANDED HOME

My new importation of 60 head will be at home to visitors June 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhops, Augusta, Miss Ramsden, Wimple, etc. Make your selection early. Gen. Issac. (All Railroads, Bell Phone) Cobourg, Ont.

"Going to Sell 'Em"

We have 5 thirteen-months bulls and are going to let them go. Three are by Pontiac Korndyke of Het Loo and brothers to Het Loo Pietertje (the world's champion heifer) while the other two are by King Segis Alcartra Spofford and Dutchland Colantha Sir Mona. Act quick if you want them.

W. L. Shaw, FROM TORONTO Roycroft Farm, Newmarket, Ontario

LLENROC STOCK FARM

On the Boulevard of the beautiful Niagara River

A few high-record Holstein bulls for sale at reasonable prices; also Holstein females in calf to our junior Rag Apple bull.

ADDRESS—W. C. HOUCK, R. R. No. 1, CHIPPAWA, ONTARIO

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Pusch and King Korndyke Sadie Keyes. All are from good record dams.

Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter in seven days. Correspondence solicited, visitors welcome.

Gordon S. Gooderham Stations: Clarkson and Oakville Farm on Toronto and Hamilton Highway Clarkson, Ont.

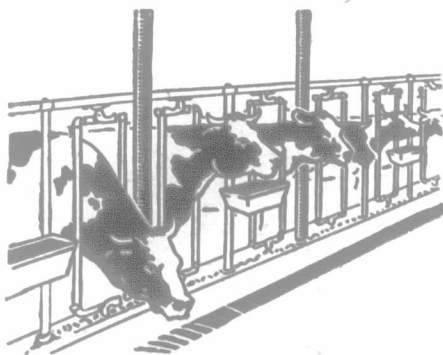
When writing advertisers will you kindly mention The Farmer's Advocate.

Killing Mustard.

I understand that mustard can be killed with a spray material. Kindly advise what material to use. A. S.

Ans.—Spraying with copper sulphate has in the majority of cases proven effective in eradicating this troublesome weed from cereal crops. This material is applied with the ordinary spray pump to which is attached a six or eight-row sprayer on a cart or light wagon. It is necessary that the mixture be applied in a fine spray. Nine pounds of bluestone or copper sulphate is used to 40 gallons of water. It is advisable to put the bluestone in a sack and suspend it in a vessel of hot water, as it will dissolve much more quickly than if cold water is used. Spraying should be done just as the plants are beginning to bloom and should be done on a bright, calm day. If rain comes soon after spraying, the work should be done over again. Forty gallons of the spray mixture should be sufficient for an acre. Experience has shown that wheat, barley, oats and clover plants are not injured beyond a slight browning for a few days after the bluestone is applied. The principle is that the material will stick to the roughened surface of the mustard leaves and run off the leaves of the cereal plants.

A. A. Colwill, Newcastle Stock Farm, writes that he has been successful in disposing of all his bulls that are ready for service, but he has a few good youngsters coming on. Some which are between four and five months old are considered fit to head any herd. The heifers which are being offered at this farm are of high quality and give promise of making splendid milkers. Young cows with calves at foot are of excellent breeding and of right good quality. Mr. Colwill has recently shipped several head of Tamworths to breeders in the United States, Quebec, New Brunswick and the Canadian West. The owner of Newcastle Stock Farm claims that prospects were never brighter than they are at the present time for good breeding stock. Consult Mr. Colwill's advertisement in another column for particulars regarding his Tamworth and Shorthorn herds.



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THERE is extra long service with Toronto Stalls because the galvanizing of the steel tubing is done by dipping. In this way the tubing is galvanized inside as well as outside. Same way with our painted stalls and stanchions. Ordinary stable equipment rusts away from the inside. For the most up-to-date equipment, including water bowls, bull pens and fittings of all kinds, write for the handy booklet on Toronto Stable Equipment. Address:— 146

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Shingle Your Barn with

PEDLARS' GEORGE SHINGLES

THEN you need have no fear that lightning or any of the other elements will harm it. These shingles give positive and dependable service in all weathers. Made of heavily galvanized steel, designed to lock securely on all four sides, they are immune from damage by lightning. They cannot rust, burn or decay, but will last a lifetime without repair. See your dealer or—

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HOLSTEINS

1 bull 2 years old; 1 bull 18 mos. old, from a 23½ lb. 3-year-old dam. One bull 13 mos.; others younger.

R. M. Holtby, Port Perry, Ont.

Questions and Answers. Miscellaneous.

Closing a Road.

How long can a township council keep a public road closed on account of a broken bridge? The bridge has a span of forty feet. People have to go about five miles farther to get to the station.

Ontario

W. J. D.

Ans.—There is no definite legal limit. The road ought not to be closed to traffic for an unreasonable length of time; but what is to be regarded as unreasonable must depend upon the circumstances of the particular case.

Registering Pigs.

I have a Tamworth sow that has been bred to a Berkshire. How many times will she have to be bred to a Tamworth before I can register the pigs?

I have a pasture but there is no well on it. Would it be cheaper to dig a well or draw the water by pump a distance of 60 or 70 feet?

E. S.

Ans.—The progeny of a registered sow mated with a registered boar of the same breed are eligible for registration.

2. It depends on how deep you would have to go for water. If a shallow well would supply water it might be the cheaper. However, water can be drawn the distance mentioned by an ordinary suction pump provided the water rises to within 20 or 22 feet of the pump cylinder.

Engineering

Where could I secure information on locomotive engineering? What school education is required and how long does it take to complete the course? Can a person start in and work up? What wages does an engineer receive?

H. B.

Ans.—Information is given on the subject at technical schools and the School of Practical Science, which is located in Toronto. To take a course at the latter school would require four or five years, and a person would be required to have his matriculation before commencing. No doubt a person could start in at a foundry or machine shop and secure practical information on the operation of an engine which would qualify him to do the work. Engineers' wages vary according to the skill of the workman.

Sweet Clover

I have five acres of sweet clover which was sown a year ago. It did not make much growth last year, and this spring looked to be dead but lately it has made exceptionally fine growth. What is the best way to handle it for hay? Will it stand to go in fairly green, like red clover? Or has it to be cut and coiled? How long should it stand in the coil? Does it go to seed after taking off the hay crop, or should it be cut for hay when desiring to save seed?

R. I. P.

Ans.—When saving sweet clover for hay, it is essential that it be cut at the proper time or else it becomes too woody. The proper stage is about the time the first bloom is ready to appear. Two crops of hay can be secured in the year, provided care is exercised not to cut the plant too low. The cutting-bar must be raised to such a height that some of the lower branches will be left uncut. Sweet clover is hard to cure as it has fairly large stems and is cut at the time when they contain a considerable amount of sap. Furthermore, if care is not exercised during curing, the leaves will be lost and these are the best part of the hay. Tedding and raking should be done when the hay is a little tough. Provided the weather is favorable, it may not be necessary to coil. However, if the plant is partially cured and then left in a coil for several days good quality hay can be made, provided the weather is right. Owing to unfavorable weather there is frequently a heavy loss in trying to save sweet clover for hay; for seed production the first crop of the second year is allowed to mature, although it may be possible to take a crop of hay and then allow the second crop to mature for seed. There is just the danger of frost injuring the seed before it is matured. When three-quarters of the seed pods become dark the seed crop may be harvested. Harvesting can be done with the binder and further operations carried on similar to other crops.

Not made over— Not added to— Built right, basically

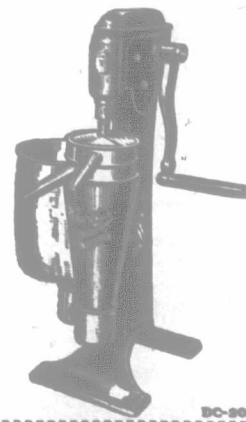
That's the Sharples Suction-feed Cream Separator.

No loss-alarm tacked onto it to remind you to turn faster.

Sharples skims clean at any speed, so it is not necessary to put on a contraption to prod you up to a fixed speed. You can judge how important this is when tests show that 95 per cent. of all separators are turned under speed much of the time, causing a waste averaging 10 pounds of butter per cow yearly. Sharples saves all this—automatically.

SHARPLES SUCTION-FEED CREAM SEPARATOR

The skim-clean-at-any-speed principle (suction-feed) is built into the Sharples, just as Nature built teeth into you. When you don't have any Nature-teeth, store-teeth are better than none, but they never measure up to the built-in kind. Think that over! Sharples construction has also eliminated troublesome discs—the simple tubular bowl containing but one piece. There are only half as many parts as in other separators—that's why a Sharples lasts longer than any other. Write for catalog to nearest office, addressing Dept. 78



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CHOICE BULLS—Ready for Service

No. 1—By a son of MAY ECHO SYLVIA. His two nearest dams (both Canadian champions) average 35.62 lbs. butter in seven days. Price \$1,000.

No. 2—By a son of MAY ECHO SYLVIA. His two nearest dams (one a four-year-old) average 34.17 lbs. butter in seven days. Price \$600.

Some extra choice young bull calves, from \$300 to \$1,000. We have sold 37 bulls this winter.

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R. W. E. Burnaby - Farm at Stop 55, Yonge St. Radial - Jefferson, Ont.

Hospital for Insane, Hamilton

We offer bulls only for sale, but they are from some of the choicest cows to be seen in any herd, and bulls equal to the best.

—Apply to Superintendent

SUMMERHILL HOLSTEINS

Present offering: Two bulls fit for service, both show animals, with excellent breeding, will be sold. Cheap if taken at once.

D. C. FLATT & SON

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R.R. 2, Hamilton, Ont.

SILVER STREAM HOLSTEINS

Present Offering—six extra well bred bull calves, sired by bulls with 34-lb. backing, and from tested dams, individually as good as their breeding. For fuller particulars and prices, write, or better come and see them.

J. MOGK & SON, R. R. 1, TAVISTOCK, ONTARIO

Cloverlea Farm Holstein-Friesians

Offers for sale a choice young bull three months old, out of a 20.3-lb. dam. For price and extended pedigree write to

GRIESBACH BROS.

COLLINGWOOD, ONTARIO

DUMFRIES FARM HOLSTEINS

Cows for sale, bred to Plus Evergreen, son of Evergreen March,

S. G. & ERLE KITCHEN

Bell 'phone.

ST. GEORGE, ONTARIO

PIONEER FARM HOLSTEIN HERD

—the herd that produces champions—offers a very handsome, ready-for-service son of Canary Hartog. His dam a high-testing sister of Calamity Snow Mechthilde 2nd, the new Canadian champion three-year-old in R.O.P. Also bull calves from champions, and from dams' sisters and daughters of champions. Don't take time to write—come at once and see them for yourself.

WALBURN RIVERS & SONS, R. R. 5, Ingersoll, Ont. Phone 343L, Ingersoll Independent Line.

EVERGREEN STOCK FARM... Registered Holsteins

Just now we are offering one choice yearling bull, ready for heavy service. The records of his five nearest dams average over 31 lbs. butter in 7 days, and over 100 lbs. milk in 1 day. We have also some high-record bull calves, including one whose dam and sire's dam have records that average 37.66 lbs. butter in 7 days and 127 lbs. of milk in 1 day. A. E. HULET, Norwich, Ont. Bell Phone 48-3

Riverside Holsteins

We still have some good bulls on hand, including two half-brothers of Totilla of Riverside, former Canadian R.O.P. Champion. Write or phone your wants to—J. W. Richardson, Caledonia, Ont.

I Will Sell My Herd Sire "SIR GELSCHER WALKER"

whose dam's sire is "King Segis" and sire's dam is by King Segis. His 7 nearest dams average 30 lbs. butter 7 days, age 3 years; quiet and sure; 70% of his calves are females. Price \$400.

Thos. L. Leslie, Alluvialdale Farm, Norval Station, Ontario

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And, remember, Victory Bond interest is free of Federal income tax.

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A small quantity applied when calves are
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JERSEYS and BERKSHIRES

We have bred over one half the world's Jersey
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We bred, and have in service, the two grand
champion Berkshire boars. If you need a sire for
improvement, write us for literature, description
and prices.

HOOD FARM, LOWELL, MASS.

Never Ending Work on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

It was so impressed upon me in my childhood that I should learn something every day that ever since I have endeavored to do so. Some days I learn more than the one thing, as for instance, when I read the letter by H. B. C. in the "Advocate" of May 23rd, and the "extra" for that day was, that farmers could be found who were not only willing to work six days of the week but were willing, even anxious to do likewise on the seventh. As every one knows the Government, in the kindness of its heart, has been trying to teach the "The man with the hoe", also his wives and his daughters, that their first duty is to "produce." I hope the "powers that be" will pardon the absence of capital letters in that important word "produce". For it is an important word. Nobody at this stage of the game would have the idiocy to deny it; but even a farmer, be he ever so willing, can hardly work all the time, and when a man (and his sons and his daughters and his wife and everything that is his except the hired man,) rises at four thirty—new time—and keeps agoing until darkness overspreads the land, he certainly must be "a glutton for work" if he wants to do that more than six days in the week. The above are the hours of the Nova Scotia farmers and I firmly believe they are doing it, as a class, because they think it is their duty and they are doing it willingly because they are sensible enough to know that they are helping in the best way. Because some farmers are investing in automobiles and other time-saving devices, the cry is raised that farmers are getting rich, now that prices are so high, forgetting completely the fact that the farmer raises but a small part of the things that he uses and that the things he buys are as high for him as for anyone else. One has to rise in an airship to get as high as farm machinery is now, and as for hired help, it would be a joke if it were not such a serious matter.

Nova Scotia farmers have never really made money. What little they saved was by doing without everything but the barest necessities. The fathers did that, and also their fathers, indeed back for three or more generations. The money thus laboriously saved was handed down from father to son and used only if absolute necessity demanded, each generation trying to do a little better than his predecessor. But now a new generation hath arisen, who say, "Our fathers saved everything they could even to the merest penny, they went without that which would make them comfortable, they left the "purple and fine linen" to others and even loaned those others the wherewithal to buy it, they drove old, decrepit farm horses, selling the best colts and putting the money in the village bank where it drew the princely interest of three and a half per cent. Our mothers worked so hard that they were old women at fifty, and many more things they did that really made this country and they were laughed at and called "hayseeds", which name was not meant in a complimentary sense, although hayseeds are great "producers". But we will not do the things that our fathers did in the same way. We will work but we will also play, when it is not to the detriment of our "production". We like the look of ourselves in tailor-mades, so we will wear them on the proper occasions, we are perfectly willing that the other fellow should have his turn at wearing "hand me downs" if that suits him. We have been laughed at for a number of generations and now we would like to do a little laughing ourselves. We expect to lead clean, decent lives trying to do our duty as well as we can, but we have hung on to the "tail of the chariot" long enough and we feel like letting somebody else do the hanging for a few generations.

We do nothing on Sunday in the shape of work, except what is necessary, like attending to the barn, and horses, milking cows, feeding calves, pigs, etc., and various other chores of like nature; but it is absolutely necessary work. The last on the farmer's list says:

"Six days shalt thou labor and do all thou art able,
And the seventh thou shalt manure the cows and sterilize the stable."

But that is necessary and not for extra gain. And another thing, is it not about



150,000 Farmers are Using the "Z" Engine

They have bought it because demonstration proved it the greatest engine value ever produced.

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3 and 6 h. p. "Z" Engines
Use Coal Oil, Distillate or Gasoline

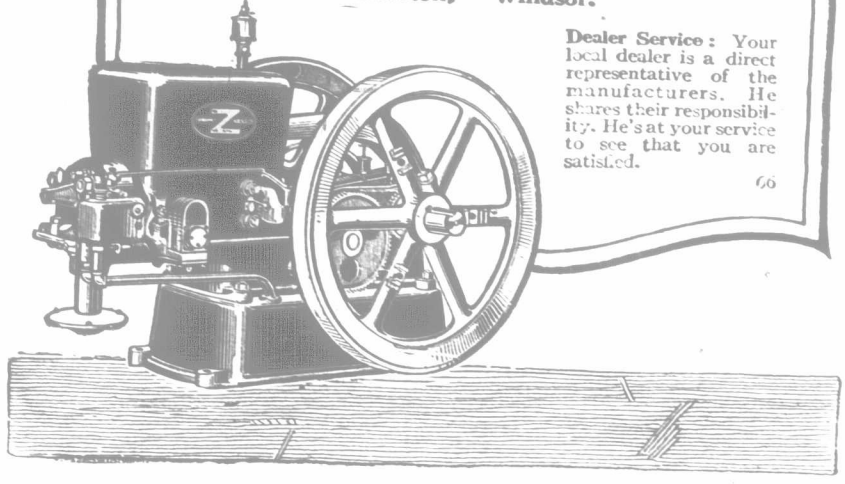
—the most economical fuels burned in engines today. The "Z" performs all farm work for which an engine can be used. It is simple, durable, light in construction, and can be operated by anyone. Fairbanks-Morse quality is built into every "Z" Engine and this quality is your guarantee of reliability.

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60

JERSEYS

"The Lord might have made a better butter cow than the Jersey, but he didn't." —[Ex. Pres. Green

According to the R.O.P. records, a four-year-old and a mature Jersey cow have each produced more butter in one year than any other cow, of any breed, in Canada. For information, apply to:

CANADIAN JERSEY CATTLE CLUB
B. A. BULL, Secretary, Brampton, Ontario

THE WOODVIEW FARM

JERSEYS

London, Ont.

JNO. PRINGLE - Proprietor

Place a bull at the head of your herd that will insure production. This one will do it:

GOLDEN FERNS MAJESTY 8473
Broken color; dropped November 16th, 1916. A high-class individual. Sire, You'll Do's Majesty 6658. A son of the great Oxford You'll Do, and having 75% the same blood as that famous bull. Dam, Lady Aidan A 5729, an imported Record of Merit daughter of Golden Ferns Noble, sold for \$25,000. Could anything be better bred? The first cheque for \$150 takes him. Watch our advertisements during coming months for bargains in young bulls. All bred in the purple.

BRAMPTON JERSEYS

We bred and owned the dam, and imported the sire of the champion R.O.P. butter cow of Canada. We own the champion four-year-old R.O.P. butter cow of Canada. To make room for 1918 importation, expected to arrive in May, we are making special offerings of females and bulls, all ages.

B. H. BULL & SON

BRAMPTON, ONTARIO

THE EDGELEY CHAMPION HERD OF JERSEYS

Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times.

JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) **EDGELEY, ONTARIO**

RECORD OF PERFORMANCE JERSEYS

CHOICE BULLS AND FEMALES. We have six young bulls of serviceable age, all from R.O.P. dams. Three are by our senior sire, Brampton Dairy Farmer, and three are by our junior sire, Brampton Bright Togo. Write for records. We also have females.

R. & A. H. BAIRD (G.T.R. Stations — New Hamburg, Bright **NEW HAMBURG, ONT**

I HAVE FOR SALE JERSEY COWS and BULLS

Six cows at \$200.00 each; bulls from \$50.00 to \$100 each. T. HETHERINGTON, c/o 481 Aylmer Street, PETERBORO, ONT.

time the boys not going of farm with the certainly are not to go. I the ener each far seriously farms w of old strength would r There an in the c their nu farmers nor yet

Begin

EDITOR One o remembe there is a for if on wages in thereby support a home. to locate navigable building useless, is located always ge ice make. A good for the speaking) is, the c and mos soil has plowing a clay and Some p deeply; deposits of the clay of extra shape to g As the been take one wishe and pile dry; then pulling all the rotter is advisab a rain, as ground a crop of h down the which oth clearing. to rot th making th If possi stumps an poor man hardly pos up enoug for himsel ground w crop of g to keep a h pig. He a real farmi time to ma Most of parts of t make them take time, to make g Ontario. I there is a new countr Nipissing

A. C. I Johns, N.I. jority of th R. O. P. ar are many g vines. Fc cow Daisy year-old of lbs. of fat i another \$1 animal \$80 fat.

time that less should be said about farm boys wanting to "save their skins by not going to war?" Compare the number of farm boys who have gone to the front with that of certain other classes and they certainly make a good showing. There are not many young fellows on farms now to go. No better move could be made for the enemy than to take the last boy off each farm, not only would production be seriously decreased for this year but the farms would so deteriorate in the hands of old men, through lack of physical strength to do the work, that Canada would not recover for years to come. There are enough deserted farms now but in the event of the above taking place their number would be multiplied. Young farmers are not devoid of Patriotism nor yet of a spirit of adventure.

NOVA SCOTIAN.

Beginning Farming in New Ontario.

EDITOR "THE FARMER'S ADVOCATE":

One of the most important things to remember in locating a homestead is that there is a good amount of timber on some, for if one has timber he can make good wages in cutting and selling the same, thereby making it possible for him to support himself and family while making a home. It is advisable when possible to locate near the railroad, or on some navigable stream, for roads are slow in building and unless graded are practically useless, except in winter; while, if one is located on a good waterway, he can always get in supplies in summer and the ice makes a good road in winter.

A good clay loam is desirable, although for the most of the country (locally speaking) one has to make the soil, that is, the clay is covered by black muck and moss, and to make a good lasting soil has to be mixed with the clay by plowing and harrowing. This softens the clay and the mixture makes an ideal soil.

Some people are inclined to burn too deeply; thus destroying the vegetable deposits of ages. Burning the surface of the clay makes it necessary to do a lot of extra work to get the land back in shape to grow crops.

As the timber (usually pulp wood) has been taken off a piece of ground which one wishes to clear, a good plan is to cut and pile all brush and burn as soon as dry; then partially clear the ground by pulling all small stumps and picking up the rotten logs and burning them. It is advisable to sow grass seed just before a rain, as the seed gets beaten into the ground and the following year a fair crop of hay can be cut, besides keeping down the growth of shrubs and brush, which otherwise would soon cover the clearing. Also, the grass has a tendency to rot the roots of the large stumps, making them easier to pull.

If possible, it is best to pull all the stumps and plow the land, but for the poor man starting on a homestead it is hardly possible. He can, however, spade up enough ground to grow vegetables for himself and family and harrow the ground without plowing and get in a crop of grain and hay, thereby being able to keep a horse and cow, a few hens, and a pig. He is then ready to begin some real farming on a small scale, for it takes time to make a farm.

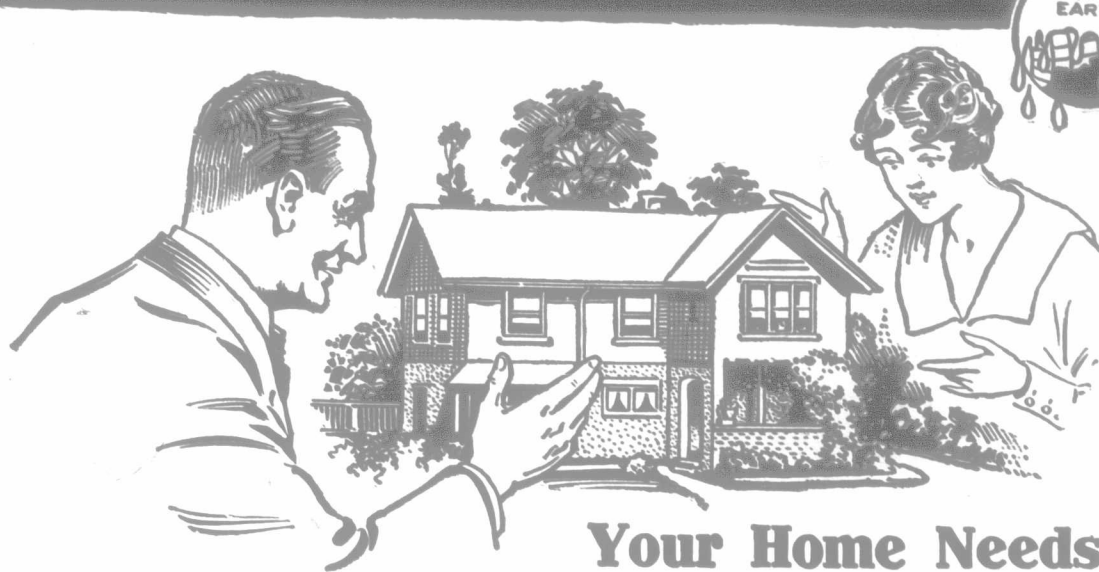
Most of the farms in the older-settled parts of Ontario have taken years to make them what they are, and it will take time, money and lots of hard work to make good productive farms in New Ontario. But for the pioneer who sticks, there is a good living to be made in this new country.

Nipissing Dist. H. J. WHEELER.

Gossip.

A. C. Fairweather & Sons, of St. Johns, N.B., write that while the majority of the high-producing cows in the R. O. P. are to be found in Ontario, there are many good ones in the Maritime Provinces. For instance, their Shorthorn cow Daisy Lodge has a record as a four-year-old of 11,638 lbs. of milk and 480 lbs. of fat in 365 days. Their cow, Bess, another Shorthorn, gave as a mature animal 8,609 lbs. of milk and 351 lbs. of fat.

**SHERWIN-WILLIAMS
PAINTS & VARNISHES**



Your Home Needs Protection

You can't afford to "let the painting go this year". Rot and decay are the greatest menace to property. You keep up life and fire insurance—why neglect your home?

A little paint or varnish on the outside or inside now will save you much greater expense later on.

LOOK IT OVER! THINK IT OVER. PAINT IT OVER!

with

**SHERWIN-WILLIAMS
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SWP for the House assures you of quality and durability, covering capacity and permanence of color.

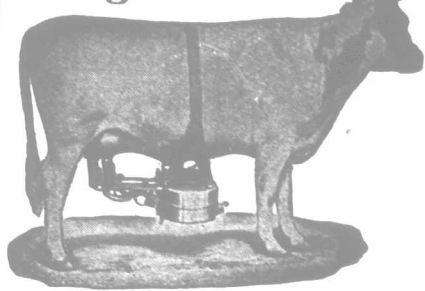
S-W Flat-Tone: A flat oil paint for interior walls and ceilings. The best decorators recognize the value of Flat-Tone for producing a permanent, velvety finish that will not rub off and is washable.

Send for our free book: "The A.B.C. of Home Painting," written by a practical painter, telling how to paint, varnish, stain or enamel every surface in and around your home.

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897, Centre St., Montreal, Que. 110 Sutherland Ave., Winnipeg, Man.
PAINT, VARNISH AND COLOR MAKERS. LINSEED OIL CRUSHERS.



Omega MILKING MACHINE



Milks fast and clean, has no rubber connections for the milk to pass through, but transparent celluloid tubes. The Omega is simple to operate, sanitary and easily washed. It is used in the private dairy of H. M. King George V. at Windsor Castle. Increased the milk flow 3% in a 17-day test on ten cows at the O. A. C., Guelph. Write to-day for free booklet.
C. RICHARDSON & CO., St. Mary's, Ont.

FEEDS

Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed Meal, Bran, Shorts, Feeding Corn Meal.

Also a full line of the reliable Good Luck Brands of Poultry Feeds.

Write or 'phone for prices.

CRAMPSEY & KELLY

Dovercourt Road, Toronto, Ontario

Glencairn Ayrshires Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont. Copetown Station, G. T. R.

GLENHURST AYRSHIRES—ESTABLISHED 50 YEARS

For a half-century Glenhurst Ayrshires have been noted for their depth and size, good teats and smoothness of conformation. Our famous Flos family has produced dozens of 60 and 65-lb.-a-day cows, many on twice-a-day milkings. We have young bulls up to twelve months, and females all ages. If you are looking for a combination of size, type and production—plus high butter-fat—write me or visit the farm. JAS. BENNING, Summerstown, G.T.R.; Williamstown, G.T.R., Williamstown, Ont.

RAVENSDALE AYRSHIRES

A few splendid 12-months-old bulls, out of R. O. P. and imp. high-testing dams. January test averaged 4.6%; also younger bulls and heifers. I have three registered Clydesdales for sale, eight months old. Write for prices or come and see stock. W. F. KAY, PHILIPSBURG, QUEBEC 50 miles south of Montreal. St. Armand Station, G. T. R.

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MESSRS. A. J. HICKMAN & CO., (Late Hickman & Scruby) Court Lodge, Egerton, Kent, England, Exporters of

PEDIGREED LIVE STOCK

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

CITY VIEW AYRSHIRES

White-Legged Kirsty—11,782 lbs. milk in 304 days in her 12th year; 69 lbs. per day at Ottawa Fair, 1917, winning 2nd. place. Do you want a serviceable bull from her, a right good one—size, color, quality? James Begg & Son, St. Thomas, Ont.

Choice Offering in Ayrshires

AT SPECIAL PRICES. Several young bulls of serviceable ages. All from R.O.P. sires and dams. Come and see them.

JOHN A. MORRISON, Mount Elgin, Ontario

Newcastle Herd of Tamworths and Shorthorns Boars ready for service. Some bred and ready to breed; 2 splendid sows carrying their 2nd and 3rd litters. Boars and sows not akin ready to wean. Mostly descendants of Colwill's Choice, 3-year champion at Toronto Industrial, and Imp. Cholder-ton Golden Secret. A few nice Shorthorn heifers in calf, deep-milking strain. Young cows with calves at foot. Long-distance 'phone. A. A. COLWILL, Proprietor, R.R. No. 2, Newcastle, Ont.

WOOL

Farmers who ship their wool direct to us get better prices than farmers who sell to the general store.

ASK ANY FARMER! who has sold his wool both ways, and note what he says—or, better still, write us for our prices; they will show you how much you lose by selling to the General Store.

We pay the highest prices of any firm in the country and are the largest wool dealers in Canada. Payment is remitted the same day wool is received. Ship us your wool to-day—you will be more than pleased if you do, and are assured of a square deal from us.

H. V. ANDREWS
13 CHURCH ST., TORONTO

RAM SALE

Lethbridge, Alberta

October 9 and 10

UNDER the auspices of the Southern Alberta Wool Growers' Association. Over one hundred members, owning two-hundred-thousand sheep.

ENTRIES CLOSE JULY 1

Entry Blanks May Be Had on application to

The Secretary, Shearlock Building, Lethbridge, ALBERTA

Shropshires and Clydesdales
Besides my regular offering of ram and ewe shearlings, I have the three-year Clydesdale stallion, Cairnbroig Heir 18299. Write quick, don't wait. W. H. PUGH, Myrtle Station, R. R., Ontario.

Gloverdale Shropshires and Berkshires—40 shearing rams, 70 shearing ewes; an exceptionally choice lot, true to type and well grown, nearly all sired by the show ram, Nock 16 imp. In Berkshires, the usual strong offering, including sows just bred. C. J. LANG, Burkton, Ont.

Meadowbrook Yorkshires
Six large litters of young pigs, about ready to wean; pairs supplied, not akin. Write your wants to G. W. MINERS, Exeter, Ont. R. R. No. 3.

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls, from 5 to 10 months old, reds and roans—dandies.
CHAS. CURRIE, Morrison, Ont.

BIG TYPE CHESTER WHITES
Three importations in 1918. From the leading prizewinning herds in the U.S. Over 100 April and May pigs, by imported sires.
JOHN G. ANNESSER, Tilbury, Ont.

POLAND CHINA
Boar 18 months; sows due in June and July. Also young pigs. Pedigrees furnished and express prepaid. Victor Vance, Box 13, Forest, Ontario

Lakeview Yorkshires If you want a brood sow or a stock boar of the greatest strain of the breed, (Cinderella), bred from prizewinners for generations back, write me.
John Duck, Port Credit, Ont.

PROSPECT HILL BERKSHIRES
Young stock, either sex, for sale, from our imported sows and boars; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right. John Weir & Son, Paris, Ont., R.R. 1

Featherston's Yorkshires—The Pine Grove Herd I have the choicest lot of young sows of breeding age that were ever on the farm. A few are already bred. Also have 10 young litters. Prices reasonable.
J. K. FEATHERSTON, STREETSVILLE, ONT.

DUROC JERSEYS
Our herd won all champion prizes at Toronto and London, 1916 and 1917. Pairs not akin. Young stock, all ages for sale. Visitors welcome. For further particulars write:
CULBERT MALOTT, No. 3, Wheatley, Ont.

SPRINGBANK CHESTER WHITES
Several young sows, ready to breed, and boars fit for service; young pigs, both sexes, ready to wean, by Sunny Mike—15917—first at Toronto in 1917. Satisfaction guaranteed, inspection invited.
Wm. Stevenson & Son, Science Hill, Ontario

TAMWORTHS
Young sows bred for Sept. farrow and a nice lot of young boars for sale. Write:
John W. Todd, R. R. No. 1, Corinth, Ontario

Control of Swarming.

One of the greatest problems in beekeeping to-day is the control of swarming. It is natural for a strong colony of bees to swarm in early summer when honey is coming in, but the breaking up of the colony cuts down the honey yield; while watching for and hiving swarms takes a great deal of the beekeeper's time, and the swarm may escape notice and fly away.

The methods of controlling swarming that have been tested at the Central Experimental Farm, Ottawa, fall under three heads.

(1) General measures. Partly shading the apiary; providing a large entrance with deep space between combs and floor; giving plenty of room in the brood chamber and supers; and young queens. These measures, while valuable, have been found insufficient in themselves to prevent the bees from raising queens in preparation for swarming.

(2) Manipulations to prevent more than one swarm. The queen's wings are clipped, preferably during fruit-bloom, and when a prime swarm issues and is still in the air, the queen is picked up from the ground and placed in a cage, and the hive is removed to a new stand. A new hive containing the caged queen is then placed on the old stand to receive the returning swarm, the queen being liberated later. The field bees join the swarm, leaving the parent hive so much weakened that it is not likely to swarm again. To make certain of this, however, the parent hive may be merely turned around and not removed to the distant stand until five days later. This method of swarm control necessitates immediate attention when the swarm issues, but, as the manipulations are simple, they can often be carried out by the home folks should the beekeeper be away.

(3) Manipulations to prevent swarming altogether. At the time of writing, none of the manipulations that have been tried has succeeded except the cutting out of all queen-cells every seven or eight days, and this failed during a heavy honey flow from clover at Ottawa in 1916 when the bees raised queens from worker larvae, and swarms issued before the queen-cells were capped over. It has, however, been found possible to prevent swarming in out-apiaries, forty miles north of Ottawa, by this means, although it entailed weekly visits from the middle of May until the middle of August, and much time was spent in examining each colony.

Experiments in the control of swarming are being continued, especially along the following lines, which seem the most promising:

(1) Testing systems of raising brood to the super. Many of these will delay swarming under some conditions.

(2) Finding means by which the brood chamber may be easily examined without lifting off the supers. A hive in which the brood combs are in a rack that can be drawn out sideways is being tried.

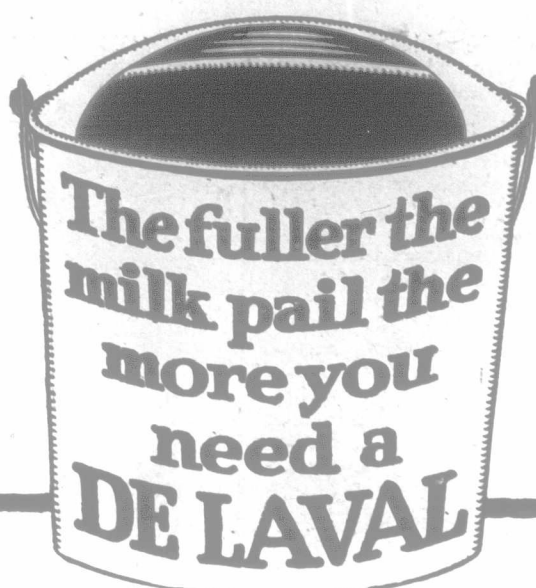
(3) Endeavoring to breed a strain that will not swarm, of which the preliminary step is to find out if the non-swarming character shown by some queens is inherited. A queen showing this character was found to retain it the following year.—Experimental Farms Note.

Re Spanish Coin.

To my mind M. A. C. has correctly interpreted the motto on the obverse of the coin referred to in your issue of the 16th instant. That on the reverse—Ultra Que Unum—numismatic style, seems to stand for Utraque Unum in plain language, and would be rendered into English—"They both, one," meaning that Spain at home and overseas (West Indies), are one kingdom—Unum is a numeral adjective signifying one, with regnum understood. [Utraque Unum (regnum) = Both one kingdom]. Submitted till we shall hear from a professional.

P. E. I. NUMISMATIST.

A Golf Handicap.—"I wouldna say McTavish canna learn the game," remarked Sandy, as they trudged home from the links; "but it will be deeficult for him."
"Aye," agreed Donald. "At times he will be like to bust, what wi' being so reelegious and tongue-tied."



Your need of a
DE LAVAL
CREAM SEPARATOR
is greater right now
than ever before

These are the days of the full milk pail.
But if you are trying to get along without any cream separator, or with an inferior or half-worn-out machine, the more milk you get the more cream you lose.

And no farmer can afford to lose even a little cream when butter-fat is selling at from 40 to 50 cents a pound.

With butter-fat at present prices, and our country begging us to stop waste, "cream slacker" methods of skimming milk must go.

Get a De Laval right away and put all the cream in the cream can.

There is no other cream separator that can compare with the De Laval in clean skimming, capacity, ease of operation, freedom from repairs and durability.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below.

THE DE LAVAL COMPANY, Ltd.
LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA
Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.
MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

SOUTHDOWNS AND SHROPSHIRE

We have an unusually choice lot of shearing Rams of both breeds to offer as flock headers, and for show purposes.

BERKSHIRES
We can offer some excellent young Boars and Sows, sired by Lucky Lad, 37075, champion Boar at the Canadian National Exhibition, 1916-1917. Also brood Sows.
LARKIN FARMS, (Please mention Farmer's Advocate) **QUEENSTON, ONT.**


OXFORD DOWN SHEEP
We are one of the oldest established firms in America. Although we have sold our farm at Arkell, we are still in the sheep business, having secured other land expressly for our sheep. Present offering, 100 yearling rams and 50 yearling ewes. Ram and ewe lambs for sale later. All bred from our own importations. Prices reasonable. Communicate to—Henry Arkell & Son, 70 Beauty Avenue, Toronto, Ontario. (Phone at present under name of T. Reg. Arkell).

ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO.
Langford Station on Brantford and Hamilton Radial

BERKSHIRES
My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.
ADAM THOMPSON, R. R. No. 1, STRATFORD, ONT. *Shakespeare Station, G.T.R.*

ENGLISH LARGE BLACK PIGS
We have some promising young stock from imported dam and sire of both sexes for sale. Large Blacks are greatly approved in England and will be a coming popular breed in Canada, and good for crossing. We also offer some young bulls from milking Shorthorns, imported stock.
LYNNORE STOCK FARM.
F. WALLACE COCKSHUTT, BRANTFORD, ONT.

DOUGLAS EGYPTIAN LINIMENT



Sure Cure For
POISON IVY

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By All Dealers

DOUGLAS & COMPANY MFRS.
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GRAND TRUNK RAILWAY SYSTEM

Highlands of Ontario

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

ALGONQUIN PARK
MUSKOKA LAKES
GEORGIAN BAY
LAKE OF BAYS
TIMAGAMI

ARE ALL FAMOUS PLAYGROUNDS

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

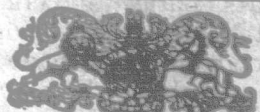
Secure your Parlor or Sleeping car accommodation in advance.

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

Food Will Win the War

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

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Land Agent, C.P.R.
Montreal, P.Q.



MAIL CONTRACT

Scaled Tenders, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 5th day of July, 1918, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week on the Petersburg No. 1 Rural Route, from the 1st of October, 1918.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Petersburg and New Dundee, and at the office of the Post Office Inspector, London, Ont. E. H. Fisher, Post Office Inspector, Post Office Department, Canada, Mail Service Branch Ottawa, 24th May, 1918.

DEAFNESS

ITS CAUSES AND TREATMENT
Write for Free Booklet and particulars of the free trial offer of the Mears Ear Phone.
THE MEARS COMPANY OF CANADA
Dept. A., 194a PEEL STREET, MONTREAL

Value of Fish Crop.

A writer in a recent issue of The American Exporter places the following value on fish: "The total value of the American fish crop, including Alaska and the insular possessions, is probably \$150,000,000 at the present time, although the latest official figures put the total at \$125,000,000. The fact, however, that a portion of these figures represents the output prior to the advance in prices resulting from the war seems to justify an estimate of approximately \$150,000,000 as the value of the United States output at the present time. This total of \$150,000,000 compares with \$40,000,000 as the value of the fish crop of Canada; Great Britain, \$52,000,000; France, \$33,000,000; Russia (in 1911), \$50,000,000; Germany, \$12,000,000; Scandinavian states, \$25,000,000, and Japan, \$50,000,000.

"In Europe, as a whole, the recorded fish crop in the latest available year is \$225,000,000; for North America (United States, Canada, and Newfoundland), \$175,000,000, and Japan, \$50,000,000, making the total for the countries supplying official figures \$450,000,000. For the remainder of the world, Asia, Africa, South and Central America, Australia, and the islands of the Pacific, there are only estimates, but these estimates bring the total of the world's fish crop at the place where taken from the seas at above \$500,000,000, suggesting that the sums paid by consumers probably exceed a billion dollars per annum.

"The world's oyster crop, it was estimated, amounts to approximately \$25,000,000 a year in value, of which four-fifths are grown in the waters of the United States, most of them along the Atlantic frontage, the remainder chiefly in the waters of France, Belgium, the Netherlands, and Great Britain.

"Fish forms a factor of considerable importance in the foreign trade of the United States, the total exported in 1917 amounting to \$25,000,000. If the amount sent from continental United States to its non-contiguous territories is included, fish and fish products passing through the ports of the United States in the calendar year 1917 would amount to approximately \$50,000,000.

"The capital invested in the fisheries of the United States, including vessels and the establishments on land in which the fish are handled, is, according to the latest official figures, about \$75,000,000, the number of persons employed 220,000, and the value of the sea products turned out by the canneries, \$50,000,000."

Varieties of Fish.

Fish is one of nature's foods which abounds in many waters, while the aborigines of our country used a good deal of this class of food the present race, as a whole, appear to prefer other forms of diet although fish is more generally used now than it was a few years ago. The following paragraphs are from an article on "Fish—its value as a food" which appeared in a recent issue of the "Literary Digest" giving some idea of the great variety of fish to be found in Canadian waters.

"These divide naturally into two classes: migratory and ground fish.

"The migratory fish are found at or near the surface of coastwise waters. They include: Alewife, Barracuda, Bonito, Bluefish, Butterfish, Croaker, Eel, Flounder, Fluke, Herring, Kingfish, Mackerel (all kinds), Porgy or Scup, Redfish, Rockfish, Salmon (Atlantic and Pacific), Sea-Bass, Sea-Trout (Southern), Shad, Shark (certain varieties), Sheepshead, Silver Hake (also called Whiting), Smelts, Spots, Striped Bass (also called Rock), Swordfish, Weakfish or Squeteague.

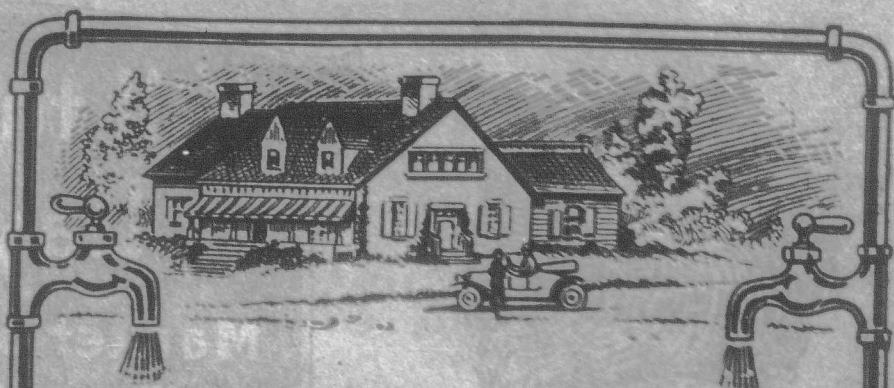
"There are many other edible varieties of migratory fish, but these are the most common.

"Ground fish, inhabiting bottom areas, are caught at various points in the open ocean. Among them are:

Cod (according to size) Steak cod, Market cod, Scrod (or baby cod), Dogfish—now termed Grayfish, Flounders or Common Sole, Grouper, Haddock (according to size) Market Haddock, Scrod (or baby haddock), Hake, Halibut, Pollock, Red Snapper, Skate, Tilefish.

"In addition, the sea provides the crustaceans—crabs, lobsters, and shrimps; and shell-fish, such as clams, oysters, mussels, and scallops.

With such a range, can any one think of a sea-food diet as being monotonous?



Drink Pure Water

—not from a wooden storage tank, but direct from the well, spring or cistern—by means of an Empire Water Supply System.

Just turn a faucet—saves all carrying. Also saves your time and strength. The progressive farmer looks upon the

Empire WATER SUPPLY System

as a sensible investment that brings health, comfort and happiness to every member of the family every day in the year.



Fresh Water — and plenty of it—also improves the health of live stock and cuts down feeding costs.

WRITE FOR FREE BOOKLET TO-DAY

We want to tell you about the many advantages of the Empire System. Our free booklet gives descriptions and illustrations. We will also send you an Information Blank, which, when filled out, will enable us to send you full particulars and the cost of a system adapted to your particular needs. Get posted—write us to-day.

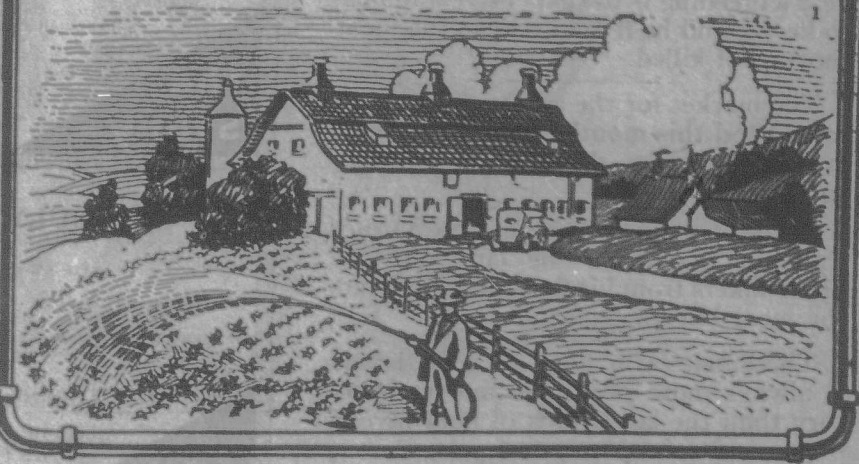
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Head Office and Factory: London, Ontario

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If Your Home or Barn Stood

There

Nothing could save it. It would simply add one more to the thousands and thousands of buildings that are destroyed every year by Lightning. 1918 Lightning losses will be the greatest ever known, because of the increased value of the buildings, grain and live stock destroyed.

This country cannot afford to lose your grain and live stock this year. It is your duty to your country, as well as to your family and yourself, to see that every building on your farm is protected before Lightning strikes.

Shinn-Flat

Protects Property from Lightning

The Shinn-Flat Conductor is made of pure copper wire, woven in the form of flat ribbon-like cables, 1 inch in width. It is the most modern Lightning Rod ever devised.

Bonded to Protect

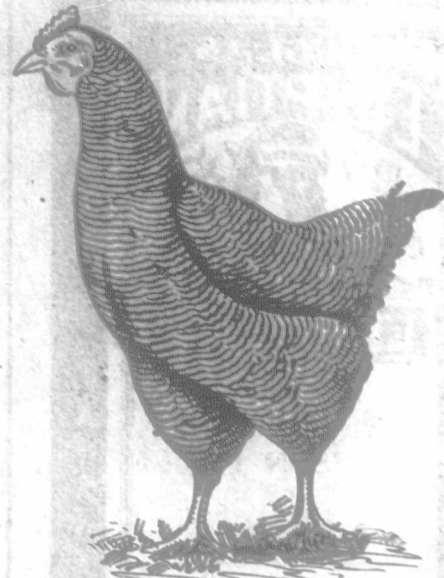
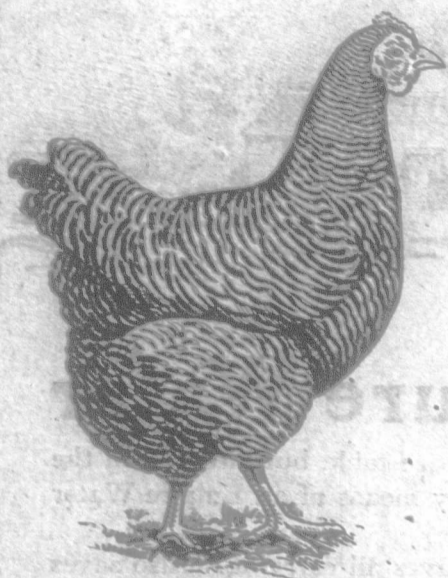
Every Shinn-Flat installation is covered by a Cash Bond that Lightning will not strike, paid for by us and issued direct to you by a large Bonding Company. The W. C. Shinn Mfg. Company is the only manufacturer of Lightning Conductors that ever backed up its goods and its work in this practical way.

Proper Installation Guaranteed

Any Lightning Conductor is dangerous unless properly installed. Shinn-Flat Conductors are installed by one of our representatives, who has been thoroughly instructed and whose work we are willing to bond. Shinn-Flat Conductors may be applied to any building at reasonable expense. Write for Book on Lightning Causes and Control, and full information.

W. C. SHINN MFG. CO., Windsor, Ontario

Remember—Lightning Can't Strike if SHINN Gets There First



Kill the Poor Layers

Market only strictly Fresh Eggs
The Following Methods are Profitable

DEFEAT

- Lays less than 100 eggs
- Lack of proper foods
- Fertile eggs
- Regular gathering neglected
- Dirty, musty baskets
- Kept in warm place
- Slow and irregular marketing

Weed, Feed and Breed—But Weed Now

The hen that lays 100 eggs a year just pays her board. Hens must be well fed to lay. If a well-fed hen gets too fat she will never make a layer. She's like a fat dairy cow—a non-producer.

The rooster, unless kept for next year's breeding is too expensive a luxury to keep—and he'll help relieve the meat shortage if killed.

The market for the cull stuff promises to be good this month—and by marketing in June the distribution is more equalized.

By eating the poor layers the farmer gains in two ways—he cuts out the profit takers from his flock and he lowers the meat bill for his table.

The small farm flock of good layers is always more profitable and satisfactory than the large flock of poor layers.

It is estimated that 750,000 dozen of eggs are wasted each year in this Province alone by not following methods advocated in the accompanying calendar. This is a loss neither individuals nor the nation can afford at this time.

HOW TO WEED

The good layer of the yellow-legged breeds at this season loses the color from the feet and bill, these latter becoming almost white. The sleek plumaged, fat, yellow-legged hens are usually very poor layers. It will pay to cull them out now.

The abdominal cavity, or the space between the pelvic bones (situated under the tail) and the end of the breast, or keel bone, should be relatively soft and flexible. If it is full of hard fat the hen is usually a very indifferent layer.

As a rule, the earlier maturing pullets are the earlier and most profitable layers. By marketing these the best breeders may be selected.

In grading up a laying flock pure-bred eggs should be purchased. From the resultant chicks good female breeding stock may be secured. The male may be secured, in very many cases, in Ontario, from eggs secured by children taking part in school fairs. Watch the school fair winners this year!

VICTORY

- Lays over 100 eggs
- Carefully fed
- Infertile eggs
- Eggs gathered daily
- Baskets clean
- Kept in cool place
- Eggs sent to market quickly

The Hen That Lays is the Hen That Pays

The hen that laid 123 eggs in 1917 made the same profit as the 123-egg hen in 1914.

The hen that laid less than 123 eggs in 1917 made a smaller profit than in 1914.

The hen that laid more eggs than 123 made a larger profit than in 1914.

In view of the high price of feed can the farmer afford to keep the poor laying hens in 1918?

Given exercise, sour skim-milk, plenty of green feed and barley or oats (rolled) the farm flock of layers will give a good account of themselves.

It saves work to let the hens feed themselves—a hopper may be built at home without expense.

Only the well-fed, well-bred hens will be found in the very heavy producing class.

WHAT AND HOW TO FEED

Feed plenty of the feeds you have on hand. Hens prefer rolled oats and barley to whole grain. A ration of one-third each of oats, barley and cracked corn gives first-class results. Supply plenty of tender green feed, shade and clean drink. Water should be given in abundance and must always be clean and fresh. Barnyard water is extremely bad. Sour skim-milk is excellent.

Where the hopper plan of feeding is adopted on the farm, the labor problem is much reduced. If the hoppers are kept supplied with grain there will be much less danger of underfeeding and producing stunted chicks. In Bulletin 247 detailed plans with a bill of material are given.

Any additional information regarding the care, management, feeding, or any other phase of the poultry industry, will be gladly given. Write to the office of the Commissioner of Agriculture, Parliament Buildings, Toronto.

Which Road Pays?

<p>JUNE</p> <p>Lost — one million dollars by faulty methods in poultry industry—much of it through careless handling of eggs.</p> <p>The rooster becomes a costly luxury—kill him now.</p> <p>Eat or sell [the poor layers—they are wasters.</p> <p>Cull the flock carefully once again.</p> <p>Only well-fed hens lay heavily.</p>	<p>Fresh Non-Fertile Egg</p>
<p>JULY</p> <p>The hen delivers a good egg. Do you?</p> <p>Gather eggs daily.</p> <p>Keep them in clean containers and in a cool place.</p> <p>Market regularly and quickly.</p> <p>Feed the lightweight cockerels for market.</p>	<p>Heated Egg Slow Marketing</p>
<p>AUGUST</p> <p>An egg does not improve with age.</p> <p>Those in found nests are better used at home.</p> <p>Sell Leghorn cockerels at 2 lbs. weight; sell heavier breeds at over 3½ lbs.</p> <p>Clean and whitewash house; destroys the mites.</p> <p>Lousy hens are poor producers.</p>	<p>Spot and Rot Entirely Wasted</p>

The Hot Weather Poultry Calendar



Ontario Department of Agriculture

Parliament Buildings, Toronto

Sir Wm. H. Hearst, Minister of Agriculture

Dr. G. C. Creelman, Commissioner of Agriculture

