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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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Vol. LII.

LONDON, ONTARIO, JULY 26, 1917.

No. 1296

ASK OUR LOCAL AGENT TO SHOW YOU

McClary's Sunshine FURNACE

There is no other furnace like the "Sunshine"—none "just-as-good"—none that can take its place for a minute with the wise, far-sighted buyer.

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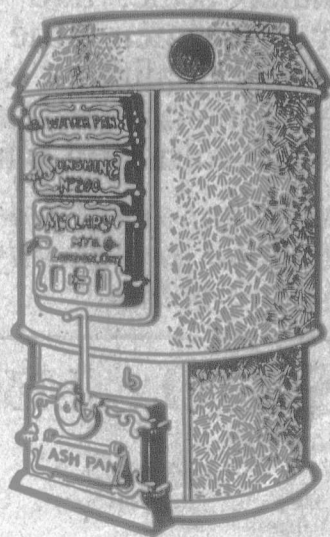
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Massey-Harris Service

Talk No. 5.—*Manufacturing and Selling.*

NO matter how much care may be exercised in the manufacturing of an article, the manner in which it is sold may to a large extent, cause one to lose sight of whatever merit the article may possess.

In some cases the manufacturer has a large force of travellers selling to the jobbers, who, in turn, have their travellers selling to the retailer, who supplies the consumer. The manufacturer must first make his profit, then each of the Selling Agencies comes in for a profit, all of which are added to the price of the article. Then, if it is an article which may require attention of any kind, one is so far removed from the manufacturer that service is practically out of the question from that source, and the various Selling Agencies lack the required knowledge or are indifferent towards an article which may be but a small part of their line, and which they might not handle another year.

Sometimes implements are sold by methods which apparently enable the vendor to make very attractive prices, but, when one comes to add the freight and other items incident to the purchase, and takes into consideration the quality of the goods and lack

of service in connection with same, the apparent "bargain" often looks very different.

In buying from Massey-Harris Company, Limited, you buy from the manufacturer. You pay no profit to middle-men—what would go to them for selling expenses and profits, you get in better implements and *Service*. Our Branch Offices, Travellers, Experts and Local Agencies are maintained solely for the purpose of rendering the very best possible service to our customers.

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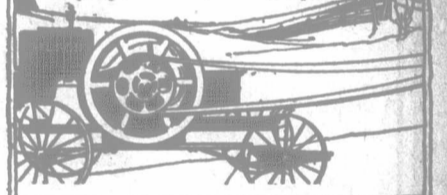
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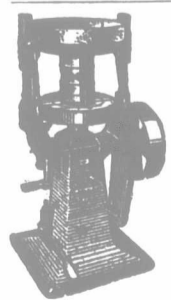
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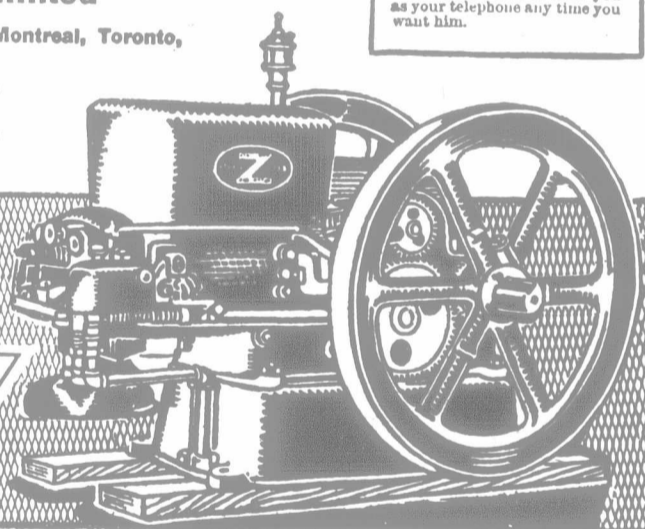
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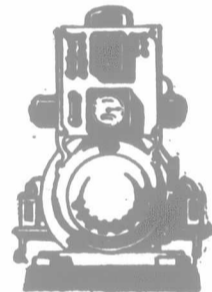
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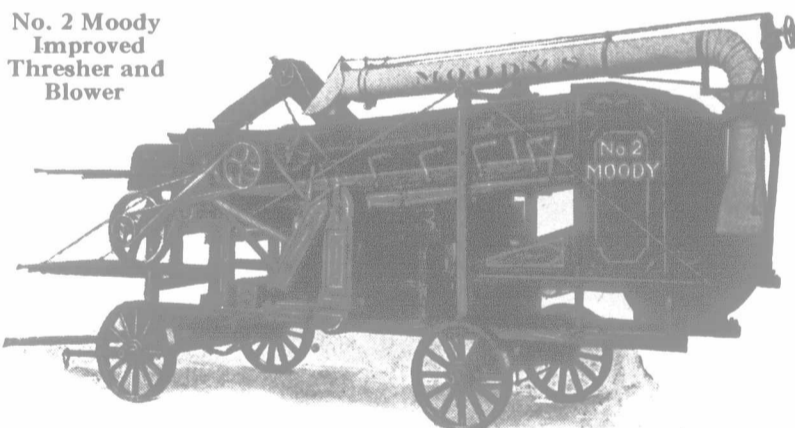
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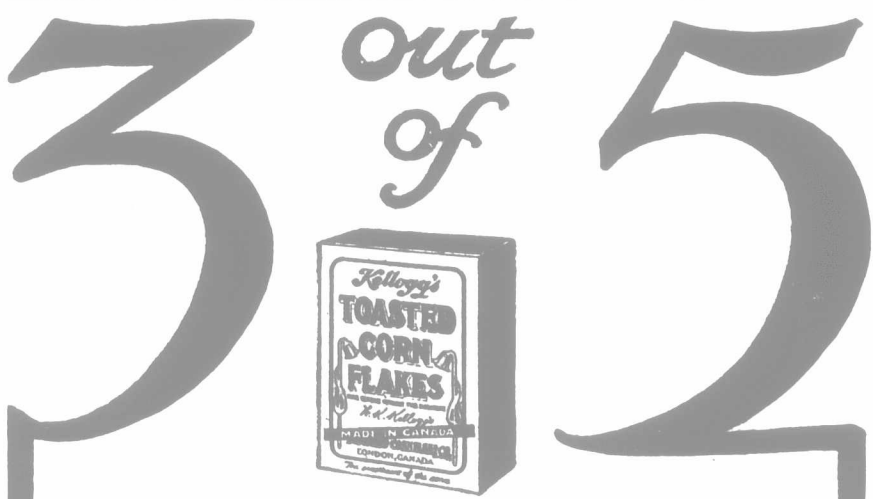
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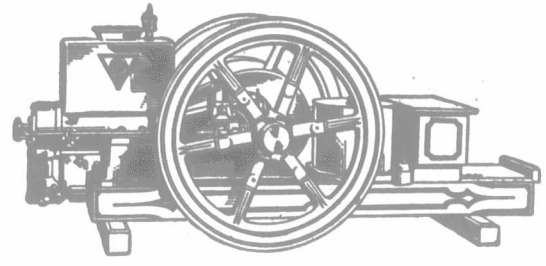
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One big feature of the Alpha is its low fuel consumption. Whether you are using gasoline, alcohol or kerosene the Alpha is a fuel-saver.

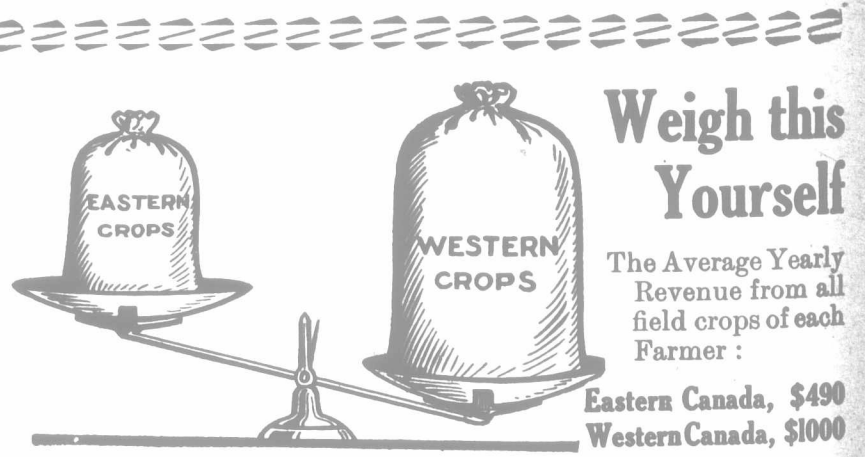
Write to-day for our large, illustrated engine catalogue, which shows you every detail of the ALPHA and explains just why you get more for your money in it than in any other engine.

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The Farmer's Advocate and Home Magazine

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1866

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LII.

LONDON, ONTARIO, JULY 26, 1917.

1296

EDITORIAL.

What you don't know about food ask Hanna.

In one more month the Exhibitions will be started. Will your stock be ready?

It will be profitable individually and nationally to speed the plow this fall.

Everybody's question to the farmer just now: "Well, John, how's the crops?"

Buy all of your needs you can close home and save commissions and cost of transportation.

It appears that certain patent medicines have a real claim to the name "medicated booze."

Economy is nothing more nor less than good management. It is bad managing when waste occurs.

Threshing from the field saves some labor, but in catchy weather is scarcely fair to all the neighbors.

A few phases of advancement since the war began—woman suffrage, prohibition, democracy and prices.

Those who sold wool before the prices received for that part of the clip sold at Guelph were announced are sorry.

We hope that the party splits we read about do not cause a doubling of campaign literature. Enough is going forward now, such as it is.

The man who in the spring preached production and has since practiced Weary-Willie ways may or may not be an effective preacher—most likely not.

The Allies are anxious to get more of their fighters up in the air to bring down enemy fighters already up, and to rain havoc on German military bases of importance.

Germany cannot concentrate superlative hate on more than one country at a time. It is said that the United States is hated by the Central Powers even more than is England.

About the only difference between food speculators and plain, rough-and-ready every-day gamblers is that the latter take some chances while the former are always absolutely sure of the coin.

Democrats and autocrats, monarchists and republicans should all be satisfied in China, for the form of government changes there sometimes monthly, sometimes weekly and sometimes daily.

There is nothing like practical experience to open eyes. Some city vacant-lot gardeners who paid from \$4 to \$5 for a bag of potatoes to plant a small lot, the cultivation of which for planting cost \$3 or \$4, and who have hoed and hoed and now find Paris green is 60 cents per pound, are beginning to figure that their work has been patriotic, for from their \$7 to \$10 outlay, to say nothing of interest or rent of lot and labor, they are likely to get from 7 to 10 bags of potatoes and maybe potatoes will not be more than 75 cents to \$1.00 per bag next winter. It is a great experience. Growing stuff for sale to others is no easier. The farmer doesn't journey out to the field and pick up money. Neither does the backyard gardener. And yet both are doing good work.

Luxury.

Despite all the talk of economy and thrift, despite the many warnings that the world faces famine and that saving is necessary, who can remember when luxurious living was so common as at the present time? There is more evidence in Canada of fat returns and much wealth than there is of any cutting down due to the H. C. of L. Profits are high. Wages are high, and while prices are abnormally high everybody seems to have more money and everybody buys. Stand on the corner of the busiest streets in our leading cities and watch, for a few minutes, the great, the near great, those who think they are great, and the imitators of the great, go by. Note the dress and the swagger; note the limousines, coupes, sixes and "just cars" pass. Drop into a fashionable restaurant or grill. Look over the menu. Veal and spring lamb may be absent, but dozens of other luxuries are present. The table of the average citizen is well laden with nourishing food, as it should be, and in emulation of the rich the luxuries are there too. Our tables all carry much that we could get along without. Right out in the rural districts there are many luxuries enjoyed besides the beauties of nature, fresh air, gorgeous sunsets and wonderful landscapes, that our city writers rave about. Watch the traffic on your own concession. Smith, Jones, White and the rest ride in their own "flivvers." The farmer no longer is recognized as a "Rube," for he dresses as well as his city cousin and as much like him as possible. Think for a minute—compare the amount of citrus and other tropical fruit consumed in your home now with that used ten years ago. When you were a boy fifty cents was a little fortune to be allowed for "spending money." Your boy would think as little of \$5. Oh, yes, this is an age of luxury, and yet well-earned luxury is nothing more than any honest, law-abiding citizen is entitled to. However, if famine is just around the corner, it might be well to take thought as to the morrow—save, serve, and cut out waste.

Uncertainty.

Of all occupations other than that of the out-and-out chance speculator, farming is perhaps the most uncertain. Even the speculator who ultimately makes good and pulls out for all time with the swag, generally is the one who leaves little to chance or uncertainty. The man who takes long chances sometimes collects big piles, but rarely does he stop at that, and on the next long shot someone else collects. But farming has so much uncertainty about it that even in normal times no one can predict what will be the reward for the labor and expense. The average farmer is sure of a fairly good living, of long days, of plenty of advice, of taxes (direct and indirect) but the maximum production of the land is limited and will continue to be limited by weather, by financial conditions, by labor scarcity and by the uncertainty as to demand and market conditions. Right now the farmer faces a more serious proposition than for many years. Uncertainty grows as the months pass by. Labor is scarce. Wages are high. He is told, and he realizes, that he should produce for food is needed, but at the same time there is a chance that his hired help, his boys, or even he himself may be called to the colors. It is not definitely settled. It is uncertain. The help he has may not be available next year, but he is asked to prepare to increase his crop acreage. A Food Controller has been appointed. Everyone hopes that his work will be satisfactory to both producer and consumer, and yet there is in the minds of those on the land uncertainty. They are not assured of prices that will leave them a safe margin of profit on production. They feel a little nervous about what may happen. No one knows what the condition of affairs will be when the war is over; no one can foretell the year or month that peace may be proclaimed

and what its effect will be. It is reasonably certain that food products will be scarce for some time, but what the effect of a world changed to meet the conditions of peace will be no one knows, however anxious we all are to see the day of a permanent cessation of hostilities. Financial conditions are looked upon with a degree of uncertainty by the farmer. Labor is ever uncertain and more so now than ever before. And the weather behaved badly last year and has not got back to normal yet. At best it makes results uncertain. Yet with all these uncertainties the Canadian farmer has done much good work for which he has received, in the past, little credit. What other business has as many uncertainties to face and is yet called "a safe proposition?" If all those who criticize the farmer could go through the mill as the farmer has gone through it, there would be less complaint of farmers making all the money, of farmers being unpatriotic, of farmers failing to do their bit. We would hear less about saving the calves, vastly less about too much grass and too many uncultivated fields, and more about legislation which would enable the farmer to compete in the labor market for the help he needs, and to buy at lowest possible cost the machinery and implements he requires to work the land.

If it is necessary for Governments to exhort farmers to produce, it is just as necessary that they show their good faith by aiding in different ways to dispel some of the uncertainty by guaranteeing a supply of labor and machinery to the farmer at a reasonable price, and at the same time seeing to it that prices for farm products, if such price-setting is to come, are placed at a point to leave a reasonable profit on labor and investment. At the present moment things are extremely uncertain, and it is important that the air be cleared in time for the preparation this fall for a big crop next year. The farmer is just the same as any other honest, industrious, patriotic, business man. He desires to play safe and at the same time would like to do his level best for the nation, and can be counted upon to do so if assured of a supply of labor and a reasonable profit. Some other industries ask more. They want unreasonable profits before they promise to touch anything. War profits of great magnitude have not been made on the land. We have better reason for believing that munitions plants, packing plants and some other plants which do not grow on the farm have received the big share, and with a part of their increased earnings they hired the farmer's help at prices he could not touch and left him in a more uncertain position than ever.

There is room right now for some bold strokes by our legislators who, late in the day, seem ready to start something. Give the farmer the legislation which will make his position a little more certain and results will soon be apparent. He wants a fair field—legislation which plays no favorites. He must have men, he must have implements and machinery at reasonable prices, and he must have reasonable assurance that the market will pay him a price which means a fair profit on what he produces. Remember he has not piles of money to back him up if he goes heavily into his enterprise and it turns out a failure. Remember he has been bitten before and hasn't forgotten it. Remember that he is human and appreciates help more than advice or exhortation. If this country is as badly off as those who are always talking to and about the farmer would have us believe, then it is high time something were done to organize its resources and give to each its proper place as the present crisis would indicate. Talk is cheap and evidently much easier than action. And so long as it goes on as now the average farmer will do the best he can with the facilities he has, will plan his work according to his own ideas, will remember the uncertainty, will put the expenditure absolutely necessary into increasing immediate production, but will more than likely go on with his plans as before, cutting down

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE, is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s., in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
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on work that requires much extra labor and elaborating upon the system of farming which takes least labor, proves least uncertain and is more likely to return a reasonable profit.

That is the situation and talk will not change it. What class other than our noble soldiers has done more in this crisis than the farmer? Who has worked as long hours as the farmer and his family? Who takes as few holidays? Who shows more evidence of economy and thrift? Who wastes less? Who has passively listened to as much advice from those in other callings? Who has faced such uncertainty?

The Importance of Farm Machinery and Repairs.

The other day a prominent Western Ontario farmer called at his local implement dealer's for some repairs for his hay fork and slings outfit. He was informed that the parts could not be obtained, and yet the firm manufacturing them is one of Canada's biggest makers of the goods in question. The man, who had prospects of a big crop to harvest with none too much help, was not pleased with the information given him. It appeared rather strange to him that farmers should be asked to increase production, and after they had responded so well should run up against the difficulty of getting repair parts for machinery and implements necessary to carry on their operations. Men and materials are scarce in many factories, but an effort should be made to make available for the farmer the machinery and implements he needs to put in and harvest extra crops. Backyard gardens mean very little compared with grain and hay fields, and mechanics working as hired men on the farm might be of more value to the farmer working on machinery or implements for him. If it is a case of no material perhaps some of the luxuries made could save a little for the necessities. Hay-fork and sling cars are almost as important as touring cars just now. It is necessary that firms manufacturing implements and machinery for farm purposes be aided as much as possible in getting material. Then it is their duty to see that the farmer can get what he urgently needs.

Carry the "Y" to the Country.

A movement which might well be followed up with greater effort on behalf of country boys and girls is that which the Organization of Resources Committee, through the Y. M. C. A. and Y. W. C. A., has inaugurated this year. Some five thousand boys and girls in Ontario have gone from the High and Continuation Schools out to the farm for the summer and arrangements have been made to have these looked after by local secretaries of the "Y". If all the activities of the Y. M. C. A. and Y. W. C. A. could be carried to the rural districts to the benefit of the boys and girls of the farm no one can estimate the good which would follow. The boys and girls and young men and young women in the country would enjoy companionship and games as much as do city boys and girls and the advantages of the modern "Y" extended to them would work wonders in keeping them contented and interested in the country. Farm boys and girls know how to work, but not how to play, and their facilities for the former are plentiful, while those for the latter are woefully scarce. Each district should have a public building with lecture rooms and large hall with a stage, where plays might be put on, or which could be converted into a "gym." for indoor baseball and basketball in the winter. All kinds of games should be available and the whole made a community centre. Whether it is called Y. M. C. A., or Young People's Club, or what not, the room is there to extend a good work to rural districts and it is needed.

A Little Bit More Earnestness Needed.

BY ALLAN MCDIARMID.

Going to church isn't what it used to be. That is if we can put dependence on all we hear of the old times from the individuals who are left to us of the youthful generation of fifty years ago. At that time the Sunday service was the principal event of the week and the social and religious interests of the people the greatest they had. The things of another world were taken about as seriously as the affairs of this time. In fact, the discussions and arguments in regard to it were generally more earnest, (sometimes even to the point of bitterness) than disputes about temporal interests.

For better or worse the case seems to be different now. Interest in the church and what it is supposed to stand for takes second place with the majority of our people. Perhaps this may be only a stage in the process of evolution that we are passing through, but its consequences are apt to be anything but good, for the time being anyway.

The church in the country seems to show this lack of interest even more than in our towns and cities. A good many country churches have given up the struggle for existence and are now little more than a memory to the older residents of the community. Others are dragging on a sort of a half-living existence and are of no particular benefit to anybody.

If this is a bad state of affairs it should be changed, but this can be done only by first finding out the cause of the trouble so that a proper remedy may be prescribed.

It's easy to put the blame on some individual when anything is going wrong, and I suppose that to a certain extent it is a reasonable thing to do. In this case the ministers are apt to get credit, or blame rather, for the present condition of their churches. In a way they deserve it. Some more than others, of course. The simple trouble is that they do not take their work seriously enough. The man who is dead in earnest in his work generally makes a success of it and the same should be true of our preachers. But I am inclined to think that a great many of them do not altogether believe the doctrines they are supposed to teach, and this lack of assurance is affecting the impressiveness of their sermons. What a man doesn't thoroughly believe he can hardly compel others to believe. Fifty years ago a doctrine of rewards and punishments in a future life for the acts committed on this earth was preached, and with a good deal of effect, too. This result was due to the fact that the truth of the teaching was unquestioned by those who taught it, and it became, as a consequence a matter of more than life and death even, to them.

To-day we do not think that the fear of punishment or the hope of reward should be the greatest inducement to right action, but apparently the vital importance of living a right life has to some extent been lost sight of. The fact that the old idea of heaven and hell is not as generally held as it used to be should not cause us to lose sight of the truth of the doctrine that teaches us that right living is followed by development and progress, and that wrong doing results in degradation and discouragement. The situation is surely still vital enough when it is a matter of choosing between these two conditions. It is in reality the same old idea differently expressed. Of the two roads through life one leads to happiness, the other to misery. This fact should give sufficient ground for earnestness on the part of people and preacher alike, one would think. One trouble with a great many of our preachers is that they do not get into touch with the lives of their people.

If you are to give a man advice that will do him any good you must know what his problems are.

The minister in the country church should be well enough posted on matters affecting the welfare of the farmer to be able to give an intelligent opinion on them, or to offer advice if necessary. But too many country ministers seem to think that these problems are outside their sphere of labor.

Sometime ago I listened to a sermon from one of these men, which from beginning to end had not one thing in it of any practical value to the man fighting his way through life, and continually confronted by its temptations and difficulties. What do I care what Abraham or Moses or David did under certain circumstances if these circumstances have nothing to do with the problems with which I have to deal?

What is wanted to-day is a class of men who will impress us with the true purpose in life, and the real object in working to earn more than a mere living. Far too large a share of humanity are going through the world without any clear idea of what it is all about, generally mistaking the means of existence for the end itself.

To know these things and to be sufficiently anxious that others shall know them as well, is the duty of every pastor of a country church, or of any other church for that matter. This matter of earnestness is really the key to the whole problem. It is the secret of Billy Sunday's success, as anyone who has ever heard him will believe. Men are attracted to him by this, who are altogether out of sympathy with him in regard to his methods and ideas. Man is naturally a sociable animal and any kind of an excuse will generally serve when there is an opportunity to come in contact with numbers of his fellow-men. His only reason for staying away from church is usually because the service wearies him. An earnest preacher very seldom wearies.

It was the earnestness of the ministers of fifty years ago that made our forefathers willing to sit through four-hour services and come away without feeling tired. We can all recall revival meetings that we have attended at some period of our lives when churches were crowded and after-meetings found very few of the congregation ready to leave for home. This again was the result of the earnestness of some one man spreading itself throughout the community.

The day is coming when religion will be the chief interest of mankind. When the things pertaining to future existence will be considered of at least as much importance as the affairs of the present life. But that day is not yet, and until it comes we must take man as we find him and use what means we have to make him better. And if our preachers are to be the instruments of this reformation the only way whereby they can fulfill their mission is to become soaked with the idea of the seriousness of life and the importance of making the most of its opportunities, up to the point where they find themselves compelled to give every day of their lives to the preaching of this gospel, and all it includes, to their fellowmen.

There is some good reason for our putting in time on this old earth, and a good many of us are willing to go a long way to listen to the man who will tell us just what that reason is.

Nature's Diary.

A. B. KLUGH, M. A.

In some sections of the country one of the most serious, if not the most serious pest with which the farmer has to contend is the locust, and in all parts these insects cause more or less severe damage to crops. Of locusts we have several species in Canada, and all the species are usually referred to as grasshoppers. The locusts and the grasshoppers belong to different families, and the differences between them may be briefly summarized as follows: Locusts are brownish or greenish-brown in color and have short antennae ("feelers"), while grasshoppers are bright green in color and have long antennae. It will thus be seen that the insects which are often so abundant and which cause the damage are really locusts and not grasshoppers.

The life-histories of the various species of locusts are quite similar in character. The eggs are usually laid in the soil, enclosed in sacs or "pods", formed of a glutinous substance excreted at the same time that the eggs are laid. The female locust thrusts her abdomen, which is capable of considerable extension, into the soil, and starts laying her eggs at the farther end of the tunnel thus formed. The tunnel is thus filled with eggs and afterwards sealed. The egg-laying usually takes place in late summer or early fall, and the young locusts emerge some time during the following spring or early summer. In contrast with many other injurious insects young locusts, when hatched, closely resemble their parents, except that they lack wings, and the head is proportionately larger than it is in the adult. There is no grublike or larval stage, nor is there any pupal or resting stage such as we find in the case of the moths, butterflies, flies, beetles and other insects. The young locusts are active and able to hop almost immediately on emergence from the eggs. It takes from seventy to ninety days for the young locusts to grow to maturity, develop full-sized wings, and during this time they moult several times. There is but one generation a year.

Fortunately the locusts have a host of natural enemies. Several kinds of parasitic flies deposit their eggs upon the mature or nearly mature locust. Robber flies feed very largely upon young locusts, grasping them with their long, stout legs thrusting their long beaks into the body and sucking out the body fluids. Several kinds of digger wasps kill or stupefy locusts by stinging them and then drag them into their underground nest.

after which the wasp lays an egg upon the body of the locust which subsequently becomes food for the newly hatched wasp grub.

The investigations of the United States Biological Survey have shown that birds play a great part in the control of locusts. These feathered friends of man are always present where locusts abound and work continuously in aiding the farmer. The statement that all birds feed upon locusts is so near the absolute truth that it needs only insignificant modifications. From the largest hawks to the smallest birds there are no exceptions other than the strictly vegetarian doves and such strictly aquatic birds as the loons and grebes. Although birds of nearly all families prey upon locusts the following may be selected as the most important species in this work: Bobwhite, Prairie Chicken, Red-tailed Hawk, Red-shouldered Hawk, Broad-winged Hawk, Sparrow Hawk, Screech Owl, Yellow-billed Cuckoo, Red-headed Woodpecker, Kingbird, Horned Lark, Red-winged Blackbird, Bronzed Grackle, Meadowlark, Shrike, House Wren, and Robin.

Domestic fowls are also very fond of locusts, and feed greedily upon them whenever possible. Turkeys are sometimes killed by feeding too freely on locusts, the strong, rough legs of which cause severe lacerations, or even puncturing of the crops of these birds.

Locusts are most troublesome in parts of the country in which there is much "wild pasture", that is land which has been cleared and allowed for many years to run to grass, and this is just what we should expect from what we know of their egg-laying habits, since tillage breaks up the egg-cases and thus destroys the eggs. In such regions they sometimes become so tremendously abundant as to constitute a plague, eating up all field and garden crops, the leaves of bushes, the lower leaves of the trees, even the bark of bushes and young trees, and biting into the wood of fences, the sides of houses, and handles of forks, rakes and other implements. I have even known them to eat into the grains of corn before it could be harrowed in when this crop was being sown in an effort to provide some fodder for the stock in a region in which they had already destroyed all other crops.

The best remedy for locusts is the use of poisoned bait prepared as follows: Wheat bran, 25 pounds; Arsenic, 1 pound; 6 finely-chopped oranges or lemons; molasses ("Black strap"), 2 quarts. This should be distributed broadcast over the fields in the early morning in dry weather. It takes from one to five days for the full effect of the bait to become apparent.

THE HORSE.

Bone Diseases in Horses.

Ostitis.

Ostitis, inflammation of a bone, is usually accompanied by periostitis (inflammation of the immediate covering of the bone which is called the periosteum). It may be acute or chronic. It may involve the whole substance and extent of the bone, or be confined to a portion of it (circumscribed inflammation.) The causes are external injury, as a bruise caused by a kick, or blow from any blunt substance which usually does not cause an open wound, concussion or hereditary tendency.

Acute inflammation of bone, involving the shaft, is frequently seen in young race horses in a disease known as "sore shins" and may appear in any young horse as a result of concussion caused by fast driving on hard roads, or from galloping on hard ground while at play. This disease usually involves the periosteum and external layer of the bone only, and usually terminates in a deposit of lymph being thrown out between the periosteum and the bone, which, becoming organized, forms a permanent thickening, depending more or less upon the degree of the diseased action, but in rare cases the whole of the bone is affected and the inflammation is of such an acute nature that the vitality of the bone is destroyed. The exudate thrown out as the result of the inflammation may, if the case be treated promptly, become absorbed and the bone regain its normal condition, but in most cases a greater or less portion of it becomes converted into bone, leaving the parts permanently enlarged and altered in appearance. The bones of young animals, being in a state of development and growth, are more vascular, (more plentifully supplied with blood) and contain a greater quantity of animal matter than the bones of those of mature age; they are consequently unable to stand with impunity the same shocks of concussion or direct injuries.

Symptoms.—If one of the bones of a limb be the seat of injury, there will usually be more or less lameness, probably slight at first, but gradually becoming more acute. The patient shows restlessness if both legs be involved, as will probably be the case when the trouble is caused by concussion; he will shift his weight from one foot to the other and probably seek ease by lying a great part of the time. If but one limb be involved he will usually stand with the foot of the affected limb pointed and sustaining little or no weight. If the inflammation be acute there will be well-marked increase of temperature, with acceleration of the pulse and heavy, frequent respiration, and the parts involved will be hot and sore to the touch. Swelling is an early symptom and is usually quite well-marked. At first it is somewhat elastic, tense and doughy to the touch. This is due to a thickening of the periosteum and the presence of an exudate between the periosteum and the bone. Afterwards the swelling may become oedematous and hard, but unless ossification (a conversion of the

exudate into bone) occurs, it will retain its elastic feel underneath the oedema.

If the exudation underneath the periosteum is very great and the swelling involves a large extent of the surface of the bone, the most active treatment must be employed to prevent death or decay of the bone. In rare cases the exudate becomes converted into a thin, somewhat fluid material which corrodes the surrounding tissues, causing great febrile disturbance, and may cause the death of the patient from its absorption into the general circulation. In the less acute cases, where the cause has been less severe, the symptoms are correspondingly less acute; the disease is more circumscribed and more limited in its extent, or the limbs of the animal have been more able to bear it; it becomes ultimately quite hard, by the conversion of the exudate into bony matter and when this is effected the lameness and pain usually disappear.

Treatment.—In very severe cases it is necessary to cut through the skin and periosteum to allow escape of the exudate in order to prevent a separation of the periosteum from the bone. This operation, of course, should be attempted only by a veterinarian. In a very large percentage of the cases less heroic treatment will suffice. The patient should be given complete rest in a comfortable box stall. It is good practice to give a laxative of one to one and one-half pints raw linseed oil and feed on laxative food. Hot poultices, or long-continued bathing with hot water with the frequent application of an anodyne liniment, as one made of one ounce acetate of lead, two fluid ounces of laudanum and six fluid ounces of water to the parts, will, in most cases, relieve the acute pain and soreness in a few days, after which the application two or three times daily of a stimulant liniment, as one made of two fluid ounces each of alcohol, oil of turpentine, and liquor ammonia, and one pint of water, will tend to reduce swelling and remove lameness. The enlargement that usually remains after all tenderness and lameness have disappeared can be reduced to some extent by the use of absorbents, as a liniment made of four drams of iodine and iodide of potassium and four ounces each of alcohol and glycerine, well rubbed in once daily.

WHIP.

What Records Show.

In 1916, twenty-one States of the United States had stallion enrollment laws. We present the stallion enrollment data for twenty.

The detailed figures, all of which are taken from records made in 1916, except for Nebraska, where 1914 statistics were the last available, show 55,806 stallions all told; 41.86 per cent. of these were grade or mongrel stallions, 9.23 per cent. were pure-bred stallions of light horse breeds, and 48.88 per cent. were pure-bred draft stallions. There are in these twenty States approximately 90 mares of breeding age to every stallion licensed for service. It is acknowledged that grade and mongrel stallions ought not to be relied on. They are not used where good pure-bred sires are sufficiently numerous to convince farmers that it pays to avoid grade or mongrel stallions regardless of the difference in service fee.

A comparison of this data with that compiled in preceding years shows that there has been a steady decrease of grade stallions, and in no State has there been an increase in these undesirables. Pure-bred stallions of light horse breeds have also decreased in proportion to the total. Pure-bred draft stallions, alone have increased.

There are, in these twenty States, 69 Suffolk, 1,275 Clydesdale, 2,006 Shire, 2,114 French Draft, 4,212 Belgian, and 19,199 Percheron stallions. Percherons, in every State, outnumber all the other draft breeds combined. In Iowa and Illinois, the two greatest

draft horse producing States, Percherons constitute 60.68 per cent. and 69.32 per cent. of all pure-bred draft sires. In the entire twenty States, 66.49 per cent. of the pure-bred draft sires are Percherons.—WAYNE DINSMORE, Sec., Percheron Society of America.

LIVE STOCK.

Give Young Sows Time to Develop Before Breeding Them.

Not everyone can breed and feed hogs successfully. There is a science about it that some stockmen find it impossible to acquire. They breed, feed, and house according to the most approved methods, and yet they do not get size in their pigs, nor are they able to make economical gains. Is it possible that the fault is in the management? One man has marked success while his neighbor goes out of hogs because there is no money in the business. A good deal depends on the feeder. He must not overfeed nor yet underfeed. He must pay attention to details and cater to the wants of the herd. Throwing a quantity of feed into the trough is not feeding in the true sense of the term, and failing to pay attention to minor points is the cause of many failures. Some have hogs weighing two hundred pounds at six months of age, while with others it takes seven or eight months. A difference in the breed may have something to do with it, but feed and management also play an important part. It is quite easy to overfeed young pigs. We have known it to be done on skim-milk alone. Then, too, it is necessary to feed a ration which tends to promote development of bone and muscle. It is growth that is wanted the first four or five months of a pig's life, and this cannot be secured on grains which are rich in carbohydrates but low in protein. These two nutrients along with ash must bear a definite relationship to each other in order to secure desired results. It is oftentimes necessary and profitable to purchase certain feeds to combine with home-grown grains. Skim-milk is one of the best feeds to give young pigs a start, but on many farms it is not available and some substitute must be sought for. Tankage has been found to take the place of milk to a certain extent. Whey is a substitute in cheese-factory districts, and if pasteurized and properly fed gives excellent returns.

Too many breeders are so anxious to get returns that they breed young sows before they are developed. The result is that the sow never turns out to be what she would have had she attained her growth before farrowing. The value of not breeding too young is clearly in evidence at Macdonald College where Prof. Barton has met with exceptional success in hog raising. Two breeds are specialized in and breeding is confined to two families in each breed, in an endeavor to bring the herd to as near perfection as possible. By careful selection and mating of breeding stock Prof. Barton has developed a strain of Yorkshires and Berkshires that develop quickly, have the desired lines and conformation and meet the demands of the bacon industry. This success has not been achieved in a day, nor a year, but is the result of continued careful work in selecting the stock and in feeding. It is quite easy to keep in the same breeding channel on the dam's side, as young sows can be saved from the best litters, but to keep boars from these litters would be in-breeding, which is not advisable except in isolated cases. Therefore, while it is necessary to secure boars from other herds Prof. Barton prefers to have them from the same blood channel. At any rate there must be a resemblance in character. A young boar is always secured before the herd sire is past his usefulness. This affords an opportunity to look around in order to pick the individual



A Neat Fence and a Good Windbreak Improve Farm Appearances.

that will mate satisfactorily with the females on hand. If all breeders would follow this practice diligently there would be more general improvement in type and quality of hogs throughout the country. What Prof. Barton has done with two breeds other breeders can do, but it will never be accomplished by buying breeding stock promiscuously without paying attention to the character of the animals. A boar may be a winner in the show-ring and have excellent conformation, but yet not mate with your sows to produce the type and quality of offspring sought after. There are too many poor sires used, and yet stockmen wonder why they do not have greater success in breeding and feeding. If a breeder of pure-bred swine, don't be influenced by one or two points when selecting a boar; look around until you find one which has character and is particularly strong where the sows are inclined to be weak. If a young hog is purchased, avoid overworking him until he is fully developed.

At Macdonald College the sows are bred to drop their first litter at from ten months to a year old. By this method the breeding stock attains a good size, and the offspring are strong and uniform in size. It is unreasonable to expect a young, under-developed sow to farrow a large litter and feed it properly. At the time our representative visited Macdonald College a number of the 25 sows kept were nursing litters of ten or a dozen thrifty pigs without a runt in the bunch. Individuals of both breeds had long, deep sides, full hams and were remarkably strong on their pasterns.

The pigs are weaned at from six weeks to two months of age. At this time they are taking considerable feed. When they are a couple of weeks old they are given an opportunity to take milk, or some substitute thereof, from a separate trough from that in which their mother is fed, consequently when they are weaned they go right ahead. Paddocks are provided in which sows and their litters are allowed to run. There is not always sufficient milk to give the little pigs the proper amount after they are weaned, and tankage is used as a substitute and gives fairly good results. Shorts, or middlings, are fed the young pigs, and the aim is to keep well within their appetite. Overfeeding results in loss in the piggery. The trough should be cleaned at each feeding and the pigs squealing for more by the time the next meal comes around. The pigs which are fattened for market are fed a mixture of grains, with barley possibly predominating, as it is found that this grain gives satisfactory results when mixed with some of the other cereals. The system of breeding and feeding followed by Prof. Barton has resulted in the building up of a fine herd. Breeders in general might profitably follow his practice of allowing the breeding stock to become well developed before being bred.

The Stock Bull in Summer.

This is the season when the care and management of the stock bull presents the greatest problem. At no other time in the year is he so likely to become restless and fall in flesh as during the summer months, particularly through the very hot weather. His management may be more easily accomplished if the use of a large paddock of good grass is available, in which he may be run, preferably at night. He should be kept in during the day in a darkened stall and away from the flies, and to ensure that he is not pestered with the latter it would be well to give him an application regularly with some fly repellent, or some believe it is better still to make a covering sheet of cheap cotton and keep him covered during the daytime. If he is kept in a well-ventilated stall this is probably the best method of keeping off flies for some of those who have tried repellents believe that the oily nature of these clog the pores and may cause the animal as much annoyance as the flies would otherwise do. However, it is important that the flies be kept from tormenting the cattle, and particularly the stock bull. If it is decided to use a repellent one may be made as follows: Fish oil, ½ gallon; coal oil, ½ pint; crude carbolic acid, 4 tablespoonfuls, mix and apply to all parts once a week. There are other simple, home-made mixtures or, if thought advisable, some proprietary mixture such as advertised in these columns might be used. We say again, however, that we would favor for the bull a sheet, provided he has a cool and well-ventilated stall.

Too many stock bulls are allowed to go down in the summer through lack of green feed and necessary care in feeding such as is given when all the stock are in the stable. It is important that the bull get green feed regularly, and if arrangements are not made that he can pick this himself in the paddock it should be cut for him, and he should get at least two feeds of it per day. A light grain ration, preferably of crushed oats, would help keep him up in condition, and exercise is absolutely essential. No man who keeps a good bull should be without a regular bull paddock in which the bull should spend every night in summer and the greater part of every day in winter.

Estimated Numbers of Live Stock in Canada.

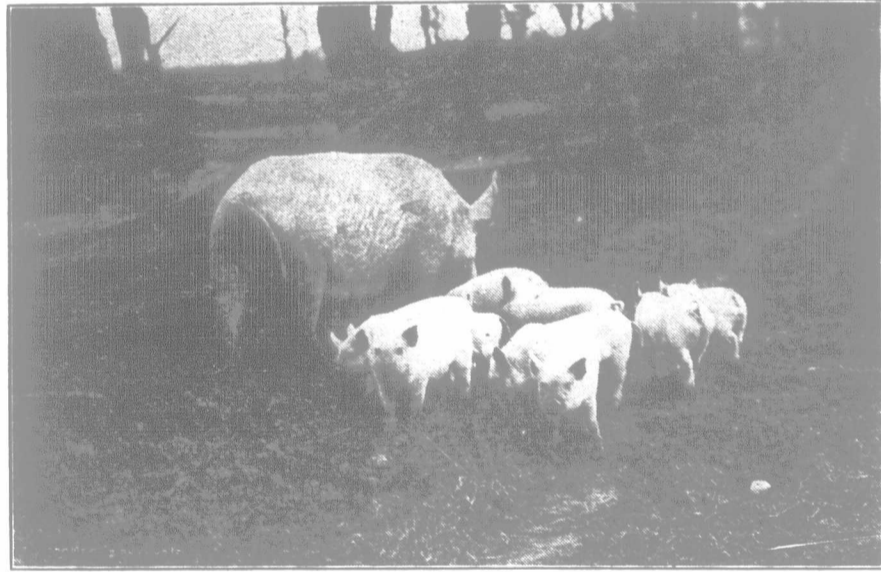
It is estimated from the reports of correspondents that the numbers of farm live stock in Canada on June 30 were as follows: Horses 3,035,254; milch cows, 2,642,709; other cattle, 3,325,013; sheep, 2,009,717; and swine 2,513,526. This is an increase over last year for all descriptions, excepting swine, which are less by over 300,000. The decline in numbers of sheep, which has been continuous annually since 1913, appears to be arrested, the increase shown this year being over 44,600.—Census and Statistics Office.

How Are Your Calves Doing?

We are hearing a good deal these days, particularly from people who know little of farming conditions, about the slaughter of calves, and evidently those who had much experience in feeding some of the poorer calves to maturity. From now until the cooler weather comes in the fall, is rather a difficult time with pail-fed calves, and it is not easy, sometimes, to keep even those which nurse their dams growing as the owner would like. All feeding utensils from which they obtain milk or drink must be kept clean, and during the hot weather it is preferable to keep the youngsters inside during the day, having the windows carefully darkened by tacking some old sacking over them. This will be found useful in preventing the ravages of flies. At night they might have the run of a good grass plot if available. If not, they should have plenty of green feed brought from the field to keep them thriving well. Red clover and alfalfa are two of the best fodders for this purpose, and may be used to good advantage until corn is big enough or some early roots are available. A few rolled oats will give good returns fed to the calves during this season. It does not take big feeds to show results, but regularity, cleanliness and comfort should be the main points in caring for the spring calf crop during the hot weather. Keep them away from the hot sun and the flies; give them plenty to drink from clean pails or troughs, and an abundance of green feed with rolled oats twice a day, and they should come on very well. Pail-fed calves should not be called upon to take their chance in the field with the cows or older cattle.

Prevent Grub in the Head.

At this season of the year, if you watch the sheep you may notice from time to time one in the flock lower its head, stamp vigorously, and run with the head down for some distance, after which it will remain quiet for a short time and probably repeat the performance. This action is an indication that the sheep gad fly is about and is attempting to lay its eggs in the nostrils of the animal, where the eggs finally develop into the



Little Fault Can Be Found with this Litter.

larval stage in the form of a grub or worm, producing a disease commonly known as grub in the head which usually makes its appearance some time during the following winter. All sheep affected do not show clinical symptoms of the disease, but some may be noticed in the winter staggering, becoming thin, and finally emaciated. Water may run from the eyes and the sheep will be noticed shaking its head from time to time.

At this season sheep owners should be interested in preventing the fly from laying its eggs in the nostrils. The insect is small and of grey color, about the size of a common house fly, and works usually in bright sunlight. The best method of prevention is to keep the noses daubed with some repellent substance. Common pine tar is often used with good results but is more effective if mixed with an equal quantity of lard and oil of tar, crude carbolic acid or coal tar dip, and is made even more obnoxious still if a little iodoform or asafetida is mixed in. The best way to use the mixture is to smear it upon the margins of holes made six inches deep, with a two-and-a-half inch auger in a squared log and kept filled with salt and primed with the smear daily throughout the season when the fly is likely to attack. This arrangement ensures thorough daubing for the sheep's noses each time they come to the salting place for a lick of salt. Even the pine tar alone used in such a way would be found quite effective. If the daubing is to be done by hand it will be necessary to apply the tar at least twice a week. It should be remembered that prevention is better than cure, for the latter is hard to effect.

Germany views the American army with contempt, but then it isn't long ago that they called the British forces "Kitchener's contemptible little army". Perhaps the "Sammies" will soon change contempt to respect as the "Tommys" have done. It is a safe bet that they will anyway.

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THE FARM.

A Grocery on Wheels.

Most of our readers remember the days when the pack peddler made his rounds through the country. The children and even the older folks were always anxious to see his big bundle unfolded, for it contained everything from household utensils to playthings and trinkets. Then came the peddler's wagon with tins, crockery and what-not. Horse hair, butter and eggs and some silver were exchanged for these. Both the pack and the wagon peddler have vanished. The huckster gathers the butter and eggs. Telephones have made it possible to order from the home and in some sections the store keeper delivers, as is done in cities. Rural mail delivery has increased the mail-order business of the big departmental stores. The advent of the automobile has made it possible for the farmer and his family to slip into town at almost any time and get their supplies. And yet there are times when the busy housewife could make some use of a daily delivery on a large scale. To meet this a business man in Arkansas has started a motor store which consists of a two-ton motor truck like a large moving van. It carries all the goods of an ordinary country store and backs up to the farmer's door and the housewife shops at home. It is fitted up with shelves and counter and the purchaser buys as in any grocery store, only it is a cash business. Tanks are carried at the rear for kerosene and gasoline. Two chicken coops swing underneath. Refrigeration is supplied for meats and perishable goods, and the whole makes quite an up-to-date store on wheels.

Recommendations of the Third Interstate Cereal Conference.

In view of the world shortage of cereal food crops which is likely to continue for an indefinite period, the Third Interstate Cereal Conference held at Kansas City, Mo., June 12-14, urges the greatest practicable enlargement of wheat acreage and would further make the following recommendations:

- (1) To encourage a larger wheat production, the producer should be guaranteed a minimum price, such price to continue at least one year after war is ended.
- (2) Early preparation of the land for small grains, where these do not follow cultivated crops, should always be practised. In the winter wheat area it is very important that this be done immediately after harvest.
- (3) Immediate action is required in providing seed for the next crop. At harvest time it is cheapest, and just before harvest seed in large bulk can best be selected. State and federal aid will be given in locating seed in localities of comparative abundance for use in localities where it is sorely needed. Clean seed, as free as possible from diseases, should be selected and arrangements be made for seed treatment.
- (4) Varieties of grain best adapted for the locality should always be used. The agricultural colleges and other state agricultural agencies will inform the farmers of the existence of these varieties and how and where to obtain the seed.
- (5) Every means should be employed to eliminate weeds, by use of clean seed, crop rotations, early cultivation above mentioned, and any special methods reliably recommended for particular weeds in different localities.
- (6) Seed testing for germination can well be further emphasized at this emergency period. The extension service, through county agents, should bring this matter home to every farm.
- (7) Seed treatment will largely prevent certain smuts and other diseases of cereals, and as a real war measure, we are bound to see that it is applied as nearly as possible on every farm, thus increasing our cereal production a hundred million bushels or more, in one season. By field demonstrations the methods can and should be made plain to all concerned.
- (8) The possible ravages of Hessian fly, chinch bug, green bug, stored grain and mill products insects, etc., must also be kept in mind, and the progress of and means of checking these insects be communicated, so far as possible, in advance of their local occurrence.
- (9) As a means of reducing the great loss from rust, it is urged that all common barberry bushes (not the Japanese) and grass weeds harboring cereal rust, be eradicated, and that rust-resistant cereal varieties be grown, if otherwise of good quality.
- (10) It is a conservative estimate that 20 million bushels of wheat and proportional quantities of other cereals are annually lost by waste in harvesting and threshing. This waste can and should be, in large measure, easily avoided. A man and team are known to have cleared \$27 to \$62 a day from cleaning up after

threshers, and in another instance last year in Kansas \$500 was gained by a man, with a team and fanning mill, cleaning up after threshing machine settings, in three weeks' time.

(11) In the western and southwestern plains, grain sorghums should be widely planted. In the northern plains, in the drier districts, flax and, under certain conditions, proso or Russian millet, may be used to a similar advantage.

(12) Suitable catch crops (such as cow peas, soy beans, sorghums, millet, flax and buckwheat) should be grown on all lands on which staple crops can not be seeded at the proper time or on which they have been destroyed.

(13) The increased use of corn, rice, grain, sorghums, proso, barley, rye, beans, cottonseed meal and peanut meal as substitutes for, or in conjunction with, wheat for human food is strongly recommended. Information on this matter can be obtained through the state agricultural colleges and the United States Department of Agriculture.

Seven Million Men Killed.

Arthur Henderson of the British War Council estimates that seven million men have been killed so far in the war.

The war originated in a quarrel over Serbia. But the entire population of Serbia was only two million and a half. France came in to recover Alsace-Lorraine. But the entire population of Alsace-Lorraine was less than two millions. England came in to rescue Belgium. But the entire population of Belgium was only seven million and a half. The number of able-bodied men in all the disputed territory in Europe is less than the number that have already fallen in the struggle for its possession. The total casualties of the war exceed the whole population of Great Britain and Ireland. As many young men have been crippled for life or severely

wounded in Europe as there are of the same age in all the United States.

Mr. Henderson adds that "there is no immediate prospect of a cessation of hostilities." There is still the United States to draw upon.—N. Y. Independent.

A Slack Time.

BY CLAYTON DUFF.

Between roadwork and hayin' there's always a spell
When things is quite slack, so you'll hear farmers tell,
Though the warm sun of June has made everything grow.
The roots isn't up far enough yet to hoe;
The cattle's in pasture, no chores to be done,
So this is the time farmer folks has their fun,
And often and often I've heard farmers sayin'
It's a slack time of year between roadwork and hayin'.

Of course, there's a few little things to be done,
The chimney has got to be mended, for one;
And this is the time many farmers is seen
To be paintin' the house white with trimmin's of green.
A new cement walk must be laid to the gate,
The old kitchen roof has been leakin' of late;
There won't be a chance to mend that before sleighin'
If it isn't done now between roadwork and hayin'.

It's the best time for meetin's, the women have found,
'Cause the men ain't too busy to drive 'em around.
They're willing to come with a wagon and team
To haul chairs and tables and turn the ice cream.
And if there's a bee to put up a new fence
Round the minister's lot so's to save church expense,
The pastor don't need to do much extra prayin',
They're sure to turn out between roadwork and hayin'.

For picnics, lawn socials, the same is the rule,
Or what little doin's they have at the school,

While everyone aims so's to sandwich between
A day cuttin' wood with the sawin' machine.
And now that these motors has come into style,
There's a trip in the car every once-in-a-while
To visit old friends who insist on you stayin'
For times is so slack between roadwork and hayin'.

I'd Like to be a Hobo Gay.

I'd like to be a gay hobo, a reaping things that others
sow; I'd like to eat the bread of life without the work
and fuss and strife. I'd like to sleep beneath the
stars and ride the bumpers on the cars, I'd like to shun
the horrid wars, I hate the sight of blood and scars.
I'd like to go when going's good—I'm sick of chores
and sawing wood. I'd like to leave the snow and cold,
my blood is thin, I'm growing old. I hate to lug in
wood and coal, I'd rather hunt a swimming hole or
with a wabby willow pole find ease and quiet for my
soul. Why must I work the livelong day a plowing
spuds and making hay? The hobo lives and doesn't
work—if I lay off I'm called a shirk. Ten hours a day
my normal stunt, no wonder I am such a runt; don't
have time to eat enough to put fat on my carcass tough.
And when I wend my weary way, homeward at last
at close of day, my good wife meets me with this lay:
"The front screen door is on the bum, a million flies
inside have come. The chicken fence has busted out,
the hens have found it isn't stout; they've scratched
the beans and dug the peas; the cherry slugs are in the
trees. Then after supper cut the grass, and find your
wrench, the stove leaks gas; the wash line sags, the
bedstead squeaks, canning time's here, the boiler leaks."
I'd like to read the daily news, I'd like to revel in the
views of sunsets rare and gorgeous hues. It's not for
me, and so I'd be a weary Will and take my fill of doing
nothing but set still.

W. E. VAILON.

Canada's Young Farmers and Future Leaders.

Don't Neglect the Crop Entered in a Competition.

In many counties of Ontario young men who have attended short courses, conducted by their District Representative, have the opportunity of entering competitions in growing cereal crops, potatoes or roots, or in hog feeding and calf raising. These competitions commence in the spring and enthusiasm is likely to run high with most young men. They are in a competition with men of their own age and standing not only in their county but throughout the Province. Preparing the soil, securing the seed and sowing or planting, is interesting work, and the young man knows that the better the seed-bed and the higher the quality of seed the greater the chance of winning out, other things being equal. Having made a good start it should be comparatively easy to keep up the good work throughout the season. However, as summer work increases and outside attractions become numerous there is a likelihood of interest in the special crop lagging. In fact, this is exactly what has taken place in more than one instance. The weeds grow up and are allowed to flourish, blight and bugs invade the potato patch and before long the ideal plot in the spring takes on a dilapidated appearance, all due to the waning interest of the competitor. The same is true with the hogs and calves. No matter how good a start is made, satisfactory results cannot be expected unless attention is given throughout the season. It is regrettable that the interest of so many of the competitors lags before the competitions close. In some counties there have not been sufficient entries in the running at the end of the season to allow of prizes being offered according to the rules and regulations. Did it ever occur to you that in neglecting your plot or dropping out of the competition you might make it so that your chums could not secure a prize? If you start in the competition stay with it, even though the elements are against the best interests of the crop. Do your part by keeping down the weeds and applying material to check bugs and disease. In case of stock, feed to keep the calf or hogs growing, and continue keeping strict account of weights of feed. You may know that you cannot win against your neighbor, but it is your duty to finish the competition.

Even yet a good deal can be done to improve the crop. If it is oats, see that weeds do not have an opportunity to rob the crop of moisture and plant food. Little else can be done to aid this crop, but with corn, potatoes and roots, where cultivation plays an important part, much can be done. There are few crops that respond to cultivation as does corn. Run the cultivator through it every week if possible up to the time it tassels out. Time may also be found to go through it with the hoe and cut out weeds growing in the rows. Cultivation is also essential with the potato crop, but another way of ensuring a good yield is to spray with Bordeaux to which some poison has been added to destroy bugs. Some seasons late blight exacts a heavy toll from the potato patch, amounting to practically the entire crop in some sections. It is possible, in fact

probable, that this disease will be rampant this fall, if the present hot, muggy weather continues. There is a way of preventing this trouble. By coating the leaves with Bordeaux mixture and keeping them coated, the spores of the disease have little opportunity of getting in their deadly work. Where potatoes are grown on a commercial scale a power sprayer is used, but for an acre plot the work could be done with a hand sprayer carried on the back of the operator, or else on a wheelbarrow. It is necessary to obtain a fine spray and to thoroughly coat the leaves above and underneath. It will require three and probably more applications, depending on the weather, but it is worth while even if bluestone is high in price this year. It may mean the difference between a good crop and failure; between winning the prize and coming low in the list. The young men who take every precaution to ensure a crop deserve to win. If you do your best but do not reach the top you should have no regrets.

In the case of live stock considerable work can be done to promote growth and thriftiness without adding too much to the cost of production. In all these competitions the cost of work, etc., as well as the appearance of the crop or stock is taken into consideration and rightly so. If feeding a pen of pigs it is necessary to give them a mixed ration which will furnish carbohydrates, protein and ash in the proper proportion for the rapid development of the hogs. Care should be taken to keep the pen clean at all times and economical gains can be made with the hogs on pasture, which will displace a considerable quantity of grain in the ration. Clover, alfalfa, oats and peas or rape make excellent pasture crops for swine. If you are not in a position to allow the hogs to run in these crops, good results have been obtained by cutting green feed and put-

ting it in the pen. This entails a little more labor, but the pigs do better if they have a little green feed than if they are forced to subsist entirely on grain. Pigs are very fond of lamb's quarters, a weed which is found growing around many buildings. Instead of hoeing this weed and allowing it to wilt in the sun, it might be turned to profitable use if fed to the hogs. Some feeders soak the grain, others feed it dry and have water in a separate trough. Both methods give good results. In case of feeding a calf it is essential that the feed and care be such that growth will be continual. If from lack of proper feed the calf gets a slight setback it is difficult to overcome it. Skim-milk or whole milk is the ideal feed for calves, but if given a large portion of this liquid the cost of raising the calf is fairly high, therefore, certain roughages and concentrates should be added to the ration. Ash and protein are two food constituents which go to produce bone and muscle and feeds which contain large proportions of these should enter largely into the ration. Legumes make the best roughages while rolled oats and a little linseed meal may constitute the concentrates. If the calf is getting a considerable quantity of skim-milk the ration will be more nearly balanced if a little cornmeal is fed. If possible the calf should be given the run of a paddock but supplied with shelter during the heat of the day. A little later, green corn, mangels or turnips could advisedly be fed. Teach the calf to lead and have it so that it will not be afraid of you. Use the curry-comb and brush frequently as their use helps to keep the animal thrifty and gives it a good appearance. Your success in these competitions depends a good deal on yourself. Good judgment in selecting the stock to feed or grain to sow is essential, but this will not make up for lack of care during the growing period.



The County Crist Mill.

Automobiles, Farm Machinery and Farm Motors.

Motor Types.

What is a valve-in-head motor? This question is often asked in garages, salesrooms and at automobile shows throughout the country. We shall endeavor to answer it in this article.

A valve-in-head motor gets its name from the fact that the valves, through which the gasoline passes to the cylinders and also leaves them after combustion, are located in the tops, or as they are sometimes called, in the heads of the cylinders. Because of their appearance, it is very easy to recognize motors of this type. It is claimed, for the valve-in-head principle, that the gasoline has an easier entrance and that the exhausting of the burnt fuel is not difficult. You may not be fully cognizant of the fact, but nevertheless it is true that power plants derive their energy, for the driving of an automobile, from heat. This is indisputable, no matter of what construction the engine may be. In valve-in-head models the heat is conserved by water jackets evenly distributed around the cylinders. The gas which is used to develop the heat, passes through the carburetor and is mixed with air. The new combination then finds its way to a cylinder with perpendicular sides, and it is on the top of this cylinder that the valves are located. When the charge of fuel explodes, the resulting heat can only escape by pushing the piston down or by getting through the cylinder walls into the water, or in the winter-time water and alcohol, used to cool the motor. Of course, the major part of the energy exhausted in the escape, goes against the top of the piston and propels the car.

There are also a great many people who wish to know what an L-head motor means. The name almost supplies the answer, for a motor is called an L-head that is, shaped like an L, the horizontal part projects at the top and not at the bottom as some amateurs think. In this system of construction the valves are placed in small compartments alongside the upper section of the cylinders. The T-head motor also derives its name from its shape, but in this instance, instead of small compartments put on one side of the tops of the cylinders, they are on both sides. Of course, the compartments are water jacketed the same as the main part of the cylinder itself.

While it is true that valve-in-head motors are used exclusively in airplane engines, which of course require maximum speed and safety, there are still many fine arguments that can be advanced in favor of L- and T-head types. Great dependence should be placed, not only upon the motor which you choose but even more reliability should attach itself to the company behind the car. When you are making a study of motor mechanism, you should have in mind the ease with which gasoline can be introduced to a cylinder and the facilities by which it can be expelled. The highest efficiency is attained when you have a system that allows a quick entry and a rapid exit. It is not difficult for you to comprehend the situation when you realize the number of revolutions that a crank shaft must make. Back of the revolutions must be some method guaranteed to develop terrific speed. Anything that is not uniform or that tends to make difficult the operation of the mechanism, is going to be a decided disadvantage.

THE DAIRY.

Preparing for the Show Ring.

The show season is drawing near in Eastern Canada and many breeders of pure-bred stock are busy putting the finishing touches on the animals they purpose showing. To win in strong competition means a good deal financially to the breeder who has stock to sell, but many jeopardize their chances of securing a prize because of failure to pay attention to details in fitting their entries. The man who has followed the shows for several years has learned his lesson and a visit to his farm would have found him making plans early in the spring or possibly last fall for the fairs which will soon open. The amateur possibly thinks that if his cows have the desired breed-type and conformation, and show good udder development that he need not worry. True, fit and finish are not considered to the same extent with dairy cattle as with beef animals, but nevertheless appearance counts, especially in a close competition. At practically every fair there are animals that would have stood near the top when awards were made had their owner spent a little time each day, for a month or more before the fair, in trimming up and training them.

While the prime object in keeping dairy cows is for the production of milk, a heavy milker which lacks type and constitution is a poor proposition for the breeder. Pick out your best individuals from every standpoint, remembering that there must be a correlation of parts. Perfect type and conformation without indication of milk, and vice versa will not win. There must be a blending of these qualities in the one individual, whether it be a mature cow, heifer or bull. While preparing for the show should have commenced months ago, there is much that can be done yet to improve the appearance of the entries.

Special feed and care will soon give a bloom or finish to the hair and hide. True, some cows turn their feed into milk at the expense of their bodies. Such are profitable animals, but a little addition to the present

The situation, in so far as internal combustion engines are concerned, was slightly complicated for a short time when the grade of gasoline supplied by the big refiners fell off, owing to the fact that they were compelled to provide great quantities of this volatile fuel from crude oil. In the old days, only a small percentage of the crude was used for gasoline, but market conditions are such that a very stiff crushing process must now take place with all crude oil in order that the maximum amount of gasoline may be produced. To secure this maximum, the quality of the gas has been lessened. This problem has made the manufacturers develop a number of changes in their power plants. A new system has been devised whereby engines will heat up rapidly. A dead engine finds it difficult to handle anything, but a high-test gasoline, but a quick heating power plant can soon accustom itself to a fuel of low order. Butterflies on the carburetors, thermostats on the generators, closer air control by gauges, and a number of other diverse systems have been brought into play. Success has crowned the efforts of the manufacturers, as is evidenced by the fact that to-day motor cars have increased efficiency, despite the fact that they are compelled to operate with fuel that is much below the standard marketed only a few years ago.

AUTO.

General Binder Troubles.

Some binder troubles can be traced to improper assembling. Special care must be taken to observe the following points:

1. The bull wheel must be set straight in its quadrants, otherwise, heavy draft and bearing troubles will result.
2. When the bull wheel has been entered correctly, replace the bolts in the holes at the bottom of the quadrants and rivet the ends to prevent them from being lost. This precaution will eliminate any possibility of the operator getting the bull wheel out of the quadrants, and, therefore, will never get it back at an angle.
3. As a general rule, place bolts so that the nuts will be in view and therefore, readily noticed should they work loose. This rule cannot be followed invariably, but do so whenever possible and there is no good reason for placing them any other way.
4. Put plenty hard oil on the ends of the rollers before they are put in place.
5. As soon as the rollers are in place, see that they are square. Measuring from corner to corner, with a reel slat, the distance from opposite corners should be the same. If it is not, adjust the tie rods.
6. When the butter has been put in place, pour in kerosene on the bearings to ensure easy working, turn the upper roller of the lower elevator by means of monkey wrench on the sprocket.
7. Run all sprocket chains with the open end of the link ahead and out.
8. Run the binder around the yard several times before taking it to the field, oil all bearings well with kerosene to cut out the paint, find every oil hole so that they will be attended to in the field later on.

ration may have the desired effect of improving the appearance of the animal's body. A show animal should not be expected to pick all her living on the pasture field. Feed some roughage in the stable, and add grain and concentrates, as oil-cake meal, cottonseed meal, etc. Cater to the whims of the cow and she



Pauline Colantha Posch 8784.

Seven-day record: Milk, 691.8 lbs.; butter, 34.32 lbs. Dam of Pauline Colantha Tensen 12077, with a seven-day record of 689.4 lbs. milk and 31.95 lbs. butter.

If the Machine Fails to Start.

Sometimes a new machine will not start. Throw it out of gear and try it again, this will test the bull wheel.

Throw the machine into gear, remove elevator chains, and start again. This will test the shafts, sickle and packer shafts. Then throw off the reel chains, replace elevator chains, and start again. Thus, the elevators may be tested. While the reel chains are off, test the reel by hand. By this method trouble may be located quickly.

Chain and Gear Troubles.

Undue wear on chains may be caused by the chains being on too tight or backwards. Hook shaped sprocket teeth will break chains. This shape is caused by running the chains with the bar of the link first. The cutting out of gears between the countershaft and the crankshaft, is caused by (1) improper meshing between the gears, or (2) the use of oil on gears in dusty land. There is an adjustment on the inside end of the countershaft by which the shaft can be forced toward the crankshaft, thus making the teeth mesh close enough to prevent "stripping," but not deep enough to cause "binding". When the soil is very sandy and the bull wheel throws dust all over the machine, do not use oil or grease on the main frame gears or chains. It is better to run them dry or better still use dry or flaked graphite.

Canvas Creeping or Broken Slats.

Caused by the elevator rollers not being square.

Rollers Binding.

Adjust tie rods and braces. If it binds at sprocket or gear end only adjust the box at that end. It has been improperly inserted or the wrong bearing has been used.

Roller Wrapping.

This is a trouble found at the front end of the inside platform roller. If the wrapping is composed of short straws, the outside end of the platform is higher than the inside, resulting in short straws being cut off and getting below the canvas. If the wrapping is composed of green stuff, raise the machine or tilt up a little.

Heavy Draft.

Poor lubrication, tight chains, or the bull wheel carelessly entered in the quadrants are the chief causes. (See precaution for assembling.)

Side Draft.

Side draft is most often caused by grain wheel difficulties. In old binders, see that the roller bearings are in good shape. If a grain wheel has been twisted by hitting a gate post, side draft will result. When a machine is new the grain wheel is set at an angle to the platform $\frac{1}{2}$ -inch nearer in front than in the rear. A fast horse on the outside will often make an operator think there is a side draft.

To make good bundles, the operator must be continually on the job and adjust the levers.

In short grain broken reel slats are common. Tack a strip of canvas or linoleum 6 inches wide on each reel slat and raise the reel.

will likely respond nobly. The elements sometimes have a detrimental effect on an animal. Rain may make the hair harsh and rough, while the sun may bleach or tan it. Keeping the cow blanketed in a cool stable during the day will help to give that glossy appearance which is so much admired. Several weeks previous to leaving for the fair, commence feeding the kind of feeds which are to be used when away from home. A sudden change of even a part of the ration may throw an animal off its feed and cause it to look gaunt when led into the show-ring. Also, feed and water at the same hour at home as you intend to at the fair. Stock are creatures of habit and a variation of a half hour or more, and that in a strange stable, may make the animals uneasy and cause them to refuse their feed. This work may seem unnecessary to some, but it may be the means of having your entries appear to better advantage than if little attention were paid to the hour of feeding.

Grooming also aids in giving a finish to the animal. If properly done the hair and hide are cleaned of dirt, and the pores of the skin are kept open so as to perform their function as nature intended that they should. Avoid using a sharp

comb; it may scratch or irritate the skin. If you can draw the comb over the back of your hand without causing annoyance, it will not harm the cow. A little trimming may be necessary; long hairs around the head and udder may be clipped off to advantage. Then, the horns may require attention. The roughness can be rasped or sandpapered off and a little polishing done. This may not increase the value of the animal, but it improves the appearance and shows that the exhibitor has done his best to make his stock attractive, and that counts for a good deal.

Too many animals brought into the show-ring act as if they were being led for the first time. There is little excuse for this as it does not take long to halter-break an animal, especially when it is young. When the stock is continually moving about it does not give the judge an opportunity to size it up as he could if it were standing in position; consequently, failure to train the animal to stand properly is oftentimes responsible for losing the coveted ribbons. The man who knows his animal can train it to stand so as to strengthen some weak point. If the animal is worth showing it is worth while taking pains to prepare it for the show. Failure to fit and train the animals applies more to exhibitors at local fairs than at the large exhibitions. The idea seems to be prevalent that as competition is not very strong at the township fair, it is not worth while going to any other in fitting the stock. If the prizes are won it is practically clear gain, if not, there is little loss. This may be true but it is not the right spirit to carry into the show-ring. What impression does it leave with young men if unfitted animals are able to secure prizes owing to lack of competition? What kind of an ideal does it set up in the neighborhood? If exhibiting your stock at the local fair, fit and train it the same as you would if going into exceptionally strong competition.

Feeding the Young Bull.

EDITOR "THE FARMER'S ADVOCATE":

I read with interest your advice, in a recent article, on raising calves, especially the heifer calves which one intends keeping for cows. I always save the heifer calves from cows that are good milkers. I like the parents to have age, as they seem to throw stronger and better-developed stock. I have a young pure-bred bull which I recently purchased. He sucked a cow for seven months and was then weaned. I keep him in a box stall during the day, but towards night I turn him in a small field with the other calves. He is fed rolled oats three times a day; a little barley is mixed with it, about three parts of a gallon at a feed. The grass in the field has become a little short, so I have quit turning him out at night and cut grass for him instead. He is watered twice a day. Should he thrive well under this treatment? He is nine months old now and in good condition. My object is to keep him growing.

YOUNG FARMER.

The system of feeding outlined should give very good results. However, we would prefer allowing the calf to run in the field at night for exercise, but give him all the grass or clover he will eat in the stable. Clover or alfalfa is preferable to timothy for young stock.

During the month of June thirty-five Holstein cows and heifers were accepted for entry in the Record of Merit. Bell Model Pietje was first in the mature class with a record of 598.3 pounds of milk and 28.71 pounds of butter-fat in seven days. The junior four-year-old class was led by Korndyke Segis Hartog with a milk yield of 586.2 pounds and 24.7 pounds of butter-fat. Miss Mercena of Alluvialdale was first in the senior three-year-old class. In seven days she gave 525.4 pounds of milk which yielded 16.37 pounds of butter-fat. In the junior three-year-old class Pietje Geiske Walker was first, while Pontiac Cornelia Pietje was first in the senior two-year-old class. Avondale Pet was the highest junior two-year-old with a record of 17.61 pounds of butter-fat.

During the month of June certificates were issued for twenty-three Holstein cows and heifers which had qualified in the yearly Record of Performance test. Flora De Kol Maid was first in the aged class; her milk yield being 17,005 pounds, which yielded 532 pounds of fat. Bonheur Queen Mercena made an excellent record in the four-year-old class. Her 17,587 pounds of milk yielded 671 pounds of fat. There were only three in the three-year-old class, with Cornucopia Sylvia Beets leading, with a record of 13,558 pounds of milk. In the two-year-old class Madoline Dora De Kol was first. She gave 11,748 pounds of milk and 458 pounds of fat. Her milk yield was exceeded by three other cows but she had a considerable lead in butter-fat.

POULTRY.

Poultry Feed Prices.

EDITOR "THE FARMER'S ADVOCATE":

I just read in your paper, under Poultry: "Cheaper Poultry Feed". When seeing this headline I felt delighted but when reading the article over I was disappointed. I think every farmer interested in poultry or other live stock has tried broken wheat, screenings, etc., but the prices were so high as compared with good wheat or grain that in fact good grain was cheaper in feeding value than the screenings. I do not think that any mill or elevator could, or better would, be willing to separate cracked and shrunken wheat and wild buck-

wheat from the large percentage of real useless weeds contained in the screenings.

The poultrymen of Canada would highly appreciate it if the Department of Agriculture could arrange that good screenings would be sold at right prices. A large quantity of wheat could be saved, but none will feed high-priced screenings full of all kinds of useless seeds. Lincoln Co., Ont.

OTTO HEROLD.

Egg Market Stronger.

For the week ending July 17 eggs and poultry markets report of the Dominion Department of Agriculture are to the effect that the egg market is gradually gaining strength, due to a certain extent to the falling off in receipts, combined with an improvement in the export situation. There is a firm tone to all the larger markets and at local points an advance of from six to seven cents has been reported during the past ten days. Prices in Montreal and vicinity have been slower to respond than they have in Western Ontario, due largely to the arrival of several cars of Western eggs. With the favorable turn of the export market, and the shortage of supplies, it is reported that some country shippers have received offers as high as 36 cents f. o. b. shipping point for candled stock, while 34 cents is becoming general over Western Ontario. Buyers are placing a premium on quality and it is to the advantage of the producer to take every precaution to safeguard and conserve the quality of the eggs he places on the market. Eggs have advanced in price from one to one and one-half cents in Manitoba, one cent in Saskatchewan and from two to three cents in Alberta. The markets in the United States continue firm, with receipts, particularly of the higher grades, showing a distinct falling off.

Receipts of poultry, particularly fowls, continue light for this season of the year. This may be due to the favorable reaction in egg prices or to the fact that poultrymen and farmers are exceptionally busy at the present time. Later in the season there is usually a rush to market the old birds which results in a sharp decline in price. Those who have poultry for sale might find it to their advantage to market it before the movement of poultry becomes general. The poultry situation in the United States is reported to be in a very depressed condition at present. Government reports indicate that stocks on hand are large.

Current storage poultry prices wholesale for the week mentioned were milk-fed broilers, 30 cents; from the range, 22 cents; milk-fed chickens, 27 to 32 cents, and on the range, 22 to 25 cents. Light fowl was from 17 to 20 cents, and heavy fowl, 22 to 23 cents. Old ducks, 20 cents; young ducks, 24 cents. Geese, 12½ cents and turkeys 28 to 30 cents.

According to the feed reports it appears that poultrymen will have to make up their minds to utilize screenings and lower grades of wheat more extensively than in the past, or else use other feeds as substitutes for wheat. Some poultrymen report difficulty in getting the laying stock to eat freely of low-grade wheat after having been accustomed to the hard wheat. It is necessary to make the change gradually and even then there may be a slight falling off in production.

Diseases of the Liver and Intestines.

At the present time when growing chicks are attaining an age of from one month to ten weeks, a disease (known as Coccidiosis) affecting the liver and bowels, is causing considerable losses. This disorder according to Dr. Wickware of the Experimental Farm is quite prevalent throughout Canada and is probably responsible for many deaths at present attributed to white diarrhoea. The disease is caused by a small egg-shaped germ which inhabits the first portion and blind pouches of the bowels. It produces inflammation of the bowels and liver, the blind pouches showing the most marked alteration. The changes in the latter may vary from a filling up with a reddish granular looking mass of soft consistency to hard cores composed of lining cells, blood, etc. The liver may show changes varying from a fairly normal appearance to large areas of a yellow color which when cut into show a cheese-like centre.

Symptoms.—The chicks appear dull and isolate themselves from the rest of the flock, usually remaining in the hovel or under the hen. The feathers become ruffled; wings droop; appetite is lost and occasionally the chicks will give utterance to a shrill cry, particularly when trying to pass material from the bowels. A white discharge is usually present although it may be rather reddish in color and the vent may become pasted with the material discharged. These are the prominent symptoms in typical cases but chicks may also be badly affected and exhibit no outward appearance of disease until death suddenly takes place.

Treatment.—Treatment consists in dissolving fifteen grains powdered catechu in a gallon of drinking water. This should be kept constantly in front of the chicks and should be changed every two days.

Prevention.—Prevention consists in the isolation of all ailing chicks from the remainder of the flock and the thorough disinfection of all the quarters and runs, which may be accomplished by the application of a lime-wash solution made by adding two and one-half pounds of stone lime to a pail of water, to which is also added one-half a teacupful of good commercial disinfectant. This should be applied full strength with a spray pump, brush or old broom, to all parts of the quarters, brooder houses, etc. The feeding troughs should be cleaned daily by scalding with boiling water and special care taken to prevent the chicks from getting their feet either in the feeding utensils or drinking fountains, as

the disease is transmitted from bird to bird in this way. The floor of the brooder houses should be covered with a coating composed of nine parts of sand and one part of air-slaked lime, and if the droppings are not removed daily, they should at least be mixed with a fair amount of air-slaked lime to insure proper disinfection. If the runs are not too large, it is also advisable to cover them with a thin coating of the above mentioned lime and either spade or plough them up. The chicks should be kept away from all adult fowls, and carcasses of dead birds immediately burned as burying only serves to keep the infection going from year to year.—Experimental Farms Note.

HORTICULTURE.

Controlling Slugs.

The slimy looking larvæ or "slugs" that eat the surface off the leaves of cherry and pear trees during July and August are easily killed. If there is no fruit on the trees, the best way is to spray the trees with arsenate of lead in the proportion of 1 pound of the powder, or 2 pounds of the paste, to each 50 gallons of water. A fine spray is best, and should be applied so as to cover the upper surface of the leaves, where most of the feeding is done.

In case there is fruit on the trees you may use white hellebore, 1 ounce to 3 gallons of water. This will kill the slugs and do no harm to people who eat the fruit.

The same results may be secured by spraying with a strong tobacco decoction, such as Black Leaf 40, 1 part in 800 parts of water.

A thorough dusting with slacked lime, ashes or fine road dust will usually be successful in removing the slugs from the leaves.—C. P. Gillette, Fort Collins, Colorado.

A Dust Mulch in the Garden.

During the summer some vegetables wilt under the mid-day sun. The moisture is pumped from the leaves faster than the roots can draw it from the soil reservoir. However, after the sun sets the plants again attain their former freshness. In order to hasten growth and encourage a maximum yield some carry water to certain crops in the garden night after night during a dry spell. Undoubtedly they are rewarded for their labor, but considerable of this work could be saved by use of the hoe. It is generally believed that if undue evaporation of moisture were checked that the soil would supply the plant with the required quantity of moisture even in dry weather. Soil uncultivated for several weeks becomes hard and cracks, while the same kind of soil kept cultivated is quite moist an inch below the surface. Cultivation makes a dust mulch which checks evaporation. Therefore, if a certain soil is stirred occasionally it will reduce the necessity for watering it. Hoeing to form this loose soil also keeps weeds in check so that cultivation of the garden at frequent intervals serves a double purpose. It does not take long to go over a small garden with the hoe. If planting is done in rows a hand-cultivator could be used to advantage. While plants respond to watering, you should not neglect loosening the surface soil around the plants, especially when the weather clears after a heavy rain.

Crops, like celery, are sometimes mulched with straw, leaves, or strawy manure. Several inches of this material are placed between the rows where they not only hold moisture but give of their fertility to the plants. Frequent cultivation of the garden throughout the summer months will go a long way towards the production of maximum crops.

Apples a Comparatively Light Crop in Canada.

The July fruit crop report, issued by the Fruit Commissioner's Branch, Department of Agriculture, is to the effect that heavy rains the fore part of the month have caused such fruits as cherries and plums to drop, and have also induced the rapid development of apple scab. The apple crop, particularly of the late varieties, is light in Lambton, Norfolk, Essex and the Niagara District, although in some orchards the early varieties promise a fair yield. Throughout Western Ontario the crop is practically a failure, being estimated at not over fifty per cent. of last year's. The crop in the Lake Ontario district is very scattered. In some orchards in the Trenton district there will be a good crop. In the Cobourg section not over sixty per cent. of last year's crop; Prince Edward County about twenty per cent. of normal with considerable scab beginning to show; in the South Bay district, Spys, Baldwins, Russets and Greenings are about twenty per cent. of the normal crop, with Ben Davis, Baxter, Stark, Mann, Snow and similar varieties seventy-five per cent. of a full crop. With the exceptions of Spys and Russets reports from the north shore of the Bay of Quinte indicate a good average crop. Bowmanville reports about sixty per cent. of last year's crop, but scab is developing. In the Oshawa District early varieties are a fair crop; Baldwins and Spys light, Ben Davis and Stark medium. It is estimated that the total crop will equal that of last year. It is believed that there will be thirty per cent. of an average crop in Newcastle district, but in Durham County it is believed that there will be less clean fruit than in any year since 1885. In the Georgian Bay district, Spys, Baldwins and Greenings are very light, with Kings, Russets, Snows and early varieties about fifty per cent. of a normal crop. In Quebec the early varieties

appear to be light with fall and winter apples about medium. In the St. Lawrence and Ottawa Valley districts the crop of Fameuse and McIntosh is about fifty per cent. of normal. Reports from the St. John Valley place the probable crop at about sixty per cent. of normal, but scab is developing rapidly. The apple crop in the Annapolis Valley is estimated at about 800,000 barrels, and the fruit is clean in well-sprayed orchards. In Prince Edward Island early varieties promise a fair crop. If conditions are favorable it is believed that the Island will produce the largest crop for some years. The estimated crop in the Kootenay Lake district is seventy-five per cent. of 1916. The crop promises to be light in the apple sections of New York State.

In the Niagara Peninsula sour cherries are about fifty per cent. of the normal crop, and about seventy-five per cent. in the Burlington district. Sweet cherries were a light crop and owing to weather conditions rotted badly. Between Hamilton and Grimsby the peach crop will not exceed forty per cent. of that of last year, but from Grimsby to Niagara Falls it will be about sixty per cent. Leaf curl has been bad in some sections and the drop has been heavy. Outside of Niagara there are practically no peaches in Ontario this year, with the exception of Lambton County, which has about ten per cent. of last year's crop. The Niagara grape crop promises to be good but will be a couple of weeks later than usual in maturing. The pear crop in the Niagara District is light to medium, with a fair crop in some orchards. The June drop has considerably reduced the plum crop. Lombards, Reine Claude, Yellow Egg and Monarch are light to medium, or about thirty per cent. of a normal crop in Niagara, but elsewhere in Ontario and in Nova Scotia prospects are good. A heavy crop is reported in British Columbia. Indications are for a good crop of small fruits in every district.

In Eastern Canada there has been a serious outbreak of apple scab fostered by prevailing weather conditions. The development has not been so serious in the Western districts. Canker worms have infested the Annapolis Valley and have also appeared in New Brunswick. Taking the Dominion as a whole the apple crop is exceedingly light, but even so those interested in marketing the fruit should lose no time in arranging for the widest possible distribution of the crop in Canada, in order that none of the crop be lost in the event of the embargo remaining.

FARM BULLETIN.

Keep the Potato Vines Green and Growing.

Many are growing potatoes in Canada this year for the first time and, as a result of the increased number of growers the crop will probably be greatly increased. But to insure a good crop there must be an abundance of moisture in the soil, and the tops must be protected from insects and disease. The soil should be kept cultivated until the tops meet sufficiently to shade the ground. As most of the tubers develop in the three or four inches of soil nearest the surface, and as the tubers will not develop well in dry soil, quite shallow cultivation is desirable at this season of the year. In soil which is dry there may be good development of tops but there will be few tubers. The roots in such cases have gone down deep into the soil to obtain moisture, but the tuber-bearing stems, which are quite different from the root system, do not develop well. Where the soil is a loose, sandy loam, hilling is not necessary and may be injurious, as the soil dries out more than if left on the level. In heavy soils it is desirable to hill the potatoes, as it will loosen the soil and the tubers will be more shapely than when the ground is left level. When there is sufficient rainfall and moisture in the soil hilling is likely to give best results in all kinds of soil, as the soil will be looser and the tubers can push through it readily. As a great development of tubers takes place during the cooler and usually moister weather of the latter part of summer, it is very important to keep the plants growing well until then. In one experiment it was shown that during the month of September there was an increase of 119 bushels of potatoes per acre.

It is very important to prevent the tops of potatoes from being eaten by insects, particularly by the Colorado Potato Beetle. The old "bugs" do not do much harm to the foliage, as a rule, and usually the plants are not sprayed to destroy these, although the fewer there are to lay eggs the less difficulty there will be in destroying the young ones. These begin to eat rapidly soon after hatching, and close watch should be kept so that the vines may be sprayed before much harm is done. Paris green kills more rapidly than arsenate of lead but does not adhere so well, and in rainy weather it is desirable to have something that will stay on the leaves so that they will be protected until it stops raining and thus prevent the tops being eaten. At the Central Experimental Farm a mixture of Paris green and arsenate of lead is used in the proportion of 8 ounces Paris green, 1 1/2 pounds paste arsenate of lead (or 12 ounces dry arsenate of lead) to 40 gallons of water in order to get the advantage of both poisons. It may be that it is not convenient to get both poisons when either 12 ounces of Paris green or 3 pounds paste arsenate of lead (or 1 1/2 pounds dry arsenate of lead) to 40 gallons water could be used, or in smaller quantities, say 1 ounce Paris green to 3 gallons or 3 1/2 ounces paste arsenate of lead or half that quantity of dry to 3 gallons of water. An experiment conducted for six years at the Ontario Agricultural

College, Guelph, showed that, on the average, where the tops were sprayed to kill "bugs", the yield was 186.9 bushels per acre, while when the tops were not sprayed and allowed to be eaten, the yield was only 98.2 bushels per acre. It is desirable not to stop with one spraying which usually does not kill all the bugs but to spray several times, if necessary, so that as little foliage as possible is eaten.

Some years the crop of potatoes is much lessened by the late blight disease, and when rot follows little of the crop may be left. It is, therefore, very desirable to prevent this disease from spreading. This is done by keeping the plants covered with Bordeaux mixture from about the first week of July, or before there is any sign of the disease, until September. Sometimes the first application of Bordeaux mixture is made before the potato beetles are all killed when the poison for them may be mixed with the Bordeaux. While the disease is not very bad every year, it is well to be prepared. There was an average increase per year of 94 bushels of potatoes from spraying with Bordeaux mixture in three years.

The formula for Bordeaux for potatoes is 4 pounds copper sulphate or bluestone, 4 pounds freshly slaked lime to 40 gallons of water. While the bluestone will dissolve more quickly in hot water, if it is not convenient to get this it may be suspended over night in a cotton bag in a wooden or earthen vessel containing four or five or more gallons of water. The lime should be slaked in another vessel and before mixing with the copper sulphate solution should be strained through coarsesacking or a finesieve. The copper sulphate solution is now put into a barrel, if it has not already been dissolved in one, and enough water added to half fill the barrel; the slaked lime should be diluted in another barrel with enough water to make a barrel of the lime mixture. Now pour the diluted lime mixture into the diluted copper sulphate solution and stir thoroughly, when it is ready for use. The concentrated lime mixture should not be mixed with the concentrated copper sulphate solution, as, if this is done, an inferior mixture will result. If the barrels are kept covered so that there is no evaporation, stock solutions of the concentrated materials may be kept in separate barrels throughout the season. It is important to have the quantities of lime and copper sulphate as recommended, but, in order to be sure that enough lime has been used and there is no danger of burning the foliage, let a drop of ferrocyanide of potassium solution (which can be obtained from a druggist) fall into the mixture when ready. If the latter turns reddish-brown, add more lime mixture until no change of color takes place.—Experimental Farms Note.

East Middlesex Notes.

EDITOR "THE FARMER'S ADVOCATE":

June is the month usually devoted to roadmaking, but some of it at least is not done yet. This is a system where we think Home Rule or local self government should be replaced by centralization so as to secure more uniformity in the methods. Each county or township should have a capable overseer or inspector appointed by the government in townships where the Statute Labor system is still retained. The average pathmaster is either incapable, careless, or afraid of offending his neighbors to do efficient work on the roads, and some of them are all three in one.

Another advance has been made in the cheese industry. Our cheesemaker announces that cheese will henceforth be graded into three grades and sold with one-half cent reduction on each grade and appeals to his patrons to take better care of the milk. This is the next best thing to paying by test which came so near realization.

It looks as though we would have a few apples after all, especially the early varieties, but it is pretty safe to predict that there will not be much cider drunk on the old farm in Middlesex this fall.

The heavy rains still continue and are doing some damage to root crops and gardens, also grain crops to a less extent on very low and poorly-drained land. But on the whole the benefits far exceed the losses as the yield of straw will likely be heavy to offset the dearth of last year and with a heavy yield of straw there is usually a fair yield at least of grain. But the moist, warm weather is favorable to the production of smut and rust, and already there are signs of the former at least being plentiful. There is also a material increase in the yield of hay but unless it dries up at least a little more the difficulty of curing hay will be enormous. Some have started haying, but we would prefer to risk it a while longer as there is less danger of it getting woody in a wet season, and anyway it is better to be a little woody than spoiled with rain.

The rain is also interfering seriously with the honey crop. All indications at present point to a small yield and higher prices. However, this is not an unmixed evil from the beekeeper's standpoint because if he cannot get honey he can get bees as there is enough honey coming in to keep brood rearing going lively and swarming is quite frequent.

Middlesex Co., Ont.

J. H. BURNS.

Cheques Issued to Wool Growers

Owing to the vast amount of work entailed in grading, shipping and making up the individual accounts it has taken considerable time to complete the business in connection with the marketing of wool co-operatively at Guelph. However, the secretary R. W. Wade has everything in readiness for issuing the cheques the week of July 23rd. Any sheep-breeder who has shipped wool but has not received his cheque by the end of the week should write the secretary at once for an explanation.

A Successful Exhibition at Edmonton.

In many respects the Edmonton Fair this year was superior to those held in the past. While some breeds of stock were not quite so well represented as last year, others were out in greater numbers. The industrial display far exceeded that of other years. The showing of farm machinery, tractors, dairy equipment, etc., attracted the attention of visitors, especially those from the rural districts. The attendance was all that could be desired.

In the horse department Clydesdales presented the greatest competition. Many new Alberta breeders brought out animals of high quality. There was also a good showing of Percherons, particularly from the southern part of Alberta. The other breeds of horses were represented by good specimens, although they were not out in large numbers. There were 528 entries of cattle, which is a trifle below that of last year. The Medicine Hat show being held at the same time was largely responsible for this. There was a large showing of Herefords, the same herds coming in competition as were at Calgary. The Shorthorns were not so numerous as at the former show.

The Prairie flocks have made steady growth in numbers and quality as evidenced by the large entry of sheep of high standard. A number of Eastern breeders were present and carried away some of the honors, although the Western breeders were successful in a number of classes. The showing of Alberta-bred pure-bred swine surpassed any previous exhibition in the Province. There was strenuous competition in practically all the classes.

The entries in Clydesdales were all from Alberta. The grand champion stallion at Calgary, exhibited by Ben Finlayson, again secured the high honors. The champion female was Poppy, exhibited by Geo. Cresswell, with Nell of Atkin, the champion at Calgary, as reserve. The Percheron breed was fairly well represented by individuals from six stables. They made a splendid showing and aroused considerable enthusiasm. The champion stallion and female at Calgary were each moved into reserve positions, and the honor went to the three-year-old stallion, Marvel, exhibited by Geo. Lane. The champion female was Nellie Bell, from the same stable. There were two exhibitors of Shires, one of Belgians, and one of Suffolk Punch.

In Shorthorns the main contest was between the herds of Yule & Bowes and J. G. Barrow, although other exhibitors were able to get well up in the money in many classes. The placings at Calgary were slightly changed. John Miller, Junior, of Ashburn, was the only Ontario exhibitor, and succeeded in securing a share of the prizes. The senior champion bull was Banner Bearer, exhibited by Yule & Bowes, while J. G. Barron had the junior and grand champion in Jubilee Star. Fairview Baroness Queen won the highest honors in the female classes for Barron, with Clipper Girl in reserve.

The high quality of the competitors in the Hereford classes created intense interest. Five Western herds and one Ontario herd were exhibited. L. O. Clifford, of Oshawa, secured second in the aged-bull class, on Bonnie Brae 31st; G. E. Fuller's bull, Martin Fairfax, winning the class also the grand championship. The Ontario herd was first in the junior yearling class, first and fourth with senior calves, and won the junior championship on Lord Fairfax 5th. Miss Armour Fairfax secured the first prize ribbon in the aged-cow class for Mr. Clifford, and also was awarded the grand championship ribbon. Third prize in the three-year-old cow class, second in the two-year-old class, first in the junior yearling class, second and third in senior calf class, first in junior herd, second in two, the progeny of one cow, and third in the aged herd all went to the Ontario Herefords.

Three herds of Aberdeen-Angus were entered, and the Ontario herd shown by Jas. Bowman, of Guelph, secured a fair share of the honors. Beauty's Leroy won the senior championship but was defeated for the highest honors by Black Cap McGregor, the junior champion from the Brandon herd. The champion prizes in the female classes all went to McGregor, although Bowman secured second and third with aged cows, second and third with heifers two-year-old, first and second with senior yearlings, second with a junior yearling, second and third with senior calves, and second with a junior calf. In the class for two, progeny of one cow, the Ontario herd was awarded first and third prizes and secured second in both the aged and junior herds.

Holsteins made the strongest showing in the dairy classes. While there were only three exhibitors of Holsteins, their stock presented keen competition for the honors. Korndyke Posch Pontiac, from J. Laycock's herd, was declared senior champion bull, with Bonnie Brae Carmen from the same herd as junior champion. The grand championship prize in the female classes went to Geo. Bevington, on Duchess of Springhill, with Sutherland Abbekerk Polly, the junior champion from Duke of Sutherland's herd as reserve. Rowland Ness of De Winton, had a strong line-up of Ayrshires. The entire herd was in fine bloom and made an attractive showing. The champion female was Ness' Birdie of Lone Spruce, and the champion bull, Burnside Masterman. Four Jersey herds competed for honors, making strong competition in most classes. It was the best Jersey showing that Edmonton has witnessed and the entries were all from Alberta. The Jean Duluth Farm Company, of Minnesota, were the only exhibitors of Guernseys, and brought out typey, uniform representatives of the breed.

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presented the... Alberta breeders... There was also... larly from the... reeds of horses... ough they were... 528 entries of... last year. The... same time was... a large show... in competition... e not so numer...

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Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 19.

Receipts and Market Tops.

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

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	5,203	3,951	4,263	\$11.25	\$ 8.75	\$11.50	954	659	1,106	\$15.00	\$12.25	\$15.00
Montreal (Pt. St. Charles)	708	450	1,120	11.00	9.25	11.75	882	598	1,612	12.50	10.00	12.50
Montreal (East End)	663	830	1,470	11.00	9.35	11.50	591	605	1,112	12.50	10.00	12.50
Winnipeg	2,424	2,132	2,577	9.90	8.50	11.00	189	203	142	12.00	9.50	12.50
Calgary		1,690	1,009		7.00	8.50					8.50	11.00

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	6,329	4,235	7,406	\$16.25	\$11.75	\$16.75	2,143	1,402	1,148	\$16.25	\$14.50	\$17.00
Montreal (Pt. St. Charles)	1,122	600	1,839	16.50	12.00	17.25	515	1,129	506	*10.00	12.00	*10.00
Montreal (East End)	903	679	1,080	16.75	12.00	17.25	350	813	669	*10.00	12.00	*10.00
Winnipeg	5,479	7,717	6,406	15.15	11.00	15.50	155	492	89	12.00	10.00	10.50
Calgary		3,095	2,428		10.15	15.00		795	272		10.00	13.50

*Quotations per head.

Market Comments.

Toronto (Union Stock Yards.)

With 3,600 cattle on sale on Monday, prices were lower by 10 to 20 cents than those prevailing on the closing market of last week, but about on a level with those prevailing on the previous Monday. Trading was, however, very active and by the close almost everything had been weighed up. With a light supply on sale on Tuesday, prices held steady and were followed by an advance of 10 to 25 cents on Wednesday, on which day a further light run was received. On Thursday everything was bought up early at Wednesday's advance, the market closing with a steady undertone. A few stalled cattle were on sale during the week, and these brought special prices. Eleven head of heavy steers from Pt. Elgin, Ontario, sold on Monday at \$12.25 per hundred with a straight load in the same class bringing \$11.90, while on Wednesday a few extra good heavy steers realized \$12.00. These were the top prices for the week, and were only reached in these instances. The bulk of the heavy cattle sold from \$10.75 to \$11.50, while steers of one thousand to eleven hundred pounds weight ranged from \$10.50 to \$11.10. Several hundred head were weighed up at these prices, a few odd head reaching \$11.25. Light butcher steers and heifers from seven hundred to one thousand pounds, sold from \$9.50 to \$10.50, with two head selling at \$11.00 and one at \$11.50. Medium quality in this class ranged from \$8.75 to \$9.25, and common dairy-bred stock from Eastern Ontario sold from \$7.00 to \$8.00, with a few selling as low as \$6.00 per hundred. Bulls ranged all the way from \$5.50 to \$10.00, the former figure being paid for poor quality yearling bulls and the latter figure for smooth beef-bred stock; the bulk of the best sold from \$8.50 to \$9.25. With an exceptionally heavy run of cows on sale on Monday, this class suffered more severely than the other grades and were from 25 to 40 cents lower, but recovered fully 25 cents during the remainder of the week. Good cows from \$8.25 to \$8.75, with a few head reaching \$9.50; medium cows sold from \$7.00 to \$8.00 per hundred with common cows \$1.00 lower, and canners and cutters bringing anywhere from \$5.25 to \$6.00 per hundred. Stockers and feeders were in fair demand at last week's quotations, with best stockers bringing from \$7.75 to \$8.50, and feeders from \$8.50 to \$9.50, according to quality. Calves were steady all week with good and choice calves ranging from \$14.00 to \$15.00 per hundred and common veal from \$9.00 to \$11.00.

With eight hundred lambs and sheep on sale on Monday, lamb prices were cut \$1.00 to \$1.50 per hundred, \$16.00 being the top price paid, and the bulk bringing in the neighborhood of \$15.50. On Tuesday as high as \$16.25 was paid, and on Wednesday the bulk of the lambs sold from \$15.50 to \$16.25, the market closing on Thursday at the latter level. About twenty-two hundred lambs were on sale during the week and with more liberal supplies coming forward, a further decline may be expected. Sheep were about steady at last week's quotations. Hogs on the Monday market were previously contracted for at \$16.25

CLASSIFICATION	No.	TORONTO (Union Stock Yards)				MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range	Bulk Sales	Top Price	No.	Avg. Price	Price Range	Top Price
STEERS									
heavy finished	127	\$10.83	\$10.75-\$11.50		\$12.00	8		\$10.75	
good	668	10.65	\$10.25-11.25		11.25	94	\$10.50	\$10.25-\$10.75	
1,000-1,200 common	66	9.75	9.25-10.25		10.50	27	9.75	9.50-10.00	
STEERS									
good	850	10.04	9.75-10.75		11.00	26	9.90	9.25-10.10	
700-1,000 common	466	9.27	8.75-9.75		9.75	163	9.09	9.00-9.50	
HEIFERS									
good	287	10.44	9.80-11.25		11.25	9	10.00	9.75-10.25	
fair	322	9.04	8.75-9.75		9.75	68	9.10	8.85-9.65	
common	108	8.13	7.50-9.00		9.00	21	8.50	8.30-8.70	
COWS									
good	737	8.50	7.75-9.00		9.50	14	8.50	8.40-8.70	
fair	1,077	7.08	6.50-8.00		8.00	126	7.65	7.00-8.00	
BULLS									
good	54	8.31	7.75-9.00		9.50	2	9.75	9.50-10.00	
common	60	6.88	6.50-7.50		8.25	102	7.57	6.00-9.00	
CANNERS & CUTTERS	80	5.68	5.25-6.00		6.00	30	6.00	5.75-6.25	
OXEN	6					2	8.00	8.00	
CALVES	954	14.17	13.50-15.00		15.00	882	10.22	8.00-12.50	
STOCKERS									
good	132	8.19	7.75-8.50		8.50				
450-800 fair	60	7.37	6.75-7.75		8.00				
FEEDERS									
good	97	9.08	8.75-9.50		9.50				
800-1,000 fair	6	8.50	8.25-9.00		9.00				
HOGS									
selects	5,794	16.00	15.75-16.25		16.25	790	16.27	15.85-16.40	
heavies	85	15.80	15.75-16.25		16.25	63	15.99	15.75-16.25	
(fed and watered) lights	299	15.00	14.75-15.25		15.25	129	15.99	15.75-16.25	
stags	5	11.10	10.75-11.25		11.25	1	11.00	11.00	
sows	146	13.06	12.75-13.25		13.25	139	13.22	12.75-13.50	
SHEEP									
heavy	22	7.91	7.00-8.50		8.50	37	9.26	9.00-9.50	
light	386	9.04	8.50-9.50		9.50	30	9.75	9.50-10.25	
common	125	6.44	6.00-7.50		7.50	103	8.74	8.50-9.00	
LAMBS									
good	1,256	15.67	15.00-16.05		16.25	112	9.11	8.00-10.00	
common	354	14.74	14.00-15.50		15.50	233	7.00	6.00-8.00	

*Quotations per head.

per hundred, and the bulk was weighed up at this figure. On Tuesday \$15.75 was the prevailing price for selects, and on the following day the bulk sold at the same level although \$16.00 was paid for several loads, but on Thursday \$15.75 was about the highest price paid. A further decline of from 25 to 50 cents is predicted for next week.

Of the disposition of live stock from the Union Stock Yards for the week ending July 12th, Canadian packinghouses purchased 607 calves, 89 butcher bulls, 149 heavy steers, 3,286 butcher cattle, 9,200 hogs, and 796 sheep and lambs. Local butchers bought 239 calves, 332 butcher cattle, 196 hogs, and 218 sheep. Shipments back to country points totalled 39 stocker calves, 62 milch cows, 276 stockers, and 29 feeders. Shipments to United States' points were made up of 180 calves, 60 butcher cattle, and 30 stockers.

The total receipts of live stock from January 1st to July 12th, inclusive, were 121,130 cattle, 29,345 calves, 17,434 sheep, and 257,775 hogs; compared to 128,027 cattle, 26,652 calves, 23,077 sheep, and 231,925 hogs, received during the corresponding period of 1916.

Montreal.

Although there were few choice butcher

cattle offered during the week, the average quality of the receipts was slightly better than for a few weeks past. This was particularly true of the offerings at the East End market, where several loads of steers averaging 1,050 to 1,200 pounds, from the district west of Ottawa and a few loads from Western Canada, were on sale. Such cattle sold generally from \$10 to \$10.50 per hundred, with a few small lots above the latter figure. Butcher cows brought from \$7 to \$8.25. Choice bulls sold up to \$10.25, but the majority of sales were made at from \$8 to \$8.75. A few bologna bulls are coming in and brought from \$6 to \$7 per hundred. Canners are scarce and in good demand at unchanged prices. Sheep and lambs are arriving in greater numbers and hold about steady. The hog market was unsteady all week. Prices on Monday ranged from \$16.50 to \$16.75, off cars, for selects. Tuesday and Wednesday sales were made at from \$16 to \$16.50 off cars. Only one load was received on Thursday, and this had been contracted for previously at \$16.60, off cars.

PT. ST. CHARLES.—Of the disposition of live stock from Pt. St. Charles Yards for the week ending July 12, Canadian packers and local butchers purchased 1,150 calves, 85 canners and cutters, 126 bulls, 846 butcher cattle, 1,839 hogs, 228 sheep

and 280 lambs. Shipments back to country points were made up of 43 stockers. Shipments to United States' points totalled 462 calves.

The total receipts of live stock from January 1st to July 12th inclusive, were 19,463 cattle, 40,020 calves, 6,973 sheep and 36,864 hogs; compared to 21,897 cattle, 29,662 calves, 9,461 sheep and 49,772 hogs, received during the corresponding period of 1916.

EAST END.—Of the disposition from the East End Yards for the week ending July 12th, Canadian packers and local butchers purchased 897 calves, 1,426 butcher cattle, 1,080 hogs and 669 sheep. Shipments to United States' points totalled 215 calves.

The total receipts of live stock from January 1st to July 12th inclusive, were 19,237 cattle, 31,382 calves, 7,450 sheep and 23,640 hogs; compared to 17,574 cattle, 29,814 calves, 10,449 sheep and 29,817 hogs, received during the corresponding period of 1916.

Winnipeg.

With light receipts over the week end, the market for butcher cattle was slow on Monday, but was followed by heavier offerings and an active trade during the remainder of the week. Very few dry-fed steers were on the market, but the grass

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cattle on sale showed more quality than previously and met with an improved demand. One choice heavy steer brought \$10.50 per hundred, but the larger proportion of this class sold at \$8.50 to \$9 per hundred. Female classes of butcher cattle were slower at slightly reduced prices. The highest for butcher heifers was \$9.75 per hundred, the bulk of the sales being made between \$7.50 and \$8.50. Good cows sold from \$7 to \$8 per hundred, and good springers were in demand. Good quality oxen held steady all week, but the common kind sold at reduced prices. Butcher bulls were also lower in price during the week. The run of calves was light but prices were 50 cents per hundred lower than the top of the previous week, the best veal calves selling at \$12 per hundred, with the bulk of the sales being made between \$10 to \$11. There was a large movement of stocker and feeder cattle from the market to the country during the week, the number being in the neighborhood of eleven hundred. Quotations on this class showed a reduction of 25 cents per hundred, the bulk of the offerings bringing from \$6.50 to \$7.25.

Sheep and lamb receipts were light and in good demand. Good lambs sold at \$12 per hundred, and good sheep around \$8.

Although the receipts of hogs were nine hundred head fewer than those of the previous week, prices declined 65 cents per hundred, the market opening on Friday at \$15.15 for selects and closing on Thursday at \$14.50. A large number of hogs were purchased on the market during the week for shipment east. Heavy hogs sold at \$12 per hundred, lights at \$13.50, sows at \$11, and stags at \$10.

Of the disposition of live stock from the Yards for the week ending July 12th, Canadian packing houses purchased 48 calves, 916 butcher cattle, 6,245 hogs, and 25 sheep. Local butchers bought 54 calves, 311 butcher cattle, 190 hogs and 51 sheep. Shipments back to the country were made up of 12 stocker calves, 772 stockers, 164 feeders and 184 hogs. Shipments to United States' points totalled 404 butcher cattle, 64 stockers and 54 feeders.

The total receipts of live stock marketed from January 1st to July 12th inclusive, were 55,325 cattle, 3,272 calves, 1,135 sheep and 155,063 hogs; compared to 30,807 cattle, 4,286 calves, 2,053 sheep and 195,429 hogs, received during the corresponding period of 1916.

Buffalo Markets.

Cattle.—Trade last week, notwithstanding the good supply, was generally higher. Buffalo's receipts on Monday totalled 170 loads, close to 40 cars of which were Canadians, and market on all good fat grades was 15 to 25 cents higher than the week previous. Medium kinds were strong to a dime higher, and common kinds ruled about steady. About twenty-five loads were shipping steers, twenty loads of which came out of Canada, and the bulk of these were sold by nine o'clock. Nothing strictly dry-fed was included and while no native brought above \$13.40, had a real ripe kind been here they would have sold close to \$14.00. Best Canadians, grass steers from \$12.65 to \$13.00, medium kinds, weighing from 1,150 to 1,250 pounds, ranged from \$11.50 to \$12.50 and plainer lots went downward from \$11.25. Top for handy steers

was \$12.00, medium grades took the range of \$10.25 to \$11.25 and common kinds went from \$10.00 down. On females market was strong to a quarter higher, advance being on the better kinds, bulls were up 15 to 25 cents, stockers and feeders, while no higher, met with a more active demand and the fresh cow and springer trade ruled strong. Receipts the past week 4,800 head, week previous 4,750 head, and same week a year ago 4,525 head. Quotations:

Shipping Steers.—Choice to prime natives, \$13.25 to \$13.75; fair to good, \$12.25 to \$13.00; plain, \$11.00 to \$11.50; very coarse and common, \$10.50 to \$10.75; best grass Canadians, \$12.65 to \$13.00; fair to good, \$11.50 to \$12.50; common and plain, \$10.50 to \$11.00.

Butchering Steers.—Choice heavy, \$11.50 to \$12.00; fair to good, \$10.50 to \$11.25; best handy, \$11.00 to \$11.50; light and common, \$9.00 to \$9.50; yearlings, choice to prime, \$12.00 to \$13.00; fair to good, \$11.00 to \$11.75.

Cows and Heifers.—Best heavy heifers, \$10.00 to \$11.00; best butchering heifers, \$9.00 to \$10.00; fair butchering heifers, \$8.00 to \$8.75; light and common, \$7.25 to \$7.75; very fancy fat cows, \$9.50 to \$10.00; best heavy fat cows, \$8.50 to \$9.00; good butchering cows, \$7.25 to \$8.00; medium to fair, \$6.50 to \$7.00; cutters, \$6.25 to \$6.50; canners, \$5.00 to \$5.50.

Bulls.—Best heavy, \$9.00 to \$9.50; good butchering, \$8.00 to \$8.75. Stockers and Feeders.—Best feeders, \$8.00 to \$8.50; common to fair, \$7.00 to \$7.50; best stockers, \$7.25 to \$8.00; common to good, \$6.50 to \$7.00.

Milchers and Springers.—Good to best, in small lots, \$90.00 to \$115.00; in car loads, \$75.00 to \$85.00; medium to fair, in small lots, \$60.00 to \$70.00; in car loads, \$55.00 to \$60.00; common, \$40.00 to \$50.00.

Hogs.—Prices showed a steady decline last week. On the opening day the top was \$16.00 but bulk sold at \$15.80 to \$15.90. Tuesday showed a \$16.00 top, with majority \$15.80 to \$15.85, and a decline of five to ten cents was noted the next three days. Friday the top dropped to \$15.80, with bulk selling from \$15.55 to \$15.65. Pigs the first half of the week sold mostly at \$15.25, and the next two days they were a quarter lower, buyers landing these weights on Friday down to \$14.75. Roughs brought from \$13.75 to \$14.00, and stags \$13.75 down. For the past week receipts were 18,500 head, as against 18,750 head for the week before and 24,600 head for the same week a year ago.

Sheep and Lambs.—Last week started with top lambs selling from \$15.50 to \$16.00 and the next three days no sales were made above \$15.50. Friday's market was a little stronger, top being \$15.75, and culls went from \$13.00 down. Top for yearlings was \$13.00, wether sheep are quotable around \$10.00 and \$10.25, and ewes downward from \$9.50, heavy fat ones selling down to \$8.50. Receipts last week were 1,600 head, the week previous there were 2,255 head for the same week a year ago the run totalled 3,500 head.

Calves.—Supply the past week aggregated 2,700 head, as compared with 2,997 head for the week before and 2,150 head for the corresponding week a year ago. Monday's trade was active, top veals selling mostly at \$15.75, and culls around \$14.50. The next three days, however, the market was dull and tops were hard to land above \$15.00. Friday's market was stronger, choice lots going mostly at \$15.50, and the cull range was from \$14.00 down. Weighty rough calves undersold the good handy culls by from \$2.00 to \$3.00 per cwt., and they were slow sale at that.

Toronto Produce.**Breadstuffs.**

Receipts of live stock at Union Stock Yards, West Toronto, Monday, July 23, were 208 cars, 4,240 cattle, 245 calves, 630 hogs and 933 sheep and lambs. Slow, draggy market. Butchers fifty cents lower; cows, bulls, stockers and feeders 25 to 40 cents lower. Lambs, one dollar and fifty cents lower, sheep and calves 25 cents lower. Hogs steady, packers quote fifty cents lower balance of week.

Wheat.—Ontario, according to freights; No. 2 winter, per car lot, \$2.45 to \$2.50; No. 3 winter, per car lot, \$2.43 to \$2.48. Manitoba wheat (track, bay ports)—No. 1 northern, \$2.63½; No. 2 northern, \$2.60½.

American Corn.—(Track, Toronto), No. 3 yellow, \$2.08, nominal.

Flour.—Ontario, winter \$10.55 to \$10.65, in bags, track, Toronto. Manitoba flour—first patents, in jute bags, \$12.90; second patents, \$12.40; strong, bakers', \$12.

Hay and Millfeed.

Hay, extra No. 2, per ton, \$12 to \$12.50; mixed, per ton, \$9 to \$11.

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

Bran.—Per ton, \$35; shorts, \$40 to \$41; middlings, per ton, \$44 to \$45; feed flour, per bag, \$3.25.

Hides and Wool.

Prices delivered, Toronto:

City hides.—City butcher hides, green flats, 22c.; calf skins, green, flat, 27c.; veal kip, 22c.; horse hides, city take-off, \$6 to \$7; city lamb skins, shearlings and pelts, 60c. to 90c.; sheep, \$2.50 to \$3.50.

Country Markets.—Beef hides, flat, cured, 20c. to 21c.; deacons, or bob calf, \$1.75 to \$2.50 each; horse hides, country take-off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2 to \$2.50. Horse hair, farmers' stock, \$37.

Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solid, in barrels, No. 1, 12c. to 16c.; cakes, No. 1, 15c. to 17c.

Wool.—Unwashed fleece wool, as to quality, fine, 58c.; coarse, 56c. Washed wool, fine, 70c.; coarse, 65c.

Country Produce.

Butter.—Butter remained stationary in price with a weaker tendency. Creamery, fresh-made pound squares, 37c. to 38c. per lb.; creamery solids, 36c. to 37c. per lb.; dairy, 30c. to 32c. per lb.; separator dairy, 33c. per lb.

Eggs.—Eggs are quite scarce and advanced in price, selling at 39c. per dozen wholesale, and are likely to still further advance.

Beans.—The bean market is very quiet at practically unchanged prices—selling at \$9.50 to \$10.50 per bushel, wholesale.

Poultry.—Poultry kept about stationary in price, bringing as follows: Live-weight prices: spring chickens, 20c. to 22c. per lb.; spring ducks, 15c. per lb.; roosters, 14c. per lb.; light fowl, 16c. per lb.; heavy fowl, 19c. per lb.; turkeys, 18c. per lb.; squabs, dressed, \$3.50 to \$4 per dozen.

Cheese.—Old, 30c. per lb.; new, 23c. per lb.; new twins, 23½c. per lb.

Wholesale Fruits and Vegetables.

Apples came in pretty freely during the past week and were a good sale, Red Astrachan selling at \$2.50 to \$3 per hamper, and Yellow Transparents at \$3 per hamper.

Bananas arrived in larger quantities and declined in price—now selling at \$3 to \$3.25 per bunch.

Blueberries.—The first blueberries for season came in last week, selling at \$2 to \$2.25 per 11-qt. basket.

Cherries.—Sweet cherries were scarce especially the choice ones. Blacks selling at 90c. to \$1.50 per 6-qt. basket; \$1.25 to \$2.50 per 11-qt. basket; whites, 50c. to 75c. per 6-qt. basket, 75c. to \$1.50 per 11-qt. basket; sour, 40c. to 60c. per 6 qts., and 85c. to \$1.25 per 11 qts.

Currants.—Both black and red currants arrived for the first time this season. The blacks were of fine quality and sold at \$1.15 per 6-qt. basket, while the reds were rather small and sold at 40c. to 60c. per 6-qt. basket.

Gooseberries arrived fairly freely and varied greatly in size and price, selling at 30c. to 75c. per 6-qt. basket, and 60c. to \$1.25 and \$1.50 per 11-qt. basket.

Lemons kept firm; Californias selling at \$3.75 to \$6 per case, and Verdillis at \$6 per case.

Oranges were a little easier, ranging from \$4 to \$4.75 per case.

Raspberries began to come in, and were of choice quality, easily selling at 25c. per box.

Strawberry shipments were not nearly heavy enough to satisfy the demand, the price advancing steadily until they reached 17c. per box; the bulk, however, sold at 15c. per box, with some going at 13c.

Tomatoes.—Outside-grown Canadian tomatoes came in in increasing quantities and sold at 85c. to \$1.25 per 6-qt. basket and \$2 to \$2.50 per 11-qt. basket; No. 1 hot house selling at 22c. to 25c. per lb., and No. 2's at 20c. per lb.; while imported outside-grown sold at \$1.75 to \$2.25 per 4-basket carrier.

Watermelons came in very freely and declined in price, selling at 30c. to 75c. each.

Beet shipments were exceptionally heavy—the bulk selling at 15c. to 20c. per dozen bunches; a few extra choice bringing 30c. per dozen bunches.

Beans.—Both wax and green beans came in for the first time this season, and shipments increased rapidly, selling at \$1.25 to \$1.50 per 11-qt. basket.

Cabbage declined, the crates selling at \$2.75 to \$3.25 and bushel hampers at \$1 to \$1.25.

Carrots have been very small and sold at 10c. to 20c. per dozen bunches.

Cauliflower shipments increased, and they were of very good quality, selling at \$2 to \$2.25 per case, and \$1 to \$1.50 per dozen.

Celery.—New celery arrived from Kalamazoo and sold at 40c. to 50c. per dozen bunches.

Cucumbers kept firm in price, and there was a keen demand and not too heavy a supply. The Leamington hot house selling at \$1.50 to \$2 per 11-qt. basket. The first outside-grown (Canadian) bringing \$1.35 to \$1.50 per 11-qt. basket.

Canadian Mushrooms of fine quality also were received and sold quickly at 75c. per lb.

Peas.—Green peas after coming in quite heavily and selling at 40c. per 11-qt. basket eased off somewhat, the price advancing to 60c. to 75c. per 11-qt. basket.

Peppers.—Canadian green peppers continued to come in in small lots, selling at 85c. to \$1 per 6-qt. basket and \$1.50 to \$1.75 per 11-qts.

New potatoes came in freely, declining in price, No. 1's selling at \$6 to \$6.50 per bbl., and No. 2's at \$5 per bbl.

Vegetable marrow made its initial appearance, selling at 65c. to 75c. per 11-qt. basket.

Montreal Produce.

Dressed Hogs.—Dressed hogs changed hands steadily and prices ranged around 23½c. per lb. for choice, abattoir, fresh-killed.

Potatoes.—Practically everywhere new potatoes are being served instead of old stock, in spite of the fact that the new brings a higher price. In fact, the old stock is now practically exhausted and consumers have no use for it anyway. The new stock is all imported and is selling at varying prices, according to receipts. The price was said to be around \$6.50 per bbl. of about 165 lbs. of potatoes.

Honey and Maple Syrup.—The supply of old honey is running low and no trade is going on in it. Nominal prices were around 15c. per lb. for white clover comb, 13c. for white extracted or brown comb, and around 11c. for buckwheat honey. The demand for maple syrup was not at all active, but prices were steady, being \$1.65 per gallon tin for choicest syrup and from that to \$1.55 for good quality and \$1.30 for lower grades. Sugar is 15c. per lb.

Eggs.—The market for eggs showed additional strength last week, more especially in the case of select stock, but also in the ordinary. This strength was doubtless due to the lighter arrivals, and to the increasing scarcity of select stock during the present hot, muggy weather. Select, new-laid were quoted at 42c. per doz.; selects, 40c.; No. 1 candled, 37c.; No. 2, 35c.

Butter.—Although there is little export and the present make of butter is not particularly desirable for storage purposes, everything offered is being quickly taken up at firm prices. Finest quality was quoted at 36c. to 36½c. per lb., while fine creamery was quoted at 1c. less. Dairies ranged from 29c. to 31c. per lb., for good to finest grades, while lower grades sold down to 27c.

Cheese.—Cheese sold at a decline at country points last week, being around 20½c. locally, the prices ranged around 21½c. per lb., for No. 1 cheese and 21¼c. for No. 2, while No. 3 was 20¾c., here, with lower grades selling at 20¼c.

Grain.—The market for wheat was quite strong. Some feed barley sold at \$1.25 per bushel. No. 2 Canadian Western oats were 81½c. per bushel, while No. 3 and extra No. 1 feed sold at 80½c. No. 2 American yellow corn was nominally \$2.06 per bushel, ex-store. Beans were very scarce and prices were as high as \$9.50 per bushel for Canadian 5-lb. pickers; Rangoons being \$9, yellow eyes \$8 and Japans \$7.50.

Flour.—The market was very firm in sympathy with the advance in wheat and prices were up about 50c. per bbl.

Continued on page 1209

Alleged Profits of The William Davies Company in 1916 on Bacon, as Indicated by Department of Labor to be Five Cents per Pound, Untrue:

ACTUAL PROFITS TWO - THIRDS OF A CENT PER POUND

THE statement issued by the Department of Labor concerning the business of The William Davies Company Limited has been given widespread circulation throughout the country and provoked public unrest.

Whatever the technical wording of the report was, the effect has been that the newspapers have published that "the profits on Bacon alone" of this Company "for 1916" were about "five millions of dollars." This interpretation of the official report is not surprising in view of certain statements that the Commissioner of the Cost of Living makes. The Commissioner is reported as saying that "There were two individual cases of profiteering in 1916 and that had these cases occurred since the passage of the cost of living Order-In-Council, he would consider it his duty to recommend that the facts be laid before the

Attorney-General for consideration as to their criminality." The situation created by such erroneous and damaging statements is serious as emanating from a Government official, from whom one looks for not only accurate statements but correct conclusions.

The William Davies Company, being a private concern, has followed the practice of all private corporations, except when it made a bond issue in 1911, in that it has not published reports of its assets and liabilities or profit and loss. The present circumstance, however, in which a Government Official has led the public to false conclusions, makes it advisable for this Company, for both the public interest and its own interest, to publish particulars of its business as well as point out the error of the statement of the Government Official.

For the last fiscal year ending March 27th, 1917, The William Davies Company bought and killed 1,043,000 head of Live Stock (Cattle, Hogs and Sheep). This, plus purchases of outside Meats, produced 160,000,000 pounds of Meats. The Company handled 6,550,000 pounds of Butter and Cheese, 5,650,000 dozens of Eggs, and manufactured 26,500,000 tins of Canned Goods.

The net profits on these were .68 cents (or two-thirds of a cent) per pound on meats, 1.04 cents on Butter and Cheese, 1.04 cents per dozen on Eggs, and .47 cents (or slightly less than one-half a cent) per tin on Canned Goods. These profits include profits on all By-Products derived from these accounts.

During the year the Company served at its retail stores 7,500,000 customers, the average purchase of each customer was 35c., and the net profit upon each sale was $\frac{5}{8}$ of one cent.

The turnover of the Company from all its operations for the last fiscal year ending March 27th, 1917, was \$40,000,000. The net percentage of profit upon this turnover, after

deducting war tax, was 1.69 per cent., or including war tax 3.45 per cent.

The William Davies Company has assets of \$13,385,000, of which \$3,865,000 is tied up in fixed investments.

To provide the necessary facilities for the increased volume of business the Company expended \$750,000 in buildings and equipment during the year.

Companies of other character present no more reasonable statement of profit and loss based upon the investments made in the business.

The William Davies Company offered to the Imperial authorities, as well as to the War Office Service (which represents the Imperial authorities in Canada) to place the output of its Factory with respect to Bacon supplies, Canned Beef and Pork and Beans at the service of the authorities, on the basis of cost plus an agreed percentage. These offers were successively declined, as the authorities evidently desired to purchase in the open market, and on this basis The William Davies Company has secured War Office business by open competition with the world.

(Continued on next page)

(Continued from preceding page)

Respecting the Report of the Commissioner on the Cost of Living:

Last Winter the Commissioner, under authority of Order-in-Council, required packers to submit statements under oath for some years back and up to December 1st, 1916, of incoming stocks of Meats and the cost of such, as well as statements of outgoing product and the selling value. This Company represented in writing at the time that the information as specifically required was not in accordance with Packing House Accounting methods, and invited the Commissioner to send an Officer to the Head Office of the Company to examine the books for any information desired, and to secure a viewpoint as to the best way of collecting data which would be of use to the Government. This offer was declined, and there was nothing to do but fill in the information required as literally as we could determine it. For example, there was no recognition of the fact that a raw product may enter a factory under a specific classification and leave the factory as a finished product under some other classification.

We submitted a series of accurate figures based upon our interpretation of the official requirements which made no provision for charges of any description other than incoming freight and unloading charges to be included in the cost or to be deducted from the selling price. There was nothing in the report which could be read so as to determine a profit and loss statement. The very fact that with only a statement based upon cost of raw products and value of sales in Great Britain a Government Official has deduced "Large margins," "Profiteering" and "Criminality" if it had occurred since the passage of a recent Act, shows too dangerous a trifling and incapacity to be permitted to deal with any important situation. The statements of this Company have been treated by the author of this report as if the outgoing product was identical with the incoming product, and from the series of reports he has singled out two items—the Bacon and Egg reports—and from them deduced an erroneous "margin" which the newspapers have interpreted as "profit." The author of the inquiry shows a strange lack of even a fundamental knowledge of simple bookkeeping and a dangerous inability to co-ordinate figures. The following are specific and outstanding errors in the report:

The principal item that is causing excitement deals with cold storage Bacon. The term "cold storage" is not defined, and the public is allowed to make its own definitions. As all Bacon in a packing house is under refrigeration it is really all cold-storage, and therefore this Company's figures of cold-storage Bacon represent the complete quantity of Bacon handled in its entire Plant, whether in freezers or in process of cure for im-

mediate shipment. That some Companies interpreted cold-storage product as "freezer" product only is evidenced by the smallness or entire lack of figures on the Bacon list for some Plants, indicating that many Firms did not submit statements of their complete stocks, as did this Company. An Official of this Company pointed out this cold-storage distinction to Mr. O'Connor and Miss McKenna in Ottawa a few weeks ago, and the failure to make the distinction after having had it pointed out, evidences lack of desire for accuracy of the real information desired.

It is true The William Davies Company, in 1916, exported 97,791,000 pounds of Bacon, but we do not know how the margin of 5.05 cents per pound is arrived at by Mr. O'Connor, as there were no figures to justify such a conclusion. The probabilities are that the margin is arrived at by taking the average cost per pound of incoming product from the average selling price per pound of outgoing product. This may be a rough way of estimating the gross margin when dealing with small figures, but when dealing with figures the size that Mr. O'Connor has to deal with, a very small fraction of a cent per pound of error makes a very important difference in the total, and one must be careful to make sure that the outgoing product is the same finished merchandise of the incoming product reported on.

Allowing it to pass, however, as a rough estimate, we wish to point out—(first)—the inquiry of the Commissioner allowed only for incoming freight and unloading charges, and made no provision whatsoever for operating charges of any kind, such as labor, curing materials, refrigeration, et cetera. Such actual charges on the 97,791,000 pounds exported were \$1,162,000—or 1.2 cents per pound. This amount covered all charges up to the point of placing the Bacon on cars f.o.b. packing-house. In addition to this was the actual cost to land and sell this 97,791,000 pounds in England after leaving the packing house, which involved charges of 2.9 cents per pound—or \$2,836,000. This 2.9 cents per pound included inland and ocean freight, landing charges, war and marine insurance, cables, and selling commission to agents. The ocean freight and war risk alone would make up 2.4 cents of the charge of 2.9 cents per pound. This 1.2 cents, plus 2.9 cents—a total of 4.1 cents—must be deducted from Mr. O'Connor's margin of 5.05 cents per pound, leaving a margin of .95 cents, or slightly less than a cent per pound, which still has to be reduced because of the error of premises and because of further factors which have to be considered to determine net profits.

It is quite evident some of the other packers did not show selling values in the country in which

the goods were sold—a proceeding quite proper, as the forms submitted to be filled in were indefinite and ambiguous, thus permitting without charge of evasion a variety of interpretation as to the information required. It is thus possible that of all the figures submitted by the different packers that no two sets of costs and sales prices are determined at the same common point. It is this difference of interpretation of what was required that accounts for the difference of the alleged "margin" made by the different companies. Common conclusions, however, have been drawn by the author of the report from varying bases of premises.

The figures of the Egg business were submitted on the same basis as Bacon, and similar deductions must be made.

(Second)—The above margin is further reduced in that the author of this inquiry singled out the Bacon figures as an item in which the selling price shows an alleged improper advance over cost, but he did not give us credit for the statements of other products, of which figures were submitted, the selling prices of which were under cost. The reason of this was through failure to inquire the Department entirely overlooked the fact that product may come in as pork and, through the process of manufacture, go out as Bacon, or, in another instance, enter the factory as beef and go out in the form of canned meats; for example: much of the product which came in as pork, and which was entered on the pork sheet submitted to the Commissioner—about which he makes no mention—was cured and left the factory in the form of Bacon, and was, therefore, entered on the outgoing side of the Bacon sheet—the result is that the Bacon sales are increased by this amount over the incoming stocks of Bacon, and, likewise, the sheet showing sales of pork is reduced by the amount that went out in the form of Bacon. If the Department takes one set of figures that show favorable to the Company they should take another set of figures that show unfavorable, as the principle in either case is the same, and failure to do so looks as if the author of the report was exercising more enthusiasm than sound judgment in his investigations.

(Third)—It is queried in the report, that "if the margin of 3.47 cents," alleged to have been made in 1915, "was satisfactory, why was it necessary to show increased margin in 1916?" Assuming again for the moment the soundness of the premises in asking such a question based on an erroneous "margin," it will be found that the increased margin is chiefly absorbed in increased ocean freight rates and war risk insurance in 1916, of which apparently the author of the report was in ignorance.

The Company does not challenge either the legal or moral right of the Government to investigate business when public interest directs such an investigation should be made. If an investigation of the packing and meat business is ordered, the Company will place at the disposal of the Government not only the data it would be required to supply under Order-in-Council directing that inquiry be made, but will place the experience of its officers at the disposal of the investigating committee, if it is considered they can render any service which will be of value. The Company has not now—nor at any time during the fifty years of its operation—anything to conceal in method or practice of carrying on its business. It does, however, claim the right to conduct its export business without abusive comment from Government civil servants—especially when the conclusions drawn from the data asked for are improper and false.

One of Canada's chief export industries is the packing business. It is essential to the live-stock industry, and, along with other export industries, it maintains the financial stability of this country and should, providing it is on a sound basis, receive encouragement and not slanderous abuse. In view of the publicity given to the report of the Commissioner on the cost of living, the Company demands the same publicity in having an official Government investigation of this report to determine the truthfulness or untruthfulness of its conclusions. We do not seek public consideration as a company, but we do say that untruthful official statements, or statements the effect of which is to create an untruth, adversely affect the live-stock

industry of this country, which is so valuable and essential a wealth-producing power and, in the long run, are harmful to the very people that the statement seeks to benefit.

If the passing out of existence of a corporation such as The William Davies Company, or if nationalization of packing houses would materially and permanently reduce food prices, then in view of the present world tragedy it ought to be consummated without delay. The fact of the matter is, however, that with millions of people in Europe turning from producers into consumers because of war, and the tremendous destruction of food products incident to war, there is no remedy for the high prices of food while such conditions last, except the remedy of thrift and increase of production.

Long before there was talk of a Food Controller in the United States or Canada The William Davies Company urged the Government at Ottawa, in writing, to appoint a Food Controller with full power to do what he saw fit, as we realized at that time the upward tendency in the price of food commodities unless checked by official effort. At the most a great deal cannot be done in reducing food prices while currency is inflated and until the scale of prices of all kinds of commodities declines also. What can be done can only be done by a Food Controller. We wish to point out that nothing at all can be accomplished unless the data secured are accurately and clearly made and the deductions therefrom sound. Only public harm arises from dangerous incompetency in the haphazard collection and careless use of important figures.

As far as The William Davies Company is concerned, this terminates all public statements of the Company, and it will pay no more attention to speculative and haphazard statements made either by newspapers or civil servants. The only further statement that will be made will be at an official investigation.

E. C. FOX, General Manager

THE WILLIAM DAVIES COMPANY, LIMITED

Toronto, July 17th, 1917

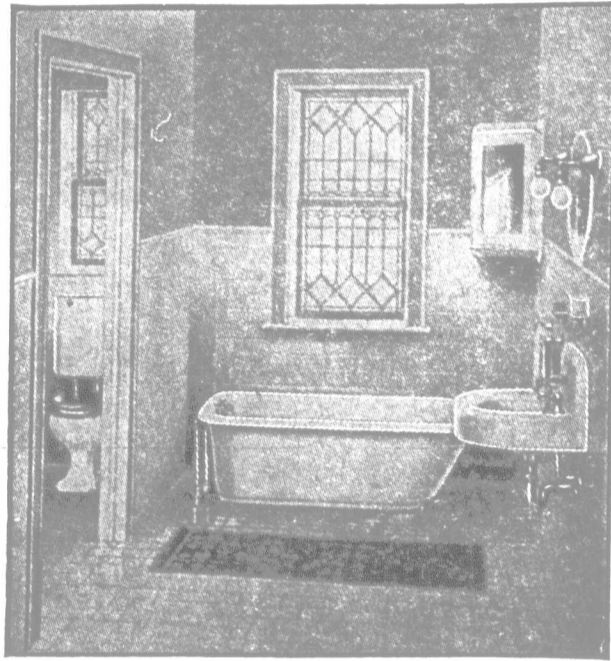
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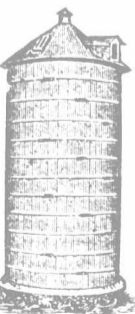
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up with wings as eagles; they shall run, and not be weary; they shall walk, and not faint."

The great hope of restoration is held out to us by prophets and apostles, and by Him Who is the Word of God. Over and over again the question of discouraged souls receives the same answer. We can tread hopelessness under our feet, saying with the buoyancy of faith: "Why art thou cast down, O my soul? and why art thou disquieted within me? hope in God: for I shall yet praise Him, who is the health of my countenance, and my God." That is the great refrain of the Psalmist. That is the reason so many Psalms begin sorrowfully and end joyfully.

When winter lays its icy grip upon the land the leaves and flowers wither and fall. But are we discouraged? Why, of course not! Winter won't last forever, and we look forward to the renewal of spring.

When a long, hard day is drawing to its close you may declare that you are "ready to drop"; but morning—with its gift of renewed strength—will come in good time.

"Why worry?" may be slang, but it is commonsense. The sun goes down and all is dark. Yes, but look to the east and watch for the glory of dawn.

After years of terrible drought Elijah sent his servant to look toward the sea. He looked and said sadly: "There is nothing."

"Go again seven times!" was the resolute answer of the prophet, who was hopefully waiting upon God. He prayed on, until a tiny cloud appeared in the sky. Then he knew the end of famine was near.

Do you feel discouraged because you have prayed and prayed, yet the war goes on? Our Lord has told us that men ought always to pray, and not to faint.

The men who succeed are the men who "carry on," refusing to own themselves beaten. Clarence Hawkes—the blind American author—is a born fighter. He had made up his mind to be an author, and he sent off his manuscripts to publisher after publisher, never allowing a rejected manuscript to lie over-night on his desk. One of his poems was returned seventeen times—yet at last it became a great favorite. When he got down-hearted he looked away from his own troubles, and found inspiration in the thought of others who had fought their way through defeat to victory. In the dark he could see people like Helen Keller, who—as he declared: "has contributed more to the world's courage and heroism than a whole regiment of soldiers," and Fanny Crosby—the blind hymn-writer—"for over ninety years in total darkness, who went on singing her songs of Faith and Glory."

Clarence Hawkes knows well that no one can carry a heavy load in his own strength. Every day he looks to God for courage, and every day the power of God is his strength. He has even made this surprising statement: "I can truly say that blindness has been a blessing to me, although the trail has been dark and the way long."

There is a marvellous Fatherliness in the heart of God. He never fails to give the warmest of welcomes to each brokenhearted prodigal son, who—when all earthly hopes have failed—seeks the Love he has long despised. The prodigal is astonished to find himself warmly loved and welcomed when at last he turns to his Father. In that Father's arms he renews his strength for the battle against sin. Despair fades, like the darkest hour before the dawn, when a man can say:

"This only have I felt, Christ's hand in mine."
Sometimes, when bodily strength is ebbing fast, new life is poured into the veins through that mysterious operation known as "transfusion of blood." The life of one man becomes the life of another. This is a parable, a type of the great spiritual reality—Christ's Life in us. We are branches, grafted into the True Vine, and His life must flow in and through us if we are to be fruit-bearing branches.

There is a story told of two wounded soldiers in a French hospital. One man had lost much blood, and the only hope of saving his life was this operation of transfusion. The other soldier—a Breton said: "Take my blood for the comrade!"

The operation was successful and both men were steadily recovering. Some Red Cross workers, having found out that the Breton was a married man with a family of several children, made up

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a purse of five hundred francs. The money was offered to him as a token of admiration for his devotion to his comrade.

The Breton was poor, and he was also grateful for the kindness shown him; but he pushed the gift aside. "I must tell you how I feel," he said: "I gave my blood. I did not sell it."

How many, in this time of danger and of heroism, have given their lives for others. They "gave"—they could not "sell"—their lifeblood. That is not for sale—how could any sum repay one for a life? One who lays down his life for his friend—or for his enemy—has placed his great treasure fearlessly and trustfully in the hand of God. It is safe there. Such a life is not "lost" but found. God is keeping it, above all keeping, and He will restore it glorified.

"Therefore doth my Father love me, because I lay down my life, that I might take it again," said the Leader of men exultantly, as He went forward to meet death. He did not sell His young life, but "gave" it freely to save the world. "No man taketh it from me," He said, "but I lay it down of myself. I have power to lay it down, and I have power to take it again."

He was young and full of the joy of life; and He was facing torture and scorn,—the scourge, the spitting, the dreadful cross,—yet He had joy and peace to use and to give away in overflowing measure. Death is a temporal thing, but life is eternal. He was not afraid to die; for He knew that on the other side of the last enemy new life awaited Him.

Despair in the great failure to be fought down. Those who wait on the Lord shall renew their strength. This life of difficulty is only the schooltime—only our childhood in which we prepare for the greater work ahead. These dark days are leading on to new light.

"In the fading of the starlight we may see the coming morn; And the lights of men are paling in the splendors of the dawn; For the eastern skies are glowing with light of hidden fire, And the hearts of men are stirring with the throbs of deep desire."

HOPE.

Gifts for the Needy.

Four readers have this week placed "gifts for the needy" in my hands for distribution. "Margaret", "Fanny D." and "Isabelle" sent one dollar each; and two dollars from "Ray" arrived to-day.

Some of this money has already been spent and the rest is waiting its mission—shut up securely in the "Quiet Hour purse". Probably it will not have to wait long. Heartiest thanks to the givers!

HOPE.

Canning Vegetables.

The directions for canning green peas, "greens", and young carrots, which are being given by the experts sent out by the Department of Agriculture are substantially as follows:

- (1) Use new rubber rings, and have jars perfectly sterilized. Do not use a dishcloth about jars after the final scalding.
- (2) "Blanch" the vegetables by pouring boiling water over and leaving for 5 to 10 minutes. Drain and cover with cold water. Drain again.
- (3) Pack vegetables tight in jars, fill with water, put on tops loosely and boil in boiler from 20 to 30 minutes.
- (4) Remove jars and screw down tops. Leave until next day.
- (5) Loosen tops and boil again for 20 to 30 minutes the second day. Screw down and leave over night as before.
- (6) Repeat process the third day. Before last boiling a teaspoon of salt may be placed on top of each jar. Let cool, and store in a cool, dark place. Before the final screwing down it may be necessary to fill up some of the jars from one kept for the purpose, or simply with boiling water.

Next week this subject will be given more attention in a report of a Demonstration on Canning given by one of the demonstrators sent out by the Department of Agriculture.

"What does your son expect to be?"
"From the hours he keeps, I should say he is naturally cut out to be a milkman."

Any farmer or dairyman ought to just about double his profits, by carrying out the hints given in our book about

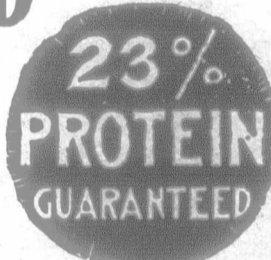
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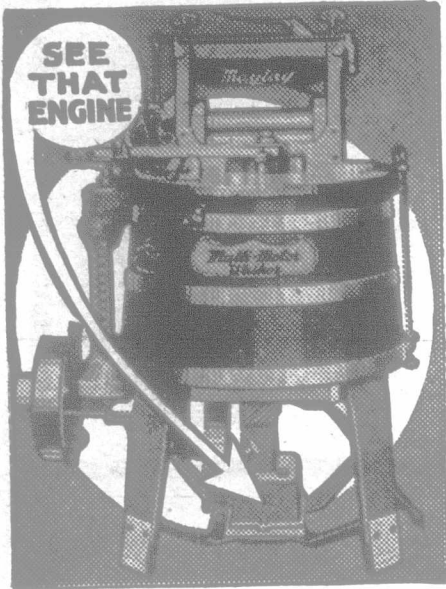
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[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to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

The 16th of July, as I write, and the sun shining! People are exclaiming over that as though it were a novelty, as, indeed, it is to some extent, for one could count on one's fingers all the really bright days we have had since spring.

Somewhere the poet Lowell speaks of:
 "A dull and drizzling day,
 That makes us bitter at our neighbor's sins".

I rather suspect that when he wrote the lines there was a twinkle in his eye—that he was enjoying to the full his sly poke at human "wobbliness" of temper,—but at the same time it must be acknowledged that there must be some touch of truth in the observation else it would lack the element that makes it humorous. There really are some people who are influenced to such an extent by weepy weather that when the sun refuses to shine they are out of tune with all creation and ready to take the head off everyone in sight. What a time these people must have had this season! What a chance for the condition to become chronic! And the worst of it is that yesterday was St. Swithin's day—and it rained, an occurrence that is said to presage more or less rain every day for the next forty days. It will be interesting to watch whether it falls so this year.

Do you know the story of St. Swithin? He was the bishop of Winchester and patron saint of Winchester Cathedral in the good old days of England, and was for some time tutor to the sons of King Egbert. He was famed as a man of great piety, and so great was his humility that he made his diocesan journeys always on foot. Whenever he gave a banquet, too, it was the poor and not the rich whom he invited. When he died, in July 862, he gave orders that he was not to be buried within the church, but outside in "a vile and unworthy place." A hundred years later when an attempt was made to move his body from this place to a new basilica, there came a tremendous downpour of rain, and legend grew about the occurrence extending the time to forty days. Hence the doggerel:

"St. Swithin's day if thou dost rain
 For forty days it will remain;
 St. Swithin's day if thou be fair
 For forty days 'twill rain na mair".

Yes, yesterday was St. Swithin's day, but to-day the sky is blue, so we may hope that the old saint has forgotten the time-honored custom. A year ago the country was parched with heat, and the wheat was shrivelling up in its sheaths for want of moisture; if the skies are clear for a time this year may be the better of the two. Certainly the grain is not suffering for food, and the only real complaints come from some of the flat lands where the hay is said to be rotting and the crops have been drowned out by lying water.

In the meantime, as the harvest days draw near, we wait almost breathlessly, for this year it is so necessary that the foodstuffs of the world receive no check. Only one good could possibly come from a shortage this season—the likelihood that if the world were on the edge of famine the death blow would have to be given to the wastage of good grain in the manufacture of alcoholic drink. That has not been done yet to any sweeping extent in Great Britain, nor in some parts of Canada, and, while the United States seems on the verge of passing a prohibitory law in regard to most liquors, an exception of beer is likely to be made. A very silly excuse in regard to the latter was made recently by one of the opponents of prohibition in the United States, viz., that if grain were not made into spirituous liquor there would be a shortage of brewers' grains to feed to cattle. Surely it does not require very deep logic to conclude that if grain must be fed to cattle it is better to give them the grain fresh from the field, rather than the soaked fermented, tampered-with product of

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International Louse Killer



Large Packages sold in 25c. and 50c. sizes.

The annual decrease in the number of eggs laid by hens in Canada that can be blamed solely on lice, is enormous. Lice play havoc with your poultry, and with horses, hogs and cattle. They destroy little chicks, prevent hens from laying, carry disease, and ruin the flock.

Dealers everywhere sell International Louse Killer, a very fine white powder that will stay in the feathers, and is sure death to lice.

Sold by dealers everywhere. If your dealer cannot supply you, write us, including 15c. extra postage per package.

INTERNATIONAL STOCK FOOD CO., LTD., TORONTO, CANADA.



Artillery Horses Wanted

Age 6 to 9 years, height 15.2 to 16 hands, weight 1,200 to 1,350 pounds and 1,500 pounds and stand 16.1 hands.

COLORS

Any except light grey, white or light buckskin. All horses must be sound, of good conformation, free from blemishes, and broken to harness or saddle.

INSPECTION POINTS AS ARRANGED BY THE COMMITTEE:—

TORONTO: Burns' repository every Monday; Union Stock Yards every Tuesday; McGregors, Hayden Street, every Wednesday.
LONDON: July 26th and alternate Thursdays. Apply to James McCartney.
BRAMPTON: July 19 and alternate Thursdays. Apply to E. J. Jones.
PETERBOROUGH: July 20th and alternate Fridays. Apply to L. Green.
ST. MARY'S: July 27th and alternate Fridays. Apply to H. M. Robinson, Toronto.
COMMITTEE:—E. C. H. Tisdale, Beaverton; Wm. Smith M.P., Columbus; Robert Graham, Toronto; E. J. Jones, Brampton; C.F. Bailey, Assistant Deputy Minister of Agriculture; H. S. Arkell, Acting Live Stock Commissioner, Ottawa; Lt. Col. G. A. Carruthers, Montreal; H. M. Robinson, Sec., 883 Broadview Ave., Toronto.



ALMA LADIES' COLLEGE OPENS ITS THIRTY-7TH YEAR ON SEPTEMBER SEVENTEEN: NINETEEN HUNDRED & SEVENTEEN

Thorough courses in Music, Art, Oratory, High School, Business College, Domestic Science and Superior Physical Training.

FOR TERMS, ADDRESS:
R. I. WARNER, M.A., D.D., President, St. Thomas, Ontario 31

ONTARIO LADIES' COLLEGE WHITBY, ONT.

Healthful, picturesque location 30 miles from Toronto. Academic Courses from Preparatory Work to Junior Matriculation, Teachers' Certificates and First Year University; Music, Art, Oratory, Domestic Science; Social Economics and Civics; Commercial Work; Physical Training—gymnasium, swimming pool, etc. Calendar from Rev. F. L. Farewell, B.A., Principal, Whitby, Ontario.

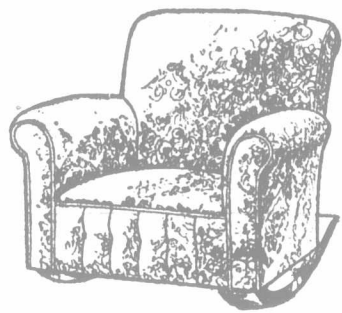


The Peerless Perfection Fence
 Divides your stock and they stay where you put them. The fence that serves you for all time. Can't rust, sag or break down. Stands any weather. Each joint securely held with the Peerless lock, all parts heavily galvanized, the strongest, most serviceable farm fence made and fully guaranteed.
SEND FOR CATALOG of all kinds of fencing for farms, ranches, parks, cemeteries, lawns, poultry yards, ornamental fencing and gates. See the Peerless line at your local dealers. Agents wanted in open territory.
THE BANWELL-HOXIE WIRE FENCE COMPANY, Ltd.
 Winnipeg, Manitoba Hamilton, Ontario

When writing please mention Farmer's Advocate

HORSE OWNERS! USE

GOMBAULT'S CAUSTIC BALSAM.
 A safe, speedy and positive cure. The safest, Best ELIXIR ever used. Removes all bunches from Horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.
 THE LAWRENCE-WILLIAMS CO., Toronto, Canada

Burroughes' August Furniture Sale

Commences August 1st and continues until the end of the month. Easy terms for all.

Send for Special August Sale Catalogue Sheet

A collection of real bargains for out-of-town shoppers only. Profusely illustrated. Special prices for August only. Send to-day.

Very Easy Terms Without Interest

Terms easier than ever throughout August. Every home should have this list of high-grade values.

BURROUGHES
 TORONTO, ONT.

POULTRY AND EGGS

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

RINGLET BARRED ROCKS—PUREBRED, trap-nested, heavy winter layers, beauty and utility combined; setting \$1.50; 100% fertility guaranteed. Book order now. Particulars, F. Coldham, Barriefield, Kingston, Ont.

WANTED

COOK; HOUSEKEEPER; FOR COUNTRY residence, close to Toronto. Apply Mrs. Jos. Kilgour, Eglinton, Ont.

FARM FOR SALE ON TOWN-LINE, between Brock and Mariposa, near Cannington, 155 acres, choice clay loam, never-failing stream. Brick dwelling, 2 story, 22x32—16x44; bank barn, 56x112, as good as new. All modern conveniences. Implement house, 22x100. A rare chance to get a good home and money-making farm on a leading road. H. C. Shipman, Cannington.

FARMERS URGENTLY REQUIRING HELP, single or married couples, wire, Sares. State wages. Men want sixty dollars per month and women want thirty-five. Toronto Engineering Agency, 57 Queen St. W., Toronto.

WANTED, POSITION AS SHORTHORN herdsman or farm manager by experienced farmer. (married). Box 73 Collingwood, Ontario.

METALLIC SKYLIGHTS & VENTILATORS
 METALLIC ROOFING CO. LIMITED
 TORONTO, CANADA.

the breweries.—And in the meantime the efficiency of the people will be preserved. Sobriety means efficiency—drink means inefficiency. And if ever there was a time when every atom of efficiency must be conserved for the use of the world, and when children should be born free from the taint of alcoholism, surely that time is now.

Blueberries.

Dear Junia.—Will you please give in your column some methods of preserving blueberries, besides canning and jam. I live in a great wild country where there seems no limit to the quantity of blueberries and all of excellent quality.

And will you also tell me if there is any method of preserving mountain ash berries? There is a great quantity of them here. One time I did up about two quarts and someone told me they were poisonous, so I have never used them. I sampled them quite freely in the process of preserving and did not feel any ill effect. There are also Saskatoon berries here and high bush cranberries in abundance. I will appreciate any help you can give me for it seems such a pity to see so much wild fruit and I have often thought it must be some good.

And now just one more request. How long can clover and timothy seed be kept without losing its germinating power? Perhaps some day I can do something in return.

"ONE WHO WOULD LIKE TO KNOW," Algoma, Ont.

I really do not know of any way of doing up blueberries besides canning, and making into preserves, jelly and jam. Huckleberries may be kept in "black strap" syrup, just put in raw, the syrup being drained off before the berries are used, so I should suppose blueberries could be done in the same way. You might try a jar to see.

Mountain ash berries are not poisonous, but surely they are rather bitter for preserving, are they not? Or did you put them through some process to remove the bitterness?

Saskatoons make perfectly delicious preserves. High-bush cranberries present some difficulty because of their flat seeds, but these may be removed by stewing the fruit then pressing it through a colander, the sugar to be added afterwards. The cranberries may also be kept until spring in a small keg or tub of water which is let freeze. The berries may be chopped out at any time and the ice thawed away.

If perfectly dry and kept covered in a perfectly dry place, so that no moisture can be absorbed from the air, clover and timothy seed will keep good for a year or two. Do not risk it longer.

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 July 13th to July 20th: Mrs. John Knister, Ruscomb Ont., (for French Red Cross), \$1.00; Howard Gardiner, R. 2, Newbury, Ont., \$2.50; Fletcher Buckland, R. 2, Warton, Ont., \$2.00; Wm. Chatwell, Bass Creek, Ont., \$1.00; Fred Moody, Big Lake, Ont., \$1.00; W. J. Moody, Big Lake, Ont., \$1.00; Morley Hanbridge, R. 1, Dobbinton, Ont., \$1.00.

Previously acknowledged.....\$4,790.90

Total to July 20.....\$4,800.40

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

Re Belgium Relief.

In thanking the many friends who have by their gifts through the Dollar Chain helped Mrs. Boomer to forward to the National Committee for Relief in Belgium no less than eleven remittances of £50 each. She asks space for the following message condensed from the formal notice which she has received from Mr. W. A. M. Goode, the Honorary Secretary.

In view of the fact that the United States Government has generously assumed all financial responsibility for the work of the Commission for Relief in Belgium, it has been decided that the National Committee for Relief in Belgium will suspend its appeals to the public in the British Empire. Any moneys received after June 1st will be held to provide for emergencies now unforeseen in connection with relief in Belgium. During the existence

of the committee over £2,400,000, subscribed throughout the British Empire for the relief of our oppressed Allies in Belgium, has passed through its hands.

Mr. Goode says: "I am sure you will join with us in satisfaction at the action of the United States Government in taking over this great responsibility but, at the same time, I hope that if unforeseen emergencies arise, (as they surely will) we may once more depend upon you for further generous assistance."

In compliance with this Mrs. Boomer will be glad to take charge of any donations for this emergency fund which sympathizers may entrust to her care for the sufferers in Belgium.

Current Events.

Premier Borden will appoint an officer to conduct a judicial inquiry into the findings in the O'Connor food report.

Greece has severed relations with the Central Powers, and is now definitely on the side of the Allies.

Kerensky has been made Premier of Russia.

Baron Rhondda, British Food Controller, has announced a substantial cut in the prices of bread and meat in Great Britain.

The Government of Russia may be removed from Petrograd to Moscow.

Chancellor Michaelis said in the Reichstag that Germany will now rely chiefly upon the fleet and the submarines to obtain the conditions upon which Germany can demand peace.

Russia admits a reverse in Galicia, due to lack of unanimity in the spirit of the troops. Because of this Kalucz was lost, but an attempt is being made to regain it. In the West very fierce fighting is taking place between the French and Germans along the plateau near Craonne, north of the Aisne; at time of going to press all the crest positions remain in possession of the French.

Canadian troops are now reported to be fighting in the streets of Lens, while British troops have made a slight advance near Monchy-le-Preux. During the past week the heaviest air-fighting in the history of the war took place along the British lines.

Some significant changes have taken place in the British Cabinet. Sir Edward Carson has resigned as First Lord of the Admiralty, and has been succeeded by Sir Eric Campbell Geddes. Winston Churchill succeeds Dr. Christopher Addison as Minister of Munitions, and Rt. Hon. E. S. Montagu succeeds Austen Chamberlain as Secretary for India.

Markets

Continued from page 1202

Manitoba first patents were \$13, seconds being \$12.50, and strong bakers', \$12.30. Ontarios were still steady at \$12 to \$12.30 per bbl., and \$5.75 per bag, but higher prices seem imminent.

Millfeed.—The market was stronger. Bran was up to \$35 per ton, and shorts to \$40. Middlings were quoted at \$41, mixed mouille at \$44 and pure grain mouille at \$48.

Hay.—A large crop is practically assured and prices were about steady at \$11 to \$11.50 per ton for No. 2, with No. 3 at \$9 to \$9.50. Quotations were largely nominal.

Hides.—Lamb skins advanced to 90c. each, the market being very strong. Calf skins were up 2c. per lb., at 38c. and 40c., while beef hides were steady at 27c., 26c. and 25c. per lb. Horse hides were steady at \$7 each. Rough tallow was 3c. to 6c. per lb. and rendered 11c. to 13c. per lb.

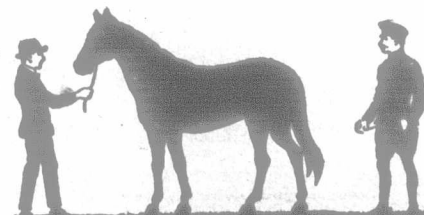
Cheese Markets.

Cowansville, Que., 20 1/2c.; St. Hyacinthe, Que., 20 1/2c.; London, 20 1/2c.; Vankleek Hill, 20 1/2c.; Belleville, 20 15-16 and 21c.; Mont Joli, Que., 20 1/2c.; Montreal, finest westerns, 21 1/2c.; finest easterns, 21 1/2c.; New York, specials, 22 1/2c. to 23c.; average run, 22c. to 22 1/2c.

Chicago.

Cattle.—Beeves, \$8.40 to \$14.05; western steers, \$8.65 to \$11.60; stockers and feeders, \$6.35 to \$9.40; cows and heifers, \$5.50 to \$12; calves, \$10 to \$14.75.

Hogs.—Light, \$14.10 to \$15.30; mixed, \$14.05 to \$15.55; heavy, \$14 to



Join the Government's Thrift Campaign Make Your Horses Sound

Thousands of Farmers have done so. They have treated lame, limping, broken-down horses with

KENDALL'S SPAVIN CURE

and made them strong and healthy. Perhaps you have a horse, crippled with Spavin, Curb, Ringbone, Thoropin, Bony Growth, Swelling, Sprain, Strain or Lameness? Or, you may know of one that can be bought cheap?

Join the Government's thrift campaign—get Kendall's Spavin Cure, the old reliable remedy—and put the lame horse back to work, or in condition to sell for the top price.

Sold by druggists everywhere, \$1 a bottle, 6 for \$5. Also ask for copy of our book, "A Treatise on the Horse", or write us.

Dr. B. J. KENDALL CO. Enosburg Falls VERMONT - U. S. A. 125

Heaves

AND HOW TO CURE —A Standard treatment with years of success back of it to guarantee results is

Fleming's Tonic Heave Remedy Use it on any case—No matter what else has been tried—and if three boxes fail to relieve, we will refund full amount paid. Further details in

Fleming's Vest Pocket Veterinary Adviser Write us for a Free Copy

BEST EVER USED Dear Sirs:—Enclosed find \$1.00 for 1 package of Tonic Heave Remedy. I used a package last year and completely cured a case of Heaves of some 8 years' standing.

H. B. BURKHOLDER, Lillooet, B.C. Per Box, \$1.00; 3 for \$2.50 FLEMING BROS., Chemists 75 Church St. Toronto

BEEKEEPER'S SUPPLIES

HIVES · FRAMES FOUNDATIONS · ETC. THE TILLSON COMPANY, LTD. TILLSONBURG, ONT.

LYING GRAIN LIFTER



Patent No. 167260 Write for full particulars, Mr. Farmer. You cannot afford to harvest your crop without this attachment, as it is no experiment, it has proven satisfactory in every way. Write to-day for full particulars.

DICK AGRICULTURE WORKS T. A. DICK, Manager, Bolton, Ontario

\$15.65; rough, \$14 to \$14.25; pigs, \$11.25 to \$14.50.

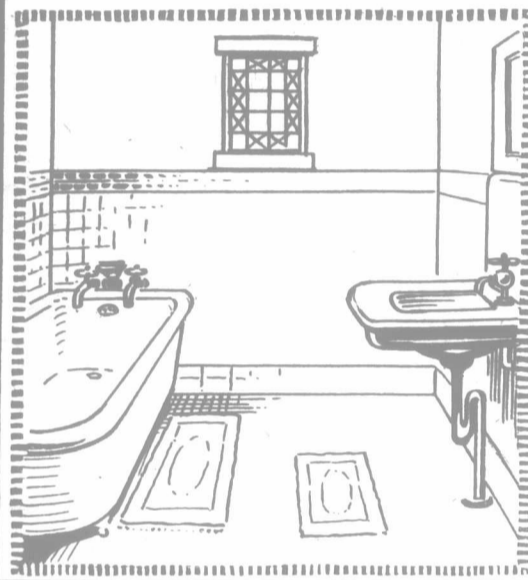
Sheep.—Lambs, native, \$10 to \$16.

SOMETHING FOR NOTHING The Breezes Will Keep Your Home Supplied With Running Water FREE

IF a great electric company offered you free power for all time for pumping water, would you accept? You will install the necessary electric motor, pump and plumbing, and count yourself fortunate. You are fortunate. Nature has provided you with ample power, properly harnessed, to give you running water in every room you desire it.

TORONTO Water Systems

With a Toronto Pressure Tank, a few hours' breeze will give you a day's supply of water. Turn on any tap and get city pressure, with force enough to send a stream of water through a hose over your house—first-rate fire protection. At a moderate cost and free power you get a city waterworks in your home.



Fit Up Your Bathroom with Modern Fixtures

A bathtub like this makes bathing a luxury. A modern basin like this is a convenience that you will appreciate, many times a day. Take full advantage of the new power, and install these modern conveniences at the same time you put in the windmill.

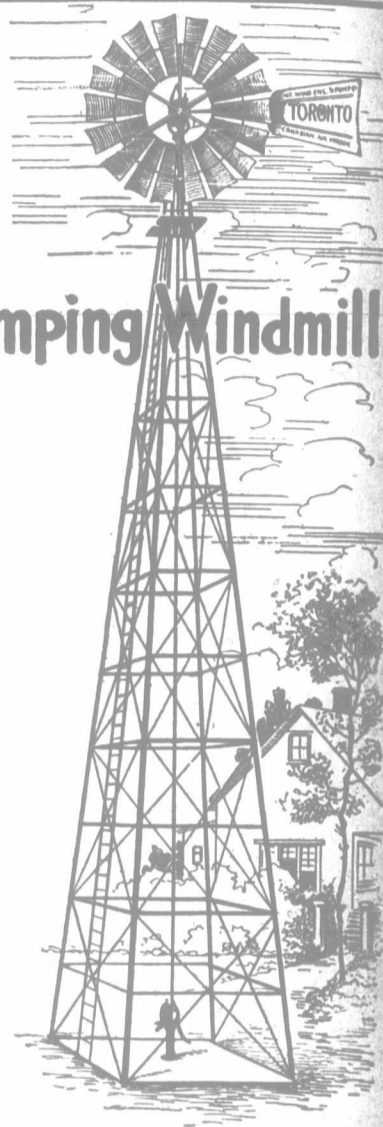
TORONTO Pumping Windmill

Our windmill is the most efficient and satisfactory means yet devised for utilizing this power. From foundation to fan tips, it is sturdy enough to stand up to any gale that blows—yet is scientifically built, so that it will work in the lightest breezes which couldn't turn other mills. Used with a Toronto Water System, the wind may blow but an hour or so a day, but you will never have to resort to the pump handle.

WRITE TO-DAY FOR THE CATALOGUE

While you have the matter on your mind, drop us a line asking for the booklet of information on Toronto Windmills. Address:

Ontario Wind Engine & Pump Company, Limited
 Toronto, Ontario
 Montreal Winnipeg Regina



Antidotes For Poisons.

The most common poisons used about the farm at this time of the year are those contained in the common insecticides and fungicides. Below are the commonly prescribed antidotes for such poisons:

- First.**—Send for a physician.
- Second.**—Induce vomiting (except in cases where caustics have been swallowed) by tickling throat with finger, or drinking hot water or strong mustard and water. Soap suds is commonly effective as is also common salt. After vomiting give sweet oil (olive oil, cottonseed oil), and then,
- Third.**—Apply the appropriate antidote, if the kind of poison is known, as follows:—

- Carbolic acid, creosote, lice killer, etc:** Give Epsom salts (magnesian sulphate), or Glauber salts (sodium sulphate), one ounce to a pint of water; then induce vomiting if possible or use the stomach tube and give olive oil or milk. Use alcohol, then water, for external burns. Diluted alcohol may be used internally if the salts cannot be had.
- Copper.**—(In Paris green, copper sulphate, blue vitrol or bluestone, Bordeaux mixture): Treat same as in case of arsenic.
- Copperas.**—(Ferrous sulphate, green vitrol): Strong tea, soapsuds.
- Lead.**—(In lead arsenate, sugar of lead): Treat same as in case of arsenic. Epsom salts is also effective.

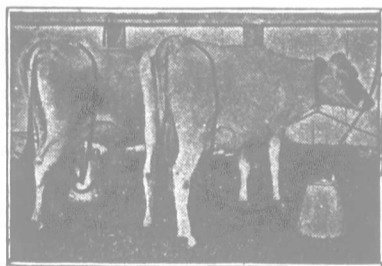
Trade Topic.

A Big Fair for Ottawa.

The Central Canada Exhibition Association will spend \$10,000 in improvements in anticipation of the biggest fair in the history of the Association. Buildings and extension to Lansdowne Park will be commenced at once and all will be in readiness for the big fair to commence Sept. 8 and run smoothly until Sept. 17. In addition to many other new attractions and features an Inter-County Live Stock Judging Competition will be put on with prizes of \$2,000 offered. This is open to farmers' sons in the Ottawa Valley who are not graduates of an agricultural college or school. A bacon hog

With HINMAN Equipment

HINMAN
THE UNIVERSAL MILKER



it is EASY to get along with less hired help, and yet escape the drudgery that drives boys away from dairy farms.

Think of the time lost milking during harvest!

SAVE two-thirds of this valuable time by using a

HINMAN MILKER

It enables one man to do three men's work.

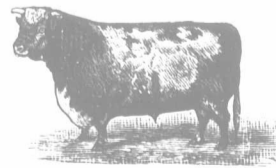
Write for FREE Milker Book "H."

H. F. BAILEY & SON, GALT, ONTARIO

Stewart's Magic Fly Chaser



Is without an equal in the market. The safest, most lasting and reliable preparation to combat attacks of the pestilential fly, which causes live stock owners serious loss in the productiveness of their animals.



\$1.50 per gallon, F.O.B. Toronto

5% discount on 6-gallon orders.

10% discount on orders of 12 gallons or more.

Send money order.

DR. J. G. STEWART, V. S. Toronto, Canada

contest will attract a number of young men. Special attractions, war trophies, horse races and the destruction of Kuel-Amara will interest all. Remember the dates—Sept. 8 to 17—Ottawa Fair.

Questions and Answers. Veterinary.

Diarrhoea.

Cow has taken diarrhoea. She has high fever and lies down and grunts. What is the cause and cure?

Ans.—It is caused by food or water of poor quality, or by some irritant in the fodder. Treatment consists in removing the cause. Feed on food of first-class quality. In the early stages, while the patient is still strong it is good practice to give 1 to 1½ pints of raw linseed oil and in 24 hours commence to give drugs to check the diarrhoea, as 2 oz. laudanum and ½ oz. each of catechu and prepared chalk in a pint of water as a drench every 5 hours until diarrhoea ceases. In the meantime add to her drinking water ¼ of its bulk of lime water. In cases where the patient is weak, omit the oil.

Fatality in Pigs.

I turned 14 three-months-old pigs into a field of alsike clover. The second day I found one dead, and the third day two more were found dead. They were all bloated. I removed them from the field and have had no more trouble.

H. C. F.

Ans.—The sudden change of food caused acute indigestion, which resulted in death. Alsike frequently causes trouble in pigs, probably it contains some ingredient that acts somewhat as a poison, when the clover is eaten in larger quantities at first. In most cases where the clover is allowed use only very small quantities the first day, a little more the following day, etc., by which means the system gradually becomes accustomed to it. It can, after a few days be allowed in unlimited quantities, but many think that alsike, under any condition, is not safe for pigs.

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CENTRAL CANADA EXHIBITION

Ottawa, Sept. 8th to 17th, 1917

\$25,000 In Prizes for Live Stock
New York Hippodrome, Vaudeville Acts, Balloon Ascensions, Aviator. \$9,000 for Horse Racing. Pure Food Show. Gov't Exhibits. Dog Show.
NIGHT SHOW—Magnificent Spectacle and Fireworks. British advance in Mesopotamia—Destruction of the Forts at Kut-El-Amara.
Entries Close August 31st. Reduced Railway Rates.
Stewart McClenaghan, President.
J. K. Paisley, Mgr. & Sec'y.

Alloway Lodge Stock Farm

Angus—Southdowns—Collies
SHOW FLOCKS

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

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

Kennelworth Farm Aberdeen-Angus

At special prices, six young bulls sired by Victor of Glencairn. All are of serviceable age, and show individuals.

PETER A. THOMSON, Hillsburg, Ont.

BEAVER HILL ABERDEEN-ANGUS AND OXFORD-DOWN SHEEP

Cows with calf at foot and bred again. Shearling rams and ram lambs.

One Ayrshire bull calf for sale.

Alex McKinney, R. R. No 1, Erin, Ontario.

BALMEDI ABERDEEN-ANGUS

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

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

PLASTER HILL HERD

DUAL-PURPOSE SHORTHORNS
A few choice bull calves coming on; also a few heifers in calf to Butterfly Champion 110726.

F. Martindale & Son, Caledonia, Ont. R. R. 3

WANTED A number of pure-bred dual-purpose Shorthorn females with high records. State in first letter, pedigree, price, full information and give photo of each animal. Harvey Daw, R. No. 1, Glanford Station, Ont. (Maple View Stock Farm)

Clontarf Farm MANNING W. DOHERTY Established 1820

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.

Bell Telephone HILLSDALE FARM Farm, 3 1/4 miles east of Ottawa

B. ROTHWELL

BREEDER OF HIGH-CLASS CLYDESDALES R. R. No. 1, OTTAWA, ONT.

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

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 a moderate price and I PAY THE FREIGHT.

Business established 81 Years Robert Miller - Stouffville, Ont. One hour from Toronto

MEADOW LAWN SHORTHORNS

We are offering 3 extra choice Scotch bulls, belonging to the Claret and Roan Lady families. Low set, thick, fleshy fellows by that great sire, Escana Ringleader, first-prize bull at Toronto and London Fairs. Write your wants or come and see them. F. W. EWING, R. R. No. 1, Elora, Ont.

THE MANOR STOCK FARM---SHORTHORNS

Two young red bulls (June and July), a Wimple and a Julia. Would buy a few females of good families

JOHN T. GIBSON, DENFIELD, ONT.

Shorthorns, Shrops., Clydesdales

Wm. D. Dyer, R. No. 3, Oshawa, Ont.

Brooklin, G. T. R. and C. N. R.; Myrtle, C. P. R.

Welland District Shorthorn Breeders' Club

are still offering young bulls of serviceable age, and a few breeding females.

Chas. Gainer, Secretary, Box 607, Welland, Ont. A. E. Howell, President, Fenwick, 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, whose dam is a heavy milker. For prices and particulars address:

THE SECRETARY, GEO. L. TELFER, R. R. 2, PARIS, ONTARIO

NICHOLSON'S SHORTHORNS

Herd headed by "Best Boy" =85552=, and "Browndale Winner" =106217=. Bulls and females for sale. Visitors always welcome to this herd of long-established reputation.

R. & S. NICHOLSON PARKHILL, R. NO. 2, ONTARIO

Pleasant Valley Farms

Offers for sale, (Imp.) Loyal Scot, conceded to be one of the best stock bulls in the country. Also good young bulls and females with the best of individual merit and breeding. Inspection invited.

Geo. Amos & Sons, Farm 11 miles east of Guelph, C.P.R. Moffat, Ontario

Questions and Answers. Miscellaneous.

Seeding Low Land.

Is alsike and timothy good seeding for a piece of land that is rather wet? Y. F.

Ans.—The two crops mentioned prove very satisfactory. Alsike does better than other clovers on rather low land; in fact, that is where it makes abundant growth. If seeding to a permanent pasture a little red top might also be added.

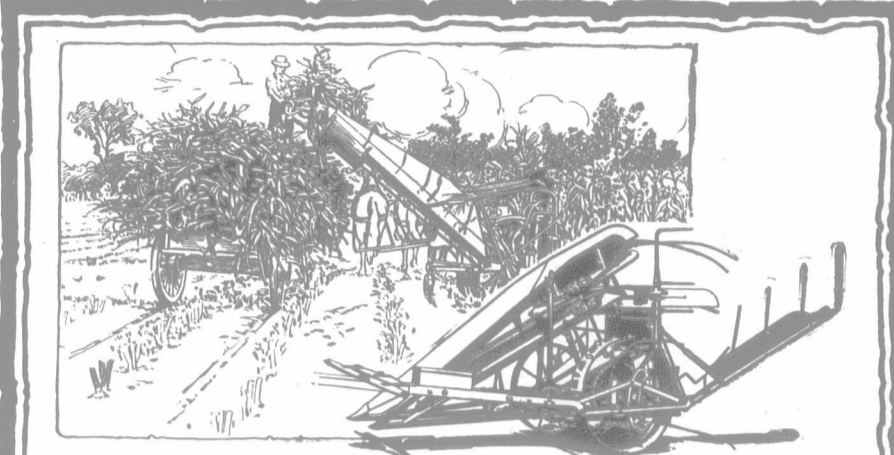
Four-horse Hitch.

1. What is the proper kind of a double-tree to use to work four horses on a two-furrow plow so that none of the horses will walk on the plowed ground?

2. Is there any penalty for people making a noise on the road when they do no harm and are not intoxicated? C. M. A.

Ans.—1. It is very difficult to get a four-horse attachment for a small plow that will allow the off horse to walk in the furrow. The long doubletree with a two-horse doubletree on each end is the only practical method of hitching four horses so that each will have the same draft. By having a wide head-clevis on the plow it is possible to move the hitching clevis over far enough so that the off horse will not be forced to walk on plowed ground. However, there is likely to be a side draft. It is difficult to overcome it where only ten or eleven-inch furrows are turned. If your two-furrow plow turns a fourteen or sixteen-inch furrow this style of four-horse attachment will work satisfactorily. Rather than have the off horse walk on the soft ground, we have seen one team driven ahead of the other. By having the reins adjusted properly one man can drive two teams tandem and manage the plow.

2. A person can be held liable if he knowingly creates a noise or racket which disturbs the peace of the community.



More Corn Money—Less Work

FROM every corn field two crops can be harvested—one of grain and one of hay. The usual practice is to harvest the grain only, and waste the hay. The value of the wasted hay (stover) is estimated at an average of \$260 a year for every corn-growing farmer.

This is something for farmers to think about and to act upon now. Eighty tons of good palatable roughage blowing away or rotting on almost every 40-acre field of corn is too much to waste this year with hay prices where they are. Harvest your corn with a McCormick Corn Binder and make two savings—one, the fodder which is now going to waste, the other, a big saving of time and money.

Cutting five to seven acres a day with a tractor or horses doing the hard work, and saving the expense and the trouble of getting corn and harvest help, the corn binder is certainly a machine worth having.

Write the nearest branch house for catalogues and get in your order now for a McCormick Corn Binder, so that you can pocket your share of the corn-crop saving.

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WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

FLETCHER'S SHORTHORNS

Our herd of Scotch Shorthorns represents Orange Blossoms, Kilblean Beauties, Matchless, Mysie, Missies, Clementinas, etc., and is headed by the Watt-Stamford bull, Victor Stamford =95959=, a Toronto winner. Present offering—one roan Orange Blossom bull, 12 months old (a show animal) also younger bulls and several choice cows and heifers. Geo. D. Fletcher, Erin, Ont., R. R. 1, Erin Sta., C.P.R., L-D. Phone.

Imported Shorthorns

Thirty-five 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.

SPRUCE GLEN SHORTHORNS

of such popular strains as Minas, Fames, Miss Ramsdens, Florences, Emilys, etc. Have still a few young bulls—thick, mellow fellows, fit for service. JAMES McPHERSON & SONS DUNDALK, ONTARIO

SHORTHORNS

Imported and Canadian bred. A. G. FARROW, Oakville, Ont.

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.

Imported Shorthorns

Cows and heifers in calf or with calves 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.

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, Ont. Myrtle Station, C.P.R. and G.T.R.

OAKLAND---50 SHORTHORNS

A herd of feeders, breeders and milkers that give satisfaction wherever they go. One bull for sale, 12 months, white, extra milk strain. Also females, any age. Priced so you can buy. One of the finest bulls in Ontario heads this herd. JNO. ELDER & SONS, HENSALL, ONTARIO

SALEM SHORTHORNS

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

SHORTHORN CATTLE AND LINCOLN SHEEP

Young cows and heifers of the best Scotch families. Sire in service, Sittytton's Selection =86508= The winning pen of long-wool lambs, all breeds competing, at 1916 Guelph Winter Fair, came from this flock. Imported and home-bred rams and ewes for sale. New importation will arrive in July. R. S. ROBSON & SON, DENFIELD, ONT.

MARDELLA SHORTHORNS

Bulls, females, sires, quality; breeding dual-purpose cattle over 40 years. The Duke—dam gave 13,509 lbs. milk, 474 lbs. butter-fat—at the head. Thomas Graham, Fort Perry, Ont., R.R. No. 3.

Glenfoyle Shorthorns

Present offering—three bulls from 10 to 12 months. Nice, straight, smooth fellows. Prices easy. Stewart M. Graham, Lindsay, Ontario

Bone Spavin

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.*

FLEMING BROS., Chemists
75 Church Street Toronto, Ont.

Cream Wanted

Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

Ontario Creameries, Limited
London, Ontario

CREAM

We are open to buy cream both for churning and table use.

ASK ANY SHIPPER

about our service and prompt returns.

Ask for Prices.

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

The Toronto Creamery Co., Limited
Church Street, Toronto

A Better Separator for Less Money

VIKING

Cream Separators of Quality

HEADQUARTERS FOR
COTTONSEED MEAL

Brands: "American Red Tag," Protein 38½%, Fat 6%. "Surety Brand," Protein 36%, Fat 5.50%. "Creamo Cottonseed Feed Meal, Protein 20 to 25%, Fat 5%.

Mills conveniently located in the south, in every cotton-growing State.

Prices on application, in car lots or less.

Fred. Smith, 32 and 34 Front St. W., Toronto

Manor Farm Holsteins

Those wishing a young sire from high-record dams and sired by King Segis Pontiac Posch, will do well to write for pedigree and prices before buying elsewhere.

SATISFACTION GUARANTEED

Gordon S. Gooderham

CLARKSON ONTARIO

Record Holsteins

We have the only two sons in Canada of the 46-lb. bull, Ormsy Jane King, only mature son of the world's most famous cow. One of them for sale. Also a 30-lb. calf, whose dam and 2 great grandams average 38.4 lbs. butter in 7 days. 11 bull calves of lesser note and females all ages.

R. M. Holtby, R. 4, Port Perry, Ont.

Willowlee Holsteins

A few bulls left 4 months old; dams, 65 lbs. of milk a day. \$50.00, delivered.

A. MIGHT, R.R. No. 6, Brampton, Ontario.

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

Questions and Answers.

Miscellaneous.

Destroying Sucking Insects on Rose Bushes.

1. Our tea-rose bush is in full bud, but is beginning to die before the flowers are fully out. On examining the leaves we find underneath small white flies. They appear to suck the substance out of the leaves and leave them white. We have tried Paris green and water and also coal oil and water without satisfactory results. What is the proper remedy to use?

2. Our turkeys are fairly good sized but are gradually becoming stupid, hang their wings and mope around. They neither pick around nor eat, but stand around with their eyes shut and soon die. It appears to be contagious. They are with a hen and the healthy ones scratch in the garden during the day, while the sick ones hang around the coop. What is the trouble and what cure do you advise? Do you advise feeding chop to young turkeys? Should the hen be taken away from them?

Ans.—1. The insects which are attacking your rose bushes evidently suck the sap from the leaves and stems, and, therefore, must be treated differently from those which eat the leaves. Possibly the best remedy for sucking insects on the rose bushes is a strong solution of tobacco water, or whale-oil soap, which kills the insects because of its caustic nature.

There are also a number of commercial preparations on the market which prove effective. If a little soap had been added to the coal oil and water to make kerosene emulsion it would have proved effective. The proportions of this material are 2 gallons of coal oil, one gallon of rain water and one-half pound of soap. Dissolve the soap in water by slicing and boiling; take from the fire and while hot pour in the coal oil and churn vigorously for five minutes. This is a concentrate solution and when it is to be applied, dilute with nine parts of water. Care must be taken to see that the material is applied to the under side of the leaves where the insects are working. Tobacco water is made by steeping one pound of refuse tobacco in one gallon of water for one hour and apply to the leaves. In making a solution a certain amount of water will evaporate; this should be made up.

2. Part of the symptoms are those of blackhead, a disease which in most cases proves fatal, as treatment of diseased birds is not very effective. Prevention is the best means of saving the flock. The flock must be kept healthy, and it is necessary to put the birds on new ground each year, as the germs of this disease live over in the ground. A post mortem examination of a victim of blackhead will likely show the caeca, or blind pouches at the lower end of the small intestines, to be thickened. The liver becomes enlarged and darkened, with whitish, round spots on its surface. The head usually shows a discoloration and swelling. Starving the birds for forty-eight hours and then letting them drink from a mixture composed of one teaspoonful of muriatic acid to one quart of water has been recommended. Treatment should be given twice a day. The birds which are apparently healthy should be put on fresh ground and carefully looked after. The old birds may have the disease in a light form and be spreaders. Some feed chop quite successfully to young birds; others find that up to the time they go on free range cornmeal bread is very satisfactory; also a loaf made of 2 quarts of shorts, 1 quart of flour, ½ quart of bran, and a teaspoonful of soda, mixed with sour milk and baked is recommended by some poultrymen. Care should be taken not to change from one feed to another too suddenly. When you find that the birds do well on a certain feed, it is advisable to keep them on it. Do not feed young turkeys on the ground. Use a clean board or else feed out of the hand. After the birds are eight weeks old they may be allowed to roam the pasture fields and will require little feed other than some grain at night, which will tend to induce them to return to the home roost. To ascertain definitely whether or not the birds are affected with blackhead, a bird might be sent to the Bacteriological Department, O. A. C., Guelph, for a diagnosis. One harm which the hen could do is the spreading of lice to the young birds. If there are no lice on the hen and the birds are still small, it might be well to leave her with them for a while.

GET THE CREAM

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Standard Hand Separator Oil

is manufactured especially for use with hand separators. It is free from all impurities, will not gum, and serves also to protect the machine from seam rust and corrosion.

Sold in pint, quart, half-gal., gal. and 4-gal. cans. Reliable dealers everywhere.

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BRANCH STATIONS THROUGHOUT CANADA



Important Notice to Breeders of Holsteins

Under the auspices of **The Western Ontario Consignment Sales Company**, there will be held at the **FRASER HOUSE, LONDON, ONT.**, on **WEDNESDAY, OCTOBER 17th, 1917**

a great sale of **PURE-BRED HOLSTEIN CATTLE**. Parties having stock to consign should communicate early with the dairy manager. Entries close **August 15th**. For entry forms apply to **D. CAMPBELL, BOX 3, KOMOKA, ONT. DAIRY MANAGER**

SENSATIONAL OFFERING IN 30-LB. BULLS

We have at present several 30-lb. bred bulls, all nearing serviceable age, that must go out to several of the country's best herds in the near future. They are sired by one of the three sires used in the herd during the past year. Pontiac Korndyke of Het Loo., Avondale Pontiac Echo, or King Segis Alcartra Spofford. Our herd contains more 30-lb. cows than any other herd of equal size in the Dominion. Extended pedigrees mailed on request.

ROYCROFT FARM W. L. Shaw, Prop., NEWMARKET, ONT.

Hospital for Insane--Hamilton, Ont.

Present offerings are 4 grandsons of Dutchland Colantha Sir Mona, and high-testing, large-producing R. of P. dams of Korndyke and Aaggie DeKol breeding. Born during April and May, 1917. Apply to Superintendent.

Sunnybrook Farm Holsteins

SELLING QUICKLY—A limited number of young bulls and heifers from approved cows, testing 18 to 30 lbs. in 7 days, and averaging from 7,000 to 12,000 lbs. milk per annum, sired by Sunnybrook Mercedes Natoye, whose dam is a 29.34-lb. cow, and Count Favorit Sylvia Segis, highly strained in blood of the world's record cow. **DON'T MISS THIS OPPORTUNITY.** Write—

JOS. KILGOUR, Eglinton, Ontario; or Phone Toronto, Belmont 184, Adelaide 3909.

Choice Young Holstein Sires

I am offering a few choice young bulls at bargain prices. These are growthy, healthy, and great individuals. While the bargains last is the time to purchase. Write for prices, extended pedigrees and full information. Kindly give me an idea of the age of the bull that you would require. Correspondence solicited.

Oak Park Stock Farm - R. R. 4, Paris, Ont. - W. G. Bailey

CLOVERLEA HOLSTEIN-FRIESIANS

Stock for sale, all ages, from choice, high-testing dams—75 head to choose from. Our special offering is a few choice heifers, due to freshen in September or October. Personal inspection is invited.

GRIESBACH BROS. L.-D. Phone COLLINGWOOD, ONT.

EVERGREEN STOCK FARM . . . REGISTERED HOLSTEINS

Just now we are offering a very choice young bull, five months old, whose five nearest dams average over 30 lbs. of butter in seven days and 100 lbs. milk in one day. Also another bull calf whose dam was the top-price cow in the Woodstock Sale. Bell phone.

A. E. HULET, Norwich, Ont.

DUMFRIES FARM HOLSTEINS

175 head to choose from. Special offering; bulls from one month to one year old Grandsons of Prince Aaggie Mechthilde. Visitors always welcome.

S. G. & ERLE KITCHEN ST. GEORGE, ONTARIO

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 29¾ 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, ONTARIO.

Riverside Holsteins Herd headed by "King Johanna Pontiac Korndyke", a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 156.82 lbs. milk and 29¾ lbs. butter in 7 days. His ten nearest relatives have official records that average of Canada was bred here. Choice young bulls for sale.

J. W. RICHARDSON, R. R. No. 2, CALEDONIA, ONT.

Questions and Answers.
Miscellaneous.

Stud Fees and Colt Queries.

If A bred a mare to B's horse and A sold the mare to C and A did not pay service could B hold C responsible for service? And if C will not pay could B hold the colt at weaning time?

2. If A bred a mare to B's horse for a galloping colt at 9 days old, and the colt was a little weak at 9 days could B collect for colt when all right?

3. Please tell me what is a galloping colt, one that can stand and walk around?

G. F.

Ans.—1. As a rule the terms printed on stallion bills, etc., state plainly that the man who breeds his mare must pay for service if he disposes of the mare whether she is with foal or not. At any rate under the circumstances given in the question the buyer of the mare is not responsible.

2. Yes.

3. The term "galloping colt" is new to us. No doubt it means a living colt reasonably smart.

Lump on Jaw.

I have a valuable calf which has a thick neck and a small lump about the size of a hen's egg on the jaw. The neck was a little thick when born. The calf has sucked the hind teats of a cow for two months. The cow always stood down in a hole in the stall, which caused a considerable strain on the cords of the neck. The lump does not appear sore, and the calf is doing well. Does this require any special treatment, or will it come all right?

V. B.

Ans.—It is rather difficult to account for the thickening of the neck. You do not state whether the lump was on the jaw when the calf was born, or whether it has developed lately. It may be lump jaw, or it may be a tumor which has developed from a bruise. If the lump does not appear sore nor interfere with the calf's feeding, it might be well to delay operating for a time and bathe with hot water and apply an absorbent liniment. If this does not remove it, the lump may be dissected out if it is not attached to the bone. If attached to the bone the iodide of potassium treatment might be used when the calf got a little older. It would be advisable to have your veterinarian do the work if you decide that an operation is necessary.

Value of Brewers' and Distillers' Grains.

Please state the relative feeding value of the grain refuse from a brewery or distillery and whole grain. R. M. W.

Ans.—It is difficult to compare brewers' and distillers' grains with normal grain pound for pound. The value of these by-products depends largely upon the quantity in the ration. Wet brewers' grains contain about 75 per cent. water, and have slightly over one-fourth the feeding value of an equal weight of dried grains. Owing to their tendency to sour they are also less satisfactory to feed. Owing to their bulky nature dried brewers' grains are not well suited to pigs. They are widely fed to dairy cows and in some cases form a part of the concentrate allowance for horses. Experiments at the New Jersey Station show that where oats were substituted in a mixed grain ration for horses with dried brewers' grains the change produced no ill effects on the horses, and the conclusion was reached that pound for pound good-quality dried brewers' grains were fully equal to oats. With dairy cows where this by-product has formed a part of the ration it has been found equal to wheat bran. Dried brewers' grains have given good results when fed to fattening cattle, but they are seldom used for sheep. Distillers' grains from corn contain from 28 to 32 per cent. crude protein and are, when dried, about equal to gluten feed in feeding value. Dried grains chiefly from rye are of considerably lower value, carrying only about 23 per cent. protein. Not being especially palatable, distillers' grains should be mixed with other concentrates. From two to four pounds per head daily are usually fed to dairy cows and when fed as a part of a ration it has been found equal and in some cases slightly superior to an equal quantity of cornmeal and bran. These grains when dry, meaning distillers' and brewers' grains, should form only a part of a ration and when used thus are in practice about equal to a like amount of millfeeds or chop.

A Warning to Cow - Owners

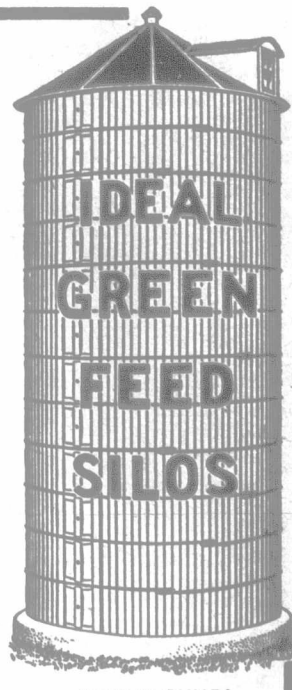
The weeks are slipping by. Summer is here, and fall soon will be.

If you have not yet made plans for a silo, we urge you, in the name of hard, practical common sense, to do so without further delay.

This is no time to waste food or waste money. The man who owns cows and does not own a silo is doing both.

He is spending 15 or 20% more for feed than he needs to, and is getting 25% less milk than he could.

Every farm paper on the continent has been urging its readers to put up silos this year. It is common knowledge among successful dairymen that no other equipment is so necessary to the cow-owner.



MADE IN CANADA

Don't let another winter catch you without an IDEAL GREEN FEED SILO

Make your plans right now to have one ready to receive your crop this fall.

A good silo is the best investment any cow-owner can make, and there are definite reasons why the Ideal is the best silo to buy.

These reasons are fully explained in our silo catalogue. Sit down and write for this catalogue now, before you forget it. There is little time to waste. Freight conditions make silo shipments uncertain, and you will avoid the possibility of delay and inconvenience by ordering your silo now.

THE DE LAVAL COMPANY, Limited

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

MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

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 FARM HOLSTEINS

Present Offering: One bull fit for heavy service, a straight and good individual of richest breeding. Sire's six nearest dams average 30.10 lbs. butter in 7 days; his dam's sire's five nearest relatives average 31.31 lbs. butter in 7 days. Anybody wanting a well bred sire at a moderate price, write at once. J. MOGK & SON, INNERKIP PHONE 1 ON 34, R.R. NO. 1, Tavistock, Ontario.

GLADDEN HILL AYRSHIRES

We are offering some choice young bulls, nine months of age from splendid cows and sired by Fairvue Milkman. A few females also for sale.

Laurie Bros., AGINCOURT, ONTARIO

D. M. WATT

For imported or Canadian-bred Ayrshires, bulls or females, get my prices. My importations win wherever shown. Write me for one animal or a carload. St. Louis Station, Que.

SUNNYSIDE AYRSHIRES

We have at present the strongest lot of young bulls we ever offered—one by Hobland Masterpiece, one by Sunnyside Matchless, and the others by our present herd sire, Sunnyside Masterpiece.

Jno. W. Logan, Howick Station, Que.

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.

JERSEYS FOR SALE

One bull, twelve months, and one bull calf, also yearling heifers and heifer calves, sired by imported bull and from high-testing dams. Write: CHAS. E. ROGERS, INGERSOLL, ONT.

Glencairn Ayrshires

Herd established 40 years. Producing ability from 8,900 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.

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.

THE WOODVIEW FARM JERSEYS

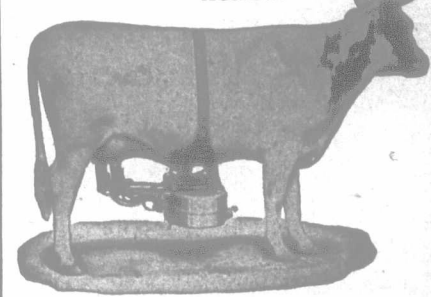
LONDON, ONTARIO
John Pringle, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD The foundation of this herd is made up of very high-class cows, imported from the Island of Jersey, most of them in the Record of Performance, and while we have, at all times, a few mature cows for sale, we make a specialty of in-calf heifers and young bulls. Write us your wants, or better still, come and see the herd. We work our show cows and show our work cows

Young BRAMPTON JERSEYS Bulls

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

OMEGA MILKING MACHINE



MILKS FAST AND CLEAN Has no rubber connections for the milk to pass through, but transparent celluloid tubes. The OMEGA is simple to operate, sanitary, and easily washed. It is used in the private dairy of H. M. King George V., at Windsor Castle. Increased the milk flow 3% in a 17-day test on ten cows at the O. A. C., Guelph. WRITE TO-DAY for FREE BOOKLET. C. RICHARDSON & CO., St. Mary's Ont.

Every farm should have an AYRSHIRE The Cow for Profit WRITE Canadian Ayrshire Breeders' Association W. F. STEPHEN, SECRETARY-TREASURER HUNTINGDON, QUE.

LAKESIDE AYRSHIRES

A few young bulls for sale from Record of Performance dams, imported and Canadian-bred, sired by Auchinbrain Sea Foam (Imp.) 38758, grand champion at both Quebec and Sherbrooke

Write for catalogue GEO. H. MONTGOMERY, PROPRIETOR, Dominion Express Building, Montreal, Quebec D. McARTHUR, MANAGER, PHILIPSBURG, QUEBEC.

Dr. Bell's Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers, and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly. Dr. Bell, V. S., Kingston, Ont.

FARMERS SHIP YOUR WOOL DIRECT TO US

**The Highest Prices Ever
Paid for Wool Are Now
Being Paid by Us**

Mr. Farmer, you can get more money for your wool by sending it direct to us.

In all probability it will come to us, anyway, at some time, no matter to whom you sell it.

For over thirty years we have been one of the largest buyers of wool in Canada.

We could not continue in business for this length of time if we had not treated our customers fairly and paid top prices.

We send your money the same day as wool is received, only deducting freight or express charges.

We are now paying for wool as follows:

	Per lb.
Unwashed fleece, fine.....	62c. to 61c.
Unwashed fleece, coarse.....	61c. to 60c.
Washed fleece, fine.....	77c. to 74c.
Washed fleece, coarse.....	74c. to 71c.

Ship to-day, or write us telling how much wool you have, if washed or unwashed, and breed of sheep clipped from. We will then quote you a straight price and send you shipping tags with full instructions.

**John Hallam Toronto
Limited**

Yorkshires

From choice stock on both sides. Several young litters. Also some young sows, ready to be bred.

WELDWOOD FARM
Farmer's Advocate, London, Ont.

SPECIAL OFFER OF PEDIGREE Tamworth Breeding Stock

Young sows in pig, also males and females about to be weaned

HEROLD'S FARMS, Beamsville, Ont.
(Niagara District)

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Bred from the prize-winning herds of England. Tamworths, both sexes; 12 sows, bred to farrow in August and September. Young boars, from 2 to 10 months old. Shorthorns, males and females.
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J. B. Pearson, Mgr., Meadowvale, Ontario.

When writing please mention this paper.

Questions and Answers.

Miscellaneous.

Age of Mules.

What is the average age which mules live?
J. J. C.

Ans.—Mules are longer lived than horses, and have been known to do effective service at thirty years of age. In "Types and Breeds of Farm Animals," by Plumb, it is stated that "cases are recorded of mules living to seventy years of age." The average age of usefulness extends probably to between twenty and twenty-five years.

Following an Award.

A B C and D petition a municipal council to have a ditch cleaned out, for the purpose of giving better drainage of the land. It is an award drain. An engineer took the levels, made assessment and gave the estimate of cost of work, and recommended that a tile be put in on one side of the road and the dirt taken from the ditch on the other side of the road used to fill in over the tile. The owners of land benefited by the drain were assessed accordingly. Everything has been done in compliance with the Municipal Drainage Act which gave all parties a chance to appeal at a certain time but no one did so. However, when it is too late, one ratepayer says they can put the ditch in front of his farm but that he will stop a contractor putting the dirt in the place previously mentioned. Can he stop the contractor from doing so, when he is going by the engineer's report?
D. M.

Ans.—From the information given the ratepayer has no right to stop the contractor who is following the engineer's award. If he was not satisfied with the way the work was to be done he should have appealed against the award at the proper time. Failing to do so then was practically as much as saying that he was satisfied.

Concrete Stable Floor.

1. I recently put a cement floor in my stable and would like to know if it is advisable to allow the cattle to stand on the bare cement or would it be better to cover the floor with lumber?
2. Should horses stand on bare cement or plank?
3. Is there any danger of pigs crippling if allowed to sleep on a cement floor?
4. My cattle stable has 2 inches of a slope in 6 feet towards a trench, and has 6 inches of a slope in 40 feet towards the door. Is that sufficient? This is my first experience with concrete floors.
5. What slope should the horse stable floor have in the stalls? Would it be better left level behind them?
J. H.

Ans.—1. In many stables the cattle stand on the bare cement with apparently no harm. However, there are some who claim that their dairy cattle have udder trouble, due to coming in contact with the cold cement. Some lay inch lumber on top of the cement, but we doubt if there would be much trouble, provided you have a fair quantity of bedding to keep under the cattle.

2. We prefer a plank floor for the horses. If they are allowed to stand on the concrete their shoes would not remain sharp very long. Two-inch plank could be laid on top of the concrete.

3. Where there is a scarcity of bedding there is a certain amount of complaint regarding hogs crippling on cement. However, concrete floors are permanent and sanitary, and any difficulty from crippling can be overcome by having a raised sleeping place. A floor about 6 feet square, raised 2 or 3 inches, would be satisfactory.

4. Two inches' of slope in 6 feet will certainly drain the moisture away, and is a little more than is generally used. It is not advisable to have breeding stock lying on floors with too great a slope. However, the 2 inches in 6 feet should not give trouble. The slope in the trench is sufficient. Cement is coming into general use for stable floors, and if it is properly put down you will find it very satisfactory. In laying the floor, especially the passageway, it should be left a little rough so as to lessen the danger of the stock slipping.

5. Two inches in the length of the horse stall would be sufficient slope. The passageway might be a trifle lower than the stall, but it is better to have it comparatively flat rather than sloping, so as to prevent slipping.



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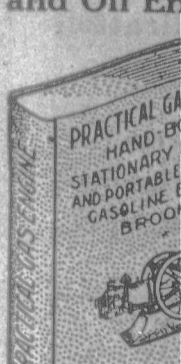
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A noted Cincinnati chemist discovered a new ether compound and called it Freezone, and it now can be had in tiny bottles as here shown for a few cents from any drug store.

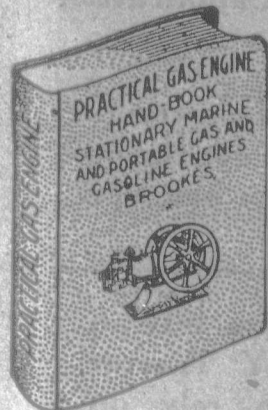
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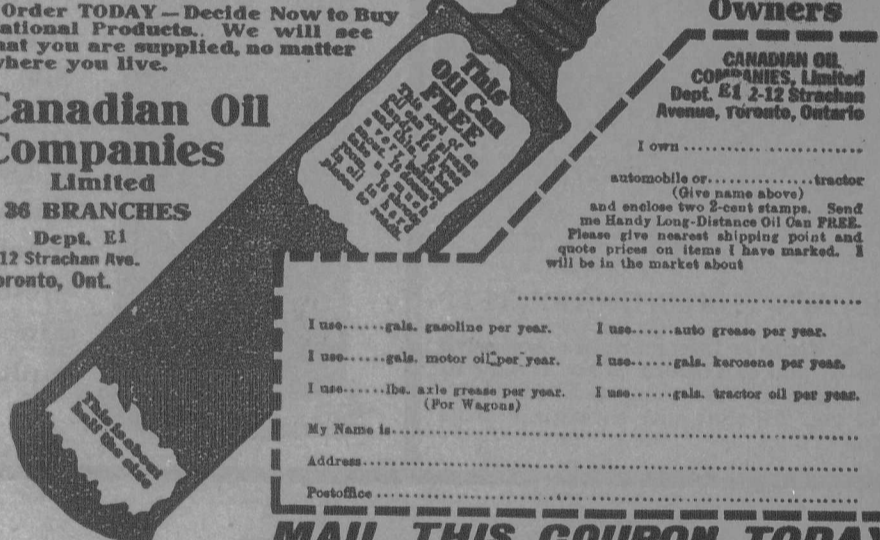
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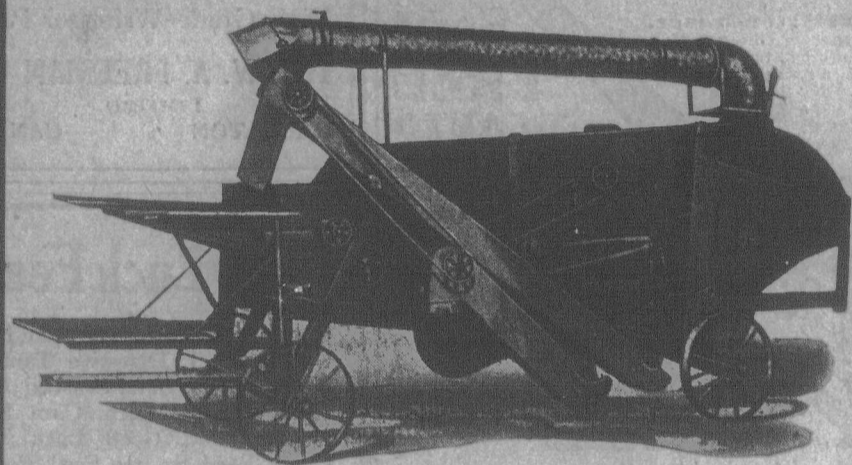
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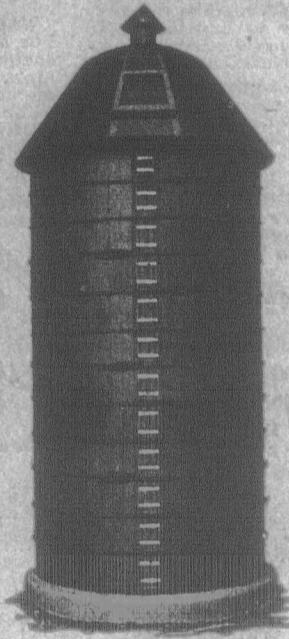
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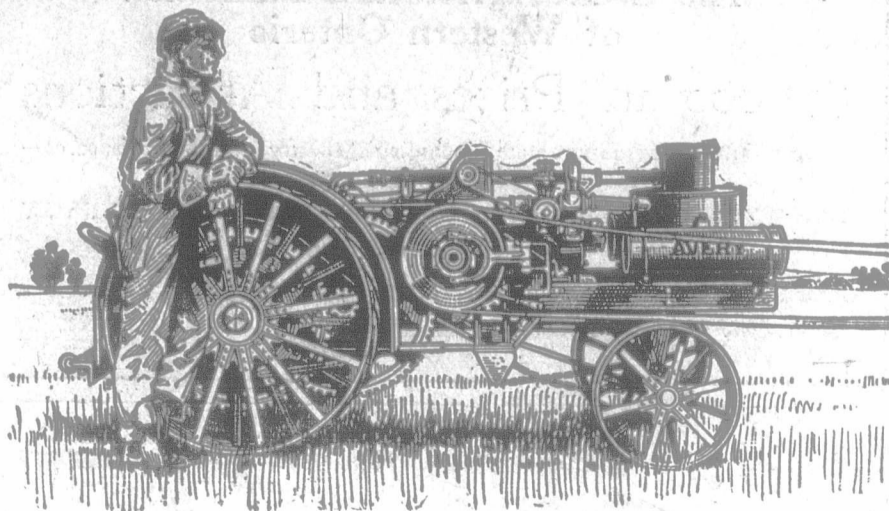
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