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THE FARMER'S ADVOCATE

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AND HOME MAGAZINE

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

Vol. LII.

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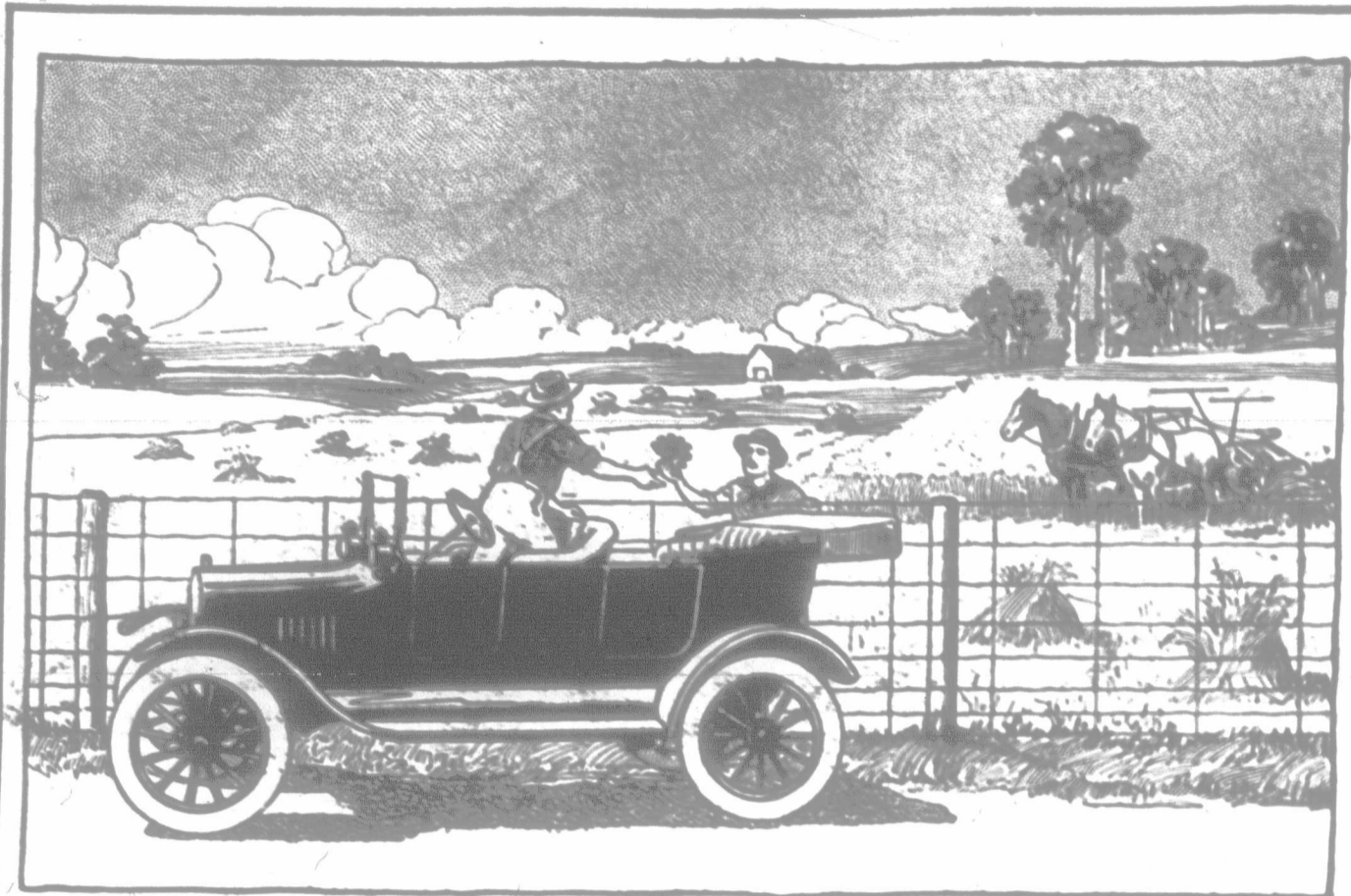


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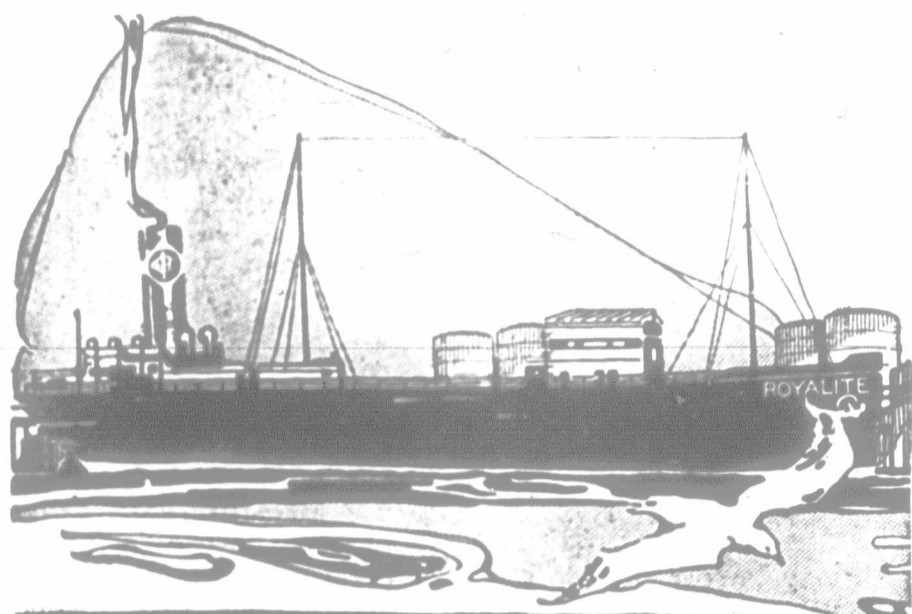
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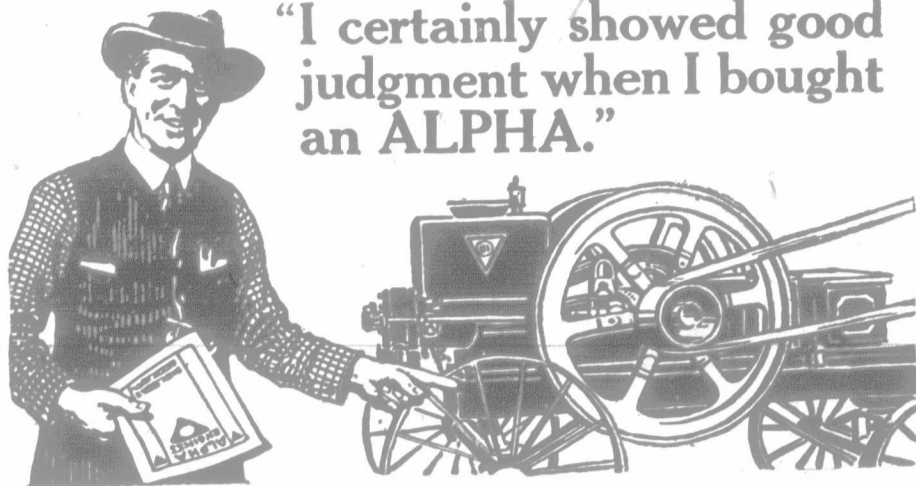
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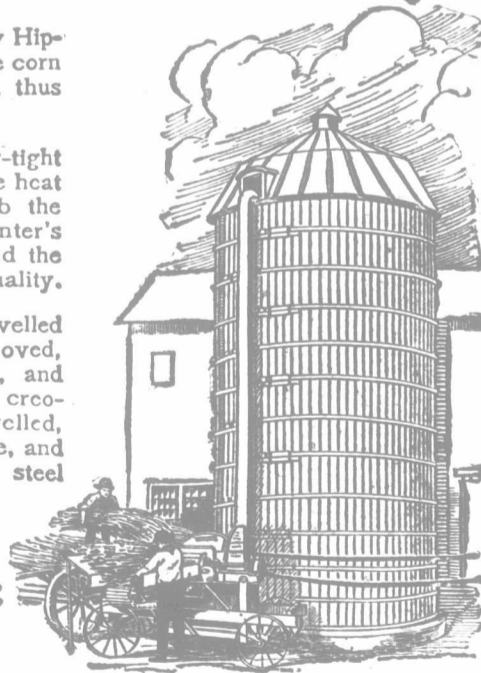
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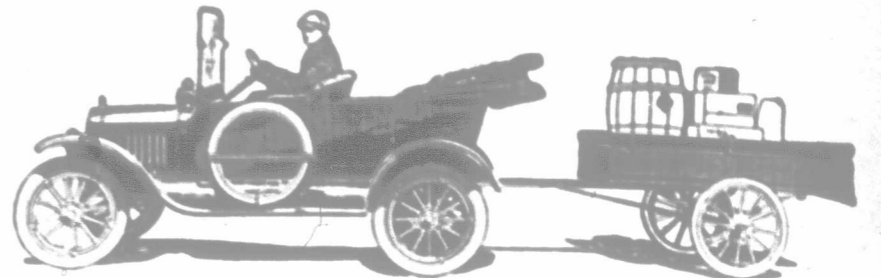
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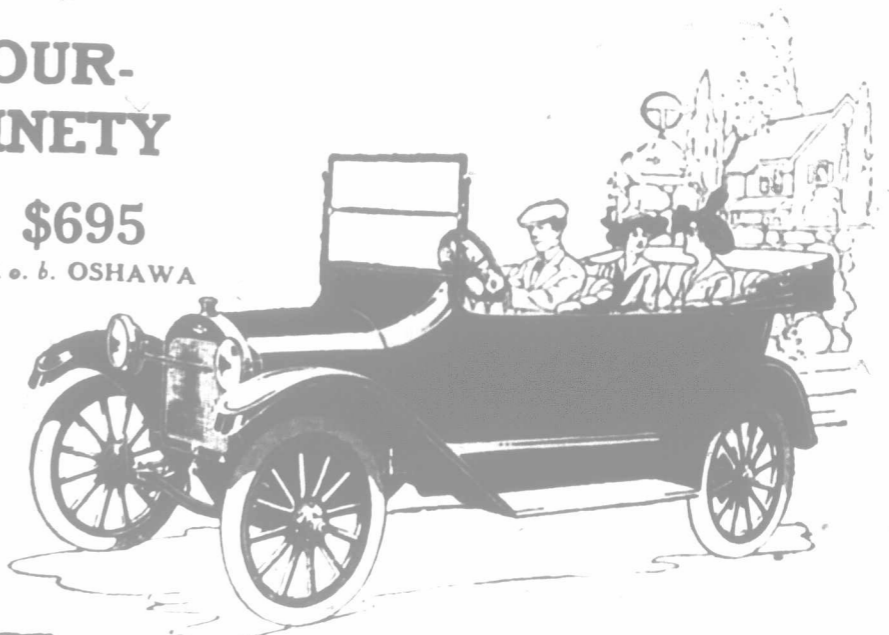
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The Farmer's Advocate and Home Magazine

PERSEVERE AND SUCCEED

ESTABLISHED 1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

LII.

LONDON, ONTARIO, MAY 3, 1917.

1284

EDITORIAL.

Plant more corn than ever

Put in more potatoes than usual.

Get ready for the corn planting

Do not forget a few mangels for the calves.

A good garden is half of the summer meals.

Times do change. Canada got free wheat.

Larger markets keep coming to Canada.

If your land is suitable try a few beans this year.

Do not neglect spraying this year. The clean fruit will sell first.

Unskilled labor is not of as much real value to the farmer as it once was.

Canadian pigs should be bred and reared to grow into choice bacon hogs.

Plant all hoed crops so that the maximum of cultivation may be done with horses.

No matter how expert the farmer is the weather often plays hob with his plans.

As soon as the producer is paid a premium for quality just so soon will he produce quality.

The better the farm is worked the sooner will the war be won. Food is a factor of first importance.

In the live-stock business it costs no more to feed and house the best class of stock than it does the scrub.

The farmer is called upon to feed them all. Everyone hopes that his efforts in 1917 will yield enough to do it.

The Allies have taken such a bite at the Hindenburg line that "Hindy" may have to get a new line very soon.

Send your wool to Guelph to be graded, and reap all the benefits of selling on a quality basis through co-operation.

A scarcity of labor always means more land in grass and more live-stock products in proportion to cereal grains.

Some noted Germans say that defeat means the end of the Hohenzollerns. In that case the German people would reap the maximum benefit from Germany's drubbing.

We have wondered if it would not be possible to train a number of battalions for home defence in Canada without putting them under canvas for the entire summer. There are many men who could spare one to two afternoons weekly and two or three evenings a week for drill, who find difficulty in leaving their business for the entire summer. Of course, everyone admits that a better training results where the men are under canvas for the summer, but the defence forces might be augmented by adding to their numbers a number of men trained in their home cities and town in spare time.

Selling by Grade.

No greater stimulus will ever be given to the production of choice farm products of all kinds than that which will follow selling by grade in all those lines where grading is possible. Nothing more discourages the farmer who takes pains and goes to considerable trouble to produce a product of a higher class, than to see his careless neighbor getting the same price for an inferior article which has cost him little effort. Too often, in the past, the producer of the best has suffered at the hands of his careless fellow. That is to say, the man who put inferior goods on the market many times got a higher price than he should, while the man whose goods were extra fine was compelled to accept a lower average than his goods were actually worth. This only encourages carelessness and discourages the production of extra quality. Selling by grade will put each in his proper class. The careless will get the full penalty of his carelessness. The careful and efficient will reap his full reward and there will soon be a higher percentage careful and efficient and the resulting products will soon share a proportionate increase of quality. Extra effort demands better returns and better returns will bring extra quality. Ontario is laying plans to grade butter. The West grades cream. All Canada should sell dairy products according to grade. Eggs should go the same way. There is talk of selling pork and other meat products strictly to grade. Grain already goes to market on grade. It is good business to make it pay to produce the best. Selling by grade is the best business.

Canada's Opportunity in Bacon Production.

Some twelve or fifteen years ago Canadian bacon was a big factor on the markets of Great Britain. This country at that time exported in the neighborhood of 35,000,000 pounds of this product annually, but, owing to a number of causes among which were the growing urban population at home and the unstable market for hogs, the export dwindled to a negligible quantity in the years just before the war. Since the outbreak of the great struggle, however, with the increased call for foodstuffs of all kinds, Canadian bacon is going to Britain in larger quantities than ever before and is establishing a name on that market. At the present time imports of bacon hogs into Britain from Denmark, the source of greatest supply before the war, are very much curtailed. Previous to the outbreak of hostilities Denmark sent in the neighborhood of 40,000 hogs to England in the form of bacon each week. The Danes formerly drew upon Germany for grain to feed their hogs and also upon the United States from which they imported large quantities of corn to feed in conjunction with the dairy by-products of which they had sufficient to make a suitable combination with corn for the production of choice bacon, although the Danish packer would prefer that the hog feeder used as little corn as possible. Denmark depended on dairy by-products to make choice bacon, for that country shipped to Britain practically the same number of pounds of butter as of bacon each week. But the war has upset that trade and Britain has called upon Canada for more bacon, and packers in this country cannot get the hogs to supply the demand.

What does it all mean? Simply this—Canada has an opportunity right now to hold the British market for Canadian bacon, but our breeders and feeders must produce for export nothing but a high-class, uniform product and this in larger quantity. This will mean breeding and feeding more bacon hogs. If we go about it right the future market is assured. Canadian bacon is already establishing itself on the British market, but preparation must be made for after-the-war competition.

The outlook is bright. Denmark has lost a large portion of her trade. The United States has no export trade in Wiltshire sides because that country produces the lard type of hogs almost exclusively. An abundance of corn and the lard type go together. The bacon hog can be produced in Canada cheaper than in any other country. Experiments have shown that the right type of bacon hog puts on weight as economically as any other type. Now is the chance.

Why have we not more bacon hogs? Largely because of the fact that the market has not been stable. When farmers had a number of hogs the bottom would suddenly drop out of the market and declines of as much as \$2.00 or \$2.50 per cwt. would come very suddenly. Consequently, the farmer lost confidence and curtailed his pig-breeding and pig feeding operations accordingly. When the farmer had few hogs the price was high; when he was well stocked up with finished bacon the price was forced down. The market could not be depended upon.

Then, too, there was a growing demand for pork for home consumption and this did not so exactly demand the bacon type. Some believed that they could produce a little thicker hog at smaller cost, and the home market took the hogs at a price on a level with that paid for the choice bacon. Buyers who went to the farmer's pen or yard to buy hogs did not offer any difference in price for choice bacon as compared with hogs a little too thick to be choice. The farmer got no price consideration for producing extra quality and so, as every other business man would do, he did not in most cases put forth any extra effort to produce the long, lean bacon, and no one could blame him. His hogs were bought at so much per found f. o. b., his nearest shipping point, and all the hogs from the neighborhood, regardless of type, went into the same car at the same price. The result was not good for the production of Wiltshire sides.

But a big opportunity now offers. If Canadian bacon can secure first recognition on the British market and the Canadian breeders, feeders and packers can supply the uniform, choice article demanded, as we believe they can, then the hog business will be on a stable basis in this country. Then all hands can have confidence. It is important to feeder and packer alike. It is to the interests of both to establish a permanent export trade. The time to start is now.

First, a community breeding centers should be established in which all will breed and feed the best type of bacon hogs, preferably of the same breed. Farmers' Clubs and other organizations already in existence could give this phase of the work a big boost. They could look after the shipping to market which could be done co-operatively. Many believe that shipping to the central market to be sold, thus getting rid of f. o. b. buying would prove a great help. Then the hogs would be sold on the open market on their merits and according to grade. The man who produced the best bacon hog would get the best price. It looks feasible and certainly should induce breeders and feeders to produce the recognized type. Expert graders could be employed to do the work of grading.

The Dominion Department of Agriculture is alive to the importance of the bacon industry. Prof. Day, as announced in last week's issue, is taking charge of the campaign for more and better bacon hogs. The market is assured if Canada produces the hogs. A regular and permanent supply must be forthcoming. Right now is the time to start. Elsewhere in this issue is a page of illustrations showing different types. Better prices for hogs of the right type will be the result of grading. A stable market can be built up. Breed the bacon hog and sell him on his merits. All hands are anxious to get the best that is in the British market. That means a stable market and more uniform prices. We have confidence in the future of the Canadian bacon hog

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

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

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Read and Think!

Is the Best Use Made of All Food Materials?

We are told that the greatest need of the world at the present moment is production. In fact those in touch with the situation are talking of the danger of food scarcity and even famine. And yet strange operations are permitted to use up food nutrients. At a conference of agricultural college presidents recently held in St. Louis, President Waters of the Kansas college said: "A large saving in grain suitable for fattening live stock can be made by shutting down the breweries and distilleries. By closing the saloons and the breweries and distilleries of the country, (the United States), we would save annually 618,508,095 bushels of grain. The equipment of our breweries and distilleries could be put to work to make munitions, to refine fuel oil for farm tractors, and even to can fruits and vegetables. Considerable labor could also be utilized to help make up the farm labor shortage, thus lightening the greatest difficulty in the way of a permanent increase in the national food supply."

President Waters said that the greatest mistake some of the countries at war have made was in not closing down distilleries and breweries early in the conflict and thus saving grain for human food, and for feeding animals whose ultimate destination is human food.

Even with the output in Britain curtailed to 10,000,000 barrels annually, as it has been by the Lloyd-George Government, millions upon millions of bushels of the Empire's best grain go into beverages. We are informed that to make the 10,000,000 barrels will require 45,000 tons of sugar, 20,000 tons of maize, 360,000 tons of barley, a total of 425,000 tons, British weight, or nearly 500,000 tons Canadian weight. At the retail price of sugar in Canada at time of writing it would require upwards of \$8,000,000 to buy the sugar for Britain's 10,000,000 barrels, and the amount of maize expressed in bushels would be 800,000 and 16,800,000 bushels of barley. We hear a great deal of shortage of tonnage. It would require 100 vessels of 5,000 tons each to carry the materials necessary to make the 10,000,000 barrels across the ocean. It would take the giant Waterland, the largest ship in the world, six months to carry it across, making a round trip every eighteen days. It would load a freight train 200 miles long.

Canada's drink bill has reached \$100,000,000 in a single year, and intoxicating beverages entered for consumption in this country amounted to 67,711,833 gallons in 1914.

In view of the fact that a food shortage seems imminent in the civilized world and because it seems necessary to forego all luxury we quote this paragraph from Lloyd-George's speech delivered in the British House late in February and leave readers to weigh the matter for themselves. Here is what the British Premier said: "What are the essential commodities? Let us cut down ruthlessly things that are not necessary. The essential commodities are food and clothing, necessary for the maintenance and equipment of the civil and military population here and abroad, and that touches everything—raw materials for our munitions and equipment of war and for industries essential to national life or national credit. Those are essential commodities, and anything beyond that is not essential, and it is running an unnecessary risk, because the nation can do without them during the war, and if it cannot it ought not to wage war."

Nature's Diary.

A. B. KLUGH, M.A.

A reader of "The Farmer's Advocate" has recently asked me to write an article on Hawks, giving particular attention to "the way in which each species may be recognized while on the wing, as on account of the great difficulty of getting near them it is almost impossible to observe them while perching."

My correspondent has hit on one of the most difficult points, if not the most difficult point, in field ornithology, and since this matter of the recognition of our Hawks is not only somewhat intricate and interesting but at the same time of great practical importance, I shall try to deal with it as fully and clearly as possible.

In the recognition of the different species of Hawks the main points to be taken into consideration are: size, relative length of wing and tail, and the character of the markings on the under surface of the tail. Now in the field study of birds the exact size of the species is a matter of little importance, since it is impossible, under field conditions, to arrive at this point. This is more particularly the case when a bird is in the air, as objects of known size, for comparison with it, are then not in close enough proximity to it to enable one to make a close estimate of its size. But at the same time we can usually make use of size as a discriminating factor if one species is at least half as large again as another. Thus in the case of the Hawks we call species about twelve inches in length "small Hawks," those about eighteen inches long, "Hawks of medium size," and those two feet and over in length "large Hawks."



Fig. 1—Sharp-shinned Hawk.

In addition to the main points already mentioned there are several other factors which aid one in recognizing the various species of Hawks. One such factor is the note of the species. Another is the manner of flight, some species being much given to soaring round in circles high in the air, some to beating back and forth over the fields close to the ground, and others to darting quickly from cover and quickly back again.

The study of the Hawks is rendered difficult, not only by their wariness, but by the fact that several of the species have very different plumages in the two sexes and at different stages.

Since the appearance of a Hawk as seen when flying overhead is not very satisfactorily or conclusively expressed in words, I give figures of the various species, which show at a glance the characteristic outline and the tail-markings. These figures are not drawn exactly to scale and, therefore, in making comparisons on a size basis the reader should consult the accompanying text.

The Sharp-shinned Hawk (*Accipiter velox*) is a common species in Canada from Labrador to the Pacific Coast and as far north as Latitude 62. As may be seen from Figure 1 this species has short, rounded wings and a long, rather narrow tail. These characteristics are common to all three of our Hawks which belong to the genus *Accipiter*. From the other two species the Sharp-shin may be distinguished by its small size (about 12 inches) and by the fact that the end of the tail is square, and not rounded as in the case of Cooper's Hawk.

This species is the most destructive of our Hawks, and is the one which is undoubtedly responsible for the bad repute in which all Hawks are held by the general public. It rarely attacks large birds or full-grown poultry, but it plays sad havoc with the smaller birds, and is the Hawk which visits the poultry-yard day after day at the time when young chickens are running about and carries off a chicken every day until the brood is exterminated. Its main food consists of small birds, as may be seen from the following list of Canadian species which have been found in the stomachs of Sharp-shins: Mourning Dove, Flicker, Downy Wood-

pecker, Chimney Swift, Cowbird, Orchard Oriole, Bronzed Grackle, American Goldfinch, Savanna Sparrow, White-throated Sparrow, Field Sparrow, Chipping Sparrow, Tree Sparrow, Junco, Song Sparrow, Fox Sparrow, House Sparrow, Red-eyed Vireo, Magnolia Warbler, Black-throated Green Warbler, Myrtle Warbler, Bay-breasted Warbler, Black-poll Warbler, Pine Warbler, Oven-bird, Maryland Yellow-throat, Wilson's Warbler, Canadian Warbler, Catbird, Carolina Wren, Red-breasted Nuthatch, Chickadee, Ruby-crowned Kinglet, Gray-cheeked Thrush, Hermit Thrush, American Robin and Bluebird. Out of 107 stomachs containing food examined, 103 contained the remains of birds.

It is perhaps needless to say that this species should be shot at sight, provided one is absolutely certain of its identity. This latter caution is very necessary to prevent the killing of the American Sparrow Hawk, a very beneficial little species which often suffers for the deeds of the Sharp-shin.

Though the Sharp-shinned Hawk is a comparatively common species it is not so often seen as many other Hawks which are not so abundant, because it is not given to sailing around in the open, but makes quick sallies from cover, captures its prey, and darts back again. The only time at which one sees this species very much in the open is when it is migrating, and then only if one happens to be on some migration route such as Point Pelee.

(To be continued.)

Fundamental Principles of Production.

EDITOR "THE FARMER'S ADVOCATE":

Now that the attention of everyone is centered upon the question of food production, it will not be amiss to restate some of the fundamental principles involved.

The cost of production depends primarily upon two things:

1. The cost of land.
2. The cost of labor.

And the nature of the food product will depend also upon two things:

1. The tastes of the consumer, or demand.
2. The relationship between the cost of land and that of labor.

Let us examine these items in reverse order. Speaking generally, cheap land and dear labor results in the production of animal products; while dear land and cheap labor results in the production of vegetable products. With immense tracts of land available for pasturage, and with no insuperable difficulty in the way of wintering stock, the keeping of flocks and herds, *a la Abraham*, is the most economical way of producing food. Hence we find ranching a pronounced feature of agriculture in all new countries, where land is cheap. For the same reason we find many tracts of land in Old Ontario, once devoted to field crops, now given over to the pasturage of cattle. Labor has become increasingly difficult to get; consequently farms which once raised grain and vegetable products for man's food are now in grass, raising live stock during the summer months.

The above general truth is modified somewhat in various places by the use of labor-saving machinery and by the difficulties of wintering stock. Modern labor-saving machinery has undoubtedly made it much easier to raise field crops with a minimum of labor; whereas the difficulties of wintering live stock in some parts of the country have militated against ranching.

Further modification is likely to result from famine conditions. Speaking roughly, vegetable products are a much cheaper source of food than animal products. It takes at least five pounds of grain to make one pound of meat, which is probably of inferior food value to one pound of grain. Similarly an acre will produce much greater food value in a cereal crop than it will in beef or mutton from pasturing cattle or sheep. Therefore, as famine conditions force people to seek for the cheapest sources of food, and as immense tracts of land for ranch purposes become less and less available we shall, no doubt, see an increase in the production of vegetable products. Even now people turn almost unconsciously to the "putting in of a large crop" at this present crisis, realizing that this is the cheapest source of food if labor can be found to cultivate the land and take off the harvest.

So far as demand goes people are likely to have to take what they can get. The education of people in correct or sensible tastes is, however, a most important matter. A man who prefers oatmeal porridge for his breakfast instead of ham and eggs is making a very much smaller demand upon both land and labor than is he who demands the ham and eggs. Of course, if we lived in nomadic days the fatted calf would be, possibly, much cheaper than anything else. In all thickly-settled countries, however, people are forced, sooner or later, to turn to vegetable products for food, and it is, therefore, wise to cultivate sensible and moderate tastes in that direction. I say this without defending the doctrine of vegetarianism or recommending the disuse of animal foods. In this connection I wish to call the attention of your readers again to an excellent bulletin lately published by the Ontario Department of Agriculture, on "Food Values," written by Prof. Harcourt, of the O. A. C.

With respect to the cost of labor little need be said here. I venture to express the conviction, however, that until a much larger number of skilled workers apply their labor permanently to agriculture we shall see no appreciable increase in production. Agriculture is becoming increasingly a "learned profession," and

the class of labor which can be of use on our farms nowadays is very different from what may have sufficed 50 years ago. There is room at times for a certain amount of unskilled labor; but speaking generally the ignoramus, the slacker or the bungler is worse than useless in farming. He is literally worth less than nothing, and farmers are generally quite justified in declining this kind of help. We shall watch with no little interest the result of certain kinds of city labor which may be available for agriculture this year.

With respect to the cost of land much can be done, and should be done, by the authorities to cheapen land. Taxation should be so levied as to utterly kill speculation in land. It is criminal folly to withhold suitable land from cultivation. Nothing that can be done in this matter will be of much assistance this year, however. Labor is so scarce that a great many farms in Old Ontario—the garden of Canada—will be quite abandoned this year, and can probably be had, with their buildings, for the asking. Under such conditions land could not be any cheaper. But when the war is over labor will be more plentiful, and the need for increased production will be as imperative as now. Then it will be of vital importance for legislation to prevent land speculation. Not very long ago I saw in one of your papers a seductive advertisement, by a land company, for the purpose of getting people to invest in land. The argument was put that the demand for land, after the war, would be tremendous; and readers were counseled to invest now, when land was cheap, so that when the returned soldiers got back, and labor turned again to the land, owners could "soak" and bleed these prospective laborers before allowing them permission to produce. This sort of hold-up is not only permitted, by Canadian legislation and public opinion, but is even condoned or excused. And yet, when one comes to think of it, could any policy be more utterly damnable and unpatriotic? Reconstruction after the war will depend largely upon our land policy, and woe be it then if we have not a new breed of politicians from what we have had in late years.

Brant Co., Ont.

W. C. Good.

THE HORSE.

Sweeny.

Sweeny or shoulder slip consists in a sprain, followed by atrophy or a wasting away of the muscles covering the shoulder blade. In severe cases the shoulder joint (the bones of which are held together simply by a capsular ligament, there being no lateral ligaments) appear to slip out and in to a greater or less extent at each step, hence the name "Shoulder Slip." This motion can be understood when we know that the shoulder joint is what is called "a ball and socket joint." The head of the humerus (the bone of the arm) has a very large convex articular surface, which articulates with a concave surface at the lower end of the scapula (the shoulder blade). The surface of this concavity is much less in extent than that of the said convexity, hence when the muscles which tend to keep the bones in place become shrunken and weak a greater degree of motion is allowed, a partial disarticulation takes place at each step; the joint appears to slip. This trouble is noticed principally in young horses that are put to work on soft or uneven ground, and especially in young horses worked in the furrow to the plow. The horse, not being accustomed to such work, will frequently place the near fore foot upon the land, while the off foot is placed in the furrow. This uneven treading tends to sprain the muscles mentioned, and the bones of the joint, being held practically by the muscles, will, when these muscles have wasted away to a considerable extent, show the slipping action noted.

Symptoms.—Lameness in the early stages is not well marked; in fact no lameness may be noticed. The first symptoms noticeable are heat and swelling of the muscles, which is soon followed by a wasting or shrinking of them. In many cases, there being an absence of lameness, the swelling escapes notice. The shoulder blade is a flat, somewhat triangular bone, placed upon the ribs with the base uppermost, and held in place by muscular attachment. On the outer surface of the bone there is a ridge of bone, running from above downwards, almost the whole length of the bone. This ridge is called "The spine of the scapula." It divides the scapula into two unequal parts, about one-third in front of and two-thirds behind it. This spine, while easily felt just underneath the skin in a healthy horse, is not visible, as the muscles on each side are of sufficient size to make the surface practically smooth; but when the muscles become atrophied, it is quite visible as a ridge running from above downwards, with a more or less well-marked hollow on each side. The skin appears to the touch to be quite close to the bone, but there is an absence of heat or tenderness to pressure. Inflammatory action has become allayed, and as a consequence swelling has subsided, and as a result of the inflammation, the muscles have become atrophied, or lessened in bulk. When the muscles which pass over the joint have been involved and have become atrophied, the slipping in and out of the joint during progression is quite noticeable, but in a large percentage of cases these muscles are not involved. Lameness is not pronounced, except, in cases where this slipping is present. Action is defective, but it is not probable that the patient suffers pain. The lessening of muscular fibre renders the patient unable to use the limb properly. The limb is brought forward with a rotary motion of the foot, and more or less difficulty is experienced in lifting the foot over obstacles. The patient stands

sound, and, except in the earlier stages, there is no heat or tenderness to pressure. As the disease progresses, the peculiarity of action and the wasting of the muscles become more marked, and, in advanced cases, considerable trouble in progressing is sometimes noticed. Horses affected with sweeny in an ordinary degree progress with considerable ease on level ground, but in soft or uneven ground the defect in action is usually well marked.

Treatment is slow. It requires several months to effect a cure in a well-marked case. Treatment must be directed to cause a reproduction of muscular tissue. The muscular elements are still there, but have become so reduced in size and strength that the muscles are unable to perform their functions. It is better to give the patient complete rest, but at all events, he must not be used on soft or uneven ground, and should not be asked to do heavy work on ground of any nature. While a little light work on hard, level ground may be given without danger of serious results, recovery will be quicker if he be given rest. In order to cause a reproduction of muscular tissue, it is necessary to set up, and keep up, a local irritation. Different methods are adopted. Some recommend seatons, extending from the top to the bottom of the shrunken muscles, both in front of and behind the capsular spine. Some recommend often repeated friction with the hand or a smooth stick. Others recommend the daily application of a strong, stimulating liniment, while some favor repeated blistering.

Probably better results are obtained from blisters than from other modes of treatment. The ordinary paste blister, made of 2 drams each of cantharides and biniodide of mercury mixed with 2 oz. vaseline or lard gives good results. The hair should be clipped off the shrunken muscles, with a slight addition all around the sound muscles, and the blister well rubbed in. The effect of a blister depends greatly upon the manner of application. In order to get well-marked results

to 18 acres per day; and on a 20-hole disc seed drill will seed from 18 to 20 acres per day, and cover it in the same operation. Only heavy draft teams can make such efficiency possible. Horses weighing over 1,600 pounds each in working condition are needed, and five of them to each farm teamster employed. Where such heavy draft horses are not available, smaller implements are used, and the daily turnover in work accomplished falls to approximately half that which is being done by men with heavy teams and plenty of them.

The United States does not need an increase in mere numbers of horses and mules. It does need an increase in well proportioned, powerful draft horses. There is no danger of an overproduction of draft horses within the next ten years, nor is there any danger of an overproduction of good thick farm chunks weighing from 1,300 to 1,600 pounds. The latter can be, and are being, produced by breeding common light mares of mixed blood weighing from 900 to 1,400 pounds each, to sound well proportioned Percheron stallions. Every mare of this kind should be bred to the best draft stallion available, and every draft mare should be bred to the best stallion within reach. The demand for heavy draft horses is already far in excess of the supply. Prices have increased from \$50 to \$75 per head, and the difficulty of obtaining the very best draft horses has been so great that city buyers have been obliged to purchase horses that are only three years old this spring in order to fill the demands of their trade. The best informed men in the market respecting city trade are agreed that draft horses will never be entirely displaced in our large cities, and that they have already reached what is practically a solid basis for the future. They are more efficient and do trucking more cheaply on short hauls than auto trucks and for this reason will continue to be used.

The demand for Percherons has shown steady improvement within the last twelve months. Transfer certificates issued by the Percheron Society of America during the first four months of the present fiscal year exceeded 3,000, an increase of more than 16 per cent. over the same period during the preceding year.

The breeders of small numbers of Percheron horses, who make up 90 per cent. of American breeders, are unanimously of the opinion that they have never had so prompt sales for good stallions rising two or rising three, nor received so satisfactory prices as during the past eight months. Importations are practically nil, and the steady increase in demand for good draft horses gives promise of a most excellent future for the shrewd farmer who realizes the advantage of using Percheron mares in his farm work.

Exports of horses to Europe for war purposes from September 1, 1914, to March 1, 1917, totaled 853,116 head, valued at \$182,994,406, and 289,062 mules, valued at \$58,051,914. British Army officers have given unstinting commendation to the grade Percherons, which have been sent from this country to Europe for artillery purposes. The effectiveness of the Percheron has been so great that studs of pure-bred Percherons have been established in Great Britain in consequence.

The vast majority of the mares in the United States will be bred or left unbred within the next ninety days. All good mares should be bred to the best available draft stallions. I hope, for this reason, that you will give publicity to this article in the news columns and emphasize the importance of intelligent horse production in your editorial columns as well.

WAYNE DINSMORE,
Secretary Percheron Horse Society of America.

LIVE STOCK.

If you want high-class stock, (and who does not?) you can never get it by breeding to the scrub sire.

Begin now to prepare and train animals intended to be shown at the coming fall and winter fairs.

Don't forget the salt when the live stock go out to pasture. They require it then as much or even more than ever.

Keep the fleeces clean when shearing; fold them with the bright side out and store where there is no possibility of getting damp.

After all that has been said against tying fleeces with binder twine one would have to be rather stubborn to use such a string.

There is still time to increase the acreage of spring crops considerably by planting corn, and there are few crops that will yield as much feed per acre.

Only an actual and serious shortage of meat animals



The Straightness of the Row Depends to a Large Extent on the Horse.

it is necessary that it be rubbed well in with smart friction. The animal must now be tied so that he cannot reach the blistered surfaces with his mouth, else he will get his nostrils, lips and mouth blistered and possibly tear the skin off the blistered parts. In 24 hours a little more of the blister should be rubbed well in, and in 24 hours longer the parts should be well rubbed with sweet oil or fresh lard. He may now be turned loose into a box stall, and the parts oiled every day until the scales come off, when he should again be tied up and the blister again applied as at first. After this the parts should be blistered every 4 or 5 weeks, and between the blisterings (after the scale has come off) it is good practice to use friction by hand-rubbing or the occasional application of a liniment, as one made of 4 oz. alcohol, 2 oz. oil of turpentine, 1/2 oz. gum champhor, and water to make a pint. The length of time necessary to effect a cure varies in different cases. Any length of time from 3 or 4 months to a year, may be necessary, but treatment should be continued until the muscles have regained their normal bulk and tone.

WHIP.

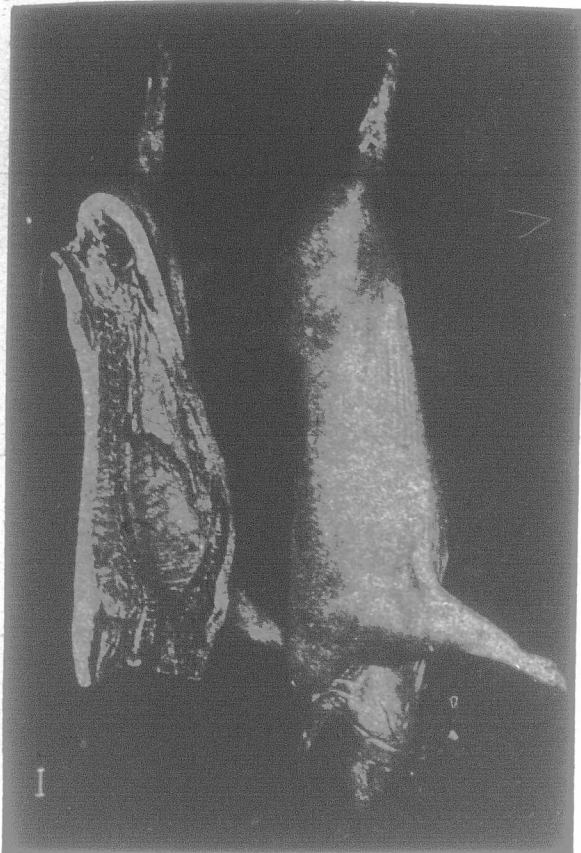
The Horse Outlook in the United States.

EDITOR "THE FARMER'S ADVOCATE":

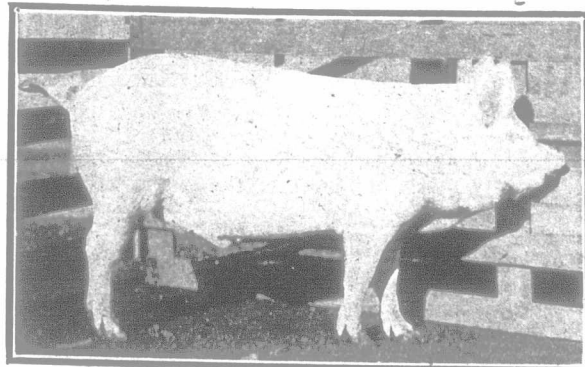
The United States, now actually at war, confronts the tremendous task of increasing its production of foodstuffs sufficiently to provide amply for its own people and to supply all the foodstuffs needed by the allied nations.

Maximum crop production requires plenty of horses, men, and efficient farm machinery. Powerful draft horses do more to compensate for labor shortage than any other factor. Gang plows of two 14-inch bottoms, with five powerful draft horses, will turn from five to five and a half acres per day; will, on a 20-wheel disc harrow, cutting 9 feet in width in the field, disc from 14

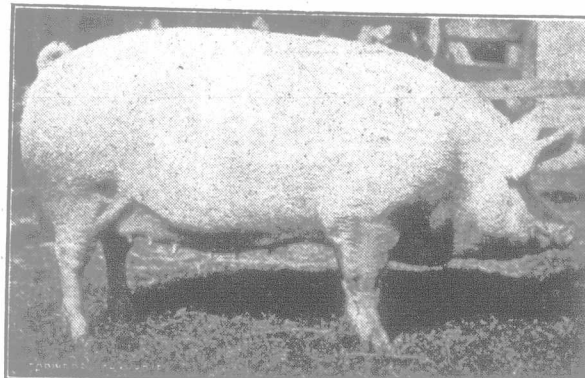
A Study in Bacon Type



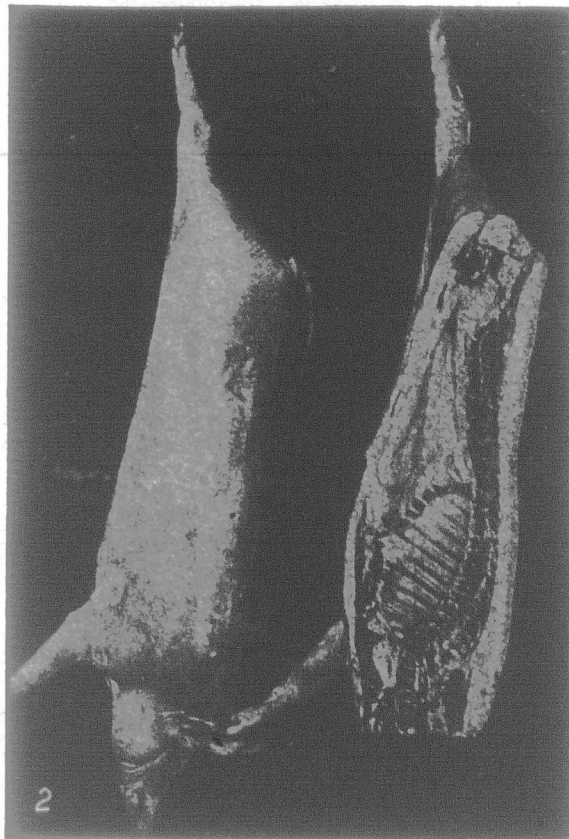
Wrong Type for Bacon Hog. (See note.)



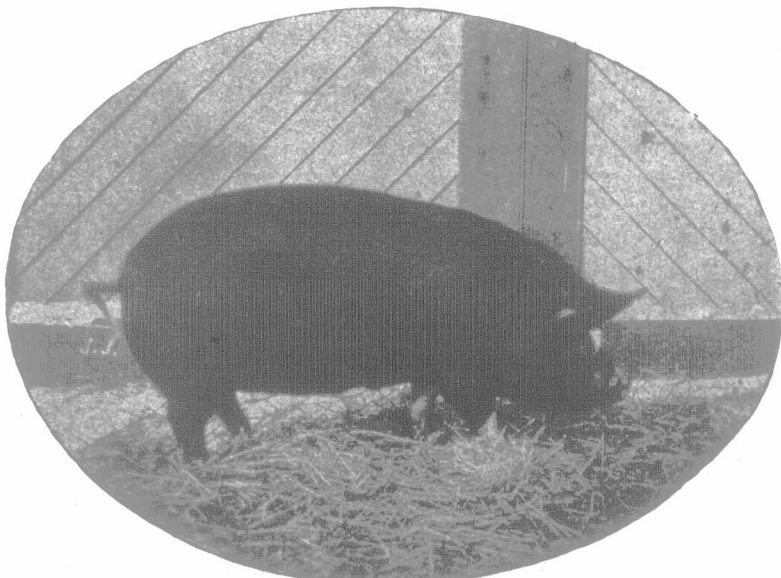
A Prizewinning Barrow.



A Champion Yorkshire Sow.



Correct Form, but Fed too Long. (See note.)



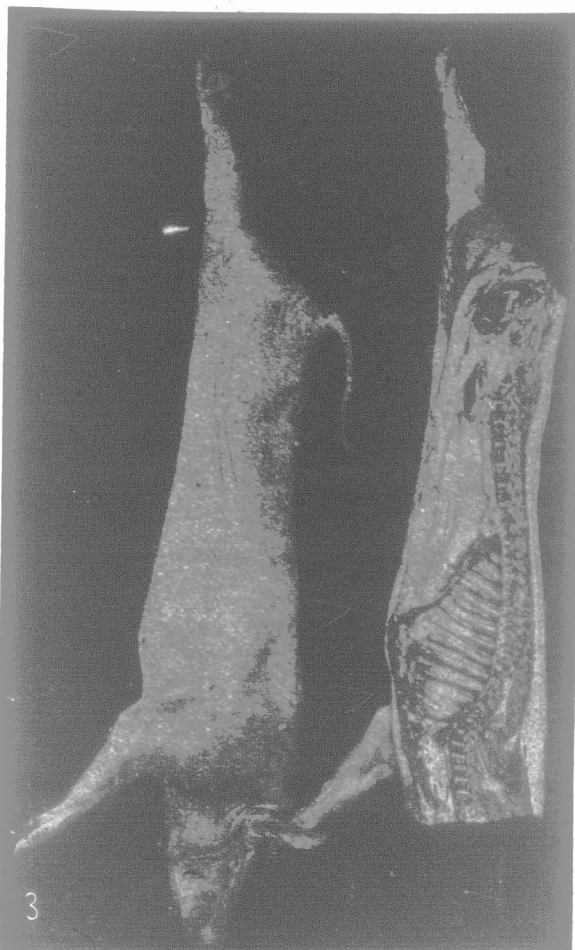
An Improved Type of Berkshire.

The above illustration represents the type of hog that does injury to our bacon trade abroad. The side is too short; a long side is desirable because this part between the shoulder and the ham furnishes the choicest cuts, and brings the best prices. The ham is also too thick as is shown to the left of the figure. There is a tendency to too much fat. The arched and heavy rump indicates excessive fat, and such is the condition over the back and around the ham. The short, thick-sided hog with heavy shoulders and hams will not produce the Wiltshire side.

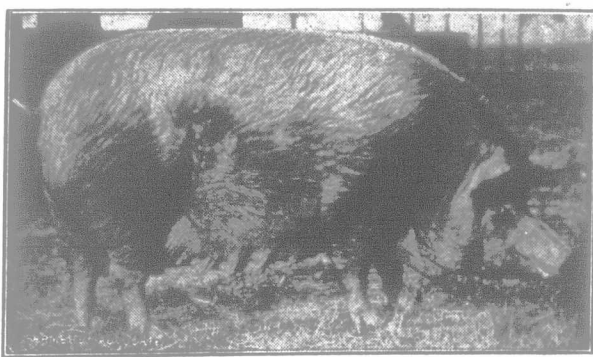
Below is the carcass of a lean old stag. It is quite unfinished and quite undesirable. Such a hog is rated low by the packers. Note the lean ham and coarse, scrawny head. The side is long enough, but altogether too light and thin. More feed at a younger age would probably have resulted in a more desirable carcass.

Illustration No. 2, above in this column, shows the correct form but excessive finish. If this animal had been killed some weeks earlier it would have been worth more to the packer, and, under a proper system of graded prices, would have brought more per pound to the producer. The carcass carries too much fat to grade the highest, but the side is long with even depth throughout from shoulder to ham. Note the tapering ham and head, and the light jowl.

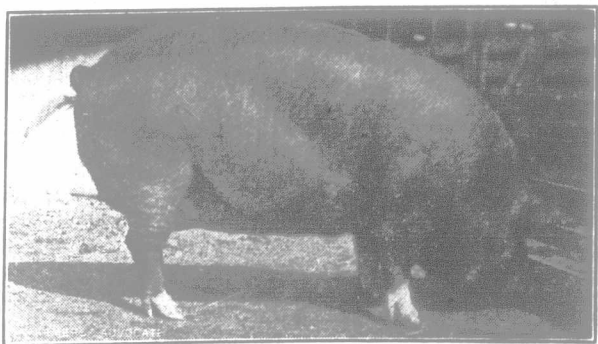
A prize-winning carcass in a block test is illustrated below. It was the sweepstakes for all breeds. The long side shown here is desirable, as is the thickness of fat over the back, and evenness to be seen on the left-hand side. The head and neck show quality and neatness, which are compatible with the type desired in a bacon hog. Study this illustration carefully for it represents the market demand and upon our volume of supply depends the future of the swine industry.



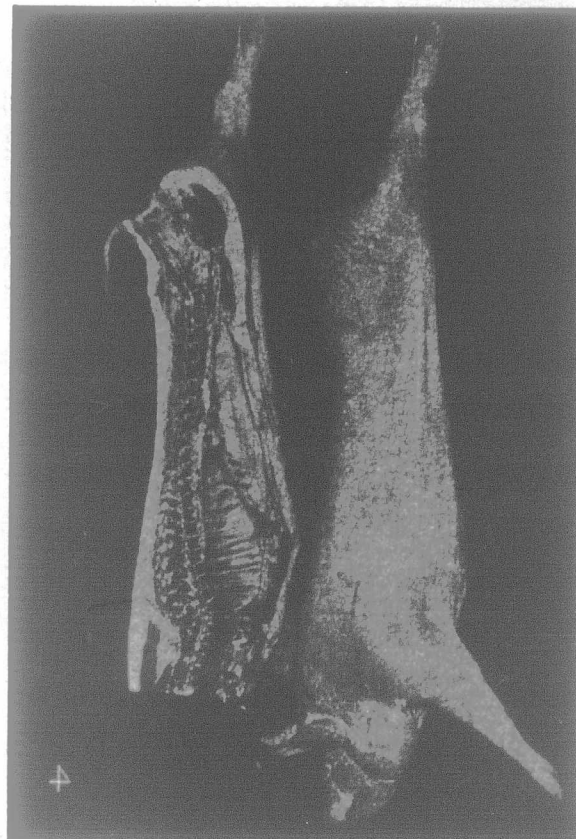
A Lean Old Stag. (See note.)



A Good Tamworth.



A Winning Berkshire Sow.



A Prize Carcass. (See note.)

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Farm Journals Handicapped Through High Price of Paper.

Since the outbreak of war, publishers of farm journals in Canada have been seriously handicapped in many ways and particularly by the unwarranted high price of paper. Recently the Associated Farm Journals of Canada appealed to the Right Honorable Sir George Foster, K. C. M. G., M. P., Minister of Trade and Commerce, to alleviate the condition which is militating against the good work of these publications. Readers will be able to gather from the memorial herewith reproduced some idea of the burden borne by the agricultural journals through the unfair and unjustifiable advance in the price of paper.

"Referring to the representations made to the Honorable, the Minister of Finance, by Mr. C. W. Peterson, Chairman of our special committee, in behalf of the Associated Farm Journals of Canada with respect to unjustifiable increases in the cost of paper used by these journals and asking for an investigation, we beg to state, that we were informed at the time that our representations had been received too late owing to the fact that the newsprint investigation had already been proceeded with. We are now informed that Mr. R. A. Pringle, K.C., has been appointed by your Department to conduct an investigation into the newsprint situation and we, therefore, hasten to place our case before you in order that it may be taken up together with the same.

"We desire to point out that we do not ask Government assistance to enable us to make increased profits. We merely plead for a reasonable opportunity to exist. Farmers organizations and public spirited men have invested large sums of money in agricultural periodicals. Only one or two of them have ever paid dividends to their shareholders. Seventy-five per cent. of them have had to meet heavy annual deficits even under normal conditions. The Minister of Agriculture will assure you, that the agricultural press of Canada is the most important educational vehicle. The farmers of Canada, and those depending upon their prosperity have, therefore, been the chief beneficiaries of the enormous losses we as publishers have sustained in the past. If we are forced out of existence by impossible prices for our raw material, which must be the inevitable result for some of us, while our individual losses may be great, the loss to the farmers of Canada and the country generally will undoubtedly be still greater. Our books are open to inspection by your Commissioner at any time.

"To begin with, out of eleven farm papers published in Canada, ten were using book paper before the war. After the war began, when it was necessary to meet the extraordinary conditions thereby created and the large depletion of our revenues, a number of us commenced to use what is known as "half-tone newsprint", until at present, only two of our publications are continuing the use of book paper. Before the war, half-tone newsprint was sold at a price of \$2.35 per hundred f. o. b. Toronto as compared with the price for ordinary newsprint of \$2.12 f. o. b., Toronto. We have reason to believe that the manufacturers were then making a better profit on half-tone newsprint at \$2.35 than on the ordinary newsprint at \$2.12 per hundred f. o. b., Toronto.

As a result of the recent investigation, by the Department of Finance, into the pulp and paper situation as affecting ordinary newsprint, it was found that the manufacturers were not justified in enforcing an increase of more than one-half cent per pound, with a maximum price of \$2.50 per cwt. f. o. b. the mill, which means not more than \$2.75 per cwt. f. o. b. Toronto. It is shown that the manufacturer is entitled to an increase of 63 cents per cwt. or 30 per cent. The manufacturers are quoting prices on half-tone newsprint of \$4.25 to \$4.50 per cwt. f. o. b. Toronto, an increase ranging from \$1.90 to \$2.15 per cwt. or 80 per cent. to 92 per cent. We are confident that investigation will reveal that increased costs of production do not justify any higher percentage of increase in the price of half-tone newsprint than the Department of Finance found to be justified in the case of ordinary newsprint. On this basis we maintain that the price asked for half-tone newsprint should now be not more than \$3.05 per cwt. f. o. b. Toronto. The difference before the war in the prices of half-tone newsprint and ordinary newsprint was only 23 cents per cwt. The manufacturers are now demanding a difference ranging from \$1.50 to \$1.75 per cwt.

"The grades of book paper that agricultural publications were using before the war cost from \$4.15 to \$4.50 per cwt. f. o. b. Toronto, and over \$5 per cwt. f. o. b. western points. Since the first of this year the paper manufacturers have been asking a price on an average of \$5 per cwt. in advance of prices in existence in 1915.

"The eleven farm papers use about 2,500 tons of paper per year on the basis of half-tone news. An increase of \$2.00 per cwt. or \$40 per ton would therefore mean an additional cost of \$100,000 to be borne by these publications, or an average of nearly \$10,000 per publication.

"On the other hand, if they were using book paper as they did before the war, the tonnage would be about 3,800 tons. An increase of \$5.00 per cwt. or \$100 per ton would therefore mean an additional cost of \$380,000, or about \$34,500 per publication.

"You no doubt understand that illustrations play a very essential part in the educational work carried on by the farm papers. These illustrations are best reproduced on book paper. (Note the high-quality of book paper used in the publications issued by the Agricultural Department.) Ordinary newsprint is en-

tirely unsuitable for this purpose and half-tone news represents a compromise that has been forced upon the agricultural publications.

"Perhaps we should point out that ordinary newsprint is made from mechanical pulp. Half-tone newsprint contains, in addition to mechanical pulp, a small quantity of chemical pulp. Book paper contains a larger percentage of chemical pulp according to the grade.

"We may point out that we have apparently exhausted every legitimate means of effecting a compromise with the paper and pulp manufacturers and in doing so have lost valuable time. We have, therefore, no option but to appeal directly to the Government for relief. Our investigation of the subject has led us to the conviction, that present prices are exorbitant and are not based on cost of production, but have been arbitrarily fixed.

"Should the Government find it impossible to afford us relief by way of fixing prices of paper on a reasonable basis, we must respectfully urge that the present import duties on newsprint and book papers be removed in order that we may be given an opportunity to purchase our raw material in a cheaper market.

"Feeling confident that we can rely on your earnest consideration of our case, we are, yours very truly,"

"ASSOCIATED FARM JOURNALS OF CANADA."

The Mangel Crop and Its Feeding Value.

The labor scarcity, together with the more general use of silage for providing succulency to the ration has been largely responsible for the decrease in the acreage devoted to roots and especially mangels during the past few years. There is no getting away from the fact that thinning mangels is a tedious and slow job, and harvesting the crop, when pulling and twisting the tops off are resorted to, is a back-breaking task. There appears to be no way of facilitating the work of thinning, but it has been found that when mangels are topped with the hoe and harrowed out they keep fairly well in storage. This is more or less a wasteful practice when the long, deep-rooted variety is grown, but selection has evolved shallow-rooted, heavy-yielding varieties which grow practically above ground and are comparatively easy to harvest. It is true that the mangels, as well as other roots, are composed of a large percentage of water, but the dry matter which they contain is considered to be equal pound for pound to the dry matter of grain. They may therefore be termed watered concentrates. All kinds of roots are palatable, easily digested and very nutritious, and are a valuable feed for all classes of stock. They appear to have a toning effect on the animal system and aid in keeping it in good condition. If pulped and mixed with cut straw or cut hay, they make the dry fodder more palatable and thus increase its value as a feed. Turnips contain a little more dry matter than do mangels, but the latter are preferred for feeding dairy cows, owing to the fact that there is no danger of them imparting a disagreeable flavor to the milk or butter-fat. Of late years silage has been grown to take the place of mangels and turnips for feeding dairy cows and fattening animals. According to analysis the mangel contains about 90.6 per cent. water; 1 per cent. ash; 1.4 per cent. crude protein; .8 per cent. fibre; 6.1 per cent. carbohydrates, and .1 per cent. fat. The sugar mangel contains a little more dry matter than the amount previously mentioned. "Feeds and Feeding", by Henry, gives the results of trials at the New York Experiment Station in which it is found that one pound of dry matter in mangels is equal to one pound of dry matter in grain, and that mangels can successfully replace half the grain ordinarily fed in a ration of grain, mixed hay and silage. The conclusion arrived at was that with concentrates costing thirty dollars a ton, mangels are an economical feed for dairy cows if they can be produced and stored for four dollars per ton. It is no longer claimed that the feeding of mangels produces watery milk.

On account of mangels being of a soft nature, they are readily eaten by pigs and are considered a valuable addition to the grain ration for shoats, and are particularly beneficial to young pigs as they tend to produce growth rather than fat. At the Michigan Station, pigs receiving one-third of the normal grain ration were allowed to forage in a beet field, and one acre of sugar beets was found to produce 716 pounds of gain, and an acre of half sugar beets and half mangels produced 792 pounds of gain. Experiments have shown that seven and one-half pounds of mangels, combined with by-products of the dairy, are as valuable in pig feeding as one pound of ground barley. The high feeding value of mangels, particularly for dairy cows and pigs, is amply demonstrated in every-day feeding.

Preparation for this year's mangel crop should have been made last fall and in many cases it has been, by selecting a clover sod and plowing down a heavy coat of manure. As this crop must be sown quite early in the spring, it is a good plan to have the manure plowed under in the fall. The other hoe crops, which are planted later in the season, permit of more time for the preparation of the seed bed. It is a mistake to select a dirty field for roots. Weeds can be eradicated by means of the horse cultivator at less expenditure of time and energy than by the use of the hoe. Mangels are rather

heavy feeders and respond to liberal applications of manure or commercial fertilizers. If the manure was not applied in the fall, it can be worked into the land this spring. While it may give as good results it will necessitate extra work.

Even if the land was well prepared in the fall, it is generally advisable to plow again in the spring and work thoroughly in order to make a fine but compact seed bed. There is not much opportunity to destroy weeds and grass by spring cultivation, but nevertheless the better the soil is in, the more readily will the seed germinate and subsequent cultivation will be easier. Many make a practice of sowing the mangel seed early in the spring, while others delay seeding until well on in May. The season has a lot to do with it. It is generally advisable to sow as soon as the ground is prepared, but it is a mistake to sacrifice a good seed bed to early sowing. Mangel seed is always slow to germinate, and the young plant makes slow growth at first even under the most favorable conditions; therefore, it is advisable to delay seeding until the soil warms up a little, so that the seed will germinate as quickly as possible and so get a start ahead of weeds and grass. If the latter once gains the supremacy it greatly increases the labor of caring for the crop during the season, and tends to decrease the yield of roots.

There are a number of comparatively new varieties which stand fairly high, both in yield and feeding value. The Globe type of mangel and the sugar beet mangel are now being most generally sown. The seed is produced in a ball which contains from one to four or five seeds, thus it is impossible to regulate the rate of seeding so as to secure a uniform stand of plants. Some growers use the "rolling pin" on the seed previous to planting, in order to break up the clusters. Several seeds encased in one shell accounts for the young plants appearing in bunches, which necessitates that considerable of the thinning be done with the fingers. From four to six pounds to the acre, depending on the method of sowing, is a fair rate of seeding, although some prefer to sow as high as eight or ten pounds. It depends a good deal on the vitality of the seed. It is a common practice to drill the land for mangels, having the rows about thirty inches apart. This may make hoeing easy, but there is more surface soil exposed to the drying effect of the sun and wind which further delays germination and lack of moisture will seriously affect the stand of the crop. Sowing on the flat is generally preferred on this account. The grain drill may be used for sowing mangel seed, but a little more seed will be required per acre than when the turnip drill is used. Have the soil as level as possible so as to avoid the danger of some seeds being covered too deeply and others not at all. With loamy soil in good tilth the seed may be covered with about an inch and a half of soil. All tubes on the seed drill except those used for sowing should be removed. The ones to leave on can be determined by the distance which it is desired to have the rows apart and on the width of the drill. If an eleven-hoe drill is used the second tube from each end and the centre one would be left on. By driving the wheel in its own track made the previous time across the field, the rows will be left twenty-eight inches apart. To make hoeing easier some make the practice of fastening the tubes so that they will just touch the ground, thus leaving the seed on the surface. A cultivator tooth is attached to each side of the tube used in sowing to cover the seed. After putting the seed in the ground, it is well to use the roller if the soil is at all loose. If heavy rains follow the seeding, use the light harrows to loosen the crust and make it easier for the young plants to push their way to the surface. The small hand seeder which is used for sowing garden seeds, is a very handy implement for sowing mangels. True, it will take a little longer to do the work with the hand machine than with the grain drill, but the depth of planting is more easily controlled and a more uniform stand is secured. The check-row corn planter may also be used to good advantage to sow mangels on the flat.

As soon as the rows can be followed the cultivator should be used to break the crust and kill weeds. As the mangel plants do not make very rapid growth at first, some growers give the first cultivation with the small, hand, wheel-hoe. This can be run quite close to the young plants without in any way molesting them or covering them with soil. The horse cultivator can then soon be used, and frequent cultivation is necessary. When the plants are two or three inches high they should be thinned to a foot or fifteen inches apart, leaving the strongest and most vigorous plants where possible. Frequent cultivation as long as it is possible to get the horse and cultivator between the rows without breaking the leaves will conserve moisture, destroy weeds and materially aid in growing a maximum crop. If the seed bed is well prepared it will mean less work later on in the season. The more work that can be done with wide implements and horses, the less there will be to do by hand. The crop from an acre of mangels will be found valuable in feeding growing pigs next winter and in keeping up the milk yield of the herd.

Remember the Provincial Plowing-Match.

The dates set for the Provincial Plowing Match and Tractor Demonstration for this fall are October 24, 25 and 26, and the match is to be held on Oak Park Farm, Brantford, Ontario. Coming at the end of the season farmers should be able to avail themselves of this opportunity to study tractors at work as well as to see what the best plowmen in the Province set up as first-class plowing.

Automobiles, Farm Machinery and Farm Motors

Banish the Screw-Driver.

There are a great many tools that will take the place of a screw-driver when it is a question of setting or removing screws, but the screw-driver itself should seldom be allowed to act as a substitute. We make this rather broad statement because in numerous cases, the screw-driver is put to uses which result in a great deal of harm. Amateur mechanics and new drivers sometimes attempt adjustments and repairs with the first instrument that comes to hand, and usually the screw-driver is found most readily. We will cite some specific instances. If your springs are squeaky and you wish to remove the unpleasant sound, do not pick up a screw-driver and jam it between the leaves because you are going to cause damage that will be disastrous sooner or later. Anticipate this operation by preparing a long thin strong strip of steel, properly tapered so that it will enter between the spring leaves with ease and accuracy. By slowly pushing this in, you will spread the leaves apart and find it a clean, safe proposition introducing graphite or oil into the opening. By the way, we trust that this initial paragraph about the screw-driver, will remind you that your spring leaves should be attended to quite frequently in order that maximum riding comfort may be maintained, and absolute freedom from squeaks secured.

There is another faulty use of the screw-driver, and that is in the removal of the piston rings. A great many mechanics jam the screw-driver into the slot and naturally hurt the rings, as the points of the screw driver make indentations that although not visible to the naked eye, are still deep enough to cause trouble. This rough usage of the piston ring with a screw-driver also hurts the even circumference of the ring and so prevents it from giving accurate service. Your best method would be to secure several thin, stiff strips of steel, from which the four sharp corners have been

filed until they are round and smooth. Press one of these steelstrips in the groove opposite the slot, and by constant pressure you will force the ring out of the slot. Now pull the end of the ring still further out and hold it there until you can slip in another piece of steel between the ring and the piston itself. The continuation of this operation will soon completely remove the ring from the groove and allow you to slide it off the piston without any damage. A great many car owners think that a piece of machinery is all right as long as it looks well, but it must be remembered that rough usage will give, to even the hardest metal, certain pits and nicks that prevent it properly carrying out the functions for which it was made by the manufacturer.

In many electrical systems, very careful and accurate oiling is required. In fact, the lubricating system is as fool-proof as possible. You will find, on some of these devices, that little round openings have been cut in order that the oil may be dropped at some certain points and not at any others. We have seen mechanics pick up the handy old screw-driver, dip it in some oil and move it to one of these oiling holes for the purpose of dropping the lubricant. Do not, however, use a screw-driver for this purpose, because it is much better to take a piece of cloth, which in practically every instance will not scatter the oil and certainly makes a much better dropper, because the lubricant can be pressed out in a definite direction.

When you are handling tires, it is as well to forget the screw-driver, because while it may be dull for certain purposes, it is sharp enough to cause injury to casings and tubes. We again recommend strips of steel, but in this particular instance, the strips must be broader and deeper and duller than those used for finer mechanical processes.

Perhaps the most common misuse of the screw-driver comes from the endeavor on the part of many people, to make a large sized screw-driver take the place

of a small one, or vice-versa, a small one substitute where a large one should be utilized. Most screw heads used in the automobile trade are of hard metal, but not a few are, nevertheless, soft enough to resent bitter treatment. If you persist in using a larger screw-driver than the screw calls for, you will soon spread the slot so that some day in a crisis, it will be impossible, or practically so, to remove the screw that has so been misused. This may appear to be a minor matter but nevertheless, when you come to the selling of your machine as a second hand car, any careful, prospective client will look at it from one end to the other, and if he finds that you have been careless and indifferent in everything that is outward and visible, he will naturally conclude that you have been the same way in those things which vitally affect the internal and more important parts of the power plant. Nothing gives one such a favorable opinion of a machine as an inspection that creates an impression of meticulous care. —AUTO.

Piston Rings Too Small.

Your articles on automobiles and internal combustion motors indicate that the writer is a man of practical experience, and his hints are very useful. Here is a point for him or for any of your readers who have had the same trouble I have had. No. 1 cylinder of my car seems to get too much oil and the spark plug rapidly fouls, which causes misfiring. Less than an hour's run will often cause the trouble. What is the reason for the trouble, and what is the remedy? Any advice will be appreciated by myself and others who have had the same trouble.

Ans.—Apparently the piston and piston rings are too small. If you procure an oversize piston and oversize piston rings, the trouble will, in all probability, be remedied. The spark plug is being fouled by oil that escapes past the piston rings.

Canada's Young Farmers and Future Leaders.

Nature of Soil Determines the Rotation.

EDITOR "THE FARMER'S ADVOCATE":

The farm on which the writer of this article is working is a long, narrow strip of rather rolling and broken land fronting on the St. John River. The slope towards the river is a light, gravelly and, in some places, stony soil. Farther back the soil is mostly loam, in some places verging into clay with a stiff clay subsoil. These different classes of soil make the planning of a rotation more difficult than it would be were the soil more uniform in texture. Many reasons might be given why a systematic rotation has never been followed on this farm. One of them is that much of the land requires tile draining before it will produce a satisfactory hoed crop, consequently it has been left continuously in sod.

We have been following mixed farming. The farm has about four acres of young orchard, and the greater part of the vegetable crops needed for home use are grown between the rows of young trees. About half an acre of the land between the trees is planted with strawberries each year. Practically all land available for planting between the trees is kept almost continually in hoed crop. Potatoes, and to a lesser extent squash, cabbage, etc., are grown as cash crops, and must be included in the rotation. A large amount of roots are needed for feeding cattle in winter, but the high prices obtainable for turnips warrant the growing of them for market, so it will be seen that the rotation must be one that will have a fairly large area under hoed crop.

Considerable rough land is available for pasture, but it is necessary to provide some succulent feed to supplement the pasture in the late summer and fall. The farm is not large enough to make a silo a profitable investment, so it is necessary to grow corn, peas and oats, clover and the soft, white English turnips for green feed. In order to provide grain to feed the horses, pigs and to have some home-grown concentrates to feed the cattle, it would be necessary to have about one-quarter of the tillable land in grain each year. To choose a single rotation to meet all these requirements is not easy. The lighter gravelly land is hungry and must be cropped in such a way that it will receive frequent applications of manure. A three-year rotation, while it would supply this need, will not give enough hay and would possibly tend to loosen the light soil too much. To my mind a combination of a three- and four-year rotation would be more satisfactory than any single one; having about three-quarters of the land under a four-year rotation, and the remaining quarter under a three-year rotation. The area under the three-year rotation would include part of the heavy or clay land and would be used for growing soiling crops. This rotation would run as follows: First year, hoed crop, chiefly corn, with perhaps a small acreage of white

turnips; second year, peas and oats, to be cut and fed green, the land to be seeded down to red clover. The third year, clover would give two crops in the season. The remainder of the farm, including quite a variety of soils, would be cropped under a four-year rotation, of which the following is an outline: First year, hoed crop, principally swede turnips and potatoes. White turnips usually sell for a high price in this locality, they are about the only succulent feed the farmer can have to feed his cattle during winter, and the greater part of them would be used for this purpose. The second year crop would consist of grain, chiefly oats with a small amount of barley and wheat, which would be crushed for hog feeding. This land would be seeded down with clover and timothy, which would give hay, mostly clover, the third year. Then timothy hay would be harvested the fourth year, and the land plowed shallow in August and cultivated at intervals of ten days or two weeks until late fall, when it would be plowed deeply and thrown up roughly to allow the frost to make plant food available for the succeeding root crop. In both rotations the manure would be applied to the hoed crop. This combination of two rotations seems to meet the requirements of this farm. It would supply the crops needed in the right proportions, maintain the fertility of the soil, control the weeds, and should be more profitable than the methods under which the farm is worked at the present time.

Kings Co., N. B.

F. LESLIE WOOD.

One-Third of the Farm in Grain.

EDITOR "THE FARMER'S ADVOCATE":

A long or short rotation of crops can be applied on the different kinds of soil and will give better results than where one crop is grown year after year on the same soil. We prefer a long rotation, which is as follows: Sod is broken up in the summer, thoroughly worked and sown to wheat in the fall. Manure is applied on the sod for most of the field, and the remainder is top-dressed and worked in just previous to sowing the wheat. The following year a crop of oats is grown and manure applied to the land during the winter. This is plowed under for hoed crop, which includes corn, potatoes, mangels and turnips. The next spring this land is sown to barley and seeded to timothy, red clover and alsike. This is left in sod two years; a crop of hay and pasture being taken off. The sod is then broken up and the same cycle followed. Our farm of one hundred and fifty acres is mostly clay-loam soil, with twenty-five acres with a sandy bottom on which wheat does exceptionally well. The farm is fairly well drained. We put about fifty acres in grain crop, forty acres in hay, ten acres in hoed crop and the remainder is pasture. We follow a system of mixed farming and keep, on the average, about thirty head of cattle, five horses, twenty-five hogs and one hundred hens. Most of the products of the farm are fed on the place, although we do sell a large portion of the wheat and occasionally we have a little seed grain for sale.

Middlesex Co., Ont.

T. W. H.

Crop Rotation Increases Production.

EDITOR "THE FARMER'S ADVOCATE":

Crop rotation, in my opinion, is one of the most important factors in keeping up the farm production. However, in many cases it is very often neglected, as far as careful consideration of it is concerned. The soil in this district is of medium texture, consequently, almost any farm crop can be produced to good advantage. Our experience is that the nearer the rotation is balanced the better are the results. We follow mixed farming, which gives an opportunity to follow crop rotation possibly to greater advantage than with specialized farming. On our soil barley does the best after a hoed crop, and oats follow very well. The land is always plowed out of sod in the fall for roots, and is manured during the winter or spring. The land is never left in sod more than two years. Fall wheat is also grown on sod which has been cut twice and then manured before plowing. If for any reason the manure cannot be gotten out before the sod is plowed, we find that top dressing gives good results. Oats very often follow wheat, and the land is seeded. This requires that about twenty-five acres to seeded each year. When alfalfa is grown it is not broken until the third or fourth year as it takes one year for it to get a good stand. We find that if it is left down much longer than four years that there is considerable difficulty in plowing it.

Middlesex Co., Ont.

J. McL.

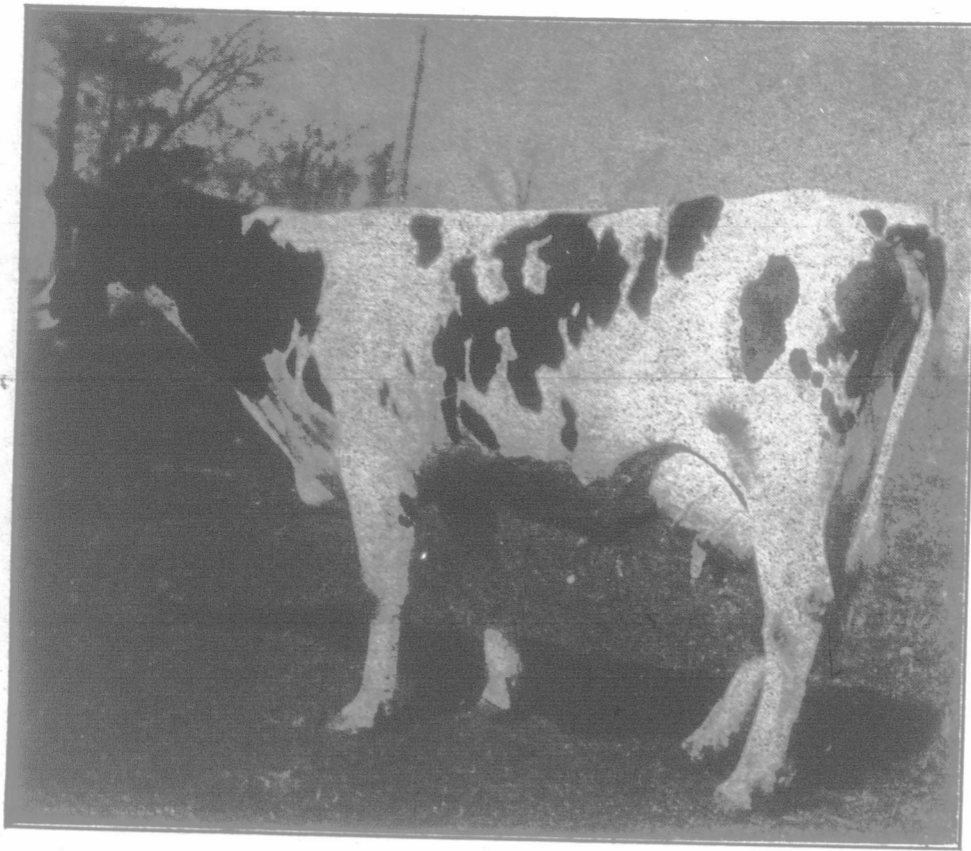
Three-Year Rotation Keeps the Farm Clean.

EDITOR "THE FARMER'S ADVOCATE":

Our farm was running wild; weeds and thistles ran riot and raspberry bushes had grown up along the rail fences. It was rather a hard looking problem to work on. However, we knew the land was all right, so we set to work on a three-year rotation. The fall we purchased the farm we cut and burned the weeds, then plowed those fields which required plowing, breaking up some that had been in sod for a long time. During the winter and spring one field was manured for hoe crop. The next fall we double plowed the fields which were not seeded and sowed grain the next spring, seeding down one field and putting another in hoed crop. Another field was broken for wheat. A hoed crop was put on this field the next year and the third year grain was sown and the field seeded. We are quite satisfied with this rotation. It is working fine on our land, which is a clay-loam soil. Our farm is getting in good heart and is fairly free from weeds. The chief advantage of the short rotation is the facility it affords for controlling weeds. With a long rotation the fields are in one crop longer which is harder on the soil and increases the difficulty of securing a catch of seeds. This difficulty is overcome when the farm is kept in good heart.

Perth Co., Ont.

C. W. T.



Simcoe Mercedes Queen 22663.
Seven-Day Record—Milk, 516.4 lbs., Butter, 30.07 lbs.

THE DAIRY.

As the temperature rises, open the stable windows and allow more fresh air to circulate through.

It does not pay to dog the cows, but a well-trained dog will save his owner many steps, and yet in no way injure the stock.

Sow a few peas or oats or plan for a patch of alfalfa near the buildings to cut green for the calves and bull which are kept in the stable.

twice daily until cured.

Very often the cow thought to be the best in the herd does not measure up to some of those believed to be the poorest, when judged by the scales and Babcock tester.

Do not make the change from stable feeding to pasture too rapidly. It takes time for the system to become accustomed to fresh, succulent feed after digesting dry fodder all winter.

If there is still a little feed in the barn and granary, don't be in a hurry to turn the cows on grass. The

In hot weather the cow giving a large flow of milk requires water between morning and night. To deprive her of it is to reduce the milk yield.

Keep a supply of salt where the stock on pasture can get it when they want it. A salt trough in the pasture field should be protected from rain.

Don't neglect the calves. A stunted calf does not develop into as good a mature cow as one which has been kept thrifty from the day it was dropped.

Feed the calves before the milk gets cold. Feeding milk warm one meal and cold the next is the cause of many digestive troubles and their attendant disorders.

If some of the calves contract ring-worm isolate them from the main herd and moisten the scales with sweet oil, then apply tincture of iodine

first growth is immature and a large amount has to furnish the necessary nutrients.

Regularity in feeding and milking is essential success in the dairy business. In the milk of a cow work the cows are sometimes given several months of rest. However, what is made up in one way is lost in another.

If calves are affected with diarrhoea they lose strength. A little lime water added to the milk is mended. One or two teaspoonfuls of iodine and a little new milk given at intervals of four or five days may relieve the trouble.

A paddock leading from the calf pen is a good one. The youngsters can take exercise and always have a pen to go to for shelter from flies, but one must be careful. It is a crime to turn young calves out to rough with the yearling and two-year-old stock.

Provide some means of giving the bull water. It is not always safe to allow him to run up and down with the rest of the stock, but a small container possibly be made outside his pen. Exercise will help keeping up his virility and procreancy.

In February 1916 Canada shipped only eight hundredweight of butter and 25,600 hundredweight of cheese to Great Britain. In the same month, 1917, Canada exported 3,204 hundredweight of butter and 100,000 hundredweight of cheese to the same market.

The damp ground may cause inflammation of the udder when the cows are first left in the pasture at night. When such occurs give a purgative and bath with four drams nitrate of potash three times a day. Poulitice or bathe with hot water and draw the udder frequently. After milking, rub well with camellia oil.

It will pay any dairyman to test each of his cows. C. F. Whitley, of the Dairy Division, Ottawa, estimates that a few minutes per cow per month spent in testing and sampling will give valuable information to build up a better herd. All dairymen who wish to test and apply the information secured are of the opinion.

Milk fever is becoming quite common with the milkers. Prevention consists in frequent milking, drawing but a little at a time, for three or four days freshening. If the trouble is contracted and does not give relief. Inflate the udder to capacity with sterilized air. Cures have been effected by the use of a bicycle pump and a teat syphon.

Quality and Uniformity Increases Price of Dairy Products

A vast number of dairymen throughout the country are engaged in selling the fat or cream of their milk to creameries. Cream is, to a large extent, a concentrate product and may profitably be shipped a considerable distance if a creamery is not located in the neighborhood. During the past five years the creameries of Ontario have almost doubled their output, which is an indication of the trend of the dairy business. The market for whole milk must be convenient in order that this phase of the business may appeal to the producer. Although the supply of creamery butter has greatly increased, it has not exceeded the demand. Good butter is a wholesome, nutritious product which is used in every home, but butter of poor quality does not find ready sale. Therefore, consumers endeavor to purchase the best available. If the product of one creamery doesn't suit their tastes, they immediately try another brand, and so on until they find what they consider the best butter. It is reasonable that they do so, and it has resulted in the product of one creamery commanding several cents per pound more than another. Butter that is "off" in flavor is not wanted for table use.

Some have the idea that the quality of butter is under the direct control of the butter-maker. While this is correct in part, good butter cannot be made from poor cream. The creameries making the highest quality product to-day are receiving cream that is of good quality. Not only is it properly looked after on the farm, but it is delivered to the creamery before it becomes rancid. The pasteurizing, the subsequent ripening and addition of salt to impart the desirable aroma and taste is controlled by the manufacturer. The color, grain and texture is largely regulated by the treatment the cream receives after it leaves the farm. Competition is responsible for the placing on the market of high-quality butter. As one creamery competes against another so provinces and countries compete for a place in the world's markets. The best product is picked up at the highest price, which is a strong incentive for individuals and countries to put forth an earnest endeavor to capture the best trade.

Ontario butter held its place in strong competition in the past, and there is no discounting the quality of much of it to-day. It is good, but other provinces and countries are producing better. This fact is plainly shown by competitions at some of the large shows, and by outside butter encroaching on the market formerly held by Ontario butter-makers. New Zealand butter is highly spoken of; Alberta and Manitoba farmers are commencing to keep more cows, consequently they are able to not only supply their home demand for butter, but have shipped a considerable quantity out of their provinces this past year. Uniformity of quality is the strong point in favor of the butter from the places mentioned. One sample is indicative of the quality

of probably carloads of butter. Consumers knowing this naturally return to the market which supplied them with the product that proved satisfactory. The newer countries and provinces are profiting by the experience of the older countries. A system of grading of products was introduced when creameries were started, consequently many producers are acquainted with no other method of marketing their cream except on a quality basis. The preferences of the consumer are met by the produce merchants who can afford to pay more for high-grade butter than for average grade. When the creameryman receives a premium for his best butter he can afford to pay the producer more for high-grade cream

than for poor quality cream. The system works automatically. When cream and butter are bought and sold on a quality basis it pays to produce the best possible. In Alberta grading of butter has been in over seventy-nine per cent. of the butter manufactured in 1916 being classed as specials, and only one per cent. as firsts. There was very little second grade or poor butter, which is an indication that but a small amount of low-grade cream was delivered at the creameries.

Creameries have been in operation in Canada for years, but the cream and butter was largely sold on a flat-rate basis. Good, bad and indifferent cream



Keyes Walker Segis.

Five-year-old cow. Butter, 7 days, 34.78 lbs.; Milk, 508.8 lbs. Butter, 14 days, 65.31 lbs. Milk, 1,000 lbs. Owned by Roycroft Farm, Newmarket, Ont. W. L. Shaw, Proprietor.

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Five year-old cow. Butter, 7 days, 34.75 lbs.; Milk, 508.8 lbs. Butter, 14 days, 65.51 lbs.; Milk, 1253.3 lbs.; Owned by Roycroft Farm, Newmarket, Ont. W. L. Shaw, Proprietor.

than for poor quality cream. The system works automatically. When cream and butter are bought and sold on a quality basis it pays to produce the best article possible. In Alberta grading of butter has resulted in over seventy-nine per cent. of the butter manufactured in 1916 being classed as specials, and over sixteen per cent. as firsts. There was very little second grade or poor butter, which is an indication that but a small amount of low-grade cream was delivered at the creameries. Creameries have been in operation in Ontario for years, but the cream and butter was largely sold on a flat-rate basis. Good, bad and indifferent quality cream brought the same price. There was little incentive for the dairyman to go to extra pains in order to sell a high-quality product. When all grades of cream were churned together the result was medium quality butter for which a medium price was received. Things have proceeded in this way until Ontario creamerymen and produce dealers have awakened to the fact that the product they are manufacturing and handling has frequently to take a second or third place. The dairymen have been told to keep their cream in better condition, but no incentive to do so was offered, and few people do any extra work for nothing nowadays. It has been realized that the improvement must start with the produce dealers. If they set the example, improvement in quality will automatically follow, as it has in Alberta and elsewhere. It is hard to break old habits, but a start in

the right direction has been made and at no distant future we believe Ontario butter will be uniformly of the finest quality.

Produce men have signified their willingness to buy butter on a graded basis and many creamerymen have followed suit. It is recognized that a new departure cannot be introduced all at once. The people must be enlightened as to the workings of the new venture and of the benefits accruing to them. The Dairy Branch of the Department of Agriculture, under the supervision of F. Hens, Chief Dairy Instructor in Western Ontario, carried on considerable work during the past summer and winter. The grading was done by J. H. Scott, of Exeter, and it was found feasible to introduce grading of butter by sample and that commercial grading was practicable in Ontario. The quality of butter depends primarily on the quality of cream, consequently improvement must start with the producer. When cream is purchased on a quality basis, it is reasonable to expect that better care will be taken of the cream on the farm. Grading has improved the quality of butter in other provinces and has given the dairymen higher returns; there is no reason why it will not do the same in Ontario. On a rising market quality does not count for so much as when prices are flat. There are abnormal times and butter-fat and butter find ready sale. Under normal conditions trade will seek out the highest quality products. By getting grading under way now we will be prepared for emergencies later on. Under the new system of paying, the aim of every dairyman will be to keep the cream in the most approved manner, because it will pay him. Likewise, creamerymen will exercise their ingenuity to make that cream into first or special grade butter.

Producing High grade Cream.

The production of first grade cream requires adherence to several well-known principles. The cows must be healthy and be given clean, wholesome feed. The stable where the milking is done should be free from objectionable odors and dust. Cows' udders and flanks should be wiped, and the milker's careful not to allow dirt to get into the pails. Do not have too thin a cream; it reduces the amount of skim-milk and increases the cost of caring for and marketing. Cream is sold on a per cent. fat basis, therefore, one hundred pounds of twenty per cent. cream is worth no more for butter making than fifty pounds testing forty per cent. Turn the screw of the separator so as to skim a thirty to thirty-five per cent. cream. In order to have a truly uniform test the milk must be of the same temperature and fed into the separator at the same rate from day to day. It is also essential that the machine always be turned at the same number of revolutions per minute. The cream should be cooled immediately after separating and kept as cool as possible until delivered at the creamery. Warm milk and cream absorb odors, thus fermenting or decaying material in the stable may seriously affect the flavor of the cream. Most people object to turny butter, and no one can blame them. Fresh clover and several other crops will impart a flavor to the milk and cream unless it is properly looked after. It is advisable to remove fresh milk from the stable as soon as possible after it is drawn. Cleanliness is essential at all times in the handling of dairy products.

Since the advent of the cream separator, it is claimed by some creamerymen that the quality of the cream is lower than when creaming was done by using the pans or cans. Under the latter method it was essential that the milk be cold in order that complete separation take place. This resulted in the cream being cold when it was skimmed. Under the almost universal system of creaming by action of centrifugal forces, cream is warm when it leaves the machine. The too common practice is to pour fresh cream in the can with old cream. The result is that warm cream brings into activity bacteria which have been dormant. Under the old system the cream was always cool when mixed in the can. It is necessary that cream from the separator be cooled immediately after it leaves the machine. This is best done by setting the pail or can in a tub of cold water, the colder the better. If possible the temperature of the cream should be lowered to about fifty degrees F., then when it is mixed with old cream there are no ill effects. Many of the bacteria which develop "off flavors," souring, etc., grow and increase rapidly in numbers at a warm temperature, but multiply slowly at or below fifty degrees. Warm, new cream added to ripened cream just before churning causes an excessive loss of fat, therefore, whether it is to be made into butter on the farm or shipped to a creamery, it means dollars and cents to the producer to carefully cool it immediately after separating. Cold, running water will reduce the temperature, but ice to put in the water materially aids in cooling. By taking this precaution there is less danger of the cream becoming over-ripe or rancid.

The opening of spring, which brings high temperatures, increases the difficulty of keeping cream sweet if it is to be held for several days, and as summer advances a poorer quality product is secured by the average creamery. However, it was proven last year that it is possible to so look after cream that it can be delivered in first-class condition. To do this requires cooling after separation and keeping the can in cold or ice water. Cream must not be held too long during hot weather. It is necessary to make more frequent deliveries in July and August than during fall and winter. When shipping, many have too large a can; it takes too long to fill it when only a few cows are kept and the milk flow drops down as it usually does in hot weather. Creameries usually secure the best product from the patrons who do their own delivering. When

it is gathered by team or truck, which is out all day in the hot sun, oftentimes without a canopy to shade the cans, the cream secured at the commencement of the trip cannot be as good as that only hauled a mile or two. A large amount is shipped by rail and is delivered in good condition. The fact that it can be shipped, thus affording many markets, is partly responsible for carelessness in handling cream on the farm. If one creamery won't accept it on account of quality, another usually will. This difficulty is always experienced under the pooling system. It is different when payment is made according to quality, and the condition of the cream is taken into consideration as well as the percentage fat. Healthy cows, good feed, cleanliness and keeping the cream cool will go a long way towards being able to market first-grade cream, which will make first-quality butter that will compete favorably with the best of other countries. By the grading system the producer is paid for taking extra care of his milk and cream. When grading of cream and butter becomes general throughout the province, Ontario butter will not have to take a second place. This means something to the dairy industry and to the dairymen in particular. The movement, though belated, has started; let every dairyman, creameryman and produce merchant put their shoulders to the wheel and boost it along so that in a short time practically all Canadian butter will be in the special or first grades. It can be done; it will be done if everyone does his part.

POULTRY.

More Eggs and Poultry.

EDITOR "THE FARMER'S ADVOCATE":

There never was a time when an increase in poultry production was as necessary as it is at present. The demand was never as good, and prospects indicate that this demand will continue for some time to come. With the scarcity of meat, Canadians are eating more eggs, and Great Britain needs all the eggs we can supply.

As a business proposition increased production of poultry products has much to commend it. In normal times Great Britain eats a million eggs a day. Present consumption is less than this owing to the war having cut off many sources of supply. Canadian eggs are good eggs and are at a premium in England. Several cents a dozen more are paid for them than for eggs from some other countries.

For two years Canada has been producing a small surplus, and there is no reason why the surplus for 1917 should not be from five to ten times what it was in 1916. We have the climate, we have the feed, and though labor for other lines of work is scarce, there is plenty of labor suitable for poultry keeping.

Unfortunately, efforts to increase production will not affect the supply of eggs until the early pullets start to lay next fall. To help the egg supply in the meantime, make sure that laying hens are well fed; give them exercise and fresh air; market all weaklings and non-producers. Use vigorous males; have the fertility strong; have as few infertiles as possible; make every egg count. Aim to have hatching done before May 25, for general purpose breeds, and for light breeds, no later than June 15. Give special attention to rearing the chicks.

The farm flock always pays when given proper care. Production here might be materially increased with very little additional labor or expense. One farmer in Eastern Ontario made \$4.00 per hundredweight out of his feed grain by selling it as new laid eggs. If one can do that, others can. Feed is dear, but so are eggs. Breed from bred-to-lay strains; market the eggs when new-laid; distribute the sale of table poultry over as much of the year as possible; cull out the weaklings and feed intelligently. Increased production will follow, resulting in a larger surplus to meet Great Britain's demand for eggs. DOMINION DEPARTMENT OF AGRICULTURE.

HORTICULTURE.

Spraying for Scab, Bud Moth and Codling Worm.

Perhaps the scab and codling worm cause more unmarketable apples than all other diseases and insects combined. The bud moth, too, works concealed and destroys the prospect of fruit within the bud as well as much foliage, particularly on young trees. Where there is any San José scale the dormant spray should have been applied, but in any case the application just before the blossom buds burst and again when about ninety per cent. of the blossoms have fallen, should not be omitted. If the British embargo on Canadian apples continues in effect next fall and winter, no doubt the influence will be detrimental. There is no use hedging this question; but on the other hand what up-to-date grower can afford to neglect his orchard and allow it to become a breeding ground for disease and insects? Such neglect will militate against profits in years to come and make future operations all the more difficult and expensive.

Scab can be dealt a heavy blow just before the blossom buds open by spraying with lime-sulphur, (one gallon of commercial lime-sulphur diluted with 30 or 35 gallons of water) or Bordeaux mixture. The price of bluestone will naturally decrease the popularity of Bordeaux mixture this year. The addition of two or three pounds of arsenate of lead to forty gallons of the solution will help to control the bud moth, so both scab

and bud moth are attacked at the one time. The spray just mentioned will not ensure freedom from scab. Another application of lime-sulphur will be necessary, and the next opportunity presents itself just as the blossoms are about all fallen. At this time the solution may be a trifle weaker than the previous one, or one gallon of commercial lime-sulphur with thirty-three to forty gallons of water. This is an opportune time also to combat the codling worm, so two pounds of arsenate of lead to forty gallons of the solution should be added. The codling worm, as most all growers know, causes the wormy apple, and the young larvæ enters the fruit at the calyx end. If this entrance be blocked with poison, the small worm eats a very little and its career is ended before any material damage is done. Thus in the first spray referred to, one would prevent the development of scab on the foliage and twigs, as well as destroy many small larvæ of the bud moth. With the second spray one would cover the small apple, just in the formative stage, and the stems, with material very injurious to scab spores, and at the same time block the entrance to the apple so the codling worm will find an unsurmountable difficulty in gaining admittance.

This is the theory or philosophy of these two sprays, and they should be applied at exactly the proper time, if possible. As an illustration of the result of tardiness we might point out that after a short time, subsequent to the falling of the petals, the small apple turns down and the calyces close. It is then difficult to get the spray into the calyx end, and an opportunity has been lost. Study the Spray Calendar, which appeared in the issue of March 29, and follow its directions as closely as conditions will permit.

FARM BULLETIN.

The 1917 Budget.

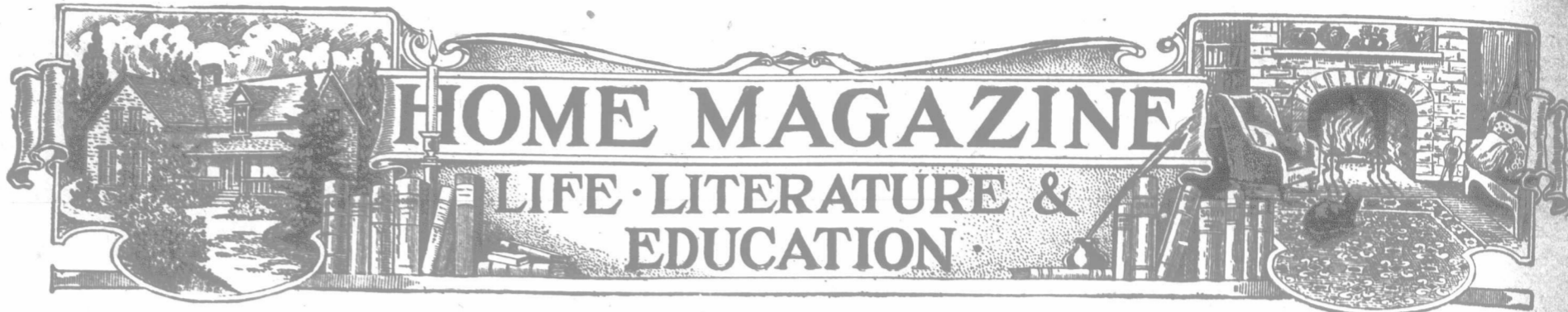
No tariff changes were proposed by Sir Thomas White, Minister of Finance, in the Budget address in the House on April 24, but increased taxes were imposed on abnormal business profits. The Business Profits War Tax Act of 1916 permitted the Government to collect twenty-five per cent. of all profits over seven per cent. on invested capital. Now the Minister of Finance proposes to extend this tax to the extent of collecting fifty per cent. of all profits over fifteen per cent., and seventy-five per cent. of all profits over twenty per cent. Incomes were untouched on the grounds that the larger earnings, apart from salaries, were derived from holdings in joint stock companies already subject to taxation under the Business Profits War Tax Act, and that the Canadian public are now contributing voluntarily to the Canadian Patriotic, Red Cross, and other funds. While some of the more wealthy are not doing their part, it was felt that they would still be able to shun their duty under any system of income taxation the Government might impose, especially when holding issues of Dominion bonds exempt from Dominion taxation.

The results from the tax on abnormal profits for the first accounting period have been gratifying to the Government. As much as \$12,500,000 has already flowed into the public treasury from this source, and when the full levy is made it is anticipated that upwards of \$15,000,000 will be collected in respect to the first period. The profits of the first accounting period were much affected by the depression and dislocation of business incidental to the first months of the war, but owing to the business prosperity which has subsequently prevailed, the Finance Minister looks for a considerable increase in revenue from profits for the second period.

For the first year of the war the revenue from all sources was about \$130,000,000. It rose during the second year to \$170,000,000. For the year ending March 31, the revenue will reach \$232,000,000, or \$100,000,000 in advance of the fiscal year 1915. In round figures \$134,000,000 of the aggregate was derived from customs, \$21,000,000 from excise, and \$12,500,000 from the Business Profits War Tax. Outside of the direct war expenditure the outlay for the past year upon ordinary account was \$146,000,000 and \$27,000,000 upon capital and subsidy account or a total of \$173,000,000. Of the expenditure on ordinary account \$25,000,000 represents increased interest and pension charges due to the war.

Since the beginning of hostilities the total war outlay including estimated and unadjusted liabilities to Great Britain for the maintenance of our troops at the front, and inclusive of withheld pay, totals approximately \$600,000,000. As the result of this large war expenditure the net national debt of Canada, which was \$336,000,000 before the outbreak of the war, has risen to over \$900,000,000. By the end of the present fiscal year the Finance Minister stated that it may reach \$1,300,000,000.

The only safeguard against the conditions as expressed in the foregoing figures that Sir Thomas White could suggest was a saving on the part of all who are now engaged at good wages and are in a position to save, and the careful husbanding of their resources by firms and companies engaged in business. The position of most businesses in Canada is now thoroughly sound, he said, and it is for their proprietors, with the prudent watchfulness of their bankers, to keep them in that condition. The sources of danger to business in war time are speculation in commodities and stock exploitation on the exchanges. With these avoided and national saving greatly increased we might look forward with confidence to whatever may occur in the reconstruction period after the war.



Bloodroot.

BY BLISS CARMAN.

When April winds arrive
And the soft rains are here
Some morning by the roadside
These gypsy folk appear.

We never see their coming,
However sharp our eyes;
Each year as if by magic
They take us by surprise.

Along the ragged woodside
And by the green spring run,
Their small white heads are nodding
And twinkling in the sun.

They crowd across the meadow
In innocence and mirth,
As if there were no sorrow,
In all the lovely earth.

So frail, so unregarded;
And yet about them clings
That exquisite perfection,
The soul of common things!

Think you the springing pastures
Their starry vigil kept,
To hear along the midnight
Some message while we slept?

How else should spring requicken
Such glory in the sod?
I guess that trail of beauty
Is where the angel trod.

School Gardening in a Suburban Section.

As I intimated in a former article on this subject, the spring of 1916 found our school with the best preparations we had ever made, and all looked forward to the best results. The ground had been well dug in the fall, a good supply of well-rotted manure provided and four large beds planted with tulips.

The only drawback was the frequent heavy rains which interfered with our plans for planting. However, early in May, we managed to plant a row of sweet peas, and such seeds as cosmos, mignonette, petunias, sweet alyssum, snap-dragon, hollyhocks, marsh-mallow, etc.

As the tulips were at the north side of the school building, they were late blooming, but remained out for nearly three weeks. When they were past, we filled the beds with the geraniums we had kept in the school windows during the winter, and saw them fairly started before the summer vacation. These grew well and when dug up in the fall have supplied plants for all our rooms to brighten the winter months, and we expect to use them again to plant the front flower beds.

The real school garden was only a partial success. The excessive rains of May and June followed by the intense heat and drought of July and August, and the absence of teachers and pupils were not conducive to the best results. However, we had a demonstration of the plants that could survive such conditions, as well as the effect upon various weeds. The cosmos, petunias, mignonette and sweet alyssum all bloomed, while the biennials made a good first year's growth.

As we were not downhearted, we have made the usual fall preparations, and this season are planning to use most of the ground for vegetables, and only the borders for flowers.

In conclusion, I must state that the work has been well worth while for many reasons. We have shown to many children who were born in the crowded cities of the Old Land that gardens, flowers, lawns and trees, as well as small flocks of poultry are within the reach of all who will make even a small effort; the class

rooms and many of the pupils' homes have been brightened all winter by geraniums and flowering bulbs; and I might add, that even in a crowded playground, and no protection for the garden or flower beds, there has been very little wilful injury by pupils at any time.

The homes of all the fifty pupils of my room have lawns around them; all have had vegetable gardens; most of them flower gardens and practically all a flock of poultry. This year our District Representative has announced the first school fair in York Township, and this will be a strong impetus to increase our efforts, and with favorable weather conditions, we should at least double the productions of former years. York Tp. TEACHER.

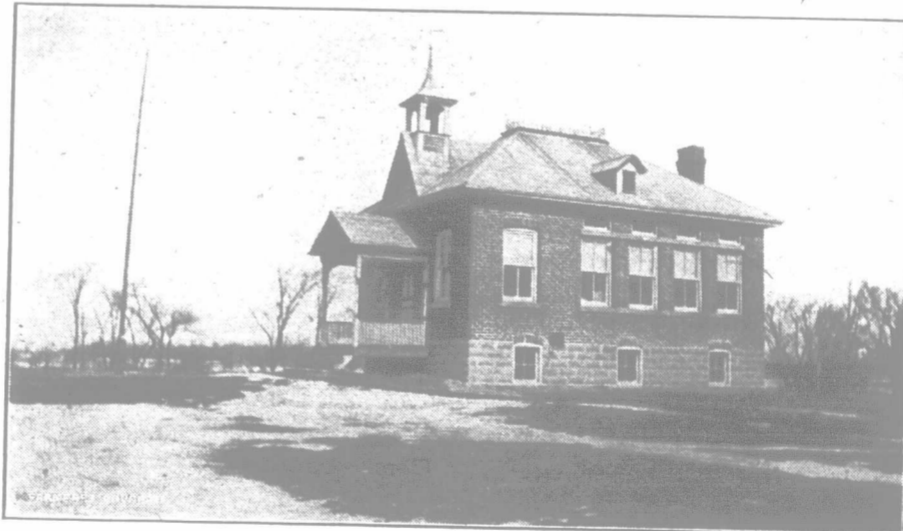
Hope's Quiet Hour

The Proof of Love.

Jesus saith to Simon Peter, Simon, son of Jonas, lovest thou Me more than these? He saith unto Him, Yea, Lord; Thou knowest that I love Thee. He saith unto him, Feed My lambs.—St. John 21:15.

Ye elder brethren think on this!
Think in the mighty bliss,
Should He, the Friend of babes, one day,
The words of blessing say:
"My seal upon My lambs ye knew,
And I shall honor you:—"
And think upon the eternal loss
If on their foreheads ye deface the glorious Cross. KEBLE.

Three times the Good Shepherd asked that searching question: "Lovest thou Me?" and three times He pressed home



An Attractive Ontario Schoolhouse.

Photo of an attractive school-house, S.S. No. 3, Caistor, Lincoln Co., Ont., kindly sent us by Miss Annie Clark. This school-house is quite removed from the monotonous structures usually seen in rural districts. With some shrubbery about the foundation and vines on the walls it may be made to look quite home-like as every school-house should.

the necessity for showing some practical proof of love. "Feed My lambs. Tend My sheep. Feed My sheep." (R. V.)

Think of the thrice-repeated "My" in this great commission. The lambs of the flock, and the sheep—black or white—are the property of the Head Shepherd and are of priceless value in His eyes. One who is only hired to take charge of part of the flock may care for his own safety first, when danger threatens; but the Good Shepherd shelters "His Own sheep," regardless of the cost to Himself. Those who profess to love Him must prove their words by ministering to Him through the least of these His brethren.

St. John knew that when a man de-

clared himself to be a lover of God he was not speaking the truth, unless he was reaching out in real brotherly kindness to his fellowmen. "If a man say, I love God, and hateth his brother, he is a liar: for he that loveth not his brother whom he hath seen, how can he love God Whom he hath not seen."

St. Peter had passionately declared his love for his Master—and then had turned his back disloyally on that Master in His hour of shame and torture. Now another chance is offered to the penitent Apostle; but his words of love must be backed by deeds.

"Lovest thou Me? Feed My lambs." Not long ago a sick woman in the hospital told me of a little Jewish girl of her acquaintance. The child was looking at a picture of Christ with the children gathered about Him, and she said very earnestly: "I love your God."

How could the children fail to be won by their Friend? "By His outward gesture and deed He declared His good will toward them; for He embraced them in His arms, He laid His hands upon them, and blessed them." If any man have not the Spirit of Christ, he is none of His, said St. Paul; and I fail to see how anyone can be a sharer of Christ's spirit and indifferent to the spiritual and temporal welfare of children. If we wish to please Him we must not put any stumbling blocks in their way. You remember how He was much displeased when men tried to keep the children at a distance from Him. What a wonderful encouragement it is to remember that any kindness we show to a little child is accepted as a treasured gift laid in the hands of our King (Himself). Anything done to one of the least of these—anything, good or bad—is done to Him. That thought makes the service of a parent or a teacher grandly, gloriously worth while. No one need feel that life is cramped and narrow when there is a

In the solemn hour of death those young men, who seemed to care little or nothing about the teaching they received on Sundays, lean for comfort and hope on the scraps of spiritual food they picked up, and assimilated while you thought they were not listening.

You feel your own helplessness as a teacher. Of course, you do! When Christ pointed to a great multitude of needy people and said: "Give ye them to eat!" the disciples, naturally enough, felt their powerlessness. But it is when we feel our weakness that we turn to the Source of supply. When an under-shepherd is bidden to feed his Master's lambs the Master Himself is ready to work through him.

"Produce enough food for a famishing world!" is the huge order given to farmers to-day. What can a farmer do? Can he make two grains of wheat out of one? He is only a man and has no power to make any kind of food. But he can plant seed, trusting to God to work the great yearly miracle of the harvest.

So it is with the spiritual seed. Paul can plant, and Apollos water, but only God is able to give the increase. Those who do the easy part—the planting and watering—are only ministers through whom the Lord gives his special portion to each member of His flock.—1 Cor. 3:5.

But if a teacher, trying to plant spiritual truths in a child's mind and soul, for an hour once a week, shall be rewarded by living sheaves of priceless grain on God's great Harvest Day, what of the opportunity of the mother and father? A little child is wonderfully receptive to the daily influences of home. The ideals of the home stamp themselves indelibly upon his nature—especially if they are good influences. Good is more infectious than evil, I am quite convinced of that. Men do repent—sometimes, like the thief on the cross, they refuse the evil and choose the good when death is only a hand's-breadth away. But—with the mystery of the land of far distances very near at hand—men don't repent of their spiritual gains nor turn at the last from trying to serve God and choose to serve Satan. "Train up a child in the way he should go; and when he is old, he will not depart from it," said the wise man.

To-day I was very delighted to receive a letter from the mother of a soldier. She told me she sent "Hope's Quiet Hour" every week to her son in the trenches, and he not only read them but passed them on. He wrote: "It is surprising how few there are who do not care for this sort of reading. Away down deep in most hearts feelings lie buried that God's Grace properly administered can restore." That mother and son are not far apart, but meet before the throne of God. She—in the quiet church at home—can clasp hands with her boy joining in a solemn communion service in "Rest Camp." The service may be held under difficulties in one corner of the Y. M. C. A., with "soldiers all around writing, talking and laughing; and the canteen farther back doing a howling business. . . . it was surprising how many stayed to sacrament."

I feel sure the splendid young soldier, who so fearlessly confessed his faith in Christ by obeying His command: "Do this in remembrance of Me!" will be glad to cheer other mothers in Canada by assuring them that "many stayed to sacrament." In spite of the noisy surroundings it is probable that they found Christ, and the dear ones at home, nearer than ever before in that sacrament of unity. Like children, gathered round our Father's table, we eat of the same loaf and drink of the same cup—1 Cor. 10:16, 17—though the ocean may roll between.

Perhaps they are drawing very near to the Veil which we call "Death," when the Chief Shepherd prepares that spiritual

food for enemies. to comfort the valiant but the ship, too. Do you from the His sold hardship love the without behind t deadly p of moto in an u so our v without tarily of country. Mary mind us love will

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food for them "in the presence of their enemies." It may be especially needed to comfort them as they walk through the valley of the shadow (Ps. 23 : 4, 5), but they are hungry for human fellowship, too. Are you giving it to them? Do your prayers carry needed supplies from the open Storehouse of the King to His soldiers, who are enduring terrible hardships for us? If you love Him, and love them, do not let them face danger without the strength of your prayers behind them. As Verdun, in its hour of deadly peril, was saved by the thousands of motor trucks which carried supplies in an unceasing stream day and night; so our vital duty and privilege is to pray without ceasing for those who are voluntarily offering their lives to save their country.

Mary Robertson's beautiful words remind us of the opportunity which real love will not let slip. She says:

"I am a prayer of faith and power
Over the ridge at Vimy:
And, as I shelter a soldier's head,
I listen in vain for the throbbing tread
Of millions of prayers that should be said
In Canada for Vimy.

"They went on the crest of your Easter prayers
Over the ridge at Vimy.
Oh, that they still may feel the surge!
That you never withhold that onward urge
Which carried them fearless over the verge
Of the fortress grim at Vimy!"

Do you love those brave young men who are so dear to Christ? Do you love Him? Then meet Him and them very often before God's Throne. Their souls as well as their bodies need your daily prayers. How discouraged a soldier must be if he thinks there is no one to cover his head in the day of battle.

"If we bend not to the world's work
Heart and hand and brain,
We have lived our life in vain."
DORA FARNCOMB.

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.]

Mr. Britling.

Just at present the city folk, in this city at least, may be said to be divided into three classes: those who have read *Mr. Britling Sees It Through*; those who are about to read *Mr. Britling Sees It Through*; and those who are half way on in *Mr. Britling Sees It Through*.

No doubt these words are no enigma in the rural districts either, and so it will be necessary to explain to but a very few that the reference is to the last novel written by H. G. Wells, who is, without question, the greatest novelist and one of the most significant personalities in England to-day. One thinks of him, somehow, in the same class with Tolstoi.

Yesterday I finished reading the book, and in thinking of it, while it is still fresh in my memory, find that I have been impressed with three things: in the first place the tremendous *daring* of Wells in saying some of the things he has said; in the second the fact that, in the years to come this book will be recognized as one of the most accurate histories of the War, or, at least, of England in the days of the War; and in the third that Wells is realizing—that the War with all its murders has forced upon him the conviction—that the old conception of God and the eternal verities must give way to a better one, that the Judaistic idea of God can no longer satisfy a world-people with ever-broadening visions of the universe.

I do not know that I can touch greatly upon Wells' *daring* here; there might be misconceptions. But it surely is greatly to the credit of England that her foremost writer has found it possible to be so free of speech; in Russia, as she was in the days of autocracy, or in Germany, he would have been brought up sharply long ago. Truly the battle which Wilkes waged for the freedom of the press was one well fought in England; truly there is something in that very freedom which must bind the hearts of her sons to her

and must forever forefend that she shall see her streets running red with blood, the sight that Paris saw in the days of her Reign of Terror, and, to a lesser extent, China in 1915, and Russia within the past three months. If ever change comes in England—and who can say that it will not?—it will come as a product of evolution, of a broader growth which will not be rooted in the torn-asunder bodies of men.

Wells loves England—one can see that—yet he points out her faults with the greatest conscience, just as one may point out the evident faults in the person one loves in the hope of removing a blemish that mars the whole. He—but dear me, I am forgetting Mr. Britling. Of course, Mr. Britling is H. G. Wells.

Wells, masquerading as Mr. Britling, takes the form of an English country gentleman and writer, with a family about him—a second wife and two children, and a son, Hugh, the offspring of the first marriage. In the house, and connected with it are: an American, Mr. Direck, and Cicely, with whom he is in love; Cicely's sister Letty and her husband Teddy; and a pink-faced German, Herr Heinrich,—Heinrich, with his white flannels, his violin, and his spectacles, a philosopher and pacifist, filled with all the German anxiety for system and thoroughness,—Heinrich, who is a favorite with everybody and an especial favorite with Hugh.

There are others who touch the home in a visiting relationship, but they do not greatly count except to throw a few side-lights on conditions in England and the character of Mr. Britling.

Early in the book Mr. Britling is revealed as a thinker and prober—he is always trying to "see things through." He is bothered about public affairs; worried about Ireland; in a fog as to whether Huxley was right, and all humanity "a careless, fitful thing, playing a tragically hopeless game, thinking too slightly, moving too quickly, against a relentless antagonist."—After all they are but the questions that every thinking person who is interested in things outside of his own affairs comes up against sooner or later.

In his book *The Modern Novel*, Professor Phelps, in comparing Wells and Locke, says that Locke has a power to make his readers love him which Mr. Wells has not. I think one feels this in the first part of *Mr. Britling Sees It Through*. The characters are not immediately convincing; there is a lot of tweedle-dum and tweedle-dee. Mr. Wells is evidently trying to draw a picture which will contrast forcibly with the great sincerity after the War breaks out, but he might have done it better; one gets so tired of the endless hockey games and tea-parties. And imagine Mr. Direck *arguing* his claims to be heard when he "proposes" to Cissy! What lover worth the name ever argued such a thing! But as the narrative advances one perceives that Mr. Wells is only a failure when he carries with the lighter things of life. He cannot be a dilettante. He is himself only when he is dealing with serious world-things. When he keeps to them—yes, one can love him. After all *Mr. Britling* was not published when Professor Phelps wrote his criticism.

Then—the war comes. "For most of the world it came," says our author, "as an illimitable multitude of incoherent and confusing impressions," incoherent and confusing enough it was, to most of us, and is yet.

The very ring of sincerity and truth is in the words with which Wells describes those first days of August, 1914, and if ever there was a clear case of lack of deliberate war-intention on the part of Great Britain, it is shown in the story of her utter unpreparedness at this time. Truly, for the precipitation, at least, of this world-catastrophe, the prepared nations must bear the onus. Germany knew what she was about; the rest of the nations were, in those first days, *puzzled*, and confused, like bats that circle round and round in the light.

Very vivid are the descriptions of little England at this time. There was hurried recruiting and mustering of troops, and of course the first thought was of the Fleet. "Submarine after submarine went out of the harbors into the North Sea, never to return. No prisoners were reported, no boasting was published by the British fishers of men. U-boat after U-boat vanished into a chilling mystery. Only later did Mr. Britling begin

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to hear whispers and form ideas of the noiseless, suffocating grip that sought through the waters for its prey."

At the first flush, poor, pink Herr Heinrich is called home to the colors, and leaves his precious violin with Mr. Britling to be sent to his parents in case he does not return to claim it. Secretly and shamefacedly Mr. Britling is glad that Hugh is too young to enlist—Hugh, his brilliant, high-minded son, the greatest comfort of his life in a somewhat loveless home (one realizes the lovelessness of it, even while seeing that the fault is in no small measure with Mr. Britling himself).

Then Hugh goes off, and Mr. Britling is left alone with his meditations. He realizes how silly and ineffective his little affair with Mrs. Harrowdean; in the face of tremendous world-events such things appear in their true significance.

He searches about for the cause of all this world-commotion and world destruction. He faces things, and probes farther than the folk who see only a flag on one side and a devil on the other. He blames, somewhat, for the war, "the blind motives and muddleheadedness of all mankind," he recognizes that there have been times when "old men at out of danger contriving death for the lads in the trenches," he sees in all war a "mere incoherent fighting and destruction, a demonstration in vast and tragic forms of the stupidity and ineffectiveness of our species," and when Hugh's letters begin to arrive from the front the conviction is deepened. "War is just foolery—lunatic foolery," says Hugh,—"hell's foolery." And yet he realizes that in this case England could do no other.

Hugh's letters are very interesting. One will not forget the little officer "Ortheris," who murdered the King's English, who "was always singing 'Tipperary' and never got the tune right," and who got on Hugh's nerves. Wells never showed himself more masterly in revealing human nature than in these letters from Hugh, so scathing in their arraignment of mismanagement at the front, and especially of "Ortheris." Youth, especially sensitive, alert-eyed youth, is usually intolerant; it has no use for mistakes. But high-souled youth can change its mind too; and when it has become generous it goes all the way, and so one is not surprised to find soon, in Hugh's next letters, a warm-hearted going over to Ortheris, and a sob in the words when he writes at last of the little officer, who died with a smile, "I never knew him scared, or anything but cheerful. And he'd starve to have something to give away."

Mr. Britling tries harder than ever to see things through now that the largest half of his very own heart is in the trenches. At home he looks up at the stars, and ponders deeply, and the ache never ceases. Then Hugh is killed by a bullet shot in his brain.

A very effective portion of the book is that which tells of how Mr. Britling comes upon Letty, out under the trees, where she has gone to be alone with her grief, for Teddy is missing, and at last, frozen in her sorrow, an insane argument for murder in her heart, she believes him killed. They can understand each other now, for their great sorrow has broken down all barriers. And so Letty is willing to listen to Mr. Britling, and when he is through she finds her interest in the world once more awakened.

"We have got to set this world on a different footing," says Mr. Britling. "We have got to set up the world at last—on justice and reason. . . . No life is safe, no happiness is safe, there is no chance of bettering life until we have made an end to all that causes war. . . . Every sort of district must have its own rule; and the great republic of the united states of the world must keep the federal peace between them all. That's the plain sense of life; the federal world-republic. It needs only that sufficient men should say it, and that republic would be here now. . . . That is what you and I must do, Letty. What else is there left for us to do? . . . I will write of nothing else, I will think of nothing else now but of safety and order. So that all these dear dead—not one of them but will have brought the great days of peace and man's real beginning nearer, and these cruel things that make men whimper like children, that break down bright lives into despair and kill youth at the very moment when it puts out its clean hands

to take hold of life—these cruelties, these abominations of confusion, shall cease from the earth forever."

With this we have reached page 405 in the book—there are only 443 pages in all, but so significant are these last pages that considerable space is needed to talk about them, and so our talk about Mr. Britling must be continued next day.

Last night, at a function held here, the "war-widows" of the city were presented with pins—a gold maple leaf with a shield upon it bearing the name of the fallen one, his battalion number, the name of the battle in which he fell, and the date.

There were so many of them—so very, very many of these black-robed women, most of them young. They occupied two rows of seats across the front of the hall, and as we sat in the gallery looking down at them, feeling how hard the ordeal must have been for them, we wondered how far-reaching the blunder that has thrown Canada—Canada—into this thing.

And then we thought of Mr. Britling, and his words: "To end that folly is as much our duty and business as telling the truth or earning a living."

JUNIA.

A Plucky Girl.

Dear Junia,—So much is being said just now regarding production and enlisting that I thought I would like to tell my experience as a farm helper during the last two years.

In the spring of 1915, after the great European war was in full swing, my brother decided to go West in answer to the call for men out there. He was then seventeen. This left my father with no help to put in the season's crop of 48 acres, six of which were not plowed. I had done very little work outside before, but I knew how to drive and harness horses, so I made an offer to my father. It was this: if I could take the place of a hired man he was to pay me a hired man's wages, if not I was not to be paid; so we started right in. The first thing we did that spring was to tap about 75 trees and make syrup, and then chores. They seemed endless. My father was lame, so he did the milking while I fed the stock; we cleaned stables in company. When seeding time came I drove three exceedingly spirited horses hitched to the harrows. I did all the harrowing that spring, and fixed fences and did chores while my father rode the cultivator and sowed the grain. Then there was the stone picking, back-breaking work. This is where mother turned in and helped; she had been putting in the garden seed before this.

Then the three of us planted 4 acres of potatoes. Mother and I dropped them while father made the drills. Then came corn and turnip sowing. When harvest time came father wanted to get a man to do the stooking, or else have me drive the binder, but it was a brand new binder and the horses were very wild, also I did not know anything about it, so I persuaded him to let me try the stooking.

Well, I stooked 30 acres of the 48; father did the rest while I put the horses in the stable, got them ready for the field, or oiled the binder; this was a job at which I became quite proficient. When the grain was almost all in we were able to secure a man and I departed for Macdonald Institute, where some of the girls asked me if I were not a city girl. Think of it, and the day before I had cleaned the hog-pen! I spent a profitable and pleasant three months there, then came home and helped with the chores till the spring wood was cut, then helped with the seeding and chores the same as the year before. My father had said by this time he would rather have my help than a hired man's (anyhow we couldn't get a man if we did want one). After seeding was over in the West my brother came home and I took a position as cook for three months at \$35.00 per month. This suited me fine but my brother joined the navy, being then past 18, so I came home and helped in with the potatoes and turnips, driving a team all fall. Now, much has been said of the farm labor problem, and what I did was what only almost every farm girl can do and many a city one if she only had a chance.

A GREY GIRL.

Padding for Comforters.

If "Janet" of Palmerston, Ont., would try scalding the wool for her comforter she will find it will not come through either

atin or other material. Some say to boil the wool, but I simply scald it with soft water and find it entirely satisfactory. Mrs. A. WILSON. R. R. 4, Owen Sound, Ont.

Window Covering—Mushrooms.

Dear Junia,—Always looking in your corner for some helpful notes, I now come for some personal help.

With regard to vitrophane for church windows, would it be satisfactory or would the heat and cold and dampness cause it to come off.

Last spring I purchased a brick of mushroom spawn and planted as nearly as possible by directions, having two or three. As we thought the cellar too cold I made my bed in an old log stable. Instead of covering with hay or straw, as one said, I covered lightly with dry maple leaves. I planted in June, and in September small ones began to appear from the size of a small pea to a small marble. Thinking they were too cold, as it did not register as high as directions said, I covered with bags and old coat and think they were some larger but very few were large enough to do an thing with. I watered by sprinkling when the surface appeared dry. Kindly tell me what was the matter if you can, and also if it would be any use to water it up this summer.

What material would be best to use to tint a white, plastered wall? It has been whitened with whitening, also alabastine, the whitening all being washed off. Thanking you for expected help. Frontenac Co., Ont. INQUISITIVE.

I have had vitrophane on the window in my bathroom since last fall, and it is as good now as when put on. Apparently it is not greatly affected by dampness. Can anyone tell any more about this, from experience?

In regard to the mushrooms, we can give no specific. All you can do is to follow directions exactly. A man here who has had some success says he never lets a draft strike across the bed, although the air is admitted indirectly. Also he waters the bed with a fine spray, and keeps the walls wet by splashing water on them, to keep dampness in the atmosphere. We think the old bags and coat rather too heavy for a mushroom bed, as the mushrooms are rather fragile things. You will have to put in new spawn this year, as it will be of little use just to water the old bed.

Practically all of the wall-tints sold for the purpose are good,—alabastine, muresco and water-paint. If you want a painted wall that can be washed, use a flat-tone, dull-surface oil paint. If you send to the Sherwin-Williams Paint Co., Montreal, for information you will probably find all that you need.

Endive—Swiss Chard.

Will you kindly advise, through the Ingle Nook, the proper way to cook endive and Swiss chard. Simcoe Co., Ont. TOOTSIE.

Endive is a salad plant that matures more slowly than lettuce, requiring about 7 weeks. It may be picked when young and used as a raw salad, like lettuce, or boiled for greens; or it may be blanched when old and used like celery. If it is not blanched it will be tough and bitter when fully grown. When blanching, the plants should be kept dry; the process is completed in from 10 to 20 days. It is well not to blanch too many at a time, as if not used as soon as ready the plants will decay. A very good way to blanch a few heads is to invert flower-pots over them.

Swiss Chard has large leaves with a thick, fleshy stalk and midribs. When picked the green part of the leaves may be stripped off and boiled for greens, while the midribs may be cooked separately, boiled and served with butter or cream sauce. The large leaves may be picked through an entire season.

Naming a Farm—Cooking Salsify.

I like the idea of "a young farmer, Ontario Co., Ont.," it is just what I have been looking for in the Advocate, as we bought a small farm with not much on it but a house and barn, and have got to plant trees and fruit. Could you give me a few names for a small farm, say 20 acres, lying pretty well to the south? What is the best nursery to get fruit and shrubs from? Would anyone give me a good recipe for cooking salsify? A READER OF THE ADVOCATE. Newmarket, Ont.

How would one of these do for a small farm?—Rosecroft, Rose Vale, Sunny Brae, Happy Hollow, Sunnisdale, Hillcrest, Glenholm, Glenacre, Moorfield, The Elms, Sunnyside. Of course, you will have to choose a name that fits.

Any of the nurserymen who advertise from time to time in "The Farmer's Advocate and Home Magazine" should be reliable.

Salsify or vegetable oyster may be cooked in several ways. Probably the best is as follows: Scrub the roots well with a brush and trim off the rootlets, then slice and boil in a very little water, adding a shred or two of salt codfish. The water should boil off until almost dry. Now pour on rich milk, let come to a scald, season and serve with biscuits or snippets of toast for supper. If you want the salsify to look very white par-boil it first and rub off the skin. It looks prettier so, but loses something of its flavor. Another way is to boil the salsify and mash it, then make into little cakes with butter and seasoning mixed in; dip the cakes in egg, then in breadcrumbs, and fry. Serve very hot.

A Wedding Anniversary.

Dear Ingle Nook—I am coming to you for help. I intend having an anniversary for the thirtieth year. Could you tell me what the thirty years' wedding is called? I would like if you could tell me what would be suitable for dinner, and what time to have it. Which do you think would be better, to serve it on the lawn or in the dining room, as it will be in June? There will be about forty guests, and is to be an informal affair. I thank you in advance and hope I will not be troubling you too much. BROWN BETTY.

The thirtieth wedding anniversary is "Pearl." It is considered in better taste nowadays, when issuing invitations for a wedding anniversary, to put "No Gifts" on the invitation cards. If you want to serve a dinner you will have to have it at about six or half-past six o'clock. Sliced meat or fowl, potatoes and a vegetable, salad, pickles, salted nuts, a strawberry shortcake or pie with ice-cream, and the wedding cake would be all that is necessary. Of course, everything should be very prettily served, and the tables should be decorated with flowers.

If the day chanced to be quite warm it would be nice to have the tables out of doors under the trees. In that case it would be better to leave out the potatoes and the other hot vegetables, and have but one hot dish—say chicken pâtes—with potato salad. This could be followed by fruit-salad with two or three kinds of cake, and the usual olives, salted nuts and candy.

You are very wise in deciding to have the affair quite informal; people have so very much better a time at informal things.

Dandelions as Food.

Dandelions are so valuable as food that a bulletin on the subject has been issued from the agricultural department of Cornell University. In this it is claimed that dandelions are of especial medicinal value because they contain iron, a needed constituent of the body. They are also mildly laxative. Moreover when gathered at the right time they are very delicious.

Near the surface of the ground the dandelion root is topped by a crown from which the leaves radiate. The flavor of this crown is exceedingly good, somewhat resembling asparagus, hence when the dandelions are gathered they should always be cut with a sharp knife so as to cut the crown out clean. When the plants are very young the whole plant can be used; when older, so that the leaves are bitter, the crowns only should be used.

Some like the young leaves crisped and served raw as a salad, but the majority of people prefer the dandelions cooked as greens. On account of their bitter flavor some prefer to "blanch" the plants before cooking. This is done as follows: Boil the leaves for 5 minutes in water, then drain, cover with cold water and drain again. Finally cover again with boiling water, cook 15 to 20 minutes, drain well, season with butter, pepper and salt, and serve with meat or potatoes, or on hot buttered toast for tea.

Dandelions may be canned and kept for use in winter. Blanch and cook, and pack boiling hot in sterilized sealers.



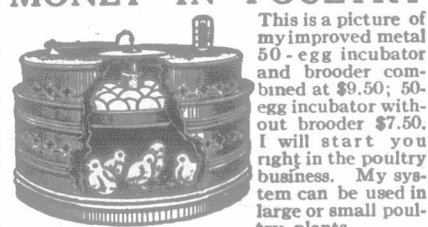
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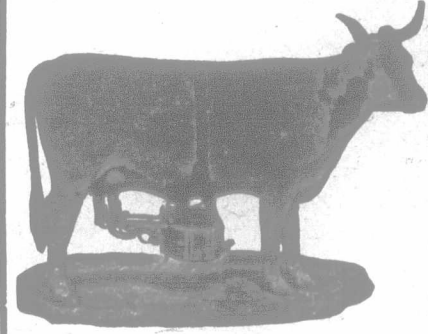
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Put the lids on loosely, place in a boiler with water, and boil for an hour, then fasten the tops down. Next day loosen the tops and boil again, and repeat on the third day. This repeated boiling is safest for all vegetables. Store in a cool, dark place.

Dandelion Soup.—One cup cooked dandelion, 1 tablespoon butter, 1 tablespoon flour, 1 cup or more of milk, salt and pepper, yolk of a hard-boiled egg. Make a white sauce by stirring the butter and flour rubbed together into the milk, and cooking together. Add the dandelion. Grate the hard-boiled yolk over and serve very hot with biscuits or buttered bread toasted in the oven. A nice supper dish.

Dandelion and Horse-radish Greens.—Cook one part young, tender horse-radish leaves with 3 parts dandelion leaves. Drain well, cut fine, and season with butter, pepper and salt. Put on a hot platter with a border of mashed potatoes. Dot butter over the potato and sprinkle with pepper or paprika, which is prettier. Instead of the mashed potato, potato balls, or stuffed baked potato may be put around. Stuffed baked potato is made as follows: Bake large potatoes, cut in two, remove the pulp, mash it and season with salt, pepper and cream. Put back in the potato shells, leaving the tops rough. Brush with melted butter and brown in the oven. Potato balls are made of mashed potato seasoned, mixed with a little cream and chopped parsley or onion. Make into balls, brush with butter and brown in the oven.

Dandelion and Bacon.—Brown in the oven 1 cup crumbs mixed with 2 tablespoons butter. Mix with them 1 pint cooked and chopped dandelion greens, 1 tablespoon onion juice, 1 tablespoon vinegar or lemon juice, and salt and pepper to season. Form into a loaf and heat in the oven. Garnish with slices of hard-boiled egg and put broiled bacon around. Serve very hot.

Dandelion Salad (Raw).—Cut hard-boiled eggs in halves lengthwise and remove the yolks. Cut very tender dandelion leaves in small pieces, add a small onion, minced fine, and the crumbled yolks of the eggs. Bind together with salad dressing. Fill the whites of the eggs with the mixture and serve on dandelion leaves or watercress.

A Cooked Salad Dressing.—Mix together yolks of 3 eggs beaten slightly, one-third cup sugar, 1 teaspoon mustard, 1/4 teaspoon paprika; 1/2 teaspoon salt, 1 cup vinegar. Cook in a double boiler, stirring constantly, until smooth and thick. When ready to use mix the portion needed with a little whipped cream.

Dandelion plants may be blanched and made more tender by inverting flower pots over them.

Serve with vinegar or without, on toast and decorated with slices of hard-boiled egg.

Watercress Salad.—Arrange watercress on a flat dish. Slice radishes and cucumbers over, or, if these are not in season, put on cheese balls and slices of hard-boiled egg. Add some spoonfuls of thick salad dressing and serve.

Watercress Sandwiches.—1. Spread chopped watercress on well-buttered slices of bread, add a layer of salad dressing and press the slices together. 2. Mix together chopped watercress and cottage cheese (milk curd), season with salt and pepper and use as filling.

Health Bread.—Three cups bran, 1 1/2 cups Graham flour, 1 cup white flour, 1/4 cup molasses, 1 teaspoon baking powder, 3/4 teaspoon soda, 1 teaspoon salt, 2 cups milk. Let rise in the pans for half an hour and bake in a slow oven. Good to prevent constipation.

Mock Jellied Turkey.—An excellent mock jellied turkey is made from a breast of veal from which the bones have been extracted. Into the spaces left by the bones put layers of stuffing, thin strips of raw bacon and cooked tongue. Roll up tight and tie, then put in a little water, cover tightly and simmer slowly for a long time. The roll may be baked if preferred. Baste frequently.

Rhubarb Shortcake.—Make a nice biscuit crust and roll out into two thin rounds. Butter the top of one and lay the other on it, then bake. When done separate, use the following filling between and on top. Filling: 2 cups stewed and sweetened rhubarb, 1 cup stewed and chopped figs or dates. Cook together for a few minutes, then spread on the cake while both are hot. Cover with whipped cream and serve hot or cold.

Rhubarb Sponge.—Cut a dozen stalks rhubarb into inch pieces and stew with sugar to sweeten. Line a small pudding-dish with slices of stale cake, then fill up with layers of the rhubarb and cake. Cover with a saucer and weight, and leave in a cool place until next day, then turn out on a glass plate, cover with sweetened whipped cream and serve at once.

Delicious Stew.—Take the needed quantity of meat stock or gravy to which water has been added. Put in shreds of meat, seasoning, diced carrots, turnips, onions and potatoes, and a cup of washed rice. Boil all for about 5 minutes, then draw to the back of the range and simmer slowly until done, keeping closely covered. This may be cooked in a fireless cooker.

Spring Salad.—Arrange lettuce in a dish, or lettuce and cress mixed. In the centre place some cold, cooked dandelion greens. Mix together sliced green onions, radishes and salad dressing and spread over the greens. Decorate with slices of hard-boiled egg and serve with cold meat.

The Cookery Column.

Pie Crust (as good as puff paste).—Take 12 level tablespoons sifted flour, and mix with it a pinch of salt, then rub in with the finger tips 2 rounded tablespoons lard or lard and butter mixed. Stir in lightly, with as few strokes as possible, 2 tablespoons sour milk in which has been stirred one-eighth of a teaspoon of soda.

Egg Omelette.—Beat yolks and whites separately. To the yolks add salt, pepper, and a little hot water. Fold in the beaten whites and cook slowly. When it begins to puff set the pan on the top grate of oven until springy. Score across the centre, fold over and serve very hot.

Cheese and Nut Salad.—Grate cheese to make a cupful. Add 1 cup coarsely ground peanuts, moisten with cream, form into small balls and serve on lettuce with dressing.

Prune Pudding.—Three tablespoons brown sugar, 2 of butter, 1 egg, 1/2 pint buttermilk, 1 teaspoon soda sifted into 1/2 cup flour, 1 1/2 cups well-soaked and pitted prunes, 1 cup oatmeal, 1 teaspoon salt. Steam 3 hours. Serve with a sauce made of butter and sugar beaten together, or with rich cream and sugar.

Boiled Watercress.—At this season of the year plenty of watercress may be found growing in many streams (it should always be planted in an available stream), and will be found very delicious if served in many ways. Everyone knows that it is nice when dipped in salt and eaten with bread and butter, but not everyone knows that it may be boiled and served like spinach. Boil about 10 minutes in salted water, drain, chop fine, season with salt, pepper and butter, and re-heat.

The Windrow

Billy Sunday is conducting a three-months' campaign in New York.

The number of exiles in Siberia freed by the Revolution is estimated at 100,000.

"Every person in America who eats corn bread instead of wheat bread helps in the present wheat shortage." Herbert C. Hoover, American Commission of Relief.

In the United States the college rolls are proving the first on the recruiting lists to be filled.

The great surgeon and scientist, Dr. Alexis Carrel, has taken charge of a military hospital in New York where he will teach his methods to army and navy surgeons.

One hundred and eighty people were martyrs in the recent Revolution in Russia. They were given a state funeral and buried together in the field of Mars.

The sixty-five Canadian chaplains on duty at the front represent all the important branches of the Church. They labor together in the most complete harmony—Protestant and Catholic, Anglican and Methodist, Presbyterian and Baptist.—Stewart Lyon in The Globe.

The "Sperry" searchlight, recently mounted on the roof of the Sperry Building in Brooklyn, is so powerful



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KING SEPARATOR WORKS OF CANADA

BRIDGEBURG - ONTARIO

that a newspaper can be read by its light at a distance of 30 miles. It was used on election night to flash returns, and the signals were easily caught 150 miles away. The light will doubtless be utilized largely for military and naval purposes. It was designed by Elmer A. Sperry, an electrical engineer and scientist.

The submarine, being a mechanical fish, is just as catchable in nets as a shad. Great Britain has been using such nets with notable success. Sometimes they are of chain, sometimes of wire, sometimes of wrought iron frames linked together—with meshes from 10 to 15 feet square. They make the lane across Dover Straits, through which millions of men and millions of tons of munitions have been safely ferried. They are laid across roadstead and harbor entrances, and in all sorts of places throughout the "danger zone."

The Kaiser's order for constitutional reforms is generally recognized as an attempt to allay discontent and head off a possible revolution of the sort which deposed the Czar of Russia. The consummation of the reforms is deferred "until our warriors come home"—in other words, until the war is over, and there will be plenty of time in the interval for the Kaiser to change his mind. The Kaiser's order is in line with the promises recently made by Chancellor von Bethmann-Hollweg. It proposes a doing away of the system of "election by the classes" which at present prevails in Prussia, and which makes the Prussian government absolute and aristocratic, the lower house of Parliament being chosen by a method of plural voting, which puts power in the hands of rich landholders, and the upper house being constituted by direct appointment by the King. The King and the nobles and the generals dominate Prussia, and Prussia dominates the German empire. Nothing less than a real and radical reform will stay the tide of revolution.—Journal of Education.

Current Events.

On April 25th the British Royal Flying Corps brought down 40 enemy airplanes.

A great demonstration was held in Petrograd to welcome Madame Catherine Breshkovskaya, "the grandmother of the Revolution," back from exile.

The first American gun discharged in the war was fired on April 19th when the American steamship Mongolia sunk a German submarine.

It is said that 250,000 laborers are on strike in Berlin.

Chancellor Bonar Law's son has been wounded in Palestine.

Great Britain has cut her imports at the rate of over 10,000,000 tons a year. So far there is no serious shortage of food, but it is recognized that food scarcity may yet become a menace.

German destroyers again attacked Ramsgate on April 26th, and did considerable damage to buildings; one man was killed and two women wounded. The destroyers were driven off.

At time of going to press there is a pause in the Battle of Arras, although an artillery duel still rages along the Scarpe, where the opposing forces have been wavering back and forth for over a fortnight, with heavy losses on both sides. Upon the whole the Allies are satisfied with their success; Gen. Maurice has said that during the eighteen days of the Arras battle the casualties were a little less than half what they were in the corresponding period on the Somme, while the numbers of prisoners and guns taken was much greater. But the fighting in this region is not yet over. The Germans are concentrating for fresh activity, and at any hour, perhaps before this reaches its readers, the battle may have re-opened. The famous Rheims Cathedral has been again shelled, apparently out of mere spite. Further north, in Belgium, fighting has again taken place, the Belgians themselves holding stubbornly to the little line that guards what is left to them of their country. On the Eastern front,

north of the Pripet marshes, 2,000,000 Huns are said to be massed for an attack on the Russians, but no definite movement has taken place. In Macedonia, on April 24th, a big British offensive was opened, probably with the object of lessening the pressure on the Western front. While in Mesopotamia Gen. Maude has again defeated the Turks in a big battle at Samara on the Tigris, whose capture gives him possession of the northern terminal of the Bagdad Railway. Fighting has also been resumed on the Austro-Italian front.

One of the events of the week was a naval battle in The Channel, between 2 British destroyers and 6 German destroyers, which resulted in the complete rout of the enemy. The British vessels returned to port, crippled but victorious, and reported wild hand-to-hand fighting when two of the vessels locked and cutlasses were used as in the days of old. Three of the German vessels were seen to go down.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for the soldiers and all who are suffering because of the war.

Contributions from April 20 to April 27: Mrs. A. Wilson, R. 4, Owen Sound, Ont., \$1. For Byron Hospital for Tubercular Soldiers: A. W. Campbell, Compton, Que., \$1; Mrs. T. J. McBeth, Salford, Ont., \$5; A Friend, R 2, Brussels, Ont., \$2; A Schoolboy, S. S. 8, Grey, Ont., \$2; Robert Brown, Wilton Grove, Ont., \$2; "M. E. K.," \$3; A Friend, Ilderton, Ont., \$1; \$10 sent by Robert Johnson, Alliston, Ont., without specification, was also applied to this fund.

The total amount received for Byron Military Hospital now amounts to \$303.50 leaving \$196.50 to be made up for the equipment of the ward.

Total amount previously acknowledged in Dollar Chain, \$4,351.75

Total to April 27th, \$4,378.75

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

The Beaver Circle

Here is a little play that some of the Beavers may like to give at a Friday evening programme at school. It has been taken from Educational Journal. The flowers may be made of tissue paper.

In a Child's Garden.

BY ALICE SUMNER VARNEY.

Place—It is supposed to be a garden, several boys and girls take part. Each boy or girl carries the flower named and implement mentioned, and displays or uses them freely.

First Boy (carries sunflower on tall stalk)—
 The flowers in my garden
 Are very straight and tall.
 The sunflower is one of them,
 And overtops them all.

First Girl (carries, plant in bloom or flowers)—
 My garden has for flowers
 The pansy of delight.
 To see them all in blossom
 Is such a pretty sight..

Second Boy—
 There are growing in my garden
 Daisies from far and wide.
 I have the fairest garden
 In all the countryside.

Third Boy—
 Bright tulips grace my garden,
 They straight from Holland came,
 And are of many colors,
 Each one of which I name.

Second Girl—
 Pretty blue forget-me-nots
 In all my garden grow.
 They are very dear indeed,
 And look so nice, you know.

Third Girl—
 Primroses in my garden show
 How flowers give delight.
 Could you see them you would say,
 "Oh, what a lovely sight!"

HIGHEST PRICE FOR CREAM

T. EATON CO. LIMITED wants your cream. We buy sweet or sour cream of good flavor for butter-making purposes. We furnish the cans, and pay the express charges within a radius of two hundred miles of Toronto. Would be pleased to hear from you. Drop us a card for any further information.

T. EATON CO. LIMITED
 TORONTO - CANADA

Removing Stumps Means So Much More Food for Our Soldiers

Send for full particulars of the

Kirstin Stump Puller

A. J. Kirstin Canadian Co., 5190 Denbie St., Sault Ste. Marie, Ontario.

A Chance for Those Going West. Homeseekers' Excursions via C. P. R.

Homeseekers' Excursion to Western Canada at attractive fares each Tuesday until October 31st, via Canadian Pacific, the Pioneer Route to the West. Particulars from any Canadian Pacific Agent or W. B. Howard, District Passenger Agent, Toronto, Ont. Advt.

Are You Going West This Spring?

If so, bear in mind that the Canadian Pacific offers especially good train service, with the finest possible equipment including Standard and Tourist Sleeping Cars and Dining Cars to Winnipeg and Vancouver by one of the most picturesque routes in the World.

If a trip is contemplated, apply to any C. P. R. Agent for full particulars or write W. B. Howard, District Passenger Agent, Toronto, Ont. Advt.

Fourth Girl—
 Rare pinks of many colors,
 Of every shade and hue,
 Are growing in my garden.
 Shall I grow one for you?

Fourth Boy—
 Violets of blue are growing
 Within my garden fair,
 I find it such a pleasure
 To give them of my care.

Fifth Girl—
 Sweet roses are the flowers
 That I like best to grow,
 And many in my garden
 Their pretty petals show.

Fifth Boy—
 Such very stately asters
 You in the fall will find
 A-blooming in my garden;
 I plant most every kind.

Sixth Boy—
 My garden is a wild one,
 From wood, and field, and dell.
 I have brought so many things
 Of all I cannot tell.

Sixth Girl—
 Daffodils and hyacinths
 Are the flowers I love best,
 And they quite crowd my garden,
 Though 'tis with others blest.

At request of the teacher the school will sing or recite the following:—

All (sing)—
 In the earth asleep
 A little seed lay,
 Heard the rain calling,
 "Come, come out and play."

The Crisis



Organization of Resources Committee

(Province of Ontario)

The Organization of Resources Committee was created by an Act of the Legislature passed on April 20th, 1916.

CHAIRMAN:

HIS HONOUR, SIR JOHN S. HENDRIE, K.C.M.G., C.V.O., LIEUTENANT-GOVERNOR OF ONTARIO.

VICE-CHAIRMEN:

HONORABLE SIR WILLIAM H. HEARST, K.C.M.G., PRIME MINISTER OF ONTARIO.
N. W. ROWELL, ESQ., K.C., LEADER OF THE OPPOSITION.

SECRETARY:

ALBERT H. ABBOTT, ESQ., PH.D.

MEMBERS OF THE COMMITTEE:

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HONORABLE G. H. FERGUSON	FRED COOK, ESQ., OTTAWA
HONORABLE W. D. MCPHERSON	M. J. HANEY, ESQ., TORONTO
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G. A. GILLESPIE, ESQ., M.L.A.	W. E. RUNDLE, ESQ., TORONTO
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J. W. WOODS, ESQ., TORONTO	W. H. SHARPLEY, ESQ., TORONTO
	HONORABLE HENRY W. RICHARDSON, KINGSTON

The Act sets forth the objects of the Committee as follows:

"To aid in securing the conservation, utilization and organization of the resources of Ontario for the successful prosecution of the war, and to secure the maintaining and increasing of the agricultural and industrial production of Ontario, and the better development of the natural and other resources of the Province during the war and thereafter."
To assist in carrying on its work, both during the war and thereafter, the Committee wishes to have in every Municipality in the Province a representative non-partisan Committee of public-spirited citizens which will co-operate with the central Committee for the purposes above stated.

"in the nation's honour, heed! Acquit yourselves like men. As workers on the land, do your duty with all your strength!"—[LLOYD GEORGE.]

Famine and World-Hunger are on Our Threshold

The Crisis

France, England and Italy in peace times did not depend upon America but on Russia, Roumania and Bulgaria for most of their bread stuffs. With these sources closed the crisis of the hour demands that we see that our soldiers and the Motherland are fed.

Everyone in Great Britain has been put on limited rations: meat is prohibited one day a week, and the making of cakes and pastry has been stopped. Further restrictions are anticipated.

Bread has gone to 24c. per four-pound loaf in England, for the first time since the Crimean War.

Lord Devonport, British Food Controller, proposes taking authority to search the houses of Great Britain to prevent food hoarding.

Forty million men are either killed, wounded or on active service.

Twenty million men and women are supporting them by service in other war activities.

In the last analysis, the land is bearing this burden.

One million tons of food-carrying ships have been torpedoed since February 1st, 1917.

Germany's hope for victory is in the starvation of Britain through the submarine.

Canada's sons will have died in vain if hunger compels the Motherland's surrender.

The land is waiting—the plough is ready—will we make the plough mightier than the sword?

Will we help the acres to save the flag?

World-Hunger Stares Us in the Face

David Lubin, representative of the United States to the International Institute of Agriculture—maintained by forty Governments—reports officially to Washington that the food grains of the world on March 31st, 1917, showed a shortage of 150,000,000 bushels below the amount necessary to feed the world until August, 1917. He declares it is beyond question that unless a greater acreage is put to crop in 1917 there will be WORLD-HUNGER before the 1918 crop is harvested.

The failure of the grain crop in the Argentine Republic, which is ordinarily a great grain-exporting nation, resulted in an embargo being placed, in March, 1917, upon the export of grains from that country to avert local famine.

The United States Department of Agriculture, in its official report, announces the condition of the fall wheat crop (which is two-thirds of their total wheat crop) on April 1st, 1917, to be the poorest ever recorded, and predicts a yield of 244,000,000 bushels below the crop of 1915. The 1916 crop was poor. Even with favorable weather, the wheat crop of the United States is likely to be the smallest in thirty-five years, not more than 64% of the normal crop.

Under date of April 10th, Ogden Armour, executive head of Armour & Company, one of the world's largest dealers in food products, stated that unless the United States wishes to walk deliberately into a catastrophe, the best brains of the country, under Government supervision, must immediately devise means of increasing and conserving food supplies. Armour urged the cultivation of every available acre. The food shortage, he said, is world-wide. European production is cut in half, the Argentine Republic has suffered droughts. Canada and the United States must wake up!

People are starving to-day in Belgium, in Serbia, in Poland, in Armenia, in many quarters of the globe. Famine conditions are becoming more wide-spread every day.

On these alarming food conditions becoming known, President Wilson immediately appointed a Food Comptroller for the United States. He selected Herbert C. Hoover, to whom the world is indebted as Chairman of the International Belgium Relief Commission for his personal direction of the distribution of food among the starving Belgians.

Mr. Hoover is already urging sacrifice and food restrictions, for, as he states, "The war will probably last another year and we shall have all we can do to supply the necessary food to carry our Allies through with their full fighting stamina."

The Problem for Ontario

1. The land under cultivation in Ontario in 1916 was 365,000 acres less than in 1915.
2. Consider how much LESS Ontario produced in 1916 than she raised in 1915:

	Year	Acres	Bushels	1916 DECREASE	
				Acres	Bushels
Fall Wheat	1916	704,867	14,942,050	106,315	9,794,961
"	1915	811,185	24,737,011		
Barley and Oats	1916	529,886	12,388,969	24,432	7,504,160
"	1915	552,318	19,893,129		
Peas and Beans	1916	95,542	1,243,979	31,401	799,070
"	1915	126,943	2,043,049		
Corn	1916	258,332	12,717,072	51,441	9,043,424
"	1915	309,773	21,760,496		
Potatoes and Carrots	1916	139,523	7,408,429	34,411	5,858,594
"	1915	173,934	13,267,023		
Mangel-Wurzels	1916	42,793	9,756,015	8,006	15,600,308
and Turnips	1915	50,799	25,356,323		

Other crops show as critical a decline.

3. Reports from Ontario on the condition of fall wheat for 1917 are decidedly discouraging.

4. As there is an average of not more than one man on each hundred acres of farm land in Ontario, the prospects indicate even a still smaller acreage under cultivation in 1917 unless extra labor is supplied.

Is It Any Wonder that Food Production is the Greatest Problem the World Faces To-day?

Owing to destruction by submarines, ocean ships are scarce.

It is much easier to protect shipping between Canada and England than on longer voyages from India or Australia.

One vessel can make twice as many trips from Canada to Britain as from India, and four times as many as from Australia.

Therefore, every ton of food stuffs grown in Canada is worth to the Motherland two tons grown in India, or four tons grown in Australia.

Is It Any Wonder that the Call to Canada is So Urgent?

If this country does not raise a big crop this year, not only will the people of Canada suffer but the Motherland and her Allies will suffer and their military power will be weakened if not paralyzed. Therefore, the right solution of the present war problem comes back to the farm, as to a foundation upon which our whole national and international structure must be built and maintained.

The farmers know that they are the last reserve, and that the soil on which crops are grown is the strategic ground on which wars are decided. To their care is entrusted the base of supplies.

To enable the farm to do the work, two factors are essential. The first is Time. Whatever we are to do must be done at once. Nature waits for no man. The second is Labor. Many farmers cannot plant the acres they would because they cannot get the necessary help. Many are afraid to increase their acreage because they fear they would not be able to cultivate and harvest an unusual crop after they have raised it. If they are to do the work that is essential for them to do, the last man in each city, town and village must be mobilized at once.

Every man not on Active Service can help. In every city, town and village are men who, by their training on the farm, or by their present occupation, can readily adapt themselves to farm work. These can render no greater service to the Empire at the present time than by answering the call of the farm. Capable men and boys willing to learn should not allow their lack of farm experience to stand in the way.

Can the employer render a more signal service in this crisis than by encouraging these men to help the farmer to cultivate every available acre, and by making it easy for them to go?

Ontario's farm lands are waiting—the implements are ready—the equipment is complete—the farmer is willing—all he needs is labor.

So short is the world's food supply that without increased production many in Canada must go hungry, and even with enormously increased production we cannot expect cheap food. The world is waiting for our harvest.

If peace should be declared within a year, the food conditions will be no better, for the accumulated hunger of the Central Empires must be met. This will absorb a large part of the world's supply.

We do not know when this war shall cease. It is endless—its lengthening out has paralyzed the thought and conception of all men who thought about it and its possible time of conclusion. Three months—six months, we said; nine months, a year, we said; and yet two years and eight months have passed their long, dreary and sanguinary length and there is no man who can tell how long this gigantic struggle may yet last.

Lloyd-George, in a letter addressed to farmers throughout the Empire, said:

"The line which the British Empire holds against the Germans is held by those who WORK ON THE LAND as well as by those who fight on land and sea. If it breaks at any point it breaks everywhere. In the face of the enemy the seamen of our Royal naval and mercantile marine and the soldiers gathered from every part of our Empire hold our line firstly. You workers on land must hold your part of our line as strongly. Every full day's labor you do helps to shorten the struggle and brings us nearer victory. Every idle day, all loitering, lengthens the struggle and makes defeat more possible. Therefore, in the nation's honor, heed! Acquit yourselves like men, and as workers on land do your duty with all your strength!"

So, for the honor of Canada's soldiers in France—and for the glory of our New-born Nationalhood—let it be said of Ontario's citizens that, in the hour of our greatest need, their response was worthy of their sons.

We owe a great debt to those who are fighting for us.

—We Must Produce More Food—

ORGANIZATION OF RESOURCES COMMITTEE, PARLIAMENT BUILDINGS, TORONTO

Questions and Answers.
Veterinary.

Obstruction in Milk Duct.

A scab formed on point of cow's teat. This had to be removed each time before milking. The teat is getting hard and there is a little hard lump, apparently in the milk duct. The milk comes in a very small stream and is getting worse.

W. F. M.

Ans.—There is a little tumor in the milk duct. A veterinarian can operate with a special instrument. Bungling operations such as passing quills, needles, etc., are usually followed by serious complications. If you cannot have her properly operated on, draw the milk with a teat syphon, being careful to thoroughly disinfect each time by immersing in boiling water, before inserting it. Allow the quarter to go dry and do not breed again. In the meantime dress the point of the teat 3 times daily until healed with 1 part carbolic acid to 25 parts sweet oil.

V.

Miscellaneous.

Staining a Violin.

What material is used to stain and polish a violin?

J. A. Y.

Ans.—Camwood, logwood or aniline are frequently used for staining violins and they give a red stain. It is claimed that varnish used by Italian violin makers consists of a mixture of one-half gallon rectified alcohol, 6 ounces gum sandarac, 3 ounces gum mastic, and one-half pint turpentine varnish. The ingredients are placed in a tin by the stove and frequently shaken until the whole is dissolved. It is then strained and is ready to use at any time. This takes on a fairly high polish.

Swollen Joint.

I have a cow which freshened the first week in April. A week later the joint on one leg began to swell. It looked as if she had scratched or rubbed it on the cement floor. A few days later the other leg swelled worse than the first one. She is quite stiff. What is wrong with her?

2. At what age can a pure-bred calf be registered?

W. J. R.

Ans.—1. There is a possibility that in getting up and down on the cement floor, the cow has bruised her legs, which has caused inflammation to set up. This would cause the swelling and subsequently the stiffness. We do not think it is due to any constitutional trouble. Bathe the legs to allay the inflammation and then apply an absorbent liniment made of 4 drams each of iodine and iodide of potassium and 4 ounces each of alcohol and glycerine. It is possible that pus will form and it will be necessary to lance the swelling before complete relief will be obtained.

2. A calf can be registered any time after it is a day old. After it is a certain age the registration fee is increased with most breeds.

Prizes For Wool.

EDITOR "THE FARMER'S ADVOCATE":

Now that the shearing season is approaching I wish to take this opportunity to draw your attention that prizes for wool in the fleece will be offered again by Toronto, Ottawa and London exhibitions this fall. Since the fleeces which are exhibited at the Canadian National can be shipped to London and Ottawa, I believe that sheep raisers will find it to their advantage and profit to reserve two or more of their best fleeces for entry at these fairs.

The greater the amount of wool received for competition this year, the more likely will the fairs be another year to increase the classification. Besides, a large display of wool of this character serves to awaken interest with farmers in sheep raising and will act, to some degree, as a means of developing the industry.

T. R. ARKELL.

Chief, Sheep and Goat Division.

Double the Value of Your Farm—

THE United States Department of Agriculture has been making a study of how good roads benefit farm values with the most astonishing revelations which are applicable to Canada.

Several counties in various parts of the country were selected where there has been a wholesale issue of bonds for the construction of a system of good roads.

Of course, the bond issue increased the taxes, but at the same time it so multiplied the land values that farmers found it easier to pay the increased taxes than it had been to pay the earlier ones.

Suppose you are paying \$50 a year in taxes on a farm worth \$10,000. Would you not be willing to have your taxes increased to \$100 if the value of your farm was increased to \$20,000? But that is not the only benefit from good roads.

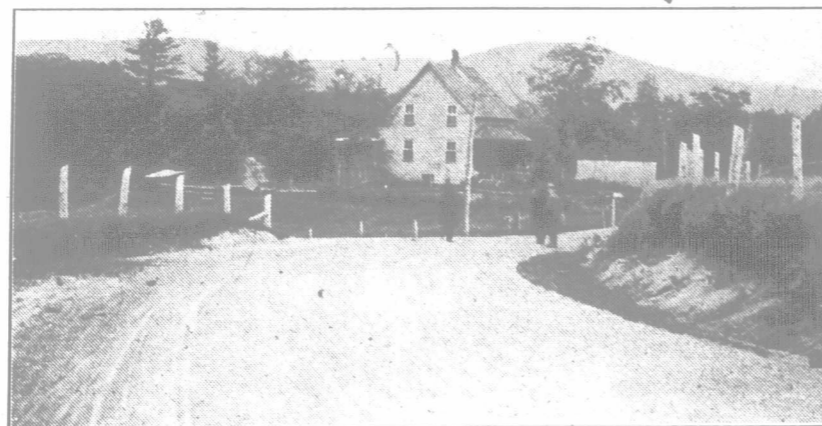
Good roads make possible consolidated schools and better education

for your children. Good roads reduce the cost of hauling, cases being cited of counties where the reduction in hauling cost throughout the county was enough in a single year to pay off the entire bond issue. Good roads and big loads bring the farmer close to the railroad, converting "starvation farms" into prosperous ones, multiplying the shipments outward from the local freight station and the corresponding inflow of money.

You must build the right kind of roads, however, in your county system. Plain macadam roads without Tarvia treatment cost so much to keep up that they are expensive luxuries. Build Tarvia-bonded roads which are capable of resisting modern automobile traffic, as well as frost and weather, and you will find that good roads are not so expensive after all.

We have booklets which we shall be glad to send to Canadian taxpayers on request.

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER
THE CARRITTE - PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.



Sherbrooke-Derby Line Highway, near Lennoxville, Provincial Government of Quebec. Constructed with "Tarvia-X" and slag, in 1915.

Increase Poultry Production.

EDITOR "THE FARMER'S ADVOCATE":

Breeders and specialists can help increase poultry production by breeding from healthy stock so mated as to give the best fertility, by shipping only selected eggs or day-old-chicks, and by endeavoring to place in good hands the eggs and chicks which they have for sale. Care should be taken that only normal eggs and strong chicks be shipped and that minimum losses occur in transportation.

Those who operate custom hatcheries should take similar care and, in addition, should warn shippers of eggs to the hatchery to be careful that the eggs shipped are fertile. Fertility can be ascertained by putting a few eggs under a hen and testing them on the seventh or eighth day.

(Dominion Department of Agriculture.)

Gossip.

The Tillsonburg Sale.

In addition to lots already mentioned in the catalogue of the Tillsonburg sale, to be held on May 8, is the great breeding bull, Korndyke Veeman Pontiac. There are now so many daughters and granddaughters of this bull in the herd which he has headed that he must be disposed of. Then there are daughters of FINDERNE King May Fayne, whose sire is a brother to the only 50-lb. cow, and whose dam, a 34-lb. four-year-old, is a full sister to a 36-lb. three-year-old. One of these daughters has just freshened and made nearly 16 lbs. as a junior two-year-old. Another is from a 16-lb. daughter of King Segis Pietertje, while the other being from a 25-lb. cow is recommended by an average for her dam and sire's dam of 29.50 lbs. of butter in seven days. There are also granddaughters of King Segis in the consignment; one being a 25-lb. four-year-old, which also made 21.50 lbs. at three years. Her four-year-old record was made without any roots whatever, and she surely looks and acts like a 30-lb. mature cow. Bessie Spinks Abbecker, another one of the mature females, has a record of 25 lbs. Bessie Colaatha, a show cow in every particular, has 20 lbs., and one other extremely good one is a four-year-old daughter of a 25-lb. cow which made over 16 lbs. at two years, but since she has always freshened in an unfavorable season for testing. She, however, will freshen this fall, and should make one of the best buys in the sale. There are many good lots, and only by securing a catalogue from R. J. Kelly, Culloden, and studying it can one really appreciate the offering that will be presented.

What, When and How to Paint

Is the title of a practical book which points the way to a more cheerful—more beautiful home.

This free book tells you in clear, understandable English just What, When and How to Paint. It will inform you on every conceivable detail concerning paint and painting, inside the house and out.

This book gives information everyone needs. It suggests how to decorate the bedrooms, living room, dining room, library and den, also the wood finishes to harmonize with them and the furnishings. It solves the floor problem by showing how to select and apply finishes to all kinds of floors for the best result.

Contains complete Color Schemes for Outside and Inside Painting.

A little paint judiciously applied will lead distinction to an otherwise commonplace house or room.

For best results and economy use Canada Paint as directed in this book. Send for your copy of free book today.

The Canada Paint Co., Limited

570 William Street, Montreal.

Use "Sanitone" the washable wall paint.



not too full of paint, and a stroke from left to right circular movement. Use brush. For exterior widths, will be most convenient brush of the



DANGEROUS
as well as painful

Backache Neuralgia
Lumbago Rheumatism
Stiff Joints Sprains

Gombant's Caustic Balsam
WILL RELIEVE YOU.

Its penetrating, soothing and healing and for all
sores or wounds, Felons, Exterior Cancers, Burns,
Blisters, Carbuncles and all Swellings where an outward
application is required. CAUSTIC BALSAM HAS NO
EQUAL. Removes the soreness—strengthens the muscles.
Price \$1.00 per bottle. Sold by druggists or sent
by express prepaid. Write for Booklet L.

The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

**Take Good Care
Of The Colts**

It's cheaper to raise colts than to
buy horses. But it's costly if you lose
the colts. Keep a bottle of Kendall's
Spavin Cure handy. For thirty-five
years has proved it the safe, reliable
remedy for spavin, splint, curb, ring-
bone, bony growths and lameness
from many causes.

Kendall's Spavin Cure

is sold by druggists everywhere at \$1 a
bottle, 6 bottles for \$5. Get a free copy of
our book "A Treatise on the Horse" at your
druggist's or write us. 116

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

Owing to the scarcity of help, my Clydesdale
stallion, Cranberry Model (14788), is for sale;
weighs over 2,000 pounds, six years old, and has
proved himself a grand stock getter. Enrolled
and inspected 3107. JAMES J. HILL, Rock-
wood P.O., Fergus Station, Wellington, Co.

Artichokes Some extraordinary results
obtained at Ottawa, in pork
production, bulletin 51. Seed
Artichokes \$1 per bushel, F.O.B., St. Thomas.

P. N. Haight, Box 124, St. Thomas.

Questions and Answers.
Miscellaneous.

Boston Ivy.
What variety of ivy is the best and
most quickly grown? When should it
be planted? What depth and distance
apart should the plants be? J. B. H.

Ans.—There are a number of varieties
of ivy such as the Virginia, Japanese,
English, Boston and Ground ivy. The
Boston ivy is frequently grown and makes
very satisfactory growth. There are
several nursery strains of the same
variety. Plants may be set about 10
feet apart, but a single plant can be
trained in the course of time to cover
the whole side of a house. The effect
of the single plant is better than with
several, but of course it takes longer to
secure the desired results. They should
be planted in good soil, and the depth
will be more or less regulated by the size
and root system of the plant secured.

Planting a Hedge.
What time of the year is it advisable
to plant cedars for a hedge? What size
is best to choose for this purpose? How
far apart should they be to obtain best
results on a rich loam soil that is now in
sod? L. L.

Ans.—If the soil is at all heavy it
should be loosened up as much as possible
by plowing under green manure or adding
some material to increase the humus.
The finer and more mellow the soil the
better chance there is for the trees to
grow. It will be rather difficult to plant
the trees if the sod is very tough. It
might be advisable to remove the sod
and add some good loam soil. Spring
is the best time for planting cedars, and
at least a foot on each side of the trees
should be kept hoed through the first
season, or else mulched with straw to
retain the moisture. Some recommend
securing trees from two to three feet high
and then cutting them back to the
height of a foot and a half. They claim
that they grow better than smaller ones.
However, others who have had consider-
able experience prefer planting out trees
which are from one to two feet in height.
For a hedge they are usually planted
from twelve to eighteen inches apart,
and should be planted about two inches
deeper than where they grew.

IMPORTED SHORTHORNS

35 imported cows and heifers, forward in calf to service in Scotland, also five imported bulls. Our
1916 importations are all choicely bred. Have also home-bred bulls and females. Farm half mile
from Burlington Junction. Write or call and see us. J. A. & H. M. PETTIT, Freeman, Ont.

The Hawthorn Clydesdales and Shorthorns—Clydesdale mares and fillies.
from extra heavy milking dams, a red and a roan. Females all ages. Choice Yorkshire pigs, ready to
wean. Everything priced to sell.

The Hawthornes, ALLAN B. MANN, Peterboro, Ont., R.R. 4

CLYDESDALES and AYRSHIRES
Two Canadian-bred stallions, rising 3 years old, sired by imported horses, one from an imported dam,
other's dam is Dolly Murray, the Canadian-bred champion mare at Toronto, 1913. Come and see
them. They are priced to sell. We are offering some choice young bulls and a few females.
LAURIE BROS., AGINCOURT, ONT.

Bell Telephone HILLSDALE FARM Farm, 3 1/4 miles east of Ottawa
B. ROTHWELL
BREEDER OF HIGH-CLASS CLYDESDALES
Write me for prices on champion mares. R. R. No. 1, OTTAWA, ONT.

Clontarf Farm MANNING W. DOHERTY Established 1870
Clydesdale Horses-Holstein Cattle-Yorkshire Hogs
We always have some choice young breeding stock to offer.
Post Office—Malton Nearest Station—Cooksville C.P.R.

OUR LATEST IMPORTATION OF CLYDESDALES
arrived at our barns late in November. A number of them since have been prominent winners at both
Guelph and Ottawa. But we have others (both stallions and mares) that were never out; the majority
of the stallions weigh around the ton, and better quality and breeding were never in the stables. Come
and see them. We like to show them. SMITH & RICHARDSON, Columbus, Ontario

Glengow Shorthorns, Cotswolds
For the present, we have sold all the Cotswolds we wish to spare, but 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, Ont.; Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

SPRING VALLEY SHORTHORNS
Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil
Ramsden 83422. Can supply a few of either sex.
KYLE BROS., Drumbo, Ont. Phone and telegraph via Ayr

A Choice Offering of Shorthorn Bulls—We have several good, thick,
just ready for service, all reds and roans, and mostly of Booth breeding. low-set bulls that are now
see these. They are priced to sell. We would like to have you
GEO. E. MORDEN & SONS, Halton Co. Bell phone Oakville, Ont.

Shorthorns and Shropshires—T. L. Mercer, Markdale, Ont.
Have sold all the Shropshires I can spare this season. Present offering in Shorthorns:—Ten really
choice young bulls, sired by Broadhocks Golden Fame =50018= (imp.), and out of such noted
families as Campbell-bred Clarets, Nonpareils, Marr Missies, Stamfords, Crimson Flowers, Village
Girls and Charming Gems, ranging from 9 to 16 months old. All are good reds and roans.

Welland District Shorthorn Breeders' Club
are in a position to supply Shorthorns in any number — from one animal to carload lots. Our herds
represent some of the strongest blood in Canada. Get our Sales Lists. Write or phone:
CHAS. GAINER, Secretary, Box 607, Welland, Ont; A. E. HOWELL, President

Enjoy Cool Cooking

Decide that this summer you will cook
the cool way—on McClary's Florence
Oil Stove. The burners concentrate
heat where needed; when the cooking
is done they are immediately turned
"out." This means a cool kitchen.

No wicks to trim. No valves to clog or leak. It's a
clean stove.

Cil feed is automatic—
a safe stove.

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gives the ideal "blue
flame"—an economical
stove.

The oven is the
"Success," with the
glass door, asbestos
lining and dead air
space. A perfect baker.

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FLORENCE**
OIL COOK STOVES Wickless, Valveless,
Blue Flame, Automatic

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THE UNIVERSAL MILKER**



**HINMAN
MILKERS**

Will help increase your herd and your
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themselves in a few months.

SIMPLICITY means low first cost
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Manufacturers under HINMAN patents

ESCANA FARM SHORTHORNS
Sires in use: NEWTON GRAND CHAMPION (IMP.), a Marr Clara, recently imported, and
RIGHT SORT (IMP.). His get has won numerous first and special prizes at Toronto.
For Sale—Seven bulls, choice individuals, at reasonable prices. Also a dozen cows and
heifers, some of them bred to our herd sires. Herd numbers 100.
MITCHELL BROS., BURLINGTON P. O., ONTARIO
Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

The Manor Stock Farm SHORTHORNS
Bulls all sold, except the four listed in the London Sale,
March 28, a Rosemary, a Wimple, a Mina, and a Julia. Denfield, Ont.

JOHN T. GIBSON,
Shorthorns, Shrop., Clydesdales If you want a good young bull, a promising stallion
colt, or a young cow or heifer of Scotch breeding
and beef type, having dams eligible or good enough
for R.O.P., come, see, and satisfy yourself and
please the owner. Prices reasonable, that they
may be sold. Visitors welcome.

Wm. D. Dyer, R. No. 3, Oshawa, Ont.
Brooklin, G. T. R. and C. N. R.; Myrtle, C. P. R.

OAKLAND SHORTHORNS—BULLS
Present offering is seven fine bulls, from 11 to 18 months of age; all have good bone and are good
feeders, being thick and low-set, and all of choice milk strain and excellent breeding. In good growing
condition, and priced so you can buy. JOHN ELDER & SONS, Hensall, Ontario

When writing please mention Advocate

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

Just fancy, readers! Whether a blacksmith, carpenter, engineer, laborer, farmer or clerk, could you by solid hard grinding wear, every day in the week—not just Sundays—wear a small hole in a \$2.25 pair of Pants or a \$6.50 Suit in six months? Could any of your boys wear a small hole in a \$2.27 Suit in six months? Remember, six months of solid grinding wear and tear—not just Sundays—but every weekday and Sundays too! If any reader can do this, he can get another garment free of charge!

A remarkable new, untearable cloth has been discovered by a well-known firm in London, England. These new Holeproof Cloths are amazing! You can't tear them, you can't wear them out, no matter how hard you try. Yet in appearance, they are exactly as finest tweed and serges sold at \$20. But the price is only \$2.25 for a pair of Trousers, Breeches \$2.60, and for a well-made, smart, stylish Gents' Suit, delivered by post, with no further charge whatever \$6.50 only. Boys' Suits from \$2.27, Knickers from \$1.

Readers are reminded that the above sums cover cost of postage and all charges, and there is nothing more to be paid on delivery. Full particulars of these remarkable cloths, together with a large catalogue of patterns, fashions, and a simple measure chart, with which readers can measure themselves at home, will be sent absolutely free and postage paid to all those who just send a postcard to (Agents Dept. 7), The Holeproof Clothing Co., P.O. Box 104, Toronto. The firm's London Address is 56 Theobalds Road, London, W. C., Eng., but all applications for samples should be sent to Toronto, Ont.—Advt.

MORE HORSE-POWER
 if your teams are equipped with



These pads prevent Sore Shoulders and cure Gall Sores. Your dealer will supply you, or write BURLINGTON BLANKET CO., Ltd., 793 King Street West, Toronto, Canada.

MESSRS. A. J. HICKMAN & CO. (late Hickman and Scruby), Court Lodge, Egerton, Kent, England, exporters of **PEDIGREED LIVE STOCK** of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

Alloway Lodge Stock Farm
 Angus—Southdowns—Collies
SPECIAL this month:

CHOICE BULLS
 ROBT. McEWEN, R.R.4, London, Ont.

BROWN SWISS

Learn the merits of the Brown Swiss. Get acquainted and become a breeder of these cattle. For information, write to

RALPH H. LIBBY

Sec. of Canadian Brown Swiss Association
 Stanstead, Quebec

BALMIDIE ABERDEEN-ANGUS
 Get a 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-yr.-old heifers. T. B. BROADFOOT, FERGUS, ONT.

Glenfoyle Shorthorns
 Present offering—3 bulls from 10 to 13 months. Nice, straight, smooth fellows. Prices easy. Stewart M. Graham, Lindsay, Ont.

Plaster Hill Herd Dual-Purpose SHORTHORNS
 Just one bull left, 12 months old—a choice one, good milking strain. Can spare a few cows and heifers. F. Martindale & Son, Caledonia, R. R. No. 3, Ont. Long-distance Telephone.

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, Bright, Ont., R. R. 3. Arr Station, G. P. R.

For Sale—Four good Shorthorn females of choice Scotch breeding; two young cows in calf to an imported Augusta bull; also two yearling heifers. Must be sold at once. Prices right. Will meet visitors at Caledonia station. Allan Anderson & Son, Caledonia, Ont. R.R. 3, Haldimand Co.

The Movement of Wheat.

The Canadian Atlantic Grain Company of Winnipeg sent out the following grain report on April 19. It gives the ruling price at that time and shows the extent of wheat on hand:

The wheat market was subjected to another severe shock when it was officially announced from Ottawa that the duty on wheat coming into Canada had been abolished, which automatically annulled the tariff of 10 cents per bushel on Canadian wheat imported into the United States. This announcement was made on April 17. On April 16, Minneapolis May wheat closed at 1/8 cent over Winnipeg May. On April 17, after the American markets had an opportunity of digesting this new Order-in-Council, Minneapolis May wheat sold at 7 1/2 cents under Winnipeg. On April 19, Minneapolis May wheat closed at nearly 8 cents per bushel under Winnipeg and Minneapolis July wheat at 9 3/8 cents under Winnipeg. Evidently, instead of permitting Canada to ship its surplus wheat into the United States at an advance over Winnipeg, it is possible to sell the wheat in Canada at considerably over the American prices.

Strong cash demand in the United States and continued aggressive buying on the part of the British Government agents advanced the market by leaps and bounds. May wheat reached the high point of \$2.45 in Winnipeg. Chicago May at the same time sold up to \$2.42 1/4. If anything, the crop news was in favor of lower prices as heavy rains have fallen in the American Southwest, and reports from that section are to the effect that there is a great improvement in crop prospects there. Seeding operations in Western Canada, however, are delayed on account of the cool weather and snow.

Primary receipts in the United States have become quite moderate, and on Monday the American visible supply showed a larger decrease than expected. This decrease amounted to 3,221,000 bushels of wheat, and the total was 34,253,000 bushels against 53,553,000 bushels for the same week a year ago. Advices from Ottawa are to the effect that the total Canadian visible supply in all positions is 116,000,000 bushels. The World's wheat shipments the week of April 19 were very light, the total being 5,507,000 bushels against 14,734,000 bushels for the same week in 1916. North America shipped only 3,609,000 bushels the week previous.

Oats.—The demand continues extremely good although the market lacks the buoyancy of other cereals such as wheat and corn. May oats sold up to 71 cents to-day. It is generally expected that our May oats will readily sell at 75 cents and probably at 80 cents per bushel. Certainly oats have not commenced to advance in proportion to the rise in wheat and corn.

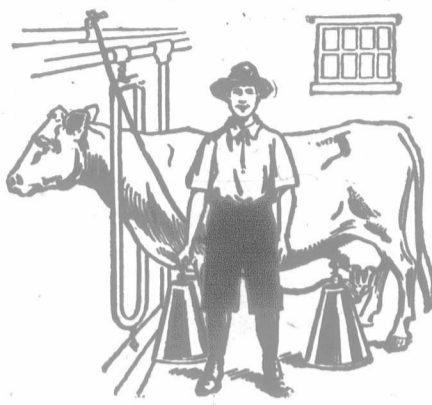
Barley.—May barley sold to-day at \$1.20 and No. 3 barley in store traded at the same price. There is an excellent demand for barley, both from exporters and American handlers who are taking it into the United States and paying the duty of 15 cents per bushel. The tariff on barley remains as it was before the Canadian Government took off the duty on wheat. Many well informed grain merchants feel that barley will sell over \$1.25 per bushel owing to the fact that choice barley in the United States at the present is selling at about \$1.50 per bushel.

Flax.—Despite the high prices, the American crushers continue to buy flax actively in this market. Offerings are very light and the undertone to the market is still exceedingly strong. Our May flax sold on April 19 at \$3.03 per bushel. This is 4 cents per bushel under the top recently reached for the May flax, but it is expected that it will sell still higher before another crop is harvested.

This may be considered the last call for the "Quality Sale" of Holsteins to be held by the York County Breeders, on Wednesday, May 9. Reference has been made in previous issues to the excellent quality and breeding of this consignment. Anyone who has not yet obtained full particulars and a catalogue from R. W. E. Burnaby, Jefferson, Ontario, should do so at once. There will be 30, 40 and 50-lb. blood in this sale, and York County is well known as the home of many of the best sires of the breed.

"Walter would rather stay home and milk than go away on a picnic!"

HOW to get along with less hired help, and yet escape the drudgery that drives boys away from the dairy farm—this is the problem that is being solved by the



EMPIRE Mechanical Milker

No one seems to like hand milking, yet every boy loves to run a machine. Here is a typical example of how it works out:

AMHERST, N.S., Jan. 5, 1917

Dear Sirs:—Walter, who was 16 years old, loves a machine, but hated to milk cows, so we bought the Empire Milking Machine that was shown at the Winter Fair at Amherst in 1915. It has given good satisfaction in every way.

We have milked at the rate of 40 cows an hour, but think it best not to exceed 32 as that leaves very little stripping to do.

One cow that only gave 21 quarts the year before, gave 29 quarts with the machine; two others that gave 22 1/2 quarts the year before gave 26 to 28 quarts this year when machine milked. We have just one cow that refuses to give her milk down with the machine. The cows are very much quieter when machine milked and sore teats are all done away with. Walter has taken full charge of engine and milker since it was put in and has never missed a milking—would rather stay home and milk than go away on a picnic. —GEO. E. FREEMAN

While overcoming the strongest objection to the life of the dairy farmer, the Empire Mechanical Milker is helping hundreds to make more money. Why shouldn't YOU be one of them? Write for illustrated Booklet and full particulars to Dept. C

THE EMPIRE CREAM SEPARATOR CO. OF CANADA, LIMITED.
 MONTREAL TORONTO WINNIPEG. 64

There are men that have good SHORTHORN HERDS that need good bulls to head them. There are men that have herds that are kept to breed thick, easy-feeding cattle, and big cows that are good milkers. There are men that are trying hard to start improvement in their own herds and in their neighborhoods. I have a suitable bull for each at moderate price, and I PAY THE FREIGHT. Business established 81 years. **Robert Miller, Stouffville, Ont.** One hour from Toronto.

Meadow Lawn Shorthorns F. W. EWING, ELORA, ONT.
 In order to make room for the crop of calves coming on, attractive prices are being made on the offering of bulls ready for the trade. They are of extra quality and choice breeding, by that great sire, Escana Ringleader, by Right Sort imp. Few bulls their equal are to be had.

PARKHILL SHORTHORNS

Herd comprising over 70 head, representing noted Scotch families. Bulls all sold except those listed in London sale, March 28th next. A few heifers well in calf will be sold right. Visitors always welcome to this herd of long-established reputation. R. & S. Nicholson, Parkhill, R. No. 2, Ont.

BRANT COUNTY SHORTHORN CLUB
 offers several young bulls of best breeding and fit for service. Also the Beauty-bred bull, Roan Duke 101320, a proven sire, and whose dam is a heavy milker. For prices and particulars address: THE SECRETARY, GEO. L. TELFER, R. R. 2, PARIS, ONTARIO

SALEM SHORTHORNS

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

IMPORTED SHORTHORNS

11 imported cows have calved since arriving at farm, others due soon. Now is your opportunity to get something worth while to add to your herd at reasonable cost. Imported bulls of serviceable age. OAKVILLE, ONTARIO. A. G. FARROW.

Spruce Glen Shorthorns of such popular strains as Mines, Fames, Miss Ramadens, Florences, Emlys, etc. Have still a few young bulls—thick, mellow fellows. Fit for service. **James McPherson & Sons, Dundalk, Ontario**

BLAIRGOWRIE SHORTHORN OFFERING

Imported and Canadian Bred. More bulls to select from than any herd in Ontario, all of serviceable age; also a large number of females, which are bred right and priced right. All the stock for sale. JOHN MILLER, Ashburn, Ontario Myrtle Station, C.P.R. and G.T.R.

Imported Shorthorns Cows and heifers in calf, or with calf at foot. Yearling bulls and bull calves. One of the best importations of the year. You will be surprised when you see them. **Will A. Dryden, Maple Shade Farm, Brooklin, Ont.**

Pleasant Valley Farms We have for sale (at prices that will move them in the next 30 days) the following exceptionally good bulls: 1 ROAN LADY, 1 BROADHOOKS, 1 ROSEWOOD, 1 WIMPLE, 1 STAMPORD, 1 MERRY LASS, 2 DUCHESS OF GLOSTERS and several others. Also equally well bred cows and heifers bred to (Imp.) ROYAL SCOTT, and BEAUMONT BEAU. Inspection invited. Our cattle will interest you. 90 head to select from. **GEO. AMOS & SONS Farm 11 miles east of Guelph, C. P. R., MOFFAT, ONTARIO**

HIGHLAND LAKE FARMS

Herd sire, Avondale Pontiac Echo (under lease) a son of May Echo Sylvia, the world's record cow for milk production, and Canadian record for butter, 41 lbs. Only one other 41-lb. bull in Canada. Our herd of one hundred includes nearly fifty daughters of a 33.31-lb. son of the great King Segis, brother to the sires of three world's record butter cows: Mature, 50.68; jr. 4-year-old, 46.84; jr. 4-year-old, 40.32 lbs. Junior herd sire, King Segis Pontiac Canada, a half brother to Avondale Pontiac Echo, out of a 30-lb. Segis cow. He is for sale. If this combination of breeding interests you, write for prices on either males or females. **R. W. E. BURNABY, Farm at Stop 55, Yonge Street Radial, JEFFERSON, ONTARIO**

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IF YOUR SOIL is not as fully productive as it should be, it may be over-acid, and an application of Beachville White Lime will produce wonderfully beneficial results in your crops.

Our Lime-stone is the highest grade in Canada. Write for free folder containing information you should have.

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Heavy Weight Three Ply Per Square \$2.15
ONE THIRD THE PRICE OF METAL

WRITE FOR FREE SAMPLES

Buy your roofing direct from the factory distributors. Get reliable quality at less than wholesale prices. We have the proper roofing material for your buildings, heavy and light grades. Some as low as 85c. per square.

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HAMILTON, CANADA

WANTED—CREAM

We pay highest market prices for churning cream of good quality. We

Remit promptly,
Test accurately,
Supply you with cans,
Give you a square deal.

Enough said. Write for fuller particulars to

ROSEDALE CREAMERY CO.
Kitchener, Ontario

Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of Fleming's Tonic Heave Remedy fail to effect a cure of any case, old or new, we will refund the full amount paid.

Per Box, \$1.00; 3 for \$2.50. Mailed on receipt of Price.

Scratches Disappeared
Gentlemen—I gave a course of your Tonic Powders, which has put a horse and his mate in fine shape, and a touch of scratches has quite disappeared.
Geo. A. Miles, Oxville, Alta.
Full information in Fleming's Vest Pocket Veterinary Adviser
Write us for a Free Copy
FLEMING BROS., Chemists
75 Church St. - Toronto, Ont.

Mardella Shorthorns—Bulls females; sires; quality; breeding dual-purpose cattle over 40 years. The Duke—dam gave 13,500 lbs. milk; 474 lbs. butter-fat—at the head. THOMAS GRAHAM, Port Perry, Ont., R. R.

Questions and Answers. Miscellaneous.

Potatoes for Seed.

I secured New Brunswick potatoes last fall. They are apparently a fine potato, of the Green Mountain variety. I have been advised not to plant them in Western Ontario because of the change in climate. I would like your opinion on the matter. A. H.

Ans.—If the seed is good we see no logical reason why the potatoes will not do well in Western Ontario, provided the soil and other conditions are suitable for potato growing. There are certain crops which must become climatized before they will produce the maximum yield. However, potatoes from New Brunswick have been planted and have given good results in Ontario.

When Bees Prove a Nuisance.

How far away from dwellings and highways must you keep bees when neighbors are being stung by them continually. Can the owner be forced to remove them as a public nuisance? J. G. L.

Ans.—There is no definite distance that bees must be away from a dwelling house or highway and we find bee yards in many localities. Sometimes they are close to the highway; they are found at the back of the lots in towns and cities, and in large cities bee-yards are found on the roofs of buildings. There are times, however, when bees are counted a nuisance and if such can be proven the court will compel the hives to be removed. When kept close to the highway, a high hedge or board fence should intervene to prevent the direct flight of the bees. This will start them on their search for honey in a different direction from where the public are travelling, or at any rate they will fly high enough that they will not come in contact with travellers. Very often a different location on the farm or lot will prevent trouble. It must first be proven that the bees are a nuisance before they can be ordered removed. This may depend somewhat on the people whom they are bothering; for instance, if a person starts fighting the bees it angers them and increases the trouble. Most beekeepers will endeavor to do their utmost to prevent their bees from becoming a nuisance to the neighbors or travelling public.

Horse in Poor Condition—Powders for Worms.

I have a seven-year-old horse which has been thin ever since he was a colt. He has taken several staggering spells and has frequent attacks of colic. I have tried different remedies without results. What is the trouble, and what remedy do you advise?

2. Can indigestion in a horse be cured?

3. What is a sure cure for worms? A. E. W.

Ans.—1. Some horses are naturally harder to keep in condition than others. However, with proper feed and attention a horse should flesh up at some period of his life. There is evidently some constitutional trouble which has become chronic. After seven years, in which the horse has not made good use of its feed, it is rather difficult to diagnose the trouble without seeing the animal. It is advisable to have him examined by a veterinarian and allow him to prescribe treatment. Indigestion will cause the colic, and worms will tend to keep the horse in low condition. It is also possible that the teeth never have been right. This would prevent the horse from properly masticating its feed, which in time will lead to chronic indigestion.

2. The symptoms of chronic indigestion are: unthriftiness, keen appetite, increased thirst, hide bound, dry, staring coat, and frequent colicky pains. Give a purgative of 7 drams aloes and 2 drams ginger, and follow with a dram each of ginger, gentian, nux vomica and bicarbonate of soda, three times daily. Give feed of first-class quality. Have the teeth examined, and if anything is wrong with them have them attended to.

3. Take 6 ounces each of sulphate of iron, sulphate of copper, and calomel; mix and make into 48 powders. Give a powder every night and morning in damp feed. After the last one has been given give a purgative of 7 drams aloes and 2 drams ginger. Avoid giving the purgative to a pregnant mare.



SAVES TIME!

The faster you turn the Sharples, the quicker you finish skimming! For instance: If by turning a Sharples at 45 revolutions per minute you get through separating in 15 minutes, you can get through in 10 minutes by simply increasing the speed to about 55 revolutions. The Sharples is the *only* separator that can be "hurried"—a mighty handy thing when you are hurried.

Now consider the time saved in cleaning the Sharples. The bowl is the most simple in existence—just *one* piece in it, no discs or blades. Simply run a brush through it once or twice—and cleaning's done!

Furthermore, the Sharples requires oiling *only once* a month—and in *only one* place. Just pour a little oil into the enclosed gear case—more time saved!

SHARPLES SUCTION-FEED CREAM SEPARATOR

- the *only* separator that skims clean at widely-varying speeds
- the *only* separator that delivers cream of unvarying thickness—all speeds
- the *only* separator that you can turn faster and finish skimming quicker
- the *only* separator with just *one* piece in the bowl—no discs, easiest to clean
- the *only* separator with knee-low supply tank and a once-a-month oiling system

Remember that all separators lose considerable cream when turned below speed—*except Sharples!* The Sharples gets all the cream no matter whether you turn it fast or slow. It saves up to \$100 a year more than other separators. Cordially welcomed by women, owing to its easy turning and easy cleaning. Over a million Sharples users. Write for catalog to Department 78.

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SUNNYBROOK FARM HOLSTEINS

Extra Special Offering for April and May in several bull calves, from good official record dams, and by our own herd sires, Sunnybrook Mercedes Natoye and Sir Natoye. We are far too heavily stocked. These may be had at prices that should move them quick. Write us also for anything in females. We have ONE HUNDRED head to choose from.

JOSEPH KILGORE, Sunnybrook Farm, EGLINTON, ONT.
Phone: Toronto, Adelaide 3900, or Belmont 184.

Riverside Holsteins—Herd headed by "King Johanna Pontiac Korndyke", a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 166.92 in 30 days—world's record when made. His ten nearest relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.
J. W. RICHARDSON R. R. No. 2, Caledonia, Ont.

KING SEGIS WALKER'S

Oldest daughter with first calf made 456 lbs. milk and 24 lbs. butter; with her second calf, 560 lbs. milk and 29½ lbs. butter. His first granddaughter, through his son at 2 yrs. 2 months, made 440 lbs. milk and 23½ lbs. butter. Young stock for sale.

A. A. FAREWELL, OSHAWA, ONT.

CLOVERLEA HOLSTEINS

Our entire lot of bulls, fit for service, as advertised are sold. We still have a number coming on, eight months and under, which will be priced right for immediate sale. Write quick, for they will go fast—as the others did.
GRIESBACH BROS., COLLINGWOOD, ONT.

EVERGREEN STOCK FARM—High-class Registered Holsteins

To breeders who wish to make secure their future success we are offering some extra choice bull calves at living prices. Two of these are from daughters of a son of Lulu Keyes, 36 lbs. butter 7 days, and 21 lbs. milk per day, and sired by Prince Colantha Abbekerk, whose dam made 32 lbs. butter 7 days and 104 lbs. milk per day.
A. E. HULET, NORWICH, ONT. BELL PHONE 48-r. 3.

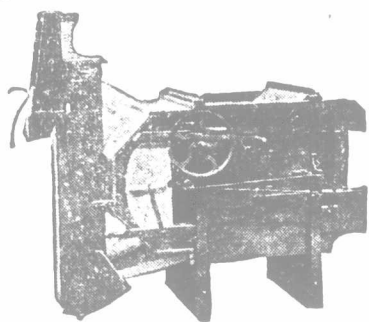
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GREAT CANADIAN SUCCESS
Bob Long's splendid industry

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R. G. LONG & CO. LIMITED
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We challenge competitors to put their fanning mills in our barn for a trial test with the

KLINE FANNING MILL

We welcome such a test, because in no other way is it possible to so decisively demonstrate the superiority of the KLINE on all kinds of grain. It is absolutely unequalled for separating wild oats, chaff, all small seeds and smut. In grading seed grain this mill will pay for itself three times over in one year off 40 acres, giving heavier yield per acre than any mill built. Write for full particulars, price and terms. Agents wanted in unrepresented territory.

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Upward **American**
FULLY GUARANTEED
CREAM
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A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for only \$16.95. Closely skims warm or cold milk. Makes heavy or light cream. Bowl a sanitary material, easily cleaned. Different from picture, which illustrates larger capacity machines. See our easy Monthly Payment Plan. Shipments made promptly from Winnipeg, Man., Toronto, Ont., and St. John, N. B. Whether dairy is large or small, write for handsome free catalog and easy payment plan.

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No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use Fleming's

Spavin and Ringbone Paste
Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of

Fleming's Vest-Pocket Veterinary Adviser
Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

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DR. BELL'S Veterinary Medical WONDER. 10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Blings, Bowels, Kidneys, Fevers, and Distempers, etc. Send 25 cents for mailing, packing, etc. Agents wanted. Write address plainly. DR. BELL, V.S., KINGSTON, ONT.

Questions and Answers.
Miscellaneous

Suggested Farm Names.

Suggest suitable names for a farm on which a number of maple and elm trees are growing in the front. N. B.

Ans.—As far as possible the name chosen for the farm should be suggestive of something on the place. We might suggest "The Maples," or "The Elms," "Maple Grove," "Maplehurst," "Elm- vale," "Fairview," "Clovermead," "Clover Leaf," "White Meadows," "Tangle- wood," "Sylvanview," "The Hedges," "Spring Lawn," "Shadeland," "River- side," "Lochdale," "Sunny Heights," "Ridgewood," "Idlewild," "Glenwood," "Forest Home," "Bellevue."

Looking After a Brood Mare.

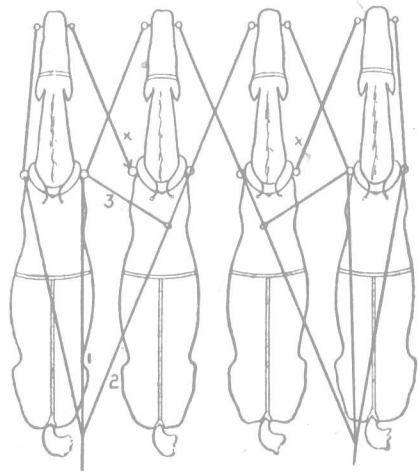
Our brood mare is due to foal June 30 but she is making milk now. Is there any particular method of feeding advisable, or is it best to let nature take its course? S. L. P.

Ans.—It is rather early for the mare to be showing much signs of milk. Is there a probability that her time is up a month earlier? Sometimes mares foal prematurely, and in such cases may show all the signs. Work or exercise her carefully and avoid too much jarring or backing. Good hay and oats to which a little bran is added makes suitable feed. As soon as the grass comes turn the mare on pasture for a feed each day. A pregnant mare doing work must be well but carefully fed. The grain should be regulated by the amount of work performed.

Four Horse Reins.

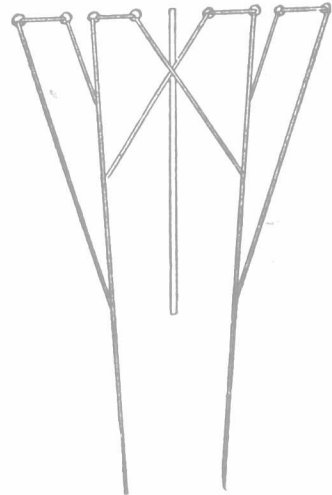
How are the lines arranged to drive a four-horse team? J. W.

Ans.—The following illustrations shows methods of arranging reins to drive four horses. There are many ways of



Four-horse Reins.

reining four horses, but these are used by many and evidently give good results. Just the ordinary lines used in driving a team are sometimes used. A strap or rope fastened to the bits of the two centre horses holds them to-



One Way of Attaching Reins for Driving Four Horses.

gether and also aids in guiding them when only the ordinary lines are used. Some use reins on the centre team only, and tie the outside horses to a ring on the harness.

MANOR FARM

KING SEGIS PONTIAC POSCH
SENIOR SIRE IN SERVICE AT MANOR FARM
Sire King Segis Pontiac Alcartra (the \$50,000 Sire)
Dam Fairmont Netherland Posch (32.59 lbs. at 4 yrs. old)

Young Sires from Manor Farm
Are in great demand. I have only two bull calves left, both of very choice breeding, one from a 28-lb. dam, the other from a 20-lb. two-year-old now under test and making good. They are priced right to sell. Write for extended pedigree and photo.

GORDON S. GOODERHAM
CLARKSON, ONT.

At Service
MAY SYLVIA PONTIAC CORNUCOPIA
His dam, May Echo Pontiac is a grand individual, never tested on account of accident but still with a three-fourths udder, with a possibility of being tested this season. She is a daughter of May Echo Sylvia, the world's greatest combined milk and butter cow, who is dam of Avondale Pontiac Echo, nowl eased to Messrs. Burnaby and Wallace. Also dam of champion Sylvia Echo Pontiac, Mr. A. C. Hardy's herd sire, the only 41-lb. sires in Canada. May Echo Pontiac's sire, King Pontiac Artis Canada has more high-testing two-year-old daughters than any bull in Canada; also a great many three-year-olds with high tests.
Book your orders early as only a limited number of cows bred.
W. F. ELLIOT, Secretary, Bell Phone, UNIONVILLE, ONT.

Hospital for Insane--Hamilton, Ont.
Our only offering at present is a bull born February 10th, 1917, a grandson of Dutchland Colantha Sir Mona, and the great cow Lakeview Lestrage, 28.34 lbs. butter in 7 days. His dam is a high-producer and tester, and carries the blood of King of the Pontiacs, and King Segis.
Apply to Superintendent.

KING SYLVIA KEYES 28566
Is our junior herd sire. Twenty of "King's" nearest relatives average for seven days 29.97 lbs. butter. His dam and five sisters' average milk for one day is 110 lbs.; seven days, 724.4 lbs. His dam, sire's dam and two sisters' average for seven days is 774 lbs. milk, with 32.26 butter. "King" will be bred to a limited number of approved cows this year. Prices and terms on application. Don't delay Correspondence solicited.

BACKED BY THE WORLD'S GREATEST RECORDS.
W. G. Bailey, Oak Park Stock Farm, R. R. 4, Paris, Ont.

ROYCROFT FARM HOLSTEINS
FORMERLY THE HET LOO HERD
We have a few exceptionally nice, straight, 9, 10 and 12-month heifers, principally all from high-record cows we have purchased in both Ontario and United States. They are all from good-record sires, but as our stabling is limited we are offering these at prices away below their value, so we may keep only those of our own breeding. They will not remain with us long. Write quick if you want them.
WE ARE AT PRESENT OFFERING THE SERVICES OF KING SEGIS ALCARTRA SPOFFORD TO A LIMITED NUMBER OF APPROVED COWS. WRITE FOR PARTICULARS.
W. L. SHAW, PROPRIETOR Gordon S. Manhard, Superintendent, Newmarket, Ontario

SUMMER HILL HOLSTEINS
The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day and their average butter records are over 35 lbs. a week. We have 50 heifers and young bulls to offer, by these sires, and out of dams just as well bred. We invite personal inspection.
D. C. FLATT & SON, R. R. 2, Hamilton, Ont. Phone 7165

Silver Stream Holsteins
Herd headed by King Lyons Hengerveld, whose five nearest dams average 31.31 lbs. butter in 7 days, and by King Lyons Colantha, 6 nearest dams average 30 lbs. butter in 7 days. Bulls fit for service; also bull calves from above sires and out of R.O.P. dams for sale.
J. MOGK & SON, R. R. 1, Tavistock, Ontario

DUMFRIES FARM HOLSTEINS
175 head to choose from. Special offering: bulls from one month to one year old. Grandsons of Prince Auggie Mechthilde. Visitors always welcome.
S. G. & Erie Kitchen St. George, Ont.

YORK COUNTY BREEDERS "Quality Sale" of Holsteins

Richmond Hill Fair Buildings, WEDNESDAY, MAY 9th
A few minutes trolley ride north of Toronto AT 12.30 P.M. SHARP

York County is well known as the home of many of the best sires of the breed, and the blood of the following are well represented in this sale: a 33.31-lb. son of the great King Segis, grandsire of the only 50-lb. mature cow and of the only 46-lb. four-year-old; a son, a full brother, a grandson of May Echo Sylvia (the world's record cow) and several grandsons of the world's greatest sire, King of the Pontiacs.

York County breeders are making every effort to make this sale of seventy head of Holsteins the sale of the season—a sale that will be a credit to York County, the breed, the breeder and the buyer.

Sixty good females will be sold, with records as high

R. W. E. BURNABY - - - - - **JEFFERSON, ONT.**

as 26 lbs. butter in 7 days, and most of them bred to one of the sires mentioned above.

If you want thirty, forty or fifty-pound blood in your herd at a time when expensive feed is a thing of the past and when prospects were never better for good prices for milk, butter and cheese, and with a growing demand for good breeding Holsteins, come to this great "Quality Sale".

Remember the Sale is rich in the blood of the families that hold the world's records for both milk and butter, and that every animal will be sold, regardless of value, to the highest bidder, and that the sale will start at 12.30 o'clock, sharp.

Send for catalogues to:—

Questions and Answers. Miscellaneous.

Ducks and Hens Dying.

I had several ducks and hens die this past winter, and I cannot understand what is the trouble. They appear to be in good condition, then suddenly commence to fail and in a few days they die. It is possible that they are a little crowded in the pen, but they are well kept and are fed scratch feed, bran and scraps. The intestines appear healthy, but the droppings are a sort of green color. What is the trouble and remedy?
E. R.

Ans.—We are unable to see anything abnormal with the specimen received at this office, except that the color was not exactly what it should have been. We are inclined to think that the trouble comes from the housing condition. When birds are crowded together it is unreasonable to expect them to keep healthy and do well. They must have grain, green feed and meat feed in order to meet the requirements of the system. The color of the droppings is an indication that the birds are possibly suffering from cholera, although we cannot say definitely with the meagre symptoms given. There are a number of conditions which might cause the trouble, so naturally the treatment would vary. The pen and runs should be thoroughly cleaned and disinfected and plenty of fresh air and sunlight admitted to the pen. Place the ducks in a pen by themselves and give the hens about four square feet of space each. Any birds showing signs of illness should be immediately separated from the main flock and given special care for a few days until they show signs of recovery, or else the disease becomes so bad that they die. Birds affected by cholera, tuberculosis, and such ailments should be removed from the pen and killed on showing the first symptoms. They are a menace to the entire flock and these two diseases in particular do not yield to treatment.

Gasoline Engine in Cellar—Hen-House.

1.—What are the prominent features of a trusty gasoline engine?
2. Would you advise placing the engine in the cellar where cream is stored until marketed?
3. Is a hen-house 15 by 30 feet, divided into three pens each 10 by 15 feet, large enough to house 100 hens? What change in arrangement would you advise?
4. Would a board walk along the front of the hen-house be of any service?
5. Does hot tar poured on a cement floor keep down the moisture? J. G. R.

Ans.—1. The majority of gasoline engines placed on the market are of a reliable type and easy to operate. The method of feed, supply tank, carburetor, the ignition service, are things which should be considered and thoroughly understood when the machine is purchased. The fewer the working parts, the less chance there will be of anything going wrong or giving trouble.

2. There is always more or less odor from gas engines and gasoline, which might taint the cream. Therefore, it is not advisable to store cream in the same compartment of the cellar where the engine is located. The cream cellar should be separated from the provision cellar, or the room that an engine is kept in, by a tight partition.

3. A pen of the size mentioned will accommodate 100 of the large breeds of fowl, and a larger number of the smaller breeds. Dividing the pen into three compartments is a very good arrangement. It is advisable to have a solid partition extending out as far as the roosts, and a solid partition or cotton about 3 feet high across the pen, in order to prevent circulation of air.

4. The board walk would be of no particular service as far as the hens are concerned, but it might be a convenience to the attendant.

5. Tar is often applied to concrete walls to prevent moisture seeping through. We have never seen it applied to a cement floor, but we are doubtful if it would prove effective in preventing moisture. Tar is very often used in the surface coat on pavements. The moisture trouble might partially be eliminated by using hot tar in a surface coat on the floor.



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EUREKA HARNESS OIL makes harness strong and tough.

This mineral oil not only takes dirt off but keeps dirt out. It fills the pores of the leather.

That is why a harness treated with Eureka is tough, pliable, shiny and new looking.

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Branches Throughout Canada

SIXTH ANNUAL SALE OF THE Southern Ontario Consignment Sales Co.

will be held on the Fair Grounds, Tillsonburg, Ontario, on

TUESDAY, MAY 8, 1917

When we will sell without reserve

50 HOLSTEINS 50

One of the best lots we ever offered at any sale in Ontario. There will be cows with records up to almost 27 lbs. butter in 7 days—and nearly all the young bulls and heifers will be from the good cows, and from bulls whose near dams average over 30 lbs. of butter in seven days. If you will study the pedigrees of the animals catalogued, you will find lots of 4% blood. The offering will contain the two great stock bulls, Baron Colantha Payne, dam's record 33.18; average test 4.3, and Korndyke Veeman Pontiac, dam's record, 30.13; average test, 5.48.

Never before has there been two such good bulls offered at one sale in Ontario. The consigners are: L. H. Lipsit and A. A. Johnston, Straffordville; T. W. McQueen and Geo. S. Elliot, Tillsonburg, and R. J. Kelly & Sons, Culloden, Ontario.

Plan to attend this sale in the Holland of North America—the day's outing will do you good. Remember, this is the SALE where the cattle offered are SOLD at the sale to the highest bidder. A square deal to all. Everybody welcome. Send for catalogue to:

R. J. KELLY, - Manager, - Culloden, Ont.

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ASK ANY SHIPPER

about our service and prompt returns.

Ask for prices.

The figures of yesterday may be TOO LOW for to-morrow. We furnish cans.

The Toronto Creamery Co., Limited
Church Street, - - Toronto

18 HOLSTEIN BULLS FOR SALE

Eleven months and under; also 1 cow; 8 heifers, freshening from March till September, from tested and untested dams.

R. M. HOLTBY, PORT PERRY, ONT. R. 4

RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pieterje, and the others are by King Segis Pontiac Duplicate. Can also supply a few females. R. W. Walker & Sons, Port Perry, R.R. 4. Manchester, G.T.R., Myrtle, C.P.R.

Willowlea Holsteins \$50 takes a bull calf 5 months old, from a 65-lb. dam; \$125 will buy a choice 2-year-old heifer in calf. The sire is from a dam with 12,000 lbs. milk in 8 months. Visitors welcome.
E. MIGHT, Brampton, Ont., R.R. 6

CLEARING OUT SALE

The most important announcement of the year

1883—The Old Reliable Spring Brook Herd of—1917

PURE-BRED HOLSTEIN-FRIESIAN CATTLE

Will be dispersed by Public Auction at the farm,

Breslau, Ont., Wednesday, May 23, 1917

Forty Head Thirty Females. Ten Bulls. **Forty Head**

individually that has come into any one sale-ring this year.

A number of the more mature females are direct descendants of the old imported cows that laid the foundation for the Spring Brook Herd way back in 1883. Twenty of the younger cows and heifers are daughters of the great 32.17-lb.-bred son of Pontiac Korndyke, **Sir Korndyke Boon**. The young bulls, most all of which are of serviceable age, are all sons or grandsons of this great Pontiac Korndyke sire.

Watch this space next week for further particulars. Send for catalogue now, and mention *The Farmer's Advocate*.

Make all applications to

A. C. HALLMAN, Prop. Spring Brook Herd, Breslau, Ont.

JERSEY BULLS

We have several choice yearling bulls from high-producing, imported and Canadian-bred cows. The sire of these bulls is Olga 4th's Oxford 1746, whose dam, on official test, gave over 16,000 lbs. of milk and over 1,000 lbs. of butter. Prices reasonable.

Twenty-minute trolley ride from Niagara Falls.

Berkshire Boars all ages. Shropshire and Southdown Sheep
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IN choosing a litter carrier, one should consider all of the equipment necessary for a complete outfit: Carrier, Track, Hangers, Switches, and Swing Pole fittings. Do not place an order before learning of the many distinctive features to be found in Louden Equipment.

LOUDEN Litter Carrier

—is simple in construction, and easily operated. Carrier box is made of heavy galvanized steel, strongly reinforced with angle iron. Worm hoisting gear insures maximum speed and power. Track is of high carbon steel and is easily installed.

Write to-day for Illustrated Catalogue.

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of Canada, Ltd.

Dept. 612 GUELPH, Ont. 6

Questions and Answers.

Miscellaneous.

Reeve—School Trustee—Councillor—Tax Exemption.

1. Can the Reeve of a township municipal council, while in the chair, move the adoption of a resolution?
2. Can a public school Trustee of a rural school section qualify as a municipal councillor in a township in which he resides, or does the Act only apply to cities and towns or incorporated villages—which prevents him from holding both offices?
3. Is a public school teacher, receiving a salary of six hundred dollars per annum, liable to pay an income tax to the township municipality?

Ontario. SUBSCRIBER.

Ans.—1. Yes.
2. He is not disqualified from being a member of the council of a township by being a member of a public school board in such township.

3. Yes, to the extent of \$200 thereof unless he is a householder in the municipality and assessed as such, or being the head of a family occupies with his family a portion of a dwelling-house, although not assessed therefor.

Tractor Power for Cultivation.

1. Where can I procure books on tractors and gasoline engines?
2. How much per day or per acre should I charge for work on farms other than my own?
3. What amount of capital would be necessary to start in this line of business?

A. S.

Ans.—1. Several books on tractors and gasoline engines may be secured through this office. "Gas Engine Troubles and Installation", by Rathbun, is \$1.00 postpaid. "The Modern Gas Tractor", by Page, is \$2.00; "Horse Truck and Tractor", by Casson, Ellis, and Hutchison, is \$1.65.
2. The amount to charge per day would depend on a number of circumstances. The cost of the machine, efficiency of the engineer, cost of gasoline, nature of the soil, number of plows, etc., would have to be taken into consideration. Some men would get considerably more out of a machine than others. There is a wide divergence of opinion as to the life of an engine. It naturally depends on the construction, the care it receives and the amount of work it performs. If setting a price the interest on investment, running expenses, wages, estimated depreciation, and a certain profit would have to be figured on.

3. There are different sized tractors, so naturally the price varies a good deal. For Eastern Canada it is not advisable to invest in too large a machine, owing to the fact that the majority of the fields are small.

Settlement of Libel Action.

A enters action against B for libel and slanders and employs lawyer C, who draws up brief and all necessary papers, but, as he is not in district where case is to be tried transfers it to lawyer D. While A and B were examined for discovery, they agreed to settle case out of court, B paying A \$150 and all costs. A had already paid in court costs of \$120 besides \$50 on entering action. Now this case has gone on six months and A has not got any settlement yet.

1. What action can be taken by A?
2. With whom should he do so?
3. What amount should A receive on said action?

4. Is it customary to give defendant this length of time to settle, or how long can he have?

JACK.

Ans.—1 and 2. It does not clearly appear whether the settlement was arranged between the solicitors or between A and B, but in either case A ought to take the matter up with C, his own original solicitor and urge him to get it disposed of. In the event of still further delay A should then see another solicitor about it, and also, if necessary, regarding the amount of costs to be retained by C.
3. There is not nearly enough information given us to enable us to tell what would be reasonable as the net proceeds to A of this litigation.

4. There cannot be said to be any established custom about it. The matter is one entirely of agreement, and the terms of settlement might have fixed any period and still be quite regular.



Give your cows summer pasturage next winter

That's the way to get a big milk flow.

No amount of grain feeding alone will give you in winter as much milk as you get in summer. Your cows need fresh green feed such as they get when pastures are flush.

Good corn silage is the greatest winter milk-producing feed there is. If you are not feeding it to your cows you are spending 15 or 20% more for feed than you need and getting 25% less milk than you could.

Get an IDEAL GREEN FEED SILO and let it make money for you

The first cost of the IDEAL is small. It will pay for itself the first year and return you 100% on your investment each year thereafter for many years. What other equipment can you buy that will do this?

No matter whether you are feeding dairy cows, beef cattle or sheep, you need a silo, and it will pay you to buy a good one. You may save a few dollars on the first cost by buying a cheap, poorly made one, but such a silo will neither last as long as an IDEAL nor keep your silage in as good condition.

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That EVERY Buyer of COTTON SEED MEAL Should Buy, and THREE GOOD REASONS WHY:

1. Because they are manufactured in our own Mills and you can depend upon the quality.
2. Because they are packed in sound ONE HUNDRED-POUND NET WEIGHT sacks, and you get what you buy.
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AMERICAN RED TAG

Protein 38½%, Fat 6%

SURETY BRAND

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Mills conveniently located in every cotton-growing State in the South. Prices on application, in car lots or less.

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Plants 2, 3, or 4 kernels, as desired. Sows in hills or rows. Send for new folder.

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The purest and best.

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THE DOMINION LINSKED OIL CO., Ltd.
Manufacturers, Baden, Ont.

LAKESIDE AYRSHIRES

A few young bulls for sale from Record of Performance dams, imported and Canadian-bred, sired by Auchinbrain Sea Foam (imp.) 35758, grand champion at both Quebec and Sherbrooke.

Write for catalogue.

GEO. H. MONTGOMERY, PROPRIETOR
Dominion Express Building, Montreal, Que.
D. McARTHUR, MANAGER, PHILIPSBURG, QUEBEC.

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 Stn., G.T.R.**

Dungannon Farm Ayrshires Offers two eleven-months-old bulls by Humesbush Prince Fortune, and from good dams. Also younger stock. **W. H. FURBER, Mgr., R. R. 6, Cobourg, Ont.**

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THE shoes for aching feet—light in weight, durable, roomy, comfortable and waterproof. Made from selected Skowhegan leather with water-proofed leather sole and heel and solid leather insoles. The ideal shoe for farmers or others working on the land.

Also specially suitable for woodsmen, trackmen, millmen, sportsmen, laborers—all who require strong, easy fitting footwear.

Get a pair of Palmer's "Moose Head Brand" footwear from your dealer. They will give you foot comfort and great wear.

JOHN PALMER CO., Limited
Fredericton, N. B., Canada 31

Young BRAMPTON JERSEYS Bulls

For the next fortnight we are making a special offering of young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.F. records, save one. Females, all ages, also for sale. **B. H. BULL & SON, Brampton, Ontario**

THE WOODVIEW FARM JERSEYS
LONDON, ONTARIO
John Pringle, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD
Present offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother; also cows and heifers. State distinctly what is wanted if writing.
WE WORK OUR SHOW COWS AND SHOW OUR WORK COWS

THE DON JERSEY HERD—

OFFERS: Several young bulls, all of serviceable age, and all from R.O.P. dams. These are priced right. Interested parties should write or see these at once. We also have females of breeding age.
D. DUNCAN & SON, Todmorden P. O., Duncan Station, C.N.O.

Hillhouse Ayrshires

F. H. HARRIS, Mt. Elgin, Ont.

Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

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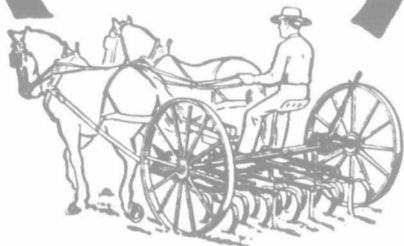
Men right around you found the benefit of first-class cultivation last year. In the construction of the Peter Hamilton Cultivator, every need has been considered and every requirement provided for. The different groups of three rows of teeth are subdivided again, and the front teeth are attached to one tooth-frame, back row to another. All teeth cultivate to an even depth and thoroughly work up every inch of ground. The

PETER HAMILTON Cultivator

is a light draft implement, in spite of its superior strength. Teeth are strongly reinforced and will stand all the hard work they will get. Sections are made from extra heavy steel. See the Peter Hamilton Cultivator before buying.

Agents wanted
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PETERBOROUGH, ONT. 17



TAMWORTHS

For Sale
Large numbers of choice males and females.
All ages.
Herold's Farms, Beamsville, Ont.

YORKSHIRES Sows 170 lbs. and under, not yet bred. Boars 2 and 3 months, 60 to choose from. Bred from prize-winning stock, Eldon Duke still at the head. Tell us your wants.
Wm. Manning & Sons, Woodville, Ontario

Meadow Brook Yorkshires
I am offering a few choice boars ready for service and some good litters ready to wean, May 1st. All bred from prize-winning stock. Prices reasonable.
G. W. Miners, R.R. 3, Exeter, Ont., Huron Co.

Berkshire Pigs Registered stock, choicely bred young boars, and sows to pig, all ages. Can supply pairs not akin.
CREDIT GRANGE FARM
J. B. PEARSON, Mgr., Meadowvale, Ontario.

Champion Berkshires—When buying, buy the best; our present offering are sons and daughters of the two great champions, L. C. V. Lad and Baron Compton, and out of winners, including champions. Both sexes.
W. W. Brownridge, Georgetown, Ont., R.R. 3.

Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable.
C. J. LANG, R. R. No. 3, Burketon, Ont.

Morrison Tamworths and Shorthorns—Bred from the prize-winning herds of England. Tamworths, both sexes, 20 young sows, bred to farrow in June and July. Young boars from 2 to 3 months old; Shorthorns of the best milking strain. Chas. Currie, Morrison, Ont.

TAMWORTHS

Young sows bred from April and May farrow, and a nice lot of young boars for sale. Write:
John W. Todd, R. R. No. 1, Cornith, Ont.

Swine For Sale—An offering choice stock in Poland-China, Duroc, and Chester White swine of either sex, most of age. First-prize Poland-China herd, London and Toronto, 1915. Prices easy.
GEO. G. GOULD, R. R. 4, ESSEX, ONT.

Springbank Chester Whites and Yorkshires—Ancestors bred from prize-winners and champions. Young boars four months old. Young sows newly weaned, both sexes. In Yorkshires, we have both sexes ready to wean. Wm. Stevenson & Son, R.R. No. 1, Science Hill, Ont.

When writing mention "Advocate"

The Care of the Tobacco Seed Bed.

EDITOR "THE FARMER'S ADVOCATE":

From the time of seeding until the young plants have produced leaves of a fairly good size, tobacco seed-beds should be given very careful attention. At this time the germinating seed and young seedlings are very sensitive, and neglect may mean a complete failure or at least the production of unthrifty seedlings.

Immediately after being seeded the beds should be well watered and kept moist at all times.

The tobacco seeds are very near the surface of the beds, and to allow the beds to dry out not only checks the germination of the seed, but also causes the death of many seedlings.

The beds should never be flooded but should be kept thoroughly moist by applying water, preferably from which the chill has been removed, in a fine spray or from a sprinkler.

Ventilation should be given the beds every fine day and even during inclement weather. Fresh air is essential to the proper development of the plants, and lack of ventilation renders conditions most suitable for the development of diseases of the seedlings. However, since the temperature most suitable for the growth of the plants is between 75 and 80 degrees F., the ventilation should be so regulated as to avoid decreasing the temperature of the beds much below this.

While the canvas-covered beds rarely require as much attention as regards watering and ventilating as glass-covered beds, these should also be carefully watched and ventilating by removing the canvas occasionally will prove to be beneficial.

When the young plants show a yellow, unthrifty color they should be carefully examined, and if no signs of "root rot" are apparent on their roots this unthrifty appearance may be overcome by watering them, twice weekly, with a solution consisting of three pounds of nitrate of soda to one barrel of water; applied at the rate of one barrel of the solution to 200 square feet of bed. The plants should be sprinkled with pure water after applying the above solution or there will be danger of burning the foliage. The application of this solution should be discontinued after the plants acquire a green, thrifty appearance. Applying nitrate of soda too heavily or frequently will tend to produce weak, spindling plants.

The "damping off" disease of seedlings characterized by the rotting of the stalk just above the surface of the ground, is quite serious. This generally occurs on unsterilized beds and where the plants are thickest in the bed. Practically the only remedy known for this disease, after it occurs, consists of thinning the plants and giving plenty of ventilation, at the same time discontinuing the watering of the beds.—D. D. DIGGES, Supt. Tobacco Station.

Questions and Answers Miscellaneous.

Feeding Calves.

What is the best feed for growing calves? Is calf meal too expensive to feed? Will they thrive on oil cake? What is the difference in cost and nutritive properties between calf meal and oil-cake meal?
M. A. C.

Ans.—There is nothing that can take the place of milk, either whole or skimmed. When the fat is removed from milk it is necessary to replace it in some other form. Flaxseed meal, cornmeal, and oats, make a very good supplement to skim-milk. It is not advisable to feed altogether on protein producing feeds, as the calf requires more or less of a balanced ration. Whole milk in itself is considered to contain the different nutrients required by the growing calf, in the proper proportions. Oil cake is good feed for practically any animal, but it must be remembered that it is comparatively low in fat. Besides the concentrates mentioned, good clover hay and a few roots or grass make excellent feed for growing calves. Calf meal is very often fed with good results, but not knowing the composition of the kind being used, it is difficult to give a comparison in nutritive properties.

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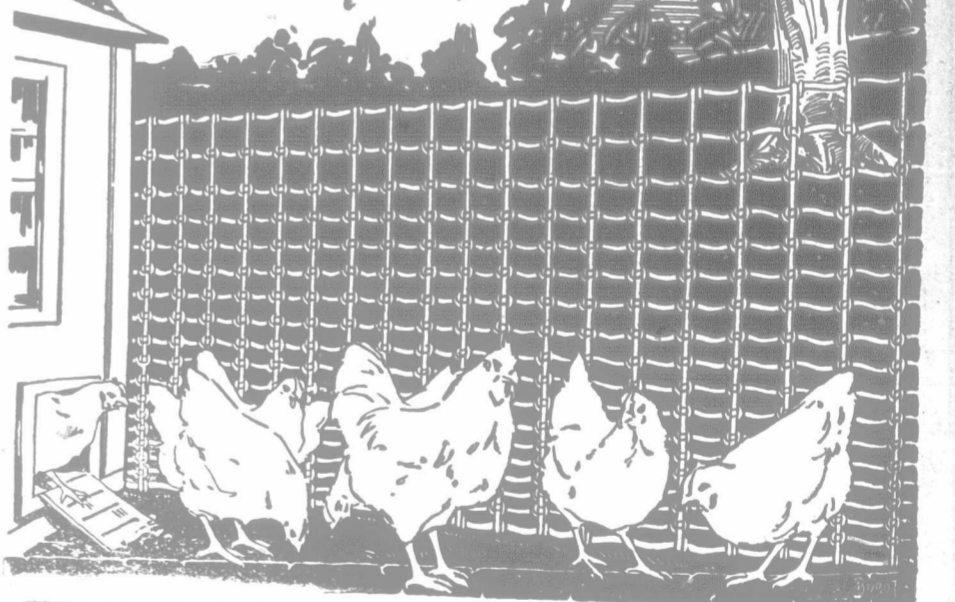
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High Grade Government Standard Seeds

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No. 1 Mammoth Red Clover.....	\$15.00
No. 1 Red Clover.....	13.50
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Terms: Cash with order, bags extra at 80 cents each.
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We can supply rack-cured corn, on the cob or shelled, from the following varieties:

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This corn was grown and cured by specialists in seed corn, and is, therefore, of a very superior grade of seed.

Let us quote you on all kinds of garden and field seeds, including Mangel, Sugar Beet, Turnips, Carrots, Butter Beans, White Beans, Seed Potatoes, Buckwheat, and field grasses.

Cotton Seed Meal, Oil Cake Meal, Gluten Meal, Bran, Shorts, Feed Oats, Whole Oats, Pure Linseed Meal, Good Luck Brand Calf Meal, and a complete line of Good Luck Brand Poultry Feeds. Write, phone, or wire for prices.

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Dovercourt Road, Toronto, Ont.

EARLY VEGETABLE PLANTS

Fruit Plants, Flower Plants

50 VARIETIES

100 Plants—Your choice, delivered, \$1.00. Catalogue free.

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Vegetable Plants

Asparagus, Conover's Colossal, two years old, 100, 60c.; 1,000, \$5.00; Early Cabbage, Jersey Wakefield, 100, 40c.; 1,000, \$3.50.
Other vegetable plants in season.

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STRAWBERRY PLANTS, including fall-bearing; Raspberries, Currants, Gooseberries, Grapes, Asparagus, Seed Potatoes, etc. Illustrated Berry Book and Price List Free. H. L. McConnell & Son, 120 Fort Burwell, Ont.

Gossip.

Breeders of Holsteins cannot fail to be interested in the clearing-out sale of the old, reliable Springbrook herd, established in 1883. A. C. Hallman, the proprietor, on May 23, will dispose of 40 head, including 30 females and 10 bulls. The individuality of this offering is right, and every Holstein breeder knows that Mr. Hallman has shown good discretion in his breeding operations throughout these years. See the advertisement elsewhere in this issue and write for a catalogue and full information.

Holsteins at Sunnybrook.

Sunnybrook Farm, Eglinton, Ont., the property of Joseph Kilgour, and the scene of more provincial plowing matches than any other one farm in the province, was visited recently by a representative of this paper, who was more than pleased to see the Sunnybrook herd of Holstein-Friesian cattle already increased to almost 100 head of females. Of these, nearly 75 are of breeding age, and while the management has as yet done very little testing, nearly everything in the herd are direct descendants of officially tested sires and dams. With very few exceptions the records given on the following members of the herd were made before coming to the farm, but in another year Mr. Kilgour fully expects to be able to announce official tests on every female in the herd of milking age. A few of those now holding records are Lady Inka Mercedes, which has 29.34 lbs. of butter in 7 days and 56.46 lbs. in 14 days; Ruby Doris Posch has 20.6 lbs. at 3 years and 1 month; Audrey's Pet Canary has 19.27 lbs. at the same age, and Inka Sylvia Maida has 18.76 lbs. as a senior 3-year-old; Sunnybrook Sylvia, a very promising heifer, bred at the farm, is now under test after dropping a nice bull calf and is expected to make one of the most creditable records on the farm. The same may be said of Sara Hengerveld, a grand, big, mature show cow, she has also a bull calf, and either are good buying to head any good herd. There are a number of other good bull calves, well over a half dozen in all, that are now advertised at prices to clear them quickly in order to make room for a score or more heifers which will soon be freshening with their first calves. These bulls are mostly sired by Sir Mercedes Natoye, a 29.34-lb.-bred son of Sir Natoye Oakland; and Count Favorit Sylvia Segis, which is a grandson of the great King Segis. These two bulls are the sires now in service at Sunnybrook, and their get are well worthy of a place in this or any other herd of double the size. They are well worth a visit to the farm from any of our readers, and to those who are in search of a young bull or a few heifers already bred as well as a few cows just fresh, we believe a day at the farm would be time well spent. Take Toronto, Yonge Street cars to Eglinton Ave., or call Adelaide 3900 during business hours, and arrangements can be made to motor you out. All correspondence should be addressed to Joseph Kilgour, Sunnybrook Farm, Eglinton, Ont.

As regards the recent Cabinet crisis in England, a contributor to London "Truth" writes pithily:—"The attitude of a First Minister in a war should be that of Chatham—I know that I can save the country, and that no one else can". That is Mr. Lloyd-George's attitude, and that is why he has put Mr. Asquith out and himself in. It is a superior sense of dramatic effect, coupled with demoniac energy, that has made Mr. Lloyd-George the man of the hour. It matters nothing that a Prime Minister cannot win a war, for where would Chatham have been without Clive, and Wolfe, and Hawke? It is enough for a Prime Minister to say that he can win the war: to borrow Macaulay's language, he must 'bid England be of good cheer, and hurl defiance at her foes.' Mr. Asquith made very fine speeches, but the impression got about that they were words divorced from deeds. Lord Chesterfield, when a Cabinet Minister, wrote to Lord Marchmont that there was no Government: they met, and talked, and then said, Lord, 'tis late, and then shall we meet to talk over this again?' Mr. Asquith's latter-day Cabinets were much of this kind."

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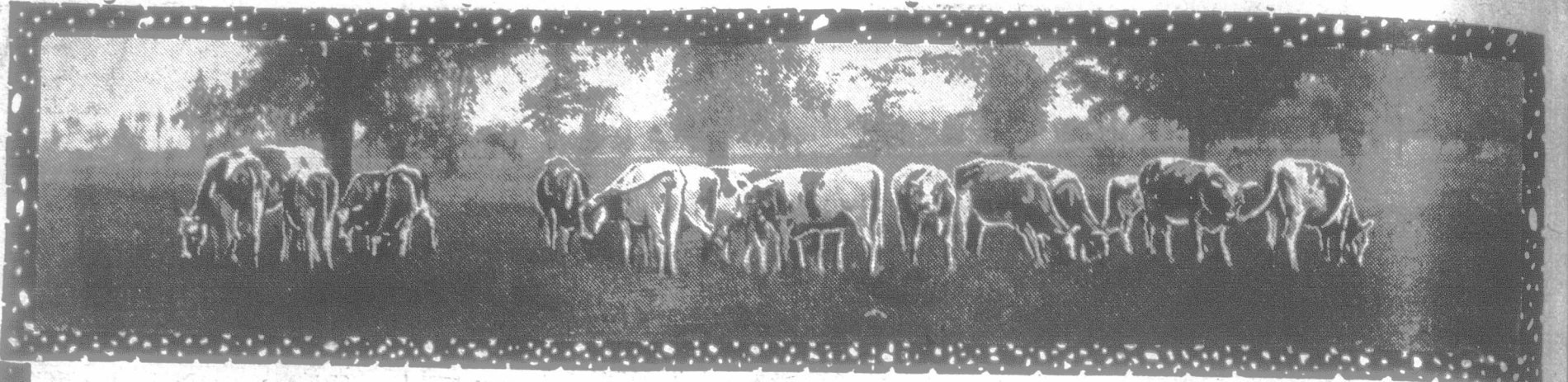
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Summer Pasture for Cattle: Very Important

The Department of Agriculture is anxious to have the farmers reap the benefit of making provision for the hot, dry months

Winter feeding has been carefully studied and profitable methods are now employed. Haphazard methods are in vogue too often in the system of summer feeding. Pasture is plentiful until June 30th, and after August 31st. During July and August heat and drouth prevail, pastures become dry, flies are a serious pest, and live stock invariably have to meet this critical period of the summer season by a greater effort to secure sufficient food, with the inevitable result of a falling off in the milk supply, or a lack of general thrift in beef cattle.

The loss in milk reaches 30% of a normal year's yield. Throughout Ontario this loss becomes enormous.

Very often beef cattle are marketed in an unfinished condition late in June to avoid midsummer failing.

Profits are reduced to a minimum under ordinary systems of pasturing. A large amount of valuable food is actually lost every year.

During 1917 Canada can ill afford any loss which can be overcome with a little foresight. Every cow can be kept up to her normal milk flow during July and August, without extra labor, if summer pasture is provided. Beef animals will thrive regardless of the heat and drouth.

Additional food may be supplied by adopting a soiling system: crops, such as oats and peas, corn, etc., may be sown and made to return green forage throughout the season, and the results will be satisfactory. But labor to carry on this work is necessary.

Summer silage is excellent where provision has been made for a sufficient supply, but many have not and will not have this for 1917. One ton of silage will supply one cow, during July and August, with 30 lbs. per day.

The soiling system involves labor just when it is most needed upon the Ontario farm for harvesting, and when labor cannot be secured some branch of work must be neglected.

Now, no man is anxious to neglect any branch of the farm operations, so a system is required which will allow the cattle to collect their own supplementary food.

The Summer Pasture is the Remedy

Because no extra labor is required during the harvesting season.

Because the animals pasture in the ordinary way, and will retain normal condition.

Because crops can be sown which will give ample pasture, withstanding heat and drouth.

Because our ordinary grain crops make an excellent pasture—They will thrive.

Here is the seed required for one acre: 1 bushel of wheat, 1 bushel of oats, 1 bushel of barley, 7 lbs. of Red Clover.

Sow about May 20th or shortly after seeding of spring grain has ceased. The sowing is done when the spring rush of work is just over.

In one month six to seven inches of growth will take place and pasturing may be commenced. Rapid and thick growth takes place as the plants are eaten off. If not allowed to head out, growth will continue until late in August.

Red Clover thrives well because the shading is not too great, and the compacting of the soil by the cattle is of great advantage.

Results of Summer Pasture at O. A. C.

At Guelph Agricultural College in 1915; with less than one acre per head, the results were:

Seventy-five head of cattle, all over one year of age, were maintained on 28 acres of annual pasture, 8 acres of old natural pasture, and 30 acres of third-year sod, 66 acres in all, from first turning out in May, until August 20th. At that time 35 head were removed.

In 1916: A very dry, hot season, seventy-seven head were pastured on 34 acres of the annual pasture, and 36 acres of permanent pasture from the last of May to August 25th, without feeding one pound of silage or other coarse feed, and the milk flow of dairy cattle, and growth of beef cattle and young stock were kept at normal during the entire period. On Aug. 25th, one half the cattle were removed to other pasture, but the annual and permanent pasture was sufficient for the remaining cattle during the balance of the season.

Every farmer has the necessary seed. Provision can be made for the land. He can get just as good results and reap the benefit.

Every stockman can increase his profits by adopting such a system, because the cattle gather their own food, and labor is saved at a period when it is most valuable upon every farm.

Every stockman can add to the food supply of the Empire by adopting methods which will keep his stock in producing form throughout July and August. Every stockman should consider summer pastures most carefully.

Ontario Department of Agriculture

PARLIAMENT BUILDINGS, TORONTO

Sir Wm. H. Hearst,
Minister of Agriculture

G. C. Creelman,
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