

Farm and Dairy

& Rural Home

DEVOTED TO
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Farm Power and Cooperation Number

October 3, 1918

Comm. of Conservation
Past Chairman Jan 19



ONE DOLLAR PER ANNUM

Published by the Farm and Dairy Association of Canada

The United Farmers of British Columbia

The Youngest Independent Farmers Organization in Canada

It is the most natural condition conceivable that farmers in one part of Canada should be interested in the affairs of their brother farmers in other parts. One of the reasons for the preparing annually of this Western Canada Number is that we may help to satisfy and encourage this natural tendency of interest between the East and the West; that the Western farmers may understand the problems of Eastern farmers, and that the farmers of the East may understand the problems of those in the West. With this object in view, it is possible that a few words regarding the newest Canadian Farmers' Organization may be of interest to those of other parts of the country. We refer to the United Farmers of British Columbia.

Although this organization has been in existence but a little over a year, it has already a membership of over one thousand, and has over 40 local branches. At the last annual meeting held on February 21st, at Victoria, the following officers were elected: President, George Clark, Sidney B.C.; J. L. Fridham, of Coloma; 1st Vice-President, Mr. R. A. Copeland, of Lundy, 2nd Vice-President; Mr. W. Patterson, of Koksilika, 3rd Vice-President.

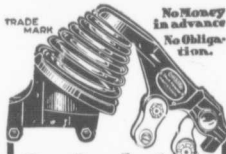
While this organization is as yet only in its infancy, already they have made themselves felt in the affairs of the Province. While it is possible that either the extreme Eastern or the extreme Western parts of Canada may find it difficult to have a complete organization on the part of the farmers as have the three prairie Provinces, yet there are always sufficient points of interest among the farmers of each province to allow them to stand together for their mutual benefit. On the prairies there is one great interest, and that is grain growing; consequently the farmers have found it easier to stand together; in fact, in their case it has been an absolute necessity that they should stand together, as without thorough organization they would be entirely at the mercy of those handling their products. In the case of British Columbia, as is somewhat the case in Ontario, farmers' interests are more divided. There is some danger one with the other as to the platform which they should adopt in regard to political and economic questions. It is not so easy for the leading men of the organization to come out flat-footed on subjects of importance and

feel that they have the undivided support of the organization behind them. However there are many questions of common interest among all farmers and strengthened by this fact, the United Farmers of B. C. are making themselves felt as a force to be reckoned with.

It is possible that in no way better could this be described than to give a synopsis of the resolutions that were passed at the last annual meeting. One of the resolutions brought forward was that in view of the shortage of labor, the local Government should be asked not to interfere with the farmers in their farming operations in drawing upon them for team labor in the making of the Provincial Highways, which are being built through the Province. A resolution was also passed that improvements of farm lands should be exempt from taxation. Another resolution was passed urging the Provincial Government to prevent orientals and aliens from acquiring control of agricultural land in the province, as a slight difference of opinion was shown when a resolution was brought forward asking for the introduction of oriental labor, as was proposed some time ago in Ontario. This latter resolution, however, was not passed.

It was decided that the executive be asked to adopt a platform policy free of party ties, but the convention was not quite agreed on the support of candidates. A resolution was passed offering prizes to boys and girls by way of a bounty in destruction of the gopher pest. A discussion of the advisability of asking the Government to establish a system of District Representatives along agricultural lines such as is now in force in Ontario. No final decision was arrived at on this question. Discussions were engaged in regarding eye-glazing contests in the province, and regarding the holding of land by lumber companies which necessitated the farmers settling back from the main roads near wooded land, which shut them off from their neighbors.

These are but a few of the questions which were brought up for discussion which were brought up for discussion, as the influence becomes stronger, as the influence becomes more united, these questions will be handled not merely as discussions, but as strong protests and in such a way that they will be recognized by the other industries of the province. (Continued on page 19.)



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AND RURAL HOME

The Recognized Exponent of 'Dairying in Canada'

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

VOL. XXXVII

TORONTO, ONT., OCTOBER 3, 1918

No. 40

Britain's Cupboard No Longer Bare

How the Women of Britain and the American Made Tractor Have Combined to Defeat the German Threat of Starving Out the Island Kingdom.—By "Motor"

THE women of Britain plus the farm tractors of America have just about solved the food problem of the British Islands for all time. And this means that they have made probable victory in the war against the Hun moral certainty.

To point the moral of this little tale it will be necessary to go back a bit to the end of 1915, when Germany definitely abandoned all the restraints of civilization and embarked on her career of submarine piracy. The British Islands have always drawn a generous share of their foodstuffs from other countries, meat, wheat and other comestibles from the United States, from the colonies, from South America, dairy products from Scandinavia, etc., etc. The Huns' announced campaign against merchant shipping at once produced a situation not of immediate food crisis, but certainly of catastrophe impending, if the German boasts proved to be well founded.

The submarine campaign proceeded with its career of destruction as accomplished, not all that its noisy Hunnish advocates claimed for it, but enough to make evident the fact that unless steps were taken to meet it, eventual disaster was certain. There were a number of interdependent methods of fighting the submarine and all of them were at once put into practice. Merchant ships were armed for self-protection and later were convoyed as a further measure of defense. Finally, it was determined to make the country as nearly self-supporting as its comparatively small area would allow. It is in this last phase of the struggle that American tractors and British women have proved their essential worth.

Magnitude of the Task.

It was no mean problem that was handed to the agricultural authorities of Great Britain, when they were asked to increase the production of foodstuffs at a time when the country had been drained of its man power almost to the last effective unit in behalf of the fighting forces, the munition industry, the shipyards and other enterprises contributing directly to military effort. The solution was found in the employment of women in agricultural labor, assisted by machines that would more than make up for the decreased quantity of manual labor available. The women of Britain nobly answered the call, from the war's daughter to the no less eager little sister of the slavers, America, the home of the one great tractor industry in the world to-day, was called upon to furnish the labor conserving machines.

Recruiting women for agricultural work started nearly three years ago. The authorities built on broad foundations. They established schools where the women were systematically trained for the work and were paid during their period of tuition. Last year 91,000 women were reported engaged in farm work in Great Britain and this year 300,000 of them are helping to raise the greatest crops in the history of the country. Next year there will probably be 500,000 technically trained women farm laborers actually making the little island kingdom of Great Britain self-supporting in the vital matter of farm produce.

The records show that to date 8,100 American farm tractors have been shipped to England and that nearly 6,000 more have been ordered and are going forward as fast as deep space allows. Henry Ford alone has shipped 6,000 Fordson tractors from his Detroit plant and many of these have already begun breaking the British soil.

How Acreage Increased.

Just what this has meant to British agriculture may be judged from the fact that the 1918 acreage

devoted to wheat, barley, oats, rye and other grains amounts to more than 7,500,000. This is an increase of over 1,800,000 acres over the figures for 1917. Also there are this year 645,000 acres devoted to the raising of potatoes, a gain of nearly fifty per cent over the 1917 acreage. These figures cover only England and Wales, those for Scotland and Ireland not being yet available, although there have been heavy agricultural gains in those sections of the United Kingdom.

For hundreds of years Great Britain has had a disproportionately large area of grass lands, given up not only to grazing, but to lawns, the fame of which is world-wide. The need for home production of foodstuffs has altered this immemorial condition in England and Wales not less than 2,500,000 acres of grass land, some of which has never felt the plow within historic times, have been broken up and of grass land has been turned under and in Ireland 1,500,000 acres more. The total addition throughout the country to tilled areas will be well over 4,000,000 acres. Practically all this has been made

possible by the use of tractors. The manual labor available in Britain at the present time would not have been adequate to bring one-tenth of this additional land into cultivation.

The Proof the Pudding.

Of course the proof of the pudding is in the eating thereof and here is how the British pudding eats. In the happy, carefree days before the war, Great Britain imported two-thirds of its agricultural foodstuffs. In 1918 the country will produce all but scant quarter of these essentials. By 1919 it is expected, and barring crop failures, will undoubtedly be the fact, that the kingdom will be entirely self-supporting as far as agricultural products go. This amounts to an agricultural miracle.

Just consider for a moment the concrete effect of this situation on the general condition of the civilized allies in this war. The home production of Britain's food supply relieves the United States of the necessity of providing for this item. It releases an immense tonnage of ships for use in carrying abroad and later supplying the great armies that we are raising in this country. It also relieves the already apparent shortage of agricultural labor in the United States, permitting the recruiting of a greater number of sturdy, country-bred boys into our forces for service abroad. It has been estimated that the increased British food production over that of last year has released 1,000,000 tons of shipping, which would otherwise have had to be employed simply for carrying supplies from this country to England. All honor to the British women and American tractors, which have made it possible.



Britain's War Lesson

IN the spring of 1915, when I was on my way to France, there seemed to be farm labor enough and to spare in England. Farm field methods were gaged accordingly. I have seen as many as three men running a single furrow down the field—two men leading the horses, hitched one in front of the other, and one man holding the plow handles. A great deal of cultivating was done by hand, a large part of the harvesting in the same way. Labor was cheap and plentiful, so farmers stuck to the old methods.

"When on my way back in the summer of 1917—with a game leg as a souvenir—I saw that farm methods in England had become completely revolutionized. An advance, which under ordinary circumstances would probably have taken 25 years to come about, had under war conditions, been accomplished in two, England's man-power had been drained and no longer could she afford to have three men in plowing a single furrow, no longer could she afford sickles and scythes. The old wasteful methods had gone by the board and in their place had come POWER FARMING.

"Tractors were everywhere, many of them working day and night—one man doing what half a dozen had done before. Under the force of war conditions, English farming had learned the man-economy and the money-economy of Power. It is a lesson which she will never forget. England will never go back to the old, antiquated methods of agriculture, for she has learned the cheaper, better way.—G. C. Trett, in "Tractor News."

A Revolution in Agriculture

THAT the tractor will cause a greater revolution in farming in Ontario than was caused by the introduction of the self-binder may be taken as assured. Either under individual or cooperative ownership this new means of providing power for the farm will, before we realize it, be found in all those parts of the province in which the land is comparatively level and reasonably free of stony. The immediate effect will be to render possible the application of speed to, and the elimination of drudgery from, the one operation on the farm that has remained unchanged for generations—that of plowing. The tractor will do more than this. It will make plowing possible under conditions when such work is impossible now; it will, applied not only to plowing, but to disking, seeding, harrowing, and rolling, greatly shorten the time required in seeding; and, in plowing, time is frequently the first essential to success.

The use of the tractor will not be, is not now, confined to the cultivation and seeding of the land. It has already been used in operating the mower in the hay field, the binder in the grain field, and in hauling the finished crop to the barn. The same power used for these purposes can also be utilized for threshing grain, filling silos, sawing wood, and crushing grain.

Demonstrations such as those held at Cobourg last week and at Brantford last fall, by showing what the tractor can do, have hastened the revolution that is coming. In one particular, however, these demonstrations have fallen short. They have not shown the fuel consumption, for a given amount of work, of each machine in the demonstrations. The deficiency should be made good at the Provincial plowing match to be held at the Dominion Experimental Farm next month.—Toronto Globe.

A Power at Our Doors

Why Not Develop Local Water Powers?

A. W. Wilkins, Wellington Co., Ont.

WHEN Ontario's lack of coal deposits is mentioned outside the province or in the province as a serious drawback to industrial development, our government has to assure us that what Ontario lacks in black coal, she more than makes up in white coal. When the present project at Niagara and Queenston is complete, we will realize even more fully the enormous value of this white coal. The neighboring city of Guelph, for instance, is run very largely by Hydro power generated at Niagara. Farmers all over Ontario are using this power where it is available, and I have read frequently in Farm and Dairy and other agricultural papers of the convenient Hydro-electric installations on many Ontario farms. I understand that in sections where Hydro-electric lines have not yet gone, farmers are letting their power requirements wait until Hydro reaches them.

Is there not a danger that in waiting for the big project, we are apt to neglect the opportunities that lie right at our doors. All through Ontario there are small streams in which there are opportunities for power development. There are several such streams in Wellington county. Some of these powers are developed and used for grist mills. Others, that were once used for milling projects have fallen into disuse. There are still many more prospects that have never been developed at all. Some of these prospective water powers would develop only five horse power. There are lots of possible water powers that no one ever thought of using that are capable of developing 15 to 20 h.p. and a great many that may be harnessed back to give three to five horse power for a few hours each day.

Now, here is my suggestion. Why not develop these powers cooperatively? I worked with an engineering concern in my younger days and I know that I am not talking of something that is impracticable. It would be very easy for a bunch of 10, 20 or 30 farmers, living near such a possible water power to construct a dam, install a turbine wheel and a dynamo. If there is not sufficient water to run the dynamo continuously it would be necessary to install a large capacity storage battery. If it were possible to arrange it, the dynamo might run just from dusk until eleven o'clock, or some other hour arranged for. Such a project would afford enough power for lighting the farm homes and buildings and to perform such minor operations as turning the cream separator, running the washing machine and churn, pumping water and so forth. There would be little expense once the plant was installed if the losses are kept at a reasonable figure, and this should be easy if the owner were one of the beneficiaries of the scheme. I know that this plan has been developed somewhat extensively in Germany and if this I would not hesitate to learn from the enemy.



Is There a Place for the Windmill?

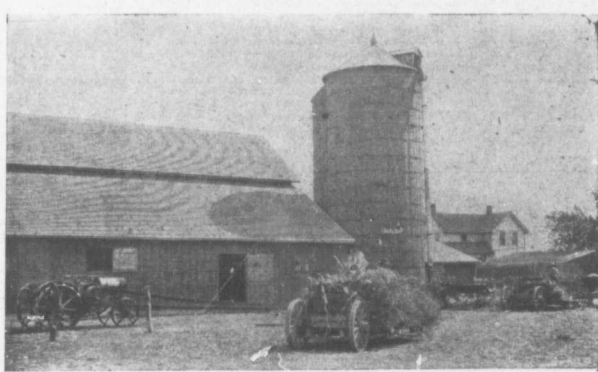
J. and O. Kidston, Kings Co., N.S., can harness their windmill for a variety of uses. It is a pumping power, however, that these mills are in greatest demand and it is probably only a matter of time before this will be the only use made of them. Prophecy, however, is always a dangerous business.

The Cheapest Pumping Power

Is the Good Old-fashioned Windmill

POWER windmills were once common. Now, we seldom see them. Wind power was once used for pulping roots, running grindstones, fanning mills, and even feed cutters. One leading windmill company in Canada advises us that they do not now sell more than two or three power windmills per year. The Canadian farmer wants a more dependable power for general use than the wind. There is one place, however, where the windmill more than holds its own. The company already referred to, in a comparatively short period of time, sold over 2,000 windmills for pumping water. Many farmers prefer to have a windmill for pumping purposes, irrespective of their power equipment in other lines. One of these is M. H. Halsey, the well known Holstein breeder.

"Our windmill has been in use for 25 years," remarked Mr. Halsey to an editor of Farm and Dairy during the Toronto Exhibition. "It has an eight-foot wheel and is used only for pumping water. It has cost practically nothing in the 25 years we have used it. Five dollars would cover every expense. It is the cheapest power procurable. Of course, the wind does not always blow and with a windmill you need a good storage supply, and this summer for the first time, we had such a wind famine that we had to call in our Hydro-electric power to pump water for a time. Even with Hydro-electric power available, however, we will continue to use wind power for pumping water just as a matter of economy."



Is the Tractor Due to Become a Popular Source of Belt Power?

The tractor investment is a heavy one. To make it profitable on the farm of moderate size many more uses than traction power alone must be found for it. Hence the importance of the utility for belt power with which most tractors are equipped. Incidentally, this illustration, which shows a medium sized tractor running an ensilage blower, gives a very good idea of the construction of the under-running corn waggon commonly used in the corn belt and described in a recent issue of Farm and Dairy by E. L. McCaskey.

Mr. W. C. Good, of Brant Co., Ont., is another farmer who, with electric power available, still prefers to depend on his windmill for his water supply. Mr. Good's equipment is very complete. The windmill is connected with a pressure tank in the house. When the pressure has reached the point desired in the tank, the water is automatically shut off and turned to the storage tank in the barn or the stock tank in the yard. Mr. Good's argument for the windmill is the same as that of Mr. Halsey—its economy. We have heard of an Ohio farmer who not only uses his windmill to pump water, but has also connected it up with a dynamo and storage battery and uses it for lighting his premises as well. Just how practicable this scheme would be, we do not know.

The Nebraska College of Agriculture has the most complete figures available as to the economy of the windmill for pumping purposes. This college estimates the cost of pumping 100 bbls. of water by windmill at 15 cents. This includes interest on investment in the mill, depreciation, cost of oil and payment for the time required to keep the mill in order.

The same amount of pumping with a gasoline engine would cost \$1.30 cents, with gasoline figured at 35 cents a gallon. A windmill, 12 feet in diameter, running in a wind having a velocity of 30 miles per hour, will produce approximately two horse power, according to these Nebraska figures. Thirty mile winds are not common, however, and a wind of six to 15 miles and an eight-foot wheel, will pump all the water required on an average farm.

An important point in installing a windmill is to have the power high enough. It should be at least 15 feet above all houses, barns, trees or other wind obstructions within 400 feet. Select a tower high



One of Several Uses for the Gas Engine.

This same gasoline engine, on the farm of DeLor B. Hastings Co., Ont., runs the grain grinder, milking machine and so forth.

—Photo by an Editor of Farm and Dairy.

enough to catch the lightest wind that blows from any point of the compass. Do not be satisfied with a higher tower in the case of the mill, because your prevailing winds are from that direction. It should be high enough to catch the light winds which blow from other directions, and it will then be above the eddying, changeably ground currents. We have sold hundreds of extensions to increase the height, but we have known of one being blown down.

A few dollars spent in getting a higher tower in the first place is a good investment. Most windmills are damaged or destroyed on account of being placed on low towers in close proximity to buildings and trees and from any other cause, and no manufacturer can consistently guarantee windmills and towers when they have not been properly selected to fit the conditions with which they will be surrounded.—F. E. E.

Two Powers for Every Farm

One Will Be a Tractor

By Tom Alfalfa.

As late as six years ago it was a common thing for a bunch of us, when one of the neighbors had bought a gasoline engine, to argue as to whether or not that engine was the right size to adequately and economically meet all the power needs of the farm. Since then the mechanical end of farming has moved on apace. There are several tractors handy enough to me now that

I can talk to their owners over the phone without paying an extra fee at central office. In fact, I was talking with one of those tractor men just a few minutes ago, and it was the news he gave me that suggested the subject of this letter to Farm and Dairy. He told me that he and four of his neighbors had completed arrangements for the purchase of a coil binder, ensilage cutter and blower and a circular saw outfit. The binder is the second-hand machine belonging to one of the members and which has now been taken over by the club. The same is true of the saw. A rush order has been sent to the factory for a blower. Arrangements have been made with this man for the use of his tractor to operate the blower and saw.

This is the first actual step taken in this district towards a condition that I expect will soon be general. We have all experienced serious delays and loss while waiting for the silo filler to come around. There is a demand for big power for some purpose or other on every farm, say from 10 horse power up. There is the silo filling, feed grinding, wood cutting, and perhaps, I had better add, threshing. It is out of the question for each farmer to have his own equipment unless his farm be a very large one. In other words, it is a question of co-operation. There is no doubt that this can be applied to the tractor, as I believe that this can be convinced that a man can afford to buy a tractor with all of its equipment for a 100-acre farm. Many farmers, however, will prefer to have their own tractor with which to push their own way.

(Continued on page 13.)

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From a Dozen Tractors to Hundreds of Them

Such is the Story of the Tractor Development in Ontario in the Past Four Years—Is the Day Coming When Each 100 Acre Farm Will Have Its Tractor?—By F. E. Ellis, B.S.A.

MY first tractor observations in Ontario? I remember the occasion well. Four years ago last spring I was driving along a country road in one of the best agricultural counties that fronts on Lake Ontario. Ahead of me in a field next the roadside I saw a crowd of men sufficiently large to have attracted a Farmers' Institute speaker, or let us say, have formed a stable farmers' club. I had had some experience with tractors in Western Canada, and from the sounds coming from the midst of that outdoor assembly, I knew that I was about to see my first tractor at work in Ontario. No wonder the whole community had turned out to witness its starting! Not one of the men present, I ascertained, had ever seen a demonstration of power plowing, and the operator of the machine had had just a few hours' instruction from a representative of the company, from whom he had purchased. That season, this particular machine was one of 12 farm tractors operating in Ontario.

That was just four years ago. This summer I have found tractors wherever I go, if conditions are at all suitable to tractors. They are not yet so common but that they attract more than passing interest from farmers in general but it is seldom that I see a crowd gathered around a tractor in operation. The tractor has proven its merit and is more or less taken for granted. Farmers may yet debate the wisdom of purchasing a tractor for use on a farm of moderate size or a farm that is rough or heavy; but they are no longer sceptical of the ability of the tractor to go and keep on going at all kinds of field work. They have shown their faith in the tractor to such an extent that the tractor population of Ontario now numbers well over 700 machines. Probably there will be over 800 in operation before the fall season is over.

The tractor was due to take its place in Eastern Canada in any case, but the war is undoubtedly responsible for the rapid adoption of power farming methods, and in hastening its introduction the provincial governments have played a large part. Early in the war the Ontario Department of Agriculture, as a part of its program for increased production, purchased a number of tractors and rented them out to farmers on an acreage basis, the fees charged being nominal. So successful were the first experiments in this line that the number of government tractors was increased just about as fast as deliveries could be made and last spring the Ontario Government had a fleet of well over 100 tractors plowing and preparing land for crop in almost every county of old Ontario. A couple of other provincial governments followed a similar policy, although not on anything like the same scale as in Ontario. The Quebec Government, for instance, is still purchasing tractors for use in that province, and there are government tractors at work in Nova Scotia. Perhaps the greatest result of the experiment of government ownership of tractors, is that farmers everywhere were given an opportunity of studying tractors in operation and as a result, they themselves have now purchased tractors in great numbers, and probably it was the work of the government tractors which made it possible for the Dominion Government to dispose of all of the Fordson tractors contracted for in the early part of this year. All that remains now is for the Eastern farmer to select his size and determine on the type of tractor that he prefers.

The Size of Tractor. In determining on the size of tractor which will prove most profitable, the Ontario farmer can benefit by the experience of farmers in other provinces and states where tractors came into common use some years ago. In Western Canada, for instance, the very large tractors, operated either on steam or gasoline, were first introduced. A



A Tractor Demonstration in Quebec.

This is one of several tractors recently purchased by the Quebec Department of Agriculture for the use of the farmers of that province. The tractor seen in the illustration is operating at Rimouski.

few proved successful and are still in operation. I believe it is safe to say, however, that the majority of these big tractors are not now in use. And they were not abandoned because worn out. When in Western Canada several years ago, I saw many of these tractors standing in barnyards and fence corners, while the plowing and other field work was being done with horses. Even under the ideal tractor conditions of the West, the heavy tractor did not universally commend itself. At present, however, the West is getting into tractors at an astonishing rate, but they are of the small and medium sized types, such as we see at Ontario tractor demonstrations.

In Ontario also the first tractors were big ones. Mr. Trethewey of Toronto had one of the first tractors in Ontario, a large sized machine, and from the fact that he never said much about the tractor, we are probably safe in assuming that it did not prove satisfactory. Mr. R. J. Fleming, on whose farm at Pickering the tractor demonstration was held two years ago, also attempted following the lead of the West in introducing a big tractor to his Ontario farm. Writing in a recent issue of Farmers' Magazine, R. Russell Fleming, who is managing the Pickering farm, tells of their experience with this tractor as follows:

"It is just three years now since we invested in our first tractor, a 15-30 of one of the most common types seen in the West. Here, of course, with a large proposition on our hands it was but natural

that we should try to imitate Western conditions. As we do our own threshing and silo filling, it was essential that we have a large machine to do the work; and having a large engine it was natural that we should use with it a large gang plow. We were not entirely blind to some of the advantages of introducing on to an Eastern farm a large plow user; but thought that any difficulty might be overcome by taking down fences and making larger fields. There was, however, a limit to this owing to the rolling nature of the land any more than of many districts. Moreover, the many grades in the fields which, with horses, never bothered us, became a serious proposition when our engine, crowded to its capacity on the level, refused to take them until one or two of the plows were removed. What was a difficulty in dry weather was more than accentuated in wet weather. So that finally, we abandoned the idea of using this machine for ploughing, and now use it only for belt power."

Tractors at Walkerside Farm.

A tractor of the same make and size as that used by Mr. Fleming is also in use on the Walkerside Farm in Essex county. On this farm conditions are ideal for the large tractor. There are 2,500 acres of land that is almost absolutely level. When I visited the farm early this spring, the foreman, Mr. Cramer, showed me the plowing they had been doing with the big tractor in sod, and it was A. W. Here the big tractor seems to be holding its own. Perhaps it is significant, however, that of the six tractors now operating on this farm, five of them are machines of moderate size and Mr. Biggar, the manager, as a result of their experience, would be the first to recommend that on the average good-sized farm in Ontario, a medium-sized tractor be tried. On the Fleming farm two small tractors are now in use and they are giving first class satisfaction.

The other extreme in tractors is also to be avoided. Four years ago there was a general opinion among farmers that the smallest size tractor made was destined to be the most popular. All who were in attendance at the first tractor demonstration at Guelph will remember the sensation caused by the appearance of a small 5-10 tractor—that is, one with five horse power at the drawbar and 10 horse power on the belt. This tractor at Guelph handled two plows and ended up with a big stiff-tooth cultivator. It always had a crowd around it. At Cobourg a couple of weeks ago, the same company exhibited a tractor of the same capacity, but much improved. It received no more than its share of attention, and larger machines of the same make were evidently more popular.

Three factors will influence Ontario farmers in selecting tractors of medium-size—the heavy character of much of our land, the necessity of using tractors for belt power. The average soil in Ontario and in much of Quebec is heavier than the prairie soil of Western Canada, or of the Western States. It was found, for instance, that the 14-inch plows which are commonly used; the Western States, could not handle Ontario soils at all satisfactorily. The experience of Mr. A. M. Zoeller of New Hamburg is typical of the experience of many other of the early tractor users in Ontario. Mr. Zoeller started with a 14-inch plow. He found they were not satisfactory and purchased a 13-inch bottom. He is now inclined to believe that 10-inch bottoms would be even more satisfactory. It requires more power to turn over Ontario land than over Western land, and this, in most sections, is enough in itself to make the smallest size tractors impracticable.

Tractors all have difficulty in working on a (Continued on page 24.)



Any Kind of Field Work May be Expediently Carried Through with Tractor Power.

On many farms in Ontario last spring as much of the work on the land, with the exception of drilling in the seed, was done with tractor power. The binders were operated by the same power, and wheat ground was prepared. These tractors are now busy at fall plowing or supplying power for silo filling. The range of usefulness of the farm tractor is constantly extending, and as new uses are found for it, the investment becomes correspondingly more profitable.

The Need of a "Central" for Cooperative Enterprise

Just Why Every Farmers' Club Should Affiliate With and Send All of Its Support, Commercial or Otherwise, to the Central Organization—By R. W. E. Burnaby

THE word "Central" in this heading is a term or name commonly used in referring to the Central or Head Office of the United Farmers of Ontario and many similar organizations. First and foremost are the ideas of the individual farmer, then the local clubs or units; then in convention of delegates from all these local clubs, a board of directors is chosen who act for a year only as the Central body. The duties of this body are to consolidate the thought of the whole organization, to keep in touch with public matters affecting the farming industry, and advise local clubs of action necessary, etc., create new clubs and generally guide its affairs.

This method of organization is in the writer's opinion, the only sound basis of a thorough organization as it culminates in a central body that speaks and acts for the whole industry. Almost without exception all successful organizations follow the same method; the Canadian Manufacturers' Association, for example, is made up of local branches who meet in convention and elect yearly directors, who represent the whole organization as a Central or Head Office body; the various Christian Societies, Labor Unions, Banks and Corporations follow the same practice; so we find the idea of a Central or Head Office common, in fact I know of no successful organization representing any great number without that main body, in fact I cannot see how any organization is complete, or has any power otherwise.

The United Farmers of Ontario now has a membership of approximately 25,000, made up of about 500 clubs. There are nearly 200,000 farmers in Ontario who have not yet organized, and from whom requests for organization and information on forming clubs are coming to our Secretary in such numbers that it is simply impossible, with the funds at our disposal, to give this branch of the work anything like the attention it demands. Legislation, orders of the various war Councils, increased freight rates and the fixing of prices on farm products, the great tariff question now receiving so much attention by the Manufacturers' Association and its kindred organizations, under such names as the Reconstruction Committee, etc., and many other matters of vital importance to the farming industry are as far as possible receiving the attention of the Central or Head Office. Then, too, there are the numberless details, great mass of correspondence, the arranging of conventions, speakers for clubs and picnics, and committees, our share of the work of the Canadian Council of Agriculture and the general finances of the whole organization, all of which come to the Central.

Is a Central Necessary?

The heading of this article, "The need of a Central," appears to raise the question as to whether or not a Central is necessary, or is there such a question in the minds of any reader, I would answer by asking a question—How could we have an organization of any value, or power, or for that matter any organization at all without a Central or Head Office? The writer is a firm believer in the need of a Central that there is simply no question about it at all. In his opinion the head or directors of the United Farmers of Ontario bears the same relationship to the great body of farmers, as the head does to the human body. A headless body is lifeless, its usefulness is passed. No sane man, not even our greatest competitor, would say that the U. F. O. has passed its usefulness, but rather its life and usefulness is just beginning.

It goes without saying that the Central, representing such a large body of thinking men, and farmers are thinking men, cannot exist without criticism. Their opinions cannot be expected to agree with all, yet they are the only vote of delegates from the various clubs, and the delegates were in turn elected by the majority vote in each club. Even the most critical respects the majority vote. It is the basis of democratic representation, and as office is held for one year only, the re-election, our method of appointment is not open to criticism.

Probably no one has come in such close touch with the Board of Directors of the U. F. O. and their great work, as has the writer, and I am very strongly of the opinion that a more able and more representa-



Two Executives Who Carry Great Responsibilities.

To the left is the Honorable Mr. R. W. E. Burnaby, Jefferson, Ont., President of the United Farmers' Cooperative Co., Ltd.; on the right is E. M. Powell, the manager of the company. On these two men and the Board of Directors devolves the task of directing the policies of a company that is now doing a \$1,000,000 business and, with the united support of the farmers of Ontario, could just as readily transact a \$25,000,000 business with correspondingly great benefits to Ontario Agriculture.

tive body of men would be exceedingly difficult to find; their tasks are great, their hours long, opinions differ, and are always respected, but through all there is perfect harmony, and unselfishness. The uppermost thought of all appears to be to do their best for the great cause which they represent.

The above has been written having in mind the U. F. O., but every word applies with equal force to our cooperative company. The problems of the cooperative board or Central, though somewhat different, are just as numerous and perplexing, but here is to be found the same chord of harmony and unselfishness, that same desire to serve and help the great cause. The loyal support of members and shareholders cooperating with both central bodies has made such wonderful progress possible in both the United Farmers of Ontario and the United Farmers' Cooperative Company, Limited.

There is one very important point I would call to the special attention of our local clubs which I feel a few do not fully appreciate, and that is the tendency to buy goods wherever they can get the best price without any consideration of the needs of the central office. This is one of the methods practiced by our opponents to break up our organization. For example, our Company placed an order with one firm for goods to the amount of \$25,000, and almost immediately that same firm put a man on the road who made a specialty of canvassing farmers' clubs and quoted a little lower price than had been given to your head office. It may not have occurred to such clubs that by accepting these baits, they are not only interfering into competition with their own Head Office, but are helping to delay the day when manufacturers and wholesalers will seek our business instead of boycotting us as they have in the past. To illustrate the point: I happened to be at a club where a salesman called to sell his goods; that club took his quotations and told him that they bought all their goods from Head Office, and advised him to call there if he wanted their business. He took their advice and I met him in the office the next day and secured a price on ten carloads that enabled us to quote a price to our clubs much below the price he had been quoting. In this connection some may say that Head Office prices are very little lower than can be had elsewhere. In some cases that is so, but do we realize what we would be paying if it were not for our cooperative company, and how much better the company could buy if we had the loyal support of all our members. I would suggest that where prices are quoted lower than ours that the head office be given full particulars in order that the company may take advantage of the price and in so doing help the whole organization. Then, too, there are some firms that will sell club goods and deal with your Head Office at all. If our clubs would refuse to buy from these firms they would soon seek

our business. In supporting your Head Office you strengthen our buying powers. In buying outside you weaken our buying power. Instead of helping to keep the prices down you are helping to put them up and delay the day when we can demand the best wholesale prices on all commodities.

In conclusion I would plead with farmers everywhere for their support and loyalty, ever keeping in mind that these are our own organizations and in these our hope lies for those improvements which are long past due our noble calling.

Organizing a Farmers' Club

A Start is All That is Needed

L. R. P., Halton Co., Ont.

IF there is a community in Ontario without a local club, it must be because no one has tried to start such an organization within the past two or three years. At best, that is the way local club organization is in the air. It is more exciting than measles. Organization consequently, is dead easy. In our own district we probably had as black as black as black as anywhere for organizing a club. The old grange flourished here and many there were who still remember the failure of the grange as a business organization. For 15 years there had not been enough cooperative spirit in evidence to keep alive a farmers' institute, with the government paying almost all the expenses. How could an organization hope to succeed that had to stand on its own feet? A few of us talked it over time and again. The U. F. O. appealed to us. We always backed down, however, when it came to taking definite action. Finally a young chap, who later acted as our secretary, until called overseas by the draft regulations, wrote to the central office in Toronto and requested that Mr. Morrison pay us a visit.

Well, Mr. Morrison could come. He fixed a date in the very near future. We published some notices in public places in the village. The day before the meeting a few of us got together and every farmer we could reach by 'phone, asking them to attend a meeting in the village. To our surprise we had a big crowd and in it were numbered the most of the best farmers of the section. Mr. Morrison gave us an excellent talk. When it came to electing officers, however, we had our first difficulty. Having had no experience in this line, our men were unwilling to act. Finally I suggested that officers be appointed provisionally only. On this point we compromised, officers were appointed and a second meeting arranged for. It was at this meeting that we really organized. We discussed the lines of work we would like to take up, appointed officers and made requests to write to have a constitution ready at our next meeting. At the next meeting, the constitution was ready, it was adopted and a carload of grain ordered. It was all "as easy as pie," as our secretary said.

Our real problems developed after organization. It took sometime to get the idea over that members could not buy in dribbles through a farmers' club. It has taken even longer to convince them that they should patronize the club even if there is apparently no direct money saving. It has been still more difficult to get members to attend club meetings regularly when they have no orders to place or no business to transact. These problems, however, have nothing to do with the actual organizing of the club and this the subject of this article should be regarded as the Organization itself need trouble no one. The country is alive, everyone wants it. Had we only known it, we could have organized without even asking head office to send us a speaker.

Needs us up moisture. When they grow in a crop they compete with the crop, for the moisture and we usually keep growing the crop. This is using moisture that should be saved up for next year's crop.—Extension Div. N. D. Agri. College.

If the drainage outlets are in good shape the land will be in condition to work earlier next spring.

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A Stable Basis for Cooperative Organization

It Involves Incorporation, a Sound System of Finance and a Sufficient Margin of Profit to Ensure Business Success

By F. C. Hart, Cooperation and Markets Branch,
Toronto.

As cooperative business enterprises become increasingly numerous over the province, the hope arises that this time there may be something of permanency in their make-up and that they will remain as a well recognized factor in trade. The financial and moral soundness of the cooperative system of trade has been abundantly proven and there is no valid reason for doubting that the time will arrive when great bulk of the business of trading, not only in farm products, but other commodities as well, will be carried on under this system on the continent of America, as has been done in the countries of Europe.

Realizing, therefore, that the principle of cooperation is right, our success or failure will depend entirely on our ability to use the system efficiently. This includes sound judgment to know when not to start a business, a knowledge of proper organization of the cooperators, the ability of the cooperators "to stick" through adversity when they know they are right, but perhaps mostly on business ability in the actual detail operations of carrying on the business.

There are vicissitudes in all business and cooperators are not the only ones who have experienced colossal failures due to inefficiency and inexperience; these come with practice and past failures are but stepping stones to permanency if the lessons be learned. The editor has asked for notes on two points which help toward such permanency—incorporation and financing.

Why Incorporate?

Incorporation is the granting by the state of a legal entity, so that the public may deal, not with irresponsible individuals, but with a responsible organization as a whole, or its recognized servants acting for it. Incorporation may be under a general Companies Act or under a special act, governing only the company so incorporated. In Ontario, practically all companies of whatever nature, are incorporated under the one general act, different parts of which apply to different classes of companies or associations.

It should be borne in mind that the primary object of the Companies Act is not for the protection of the public. This, of course, applies to cooperative companies as well as others. Nevertheless incorporation has substantial benefits from the company's standpoint, among which may be mentioned the following:

1. Gives the company a legal standing. Without incorporation, a company or association is non-existent at law, and cannot come into court to sue or be sued, or for other purposes. Such action would have to be taken by or against individual members.

2. Limits the liability of the members. The liabilities of an incorporated company can be met only

by its assets, which do not include the personal possessions of the members or shareholders. When a person buys a hundred dollar share in a company, or gives a capital note, his money or promise to pay, becomes the property of the company and the member is liable to that extent, but to that extent only. (This, of course, refers to capital liability. It does not relieve the member or shareholder from any debts which he may owe the company.) This is why the word "Limited" is required to be placed after the name of a company, to acquaint the public with the fact that they are dealing with a company, the liability of whose shareholders is limited. An unincorporated company or association, on the other hand, is somewhat similar to a co-partnership, where each partner is liable for the debts, and if such can be proven, are collectable from one or more of the partners able to pay. Such partners can collect from the others and an unincorporated association is thus practically one of unlimited liability.

There are other benefits of incorporation, but the above indicate its import-

ance to a company or association intending to stay in business. The sort of incorporation is nominal. Branches of a company do not need separate incorporation.

Until last year no provision was made in The Ontario Companies' Act for the incorporation of cooperative companies as such. As a result, companies which were in no sense cooperative were using the word in their trade name, usually for the purpose of trying the experiment played in this. The resultant failure of the experiment played its part in discrediting true cooperation. The act now prevents such exploitation and legally defines cooperation and prevents the use of the word by non-cooperative companies. It further provides that companies which are cooperative shall acquaint the public of the fact by the use of the word in their name. It was high time that cooperation should be protected from at least this form of exploitation and given legal recognition.

Cooperative companies, as well all companies, come under the general provisions of the Ontario Companies Act, except where such conflict with the special part referring to cooperative companies. The Act is administered under the Provincial Secretary's Department to whom application should be made for incorporation. Detailed instructions as to obtaining incorporation, are given in Department of Agriculture Bulletin 234.

Financing a Company.

Some lines of business, such as cooperative live stock shipping, can for a time be successfully carried on without capital. Any business, however, can be more efficiently run if it be properly financed; and too often in the past, cooperative enterprises have been seriously handicapped for the lack of this first necessary tool for the work. Often the capital of the members is more necessary at the start than it is later when the business becomes established and safe and credit can be more easily obtained. The banks have no hesitancy in lending money where it has been proven the borrower can make profitable use of it. At the start the cooperators themselves have the necessary confidence in their success, and should not hesitate to supply the necessary capital. If they are without such confidence, better leave cooperation alone until it can be given a fairer chance. In old Ontario at least, there is available capital among farmers, either in the form of cash or credit, to finance their cooperative undertakings.

As far as cooperation is concerned, the form in which capital is raised is immaterial. That is to say, a joint stock company can be as truly cooperative as any other. The difference between cooperative com-

panies and others is not in the method of raising capital, but in the division of profits on surplus. In a non-cooperative company the profits go to the shareholders in proportion to capital invested; in a cooperative company the dividend on capital is limited and profits are distributed on the basis of business done, or in other words, as a trade dividend and not as a capital stock dividend.

Where actual cash is to be permanently invested in buildings, machinery, stock of goods or otherwise, the share method is possibly the more satisfactory. Money has to be acquired for the purpose, and it is more satisfactory to acquire it from the shareholders direct rather than borrow permanently on their credit. The company can pay its shareholders interest or not as the business warrants, and can thus acquire capital cheaper than borrowing where the regular rate of interest becomes a charge that must be met.

When the business is such that it requires capital to be used only periodically during the year, perhaps the capital note system of raising capital is preferable. By this method, the members do not pay in cash, but give the company Demand Notes, which are used as collateral for loans. As soon as the loans are paid, interest thereon ceases and the company therefore pays interest only while it is in actual use. During certain seasons of the year, a company may use large amounts of capital either in buying supplies, or in paying members for produce, while at other times practically no capital is needed. If cash capital has been paid in, during such a season the capital is lying idle and not earning even the interest which the member should be paid for the use of his money. The revision of the Ontario Companies Act gives these Capital Notes the same legal status as shares and limits the liability of the member to the value of his capital note, just as a share limits the liability of the shareholder to the face value of his share.

Capital is important for a number of reasons, but perhaps none more so than enabling the company to pay cash in both buying and selling. The middleman at present carrying on the work contemplated by cooperative companies have capital tied up themselves with capital for the purpose and interest on capital invested is one of their legitimate charges against the business. Someone's money is tied up in the goods at all stages. In any event interest must be paid on money so tied up and cooperators should pay this interest to themselves.

Take the Business Margin.

In order to safeguard capital, middlemen exact a margin over their buying prices. These margins vary with the different classes of business. They vary also with conditions in the special trades. But the experience of businesses has given a fairly accurate estimate of the margin necessary for safety. Even at

these margins, some others will be able to keep on their feet, while the efficient business will show handsome profits. The numerous failures in business would indicate that the margins are not always excessive, and it is in a narrower margin that the cooperators to take the recognized margin until such time as they can prove themselves able to do business on a narrower margin. Price cutting is dangerous business, especially in hands not thoroughly experienced. Moreover price cutting in a cooperative association is almost entirely unnecessary, as irrespective of the prices he pays, the member finally receives his goods at actual cost or is paid the full selling price of his produce, less expenses.

The members should, therefore, realize that the important things are the prices at which the association buys the goods and the expenses of the business. All money which he pays for supplies at the time he purchases from his association in excess of these prices, comes back to him as a dividend and in exact proportion to

(Continued on page 15.)



Canadian Fruit Growers Were Our Pioneers in Cooperative Marketing.

In the illustration is seen a portion of the day's shipment of the Gordon Head Fruit Growers' Association of British Columbia being loaded onto a motor lorry. Cooperative marketing projects are always in front to launch in communities of crop specialists. In Canada, for instance, cooperative marketing has made greatest progress among grain growers and fruit men. In all cases, however, a proper system of organization and finance, as discussed in the article following, is necessary to success.



Egg Laying Contest in P. E. I.

PRINCE EDWARD ISLAND is going to produce more eggs to the square foot than any other province in the Dominion. Already eggs are one of the big exports and the Island is bound to make it bigger. To further this patriotic ambition an egg-laying contest is being staged at the Experimental Farm, Charlottetown. It is conducted by the Experimental Farm System Poultry Division. It starts November 1st, and will continue for 11 months.

The contest will be open to birds from anywhere in America, but accommodation is made for only 20 pens of eight birds, or 160 birds in all. The first 20 applications will be the ones accepted. There will be two classes—Class No. 1, light breeds, and Class No. 2, heavy breeds.

Full information, including rules and regulations, application forms, etc., may be secured by applying to superintendent, Experimental Farm, Charlottetown, where the contest is being held, or to the Dominion Poultry Husbandman, Central Experimental Farm, Ottawa.

Fall Suggestions

DAMPNESS is the greatest cause of disease among poultry. Poultry suffer very little from cold, but once put them in damp quarters and roup will start to decimate the flock. For this reason we favor the open front poultry house. We have had experience with the warm, tight, glass front houses, and we were never able to keep the houses dry or the birds healthy. The houses we now use are 20 feet square of the shanty roof type, and in the front is an open space, 3 x 8 feet, covered with wire netting. Over this opening we drop a burlap curtain on the coldest winter nights, or when the storm is beating in from the southeast. At all other times there is nothing but wire netting between the pullets and the weather. As we have

single comb white Leghorns, the combs freeze more or less every winter, but we have never noticed that this freezing had any appreciable effect, either on the egg yield or the comfort of the birds. One type of house that is being commonly built has an opening across the entire front. We have been in several houses of this type and have found them somewhat drafty when the wind is blowing. The defect may be remedied by using a cotton screen over the opening to the side on which the wind is coming.

Offentimes the pullets are put moved into permanent winter laying quarters until late in the fall. One of our neighbors recently asked us of combs and tell her what was wrong with her chickens. She had quartered them in a packing box in the barnyard when they were small chicks and there was lots of room for all in the box. They have been quartered in that packing box ever since. They are now badly overcrowded and, as no roosts are provided, they huddle together on the floor. Closely packed, they get overheated, and overheating inevitably leads to colds. Roosts

should have been provided in commodious quarters long ago, and had this been done, a dozen or two fine pullets would have been saved. Where colds do break out from this or other causes a little addition of permanganate in the drinking water is excellent.

Red mites are one of the greatest enemies of poultry. These mites lodge in the cracks and crevices of the roosts and in the joints of the wood that attack the poultry at night. They are not carried around on the bodies of the fowl during the day. Our method of combating them is to wash the roosts and all adjoining woodwork with a strong solution of zenoform. We do this once a month during the fall weather and less frequently during the fall. We have not been able to find any mites in the winter time when summer treatment was persistent. The nests are treated in the same manner.

Now is a good time to select a breeding flock for next year. The farmer will do well when he visits his poultry pens to have a small package of leg-horn hands and slip them on to some of the late moulters that seem to have good constitution and correct conformation for the breed. When we first started into poultry we knew nothing about conformation and seemed almost ridiculous for us to start or try to select a breeding pen. The whole difficulty is in getting started. As the work progresses the poultrymen become skilled in noting the points of a good bird, and it is on this selection that flock improvement depends.—C. G. P.

Egg Contest Results

THE Seventh International Egg Laying Contest being held on the Exhibition Grounds, Victoria, B.C., is drawing near to a close, the tenth month's report now being available. As there is only one more month to run the contest is, at this contest, the present standing of competitors will probably be fairly well maintained. In the class for light weight varieties, in which are entered 19 pens of White Leghorns and one pen of Anconas, 16,745 eggs have been laid to date and 2,442 in the last month. The highest total production is credited to the one pen of Anconas—955 eggs laid by six pens in 11 months. In second place is a production of 946 eggs by a pen of White Leghorns.

White Wyandottes predominate in the class for heavy weight, with representatives also of the Barred Rocks, Buff Orpingtons, Buff Dottes, Rhode Island Whites, Sussex and S. C. Reds. The 20 pens in this class have a total production to date of 16,208 eggs and in the last month 2,097. The highest production is credited to a pen of Barred Rocks, 1,062 eggs. In second place is a pen of White Wyandottes with 951 eggs. The two lowest pens of the whole 40 are of the Buff Orpingtons with 503 eggs, and the Sussex with 359.

Comparing the two classes, we find that the average production of the so-called egg breeds is very little in excess of the average production of the heavy weight varieties whose average is pulled down by the two low pens mentioned. It is noticeable, however, that the pens of light weight varieties have a uniformly high production, the lowest pen of all being credited with 753 eggs, as compared with the high mark of 955. In the heavy weights the production varies all the way from 359 eggs to 1,062. It should also be mentioned, in justice to the lighter breeds, that the strains of heavy weight breeds represented are not truly representative of their breeds, in that they represent special bred-to-lay strains.

The Eighth International Egg Laying Contest will be conducted from Oct. 15th, 1918, to Sept. 14th, 1919. The contest is open to the world and entry forms may be had on application to R. Terry, Department of Agriculture, Victoria, B.C.

Join the Great Outdoor Crowd

—be one of the legion who enjoy the freedom of Canada's silent forests and open places. Even a single day out for ducks will give you a taste of life as Nature intended you to live. And

Dominion Shotgun Shells

will make the pleasure of that day complete. Leave the nerve-racking life of city or town—shoulder the gun and hike for the place where the ducks are 'n flight. Slip Dominion Shell into the breach of the old gun and watch 'em drop.

Dominion Shells have accuracy and dependability that is backed by the big "D" trademark.

Dominion Cartridge Co., Limited,
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The Heavy-duty Ontario farm and has been used in the G. GOLD, S. WA



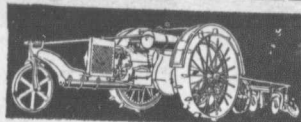
Tractors are fuel consumption and equipment Motor—4 cc Magneto—S

THE DE L



THE CASE TRACTOR.

The work that the Case is capable of doing on the average farm is almost unlimited. For grinding feed, cutting, pumping, silo filling and a hundred and one other duties, it has no peer. A popular model is the famous 10-20 "Canadian Fairbanks-Morse Co. Limited, is the Eastern Canada distributor of the Case Tractors.



HAPPY FARMER TRACTOR—12-24 H.P.

Records are not made by luck. "Happy Farmer" has its own reasons for leaving competition behind. One is its remarkable power compared with its light weight (only 3,700 lbs.). It gets no less than 2,000 lbs. draw bar pull, because it hasn't much initial weight of its own to propel along, and 88 per cent of that is on the big tractor wheels. "Turns in its own tracks."

RENFREW MACHINERY CO., LTD.,

RENFREW, ONTARIO.



THE FORDSON.

"Yes, I'll be there to do my bit" with the fall plow on the Experimental Farm. You'll know me—I'm different."
FORD MOTOR COMPANY OF CANADA, LTD.
Distributors of Fordson Tractors.

TRACTORS AT OTTAWA.

The tractors illustrated on this page of Farm and Dairy will be at the big International Plowing Match at Ottawa on October 16, 17, and 18. Farmers of Eastern Canada will do well to make it a special point to examine these carefully.

**To the Farmers
Particularly of
Ontario and Quebec**

This is a kindly invitation to attend what we believe will be the greatest Tractor Demonstration and Plowing Match ever held in America. With the farm help problems facing us as never before, we specially desire as many farmers as possible to be with us and

**Learn What POWER Will Do
on YOUR Farm**

DATES—OCTOBER 16, 17, 18

Wednesday—Farm Machinery Demonstrations
Thursday—Walking and Riding Plow Competitions
Friday—Tractor and Seed Drilling Competitions

PLACE—DOMINION EXPERIMENTAL FARM, Ottawa, Ontario

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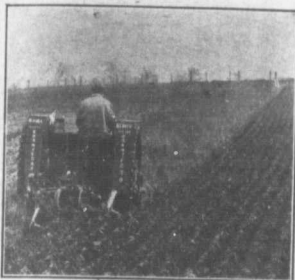
Special rate of fare and one-third. If over 50 miles, buy a single ticket with certificate, and return fare can be secured at Ottawa for one-third fare plus 25c.

Buy your ticket to Ottawa, where car service every 10 minutes will take you to the Farm.

A programme with list of all prizes gladly sent on request.

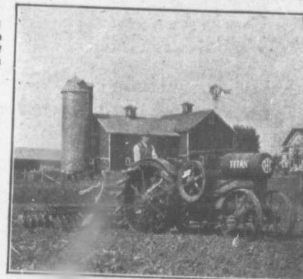
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PLAN NOW TO ATTEND.

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The Beaver is a clean cut machine built for continuous heavy work of any kind that is found on the Ontario farm. It operates on kerosene or gasoline and has Waukesha heavy duty tractor motor of four cylinders.
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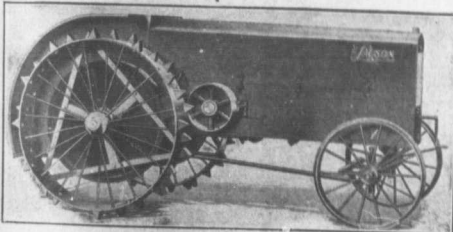
THE I. H. C. TRACTOR.

Known the world over, wherever good farm machinery is used. The I. H. C. line of implements covers every operation in every class of farm work. Our different sizes of machines will show you what they can do at Ottawa, October 16th, 17th, and 18th.
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"AVERY 8-16 TRACTOR" PLOWING IN STUBBLE.

Mr. Gordon Fincombe, of Strathroy, who owns an 8-16 says: "If you have an Avery who owns an engine when you want one. It does all the heavy work." Send for catalogue to
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THE LAUSON—TRACTIVE 15, BELT 25 H.P.

Tractors are profitable only as they give continued satisfactory service on low fuel consumption. For this reason "Lauson" tractors are unequalled in materials and equipment—durable, efficient, reliable. Motor—4 cylinder—valve-in-head Lauson-Beaver. Magneto—Sunner-Dixie. Carburetor—Kingston Kerosene. See it and its work at Ottawa.
Distributors F. W. Canada.

THE DE LAVAL CO., LIMITED, PETERBOROUGH, ONTARIO.



THE NEVER-SLIP.

The Never Slip creeps on a steel track. It will not pack the soil and is so conveniently handy that it can be turned in its own tracks within an eleven-foot circle. Learn more about it when you are at Ottawa. It is the coupling type tractor.

MONARCH TRACTOR CO., LTD.,

BRANTFORD, ONTARIO.



Following
the sun with

WRIGLEYS

From Arctic ice, to the torrid lands
beneath the Southern Cross—

From towns tucked in the mountains, to
the busy river's mouth—

WRIGLEYS is there!

There, because men find
comfort and refreshment
in its continued use.

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After a close study of the great number of dairy publications that are available, our Book Department feels justified in recommending this book as the most comprehensive of its kind ever written. The book is only recently published and covers practically every phase of dairy work—the balancing of rations, feeding cows for heavy production, the best feeds to use when prices are high—crops to grow, etc. If you want a book that you wouldn't sell for double the price later, order one and study it.

The book sells for \$1.50 and can be secured direct from our

BOOK DEPARTMENT

FARM AND DAIRY - Peterboro, Ont

What District Representatives Say of Farm Tractors

They Have Had More Experience With Tractors Than Any Other Disinterested Parties in Eastern Canada—The Conclusions of Two of Them, R. A. Finn and F. C. McRae

FEW men in Eastern Canada have had fuller opportunities of studying the tractor in operation than the District Representatives of Ontario. The Ontario Government tractors have been operated under their supervision. They have seen tractors operating under all possible conditions. Farm and Dairy is pleased, therefore, to be able to quote the opinions of two of these representatives, Messrs. Finn of Middlesex county in Western Ontario and McRae of Peterborough county in Eastern Ontario, who have written us out of the fullness of their experience. R. A. Finn, B.S.A., writes as follows:

"From my experience in the last two years with the tractors under my charge, from observing those on private farms, and from queries received from farmers, it seems to me as follows:—"

"(1) Would it be a paying proposition on my farm?"

"(2) Are conditions on my farm suitable for tractor work?"

"(3) If I had one could I operate it?"

"(4) What size or horse power would be most economical?"

"(5) What make or type should I buy?"

"The answer to the first question depends upon the answer to all the others. Since on the average farm (perhaps not on all farms) horses are a necessity there is not much need of a tractor on a small farm, yet indications are that on a larger farm where a large acreage has to be plowed and cultivated, etc., where belt work such as silo filling, grain chopping, wood cutting, or even threshing has been done there is a place for the tractor. It will do satisfactory work if operated properly. It does the work quickly and at a reasonable time. It is possible to get, after harvest, cultivation done, also to prepare ground for fall wheat and to fill silo at the time you desire.

"My experience leads me to believe that hilly, stoney, spriny or boggy land is unsuitable to the economical use of a tractor.

"The average farmer has enough mechanical ability to take proper care of a farm tractor, but should take the course in Farm Power if possible. He can get many good pointers in this course, particularly after he has operated and become somewhat familiar with his outfit. The man who operates the tractor himself and, therefore, always knows the condition it is in, and who does his own repair work, will usually meet with success.

"The tractor that will pull two or three plows and have power to spare appears to suit the farmer on one, two or three hundred acres of land.

"In regard to the make or type to buy, there are several good makes on the market, but personally I should prefer one that has plenty of power, simply constructed, light weight, yet strong, rigid frame, easy to get at when adjustments or repairs are required, and above all, it is necessary to consider a company near you carrying a full line of repairs, and one that gives you service.

"The chief difficulties that we have had been due to frequent changes in operators; too much moving on the road from farm to farm, which appears to rack the tractor, particularly when not run slowly; overloading the tractor, that is, plowing hard ground with three plows when two would have been more satisfactory; attempting to plow unsuitable land; and fouling of spark plugs, due to poor quality kerosene. In some instances it would have paid to have strained the kerosene through a chamois to get rid of the water. A plug that is suitable for

gasoline does not in all cases appear satisfactory for kerosene. One that goes well into the combustion chamber and has the points projecting forward so as not to obstruct the kerosene seems to give us the best satisfaction.

"Many farmers after carefully considering the question are purchasing small farm tractors, and there is no doubt that there is a day not far distant when on many Ontario farms a tractor will be practically indispensable.

Peterborough County Experience, F. C. McRae, B.S.A., writes as follows:

"Almost two years have elapsed since the Department's scheme was put into operation and in that time much valuable information has been collected. In the county of Peterborough, two machines, a Model 14 and a Bull 12-24 were placed. The Mogul is a four-wheeled outfit, while the Bull has only three wheels. Plowing was the chief work done, though they have been used to a limited extent in dicing. Two makes of plow, a Cocksbutt 12-inch bottom, and an Oliver 10-inch bottom were furnished with the machines. The disc harrow, were a Bissell and a Cocksbutt.

"It is rather unfair to compare the work of these tractors with that which might be accomplished by a privately owned machine, because we were obliged to engage inexperienced operators, men who almost invariably had never driven a tractor before, and who, after a few days, became inefficient mechanics, were generally discharged, owing to lack of work for the machine. However, from the results obtained, it is found that normal conditions from three to four acres can be plowed in a day of ten hours at a cost of from \$1.80 to \$2.50 per acre including fuel, lubricating oil, and operator. District farmers are getting farmers about \$1.10 per acre. These machines require from 10 to 15 gallons kerosene and about one quart of lubricating oil per day, depending upon the nature of the work being done.

Conditions Necessary to Successful Operation.

"The tractor as yet, is only in the experimental stage, and for this reason we find a great many different types on the market. Farmers generally are taking a keen interest in this new form of farm power. Many have already purchased machines while others are waiting to secure more definite information regarding their practicability for the average Ontario farm. From my own experience in handling the tractors under my supervision, I have found that in order to do successful work, it is necessary to have a fairly large field, ten acres or preferably more. The must be reasonably free from stumps and level, or at least, the tractor should have the power on rolling land when it was necessary to climb sharp, steep elevations. On side hills, also, the tractor has a tendency to run into the plow land. On wet land, or land where there are soft spots they will nearly always mire, and time lost in getting the machine out was considerable. However, provided that the ground is level and in good shape for working, the tractor will do as much work.

"I am convinced that, for the present at least, the tractor will not replace the horse on the farm and, therefore, to be profitable, the intending purchaser should have a farm sufficiently large that a number of horses will be profitably kept. The fields also should be as large as possible.

"Another factor of paramount importance is that the machinery of the tractor be as simple as possible. Given this, a man with a mechanical

knowledge, successfully operate a tractor. "In a tractor, farm, in, to plow, it should be able to give it an ably level in good all these doubt, satisfied, think that can repli farm."

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knowledge, such as is required to successfully run an automobile, should experience no difficulty in operating a tractor.

"In conclusion, I would say that a tractor, to be a success on an Ontario farm, must develop sufficient power to plow, disc, till, mow, thresh, etc. It should also be small enough that it can be turned around in a small space, and be simple to operate. On the other hand, it should have reasonably level land, free from stones, and in good condition for working. With all these conditions the tractor will doubtless find a place and will give satisfactory results, though I do not think that, for the present at least, it can replace the horse power on the farm."

Orchard and Garden

Orchard and Garden Notes

SAVE seed of all vegetables and flowers for use next year. The lupine is one of the perennials that should be more often planted in the garden.

White cauliflower can be had by tying up the leaves over the head of the plant.

Celery is best blanched by drawing earth up about it when the plant is perfectly dry.

Wood ashes make a splendid fertilizer for the garden. Better save all that come from the fireplace or stove for next year.

When exhibiting fruits or vegetables at the fairs pick uniform evenly colored specimens of good marketable size. Large or grotesque specimens have no exhibition value.

Aster blight was quite common again this year. Fine lots of plants disappeared in a few days. There seems to be no remedy for it.

A large pan of water will supply the needed drink for birds and they will not be likely to destroy grapes and other soft fruits.

See that the sweet corn saved for seed is thoroughly dried before storing for the winter or before it freezes. Sweet corn is harder to dry than field corn.

Save a few sheaves of grain to put up in the winter for the birds. They like to work in the straw and it will furnish you some amusement.

During the cool days of autumn and early winter it is well to water plants before noon so that any moisture on the leaves may dry off before night. Otherwise mildew is likely to attack the plants.

A cold frame is a good place in which to store root crops, cabbage, and celery temporarily.

Squashes should be picked before being frosted and they require a dry, warm place for storage.

Take up a few plants of parsley for winter use. It will grow quite readily in the kitchen window.

Let the canna and dahlia bulbs lie on the ground a few hours before putting them in the cellar.

Cut all grass away from small apple trees before the ground freezes. This will leave one less home for mice.

Clean up the garden as early as possible and plow or spade it this fall. Many insects will be destroyed by doing this.

Don't knock the apples off the trees and then throw them into barrels if you expect them to keep long. Every bruise means quick decay of that part.

As soon as the frost has killed the asparagus foliage, it may be cut off and started by sowing and planting the seeds when ripe.

It doesn't cost much to plant trees, yet they add a great deal to any property. The New Jersey Forester says the shade trees of New Jersey are worth \$20,000,000.

Save your Money and help Canada!

EVERY dollar of money in existence in Canada represents the products of individuals because money is the only visible symbol of the work of the hands or brains of individuals.

In this war, victory depends upon the way in which the assets of the people are devoted to fighting the war—in other words, upon how each person spends his money which represents his portion of the combined assets of the nation.

The nation's assets and resources are in the hands of eight million individuals—every single individual controls some part, large or small, of these resources. If those resources, represented by money and effort, are diverted from war purposes to those of private indulgence or needless expenditure, the war effectiveness of the nation is weakened to that extent.

resources of the individual and therefore those of the nation.

When you spend a dollar self-indulgently you weaken your own position and your individual ability to help win the war by just that much.

When you save a dollar and put it where it can be called upon for use in the nation's service you add to your own resources and to those of Canada.

Every dollar needlessly spent reduces the available re-

That is why Canada

at this time asks each and every loyal Canadian to conserve and accumulate his and her cash resources, small however they may be, so that when they are called upon for the war they will be available.

Issued under the authority of the Minister of Finance of Canada

The Home Orchard

BELIEVE the time is coming when there will be just two kinds of orchards in Eastern Canada," recently remarked a well known fruit grower, with whom I dropped into conversation on the train between Port Hope and Toronto. "We will have the small home orchard designed to meet home needs, and we will have the large commercial orchard designed to supply the needs of our own cities and of the foreign market."

This grower, who himself has 50 acres in apples, backed up his prophecy with some good arguments. Profitable fruit growing today involves a heavy investment in spraying machinery and from the first of the season to the last the trees and the fruit must be handled skilfully

and well in order to produce a product that will command attention on the market. Pests have become so numerous that they are completely controlled only by the man who is making fruit growing his first consideration. The investment in spraying machinery and the necessity for constant attention to the orchard will, in time, eliminate the orchard of one to six acres, run as a sideline to the general farm. If these orchards are to continue, this grower believes that they will be handled by individuals or companies, who will take over and manage numerous small orchards, paying the farmer rent for the same.

There is still a place, however, for a small well-selected orchard of one to three or four trees of each of the leading varieties of apples, including sum-

mer, fall and winter kinds, a few pear trees, some plums and cherries, and, in the proper districts, peaches as well. This small orchard will be designed to meet home needs, and if any fruit is marketed that will be a secondary consideration. We have such an orchard ourselves on a farm where milk for the Toronto market is the main consideration. We spray two or three times in the spring, we keep the trees moderately well pruned, and use the orchard for a calf pasture. The same spraying machine which whitewashes the stables also keeps the home orchard free of codling moth. I am moved to make these few remarks on the home orchard in case the general disappearance of the small commercial orchard might discourage home planting as well—"Milk Shipper," Ontario County, Ont.

Farm and Dairy

AND
Rural Home

"The Farm Paper for the farmer who milks cows."
Published every Thursday by
The Rural Publishing Company, Limited
Peterboro and Toronto.

47

SUBSCRIPTION PRICE, \$1.00 a year. Great Britain, \$1.20 a year. For all countries, except Canada and Great Britain, add 50c for postage.

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United States Representatives:
Stockwell's Special Agency.
Chicago Office—People's Gas Building.
New York Office—Tribune Building.

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The paid subscriptions to Farm and Dairy approximate 30,000. The actual circulation of each issue including copies of the paper sent to subscribers, who are but slightly in arrears, and single copies, varies from 18,000 to 20,000 copies. No subscriptions are accepted at less than the full subscription rate.

Sworn detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

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We guarantee to every advertiser in this issue a reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading copy because to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our paid-in-advance subscribers, we will make good the amount of your loss, provided such transaction occurs within one month from date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts as stated. On the condition of this contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."

Refuge shall not give their names at the expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

The Rural Publishing Company, Ltd.
PETERBORO AND TORONTO

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

Production in 1919

IN a recent appeal to the Canadian people, the Food Board says:

"The hard work and self-sacrifice of Canadians has borne fruit. Great Britain cannot be starved. There is enough to provide for the armies and the civilians until the next crop, but no more. There are no food reserves, as there should be. "Indeed, Canada must double its production in 1919. Let that soak in. The continent of America has promised, and must deliver, 15,000,000 tons of foodstuffs this coming year. In 1917-18, 10,000,000 tons were promised and will be delivered. America must produce 50 per cent more, for the Allies. That's the job before the farmers and citizens of this country. The great crops of grain in the United States in 1918 may not be duplicated next year, and Canada will have to deliver as well greater share."

This is a large order. If it is really essential that Canada materially increase her production in 1919, and we believe it is, then the outlook for a well-fed allied people following the next harvest is not bright. Thousands of young men who helped prepare the soil and were available for the seeding and harvest of this year's crop are due to report for duty immediately. The man power on the farms will be seriously reduced next year as compared with this. The same conditions prevail in the United States. There, a great army is to be drafted this winter and to this army the farms will supply their proportionate quota. Already the best informed agricultural leaders of the United States are expressing a fear that crop acreage will have to be seriously reduced next season. It is true that large sections of the Canadian West experienced a partial crop failure this year but this was more than offset by bumper crops in Eastern Canada and the United States. On the whole we are not justified in looking for greater average returns per acre in 1919 than we have gathered in 1918.

What measures, then, are necessary to insure against a future food shortage? In the first place it must be recognized that the great majority of the men on the land are doing all that is humanly pos-

sible. If crop areas are to be greater, there must be more help on the farms. Both machinery and men are needed. The action of the government in placing tractors on the duty free list has already resulted in a great increase in the tractor power on our farms. But to use tractors to capacity, tractor machinery has to be purchased and this is still subject to a tariff which makes prices prohibitive to many who would otherwise invest in a tractor outfit. The removal of the tariff on all agricultural implements would assist materially in increasing production.

In the second place, the leave of all drafted men who have been working on farms, recently extended to October 30th, should be immediately extended until the conclusion of all fall work, and, where it is evident that their removal will seriously curtail production, they should be granted complete exemption. Farmers must also be given full assistance that the rural man power of the rural districts is not to be further reduced by the military draft. A supply of men new from the cities might be assured by the closing of all non-essential industries. And, finally, if farmers are to take the risks of high wages or an unfavorable season, a minimum price must be guaranteed which will justify a greatly increased acreage.

In all that we have said, we are assuming that the need is as great as the Food Board would have us to believe. Every farmer knows that, under present conditions, it is impossible to double production in 1919 and it will take more than exhortations to ensure even a small increase.

Time Standards

THE end of this month those who have adopted new time will turn their clocks back for an hour. Those who adhered to the old standard time, in spite of legislation to the contrary and untold inconvenience to themselves, will again be in accord with the community at large. All differences will be forgotten—and all next spring.

And what of city folks. The extra hour of daylight in the evening has been appreciated by office and factory workers. These will demand a re-enactment of Daylight Saving next year. Were it as easy to switch the sun as the clock, this legislation might be made acceptable in the country also. As it is, however, nature still goes on in the same old way and the farmer has to follow her lead. In many cases, rural schools and churches soon changed back to standard time, but where they did not the measure has been the cause of much unnecessary work and trouble in farm homes where the burden was already heavy enough. City milk producers probably suffered most, as owing to the earliness of the milk trains they were forced to milk by new time and to feed their field work by old time. The farming community at large was seriously inconvenienced by the hours observed by the banks and stores. It is a question if the advantage to the city worker is sufficient to compensate for the inconvenience caused in the rural districts.

What attitude are farmers and their organizations going to take in regard to Daylight Saving in 1919? It is a subject that might well be discussed at farmers' clubs this coming winter.

The Tractor is Coming

THE tractor is not yet standardized. The various makes have never been subjected to uniform competitive tests. Aside from the known reliability of many of the companies manufacturing these machines, farmers have virtually been "buying in the dark." But they are buying just the same. There are 12 tractors in Ontario four years ago. There are now over 700. They are found in considerable numbers in Quebec and there are a few in the Maritime provinces. In Western Canada tractors are having a phenomenal sale.

This wonderful extension in power farming represents the effort being made by Canada's farmers to adapt themselves to changing labor conditions. At once it disproves the claim so often made that farm-

ers are slow to adapt methods to conditions and it ushers in a new era in agriculture. We have been living in a machinery age; help was always scarce in America and mechanical aids always popular. Now with labor still scarcer, due to war, we enter on a power-machinery age.

This power factor will, if anything, make the problems of reconstruction more difficult than they would otherwise be. The food of this continent will be produced in the future with less manual labor. There will be a lesser demand for help on the farm, and correspondingly greater difficulty in paying soldiers back in civil life. This, however, is a question that in time will adjust itself. Having, in consequence of the tractor method, Canadian farmers will not go back to old methods. In the not very distant future the tractor will be doing the heavy field and belt work on thousands of Canadian farms and gasoline or electricity will be harnessed to the smaller power equipment. The social results of this adoption of power standards, may be more far-reaching than we sometimes care to contemplate.

Old-Fashioned Thrift

THE good old-fashioned way of "sending the boy through" for one of the professions was to institute a reign of thrift and frugality at home. Fine clothing and dainty living were taboo. The new barn had to wait and the great objective was postponed in order that the right objective of helping the boy through college might be attained. Such sacrifices were made gladly. It was a labor of love.

The Canadian people have entered on a great task. They are going to see this war through to a successful conclusion because they believe the principle for which the allies are fighting to be just and right. The national burden involved in this undertaking is even greater proportionately than the expense of sending John to college. Its cost can be met only by adopting thrift as a national virtue and making it a national characteristic. Every extravagant expenditure weakens the nation's strength. Every permanent improvement that can be deferred until after the war should not be gone ahead with now for the same reason; we need the saving represent for a greater purpose. Farm and Dairy knows that country people, as a rule, are thrifty and frugal. Even in the country, however, by taking thought, we may add to the nation's savings account. Thrift, with accumulating savings, is what the government asks of the men and women at home. It talks heed to the urgent appeals for national thrift, we say "doing our bit."

The Yearly Test

THE results obtained in long-time testing are certain to be a most important factor in determining future values of Holstein-Friesian cattle. I trust that Holstein-Friesian breeders, whether great or small, will take up the "long-time semi-official test; and I can assure all that I consider the results so obtained as of all intents and purposes fully reliable. The short-time test shows what a cow can do for a short time and under favorable circumstances, and is valuable accordingly; the long-time test shows what a cow can do during a lactation period and is a correct measure of the capacity of that cow "for long-time work."

The foregoing paragraph is from a letter by Malcolm H. Gardiner in the Holstein-Friesian World. It gives the mature opinion of one who has probably had more to do with the official testing of dairy milk than any other man in the world. His opinion is worthy of the thoughtful consideration of all breeders who are abandoning the semi-official yearly test in favor of the official short time test. No matter what may be the difficulties in the way that may be serving his best breed who makes the yearly test the test of his success as a breeder. The opinion expressed of Mr. Gardiner's conclusion is worthy of repetition: "The results obtained in long-time testing are certain to be the most important factor in determining future values of all Holstein-Friesian cattle."

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TWELVE HUNDRED THOUSAND YOUNG BELGIANS DEPENDENT UPON RELIEF WORK.

With the advent of war in Belgium both public assistance and private charity found their resources strained to the breaking point. Children's aid societies, orphanages, day nurseries, etc., viewed with alarm the swift dwindling of their finances. We might they be alarmed, for upon their efforts depended the lives of more than one million children. From the very beginning the Belgian Relief Commission undertook the special task of nourishing children, as well as the general work of alimenting the population. A children's department already in existence, but gradually its scope was extended until it embraced three branches: Children's Aid Societies, the Feeding of Children and Orphanages. These three branches have a common secretary and a complete board of inspection who see that measures decided upon at the monthly meetings are put into effect. Every two weeks delegates from all the provinces and women are devoting themselves to the protection of children in the occupied parts of Belgium. The branch having to do with the feeding of children, attached to the Commission for the Feeding of Children, to which are given meals for 595,517 children at the schools in 1,697 communes. Canteens for debilitated children provide special nourishment for 53,311 children. Canteens for

It is an indubitable fact that but for these activities over a million children would be without the means of supporting life, that over a million children would perish of starvation and disease consequent upon malnutrition. This great work is at present seriously hampered by lack of funds, and looks to the Belgian Relief Commission for the means wherewith to continue its noble efforts. It is on behalf of these and similar organizations, on behalf of the appealing to the generosity of the Canadian public in aid, that the Belgian Relief Fund is organized or with a view to saving life or death for a child. Contributions should be sent to the local branch of the Belgian Relief Fund or to the Canadian headquarters at 59 St. Peter Street, Montreal, Que.

Daylight Saving a Nuisance

EDTOR, Farm and Dairy.—As time goes on and the seasons advance Daylight Saving is proving more and more of a nuisance on the farm. The nuisance is more pronounced where help by the day is hired. At having time the help come at six o'clock, God's time, when the dew was on the hay and nothing could be done for a couple of hours, and at five in the evening when the hay was laid and dry and a long spell of fine day and light weather was ahead, the man-help knocked off work and went home. At harvest, when the days, or mornings, are shorter, it was even worse. You cannot begin to handle grain at six a.m. sun time; it was not fit to start the binder much on an average before eight o'clock. And what is the man going to do these two hours? I say this daylight saving has caused thousands of dollars of ill-repent wages to badly needed help, while the loss of labor in the early evenings, when conditions for working in the fields were ideal, was another gigantic loss to the farmers.

Anywhere cream is shipped by train farmers have to be up in the summer days before day to get the cows milked and to start to the station with the cream. Even on Sunday mornings the nuisance is felt as bad or worse than any of the week days. On Sunday we have to be astril as early or earlier than on week days if we wish, as all Christians naturally do, to go to church. Our church services begin at 10.30, when is 9.30 God's or mean time. When one has to go a distance of five miles to church, as does the writer and thousands like him, one has to be around pretty early in the morning to get the cows from the pasture, milk them, send them away, separate the milk, and put it away, get from the field and feed and harness him and then dress for church. As our women have also to get breakfast, and as many of them (or most of them nowadays) milk, they, the women, must hustle on Sunday mornings to be enabled to go to church, if the distance is five miles. I have to leave for church at eight o'clock, giving myself an hour to drive the five miles and a half hour extra, as in country places farmers always get to church fully a half hour, if possible, before the bell rings for service. We are unlike the towns in this way. Possibly we meet for a social that among acquaintances as at church is the only place one has the opportunity, in the presence of, of seeing one's friends. Anyway it is the custom in the country to get to the church about a half hour before service begins. Here then, many farm women were unable to go to church on very many Sundays this summer on account of the early hours of service caused by daylight saving, and the amount of necessary labor to be performed before leaving home.

We trust the farmer will not allow this daylight saying to go in operation next year. But what's the use in talking? Farmers have no say with government—J. A. M., Kings Co., P.E.I.

Letters to the Editor

How the Tariff Works

EDTOR, Farm and Dairy.—A fiscal policy of Canada is robbing the people, in order to make a few millionaires, is shown by the operations of the automobile industry. To get a clear insight of how it works out it is necessary to go back a year or more. During the fiscal year ending March 31st, 1917, there was imported from the States eight million dollars worth of automobiles, on which the duty was \$1,500,000, all of which went into the public treasury. In August, 1916, about the middle of that fiscal year, price lists of Ford cars were issued simultaneously in American and Canadian papers, giving the prices of various types of cars, in Detroit and Ford, Ont., respectively. The prices of the four styles of cars most commonly used outside of the larger cities were as follows:

Runabout, Touring, Coupelet, Sedan.	
Ford L.	\$475
4895	\$695
5890	\$850
Detroit.	345
360	505
445	645

These figures show an average difference of \$175 per car in favor of the Detroit cars, although the cost of manufacturing in Ford is as low as in Detroit. As the companies have announced that it expected an output of 60,000 cars from the Canadian plant during the ensuing year, it will be seen that the tariff must have made a difference of over \$10,500,000 in the price of Ford cars alone to Canadian consumers. The public treasury received no benefit, and it cost the Canadian people just \$10,500,000 to keep the factory in Canada. It would have been cheaper to pension all the employees. We could have paid 3,000 men a salary of \$1,200 each and have had nearly a million dollars left.

What is true of the automobile industry applies with equal force to the other industries which are supported by protective tariffs, exemptions, municipal bonuses, etc.

It would be silly to censure those men who have so richly benefited by an iniquitous fiscal policy; they used their brains either in having the tariff framed to suit them, or in taking advantage of it afterwards. The responsibility is with the electors, and as the industry of agriculture is the only one that is taxed under our tariff restrictions, it is up to the organized farmers to do a little thinking for themselves.

H. J. Pettypiece, Forest, Ont.



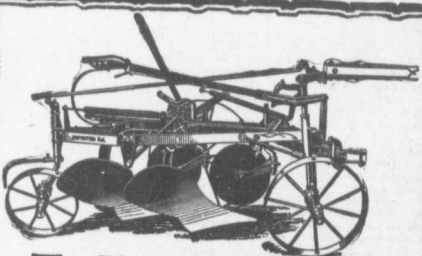
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- COST** since while a De Laval Cream Separator may cost a little more than a poor one to begin with, it will last from ten to twenty years, while other separators wear out and require to be replaced in from one to five years.
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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



The Plow it Pays to Use

SEE the Oliver Improved No. 1 Gang Plow. It is a model of strong construction, light draft, close adjustment, ease of operation—the result of 59 years of good plow building. Getting down to details, compare the heavy one-piece bar steel frame, the bracing, the ball hangers, the wheel connections, those wheel bracket bearings and control rod adjustment, with those of any other plow sold in Western Canada. The Oliver No. 1 leads them all. The plow beams with their right angles, the long, strong frog that makes the foundation of the plow every feature that means good work and long life for the tool, is found in this Oliver plow. Look it over carefully; compare it point by point with any other gang plow offered. In this same good Oliver plow line are tractor plows, sulking, disk gangs, prairie and brush breakers, and walking plows to meet every possible plowing condition. See the local dealer for full information about any plow in the Oliver line, or write the nearest branch house below.

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THIS world would soon be regenerated if the saints were fully consecrated.

Owing to Christopher

By Nancy Byrd Turner.—(Youth's Companion). (Continued from last week.)

HAZEL CREEK, wide, deep, swift running, was at the bottom of the hill; Christopher slowed up just in time to enter the ford without disaster. In seasons of heavy rains Hazel Creek was unfordable at this point; it was no tshawlow, even in a drought.

"This creek," Mr. Shane explained to Mr. Beale, "is the boundary line for one side of my property."

All at once, in the middle of the stream, Christopher stopped short. He was merely resting for a minute, with the cool current washing his knees, before starting on the steep uphill climb on the other side of Hazel Creek. So to stop was a time-honored habit of his; Aunt Luella and Mary were well aware of it. But Mr. Shane got up fustilly.

"The horse wants to drink," he announced, "and the shortest cut is to let him do it. But why, in the name of common sense, didn't we take the check rein down before we got into the water?"

Although he said "we," it was very evident at whom he aimed the reproach. Aunt Luella opened her mouth to explain that the stoop had drunk heartily before leaving home, and that he abhorred any other drinking place, when she beheld Mr. Shane swinging himself round by the stop. "I don't see anything to do," he declared, "except to let down the confounded rein myself."

Clutching the harness, he crept gingerly out along the shaft. Christopher seel what was happening. Mr. Shane loosened the rein with a jerk that brought Christopher's nose sharply into the air; then he crawled back to his place.

Aunt Luella and Mary exchanged glances. Mr. Shane had grievously affronted Christopher.

A little silence fell. Hazel Creek swirled along through light and shadow.

"Why doesn't the critter drink?" asked Mr. Shane, in an exasperated voice.

Before Aunt Luella could answer, Christopher's head turned again, slowly, at a sharp angle with his body, and one eye rolled defiantly; then his tall gave a violent twitch from left to right.

Christopher had balked.

"Get up, Christopher!" commanded Aunt Luella, fustily. He did not "get up"; he stood motionless and steadfast. Aunt Luella clucked and tugged at the reins as earnestly as if she had believed such methods would stir him; in the back seat Mr. Shane fidgeted and breathed hard.

"The old fellow's after a nap, to my way of thinking," observed Mr. Beale, with an attempt at jocularity.

"Well, I'll see him take it!" Mr. Shane cried. "I'll teach him to nap when I'm behind him in a hurry!"

He leaned forward with extended hand and grabbed the long whip from the socket.

Now this whip was a mere foghead carried only because every one else carried a whip. The Dunaways would almost as soon have thought of striking grandfather as of using the whip on Christopher. Before Aunt Luella could protest, however, the lash descended, and smote Christopher's venerable back with a sickening swish.

"Now will you go on?" cried Mr.



A Well Trained Vine has Made This Archway a Beauty Spot. The illustration shows a picturesque archway leading into an artificial lake in the Scotchburn, in Ficton Co., N.S. The Scotchburn Creamery may also be seen in the background.

Shane, shrilly. "Get up, get up here, you confounded beast! Beg your pardon, Miss Dunaway, but this is no time for half measures."

It was not, indeed. Christopher's tall described a swift arc, and then was still. The whip fell again, and yet again, and at each blow the gray tall swung with a twist that meant outraged surprise as well as obstinacy. When Mr. Shane's hand went up for the fourth time, Christopher turned his head slowly. Until then he had evidently attributed the whipping to Aunt Luella, the driver and custodian of the whip. When he perceived the real state of affairs, his behavior changed in an instant. With an airy toss of his head and tall together, he began to dance.

He was a nimble old horse, and he had what Michael called "blooded legs"; those slender, tapering legs were now put to strange use. Without rearing or plunging, without moving an inch backward or forward, he danced lightly under the spur of the lash. His hoofs beat a lively tattoo under the water, his old shanks dashed in the sunlight; a shower of flying drops sprayed the occupants of the wagon.

Mr. Beale was obviously alarmed; he clutched the seat tightly as if he had expected the horse to bolt at any moment. "Stop, Shane!" he remon-

strated, weakly. "Stop, I say!"

But Shane stopped only for breath. Again the whip sang through the air. "Take that!" he cried. "You—you ash-colored idiot!"

Christopher performed a graceful polka that drenched his castigator thoroughly, and Mr. Shane sat down, gasping. Suddenly Mary felt the seat begin to shake, and glanced up. Aunt Luella was very large, and she was laughing, silently and helplessly, and so hard that the loose springs of the wagon squeaked beneath her mirth.

She knew there was no danger. In all his well-ordered life Christopher had never run away; and he was not apt to begin now. But that last epithet had proved too much for her; she was overpowered by an emotion as uncontrollable as Mr. Shane's.

Aunt Luella's mirth coiled Mr. Shane down to a state of sulky siffness, and reassured the frightened lawyer. For a long time no one spoke. There seemed nothing to say. Mr. Shane, for all his wrath, could not blame his hosts, certainly. He knew well enough that Pleasant Plains had only one horse—and he had ordered that one to meet him. Mr. Beale relaxed with a sigh, and Aunt Luella gradually got the better of her mirth. Hazel Creek flowed monotonously along. Christopher stood like a statue, with his gaze fixed

the tall red chimneys of the house appeared above the trees.

Michael shuffled round the corner as they drove up. Mary had expected to see him surly and dumb, but his manner was cordial almost to offensiveness. As the occupants of the spring wagon descended, Grandfather Dunaway appeared in the front door, and suddenly another figure loomed behind him—big Uncle Thomas Dunaway, who had come in his automobile by another road. Grandfather and old face wore a queer blend of expressions, but his hospitality did not falter. The two guests were graciously received.

The tall clock pointed to one when dinner was served. Mr. Shane was still sulky, and plainly ill at ease. All through the meal he kept consulting his watch. When Aunt Luella gave the signal to rise, he looked at grandfather and then at Mr. Beale, and cleared his throat.

"Well, gentlemen," he said, "shall we settle our little affair?" "No," said Uncle Thomas turned from the window. "I didn't bring up the subject during dinner," he remarked, "because I don't believe in mixing business and pleasure—but, as it turns out, there's no affair to settle. You see, it's this way. When Michael's letter found me, some weeks ago, with the news that it looked as if the place had soon to go, I made up my mind that it shouldn't, for its own sake, and not because it held anything worth digging for. My brother insisted that until noon you had the right of purchase. We waited and twelve o'clock; then I saw no reason why I shouldn't buy in my old home—and I bought it."

He did not add that he had also immediately turned it over to its former owner, but grandfather's happy old face told that for him.

Mr. Shane behaved better than anyone thought he would. Perhaps Uncle Thomas overawed him; or perhaps he felt a bit of honest, if belated, shame. At any rate, he simply snapped his watch, and announced that he must immediately get back to town.

"But not," he added, "behind the animal that brought me. I'll telephone for a livery team from the station."

Half an hour later, Michael, with a smile, watched the livery vehicle depart in a whirl of dust. He had a halter round Christopher's neck, and was grazing him in a forbidden spot under the apple tree.

"There go all our fallen winessaps!" said Aunt Luella. "But never mind, Christopher shall have them if he wants them!"

As some hidden memory her shoulders heaved.

Uncle Thomas sat tilted back comfortably on the veranda, and grandfather was pottering happily about in the yard.

"What's the gray's name, Mr.?" asked Uncle Thomas.

Michael gave his rope a slight tug that brought the head of his old charge up, with ears erect. "Go together, and the apple tree."

"Looks as if he'd been some time of a horse in his day."

"He has one grave fault, though," admitted grandfather. "He balks."

Suddenly Uncle Thomas threw his head, and laughed long and loud.

Across the "ash-colored" nose Michael had winked at him solemnly. "To be sure," said Michael, "Christopher do balk occasional. No, sir, I would not," and Michael smiled significantly. Uncle Thomas came back from the sweet, level fields of Pleasant Plains.

"I can imagine times," he said, "when it might be called a positive virtue!"

The End.

The Upward Look

Spiritual Habits

By Rev. J. H. JOWETT, D.D.
 "Trust in the Lord at all times."—*Ps. 121.*
 "Pray without ceasing."—*1 Thes. v. 17.*
 "In everything give thanks."—*1 Thes. v. 18.*

EVERY student of the Scriptures knows how constantly we are counselled and commanded to seek the strength and security of spiritual habits. It is only in formal, fixed habits that life finds its strongholds, whether they be strongholds of virtue or of vice. As long as anything expresses itself brokenly, infrequently, irregularly, we are in a state of weakness and we are exposed to the assaults of the enemy. It is when our separate acts have matured into a permanent attitude, when the deliberate posture has become an abiding disposition, that we enter the realm of spiritual rest and fortitude. When we have always to painfully think about doing things we are in bondage; when things come, as it were, to do themselves, we have gained our freedom. There is a Psalmist who offers this great prayer unto the Lord: "Incline my heart to do Thy will." And in that prayer he was asking for the great attainment, the rich condition in which the bias and the posture of life are abidingly turned toward the Lord. It is profoundly true that in the spiritual life we only become free when we have become the bond-slaves of habit.

I have quoted at the head of this meditation two or three examples of spiritual habits in which the soul would find the strength of rest. There is the habit of trust. "Trust in the Lord at all times." We are bidden to cultivate the habit of confidence in God. We are to deliberately practise such confidence until the action becomes instinctive; that is to say, until the action becomes an attitude. And we are to be especially diligent in the practice in seasons when circumstances seem to be hostile or indifferent. We are to deliberately enter the valley of gloom believing in the reality and the active vigilance of God. "Though I walk through the valley of the shadow of death, I will fear no evil, for Thou art with me." We are to be trustful when trust is difficult, for it is just in these apparently unfriendly seasons that we have the most favourable time for cultivating the habit. Here is the grand philosophy which is daily confirmed in human experiences; we can by confidence in God drain a difficulty of its vital strength and pour its vigour into our own desires and inclinations. We can make our very difficulties the ministers of our strength. We can grow fiercer in one dark day than in ten bright ones. We become athletes by antagonism. If we trust the Lord in the difficult moment, we are making splendid headway in the cultivation of the trustful habit.

And then there is the habit of prayer. "Pray without ceasing." That also is surely the attainment of a spiritual posture. This kind of prayer is not merely the communion of speech, though it includes it. We cannot be always speaking, but we can be always praying. We cannot be always consciously in fellowship with God, but our souls can be unbrokenly poised in receptive reverence before Him. ceaseless prayer is the prayer of mental posture. It is devotional aspiration. It is the unbroken emanation of spiritual yearning and desire. It is to be posed God-ward with the windows open night and day. It is prayer piped into an instinctive habit.

And then there is, finally, the habit of praise. "In everything give thanks." This is just the cultivation of the habit of seeking and finding the tokens

of God's mercy upon the common roads of life. It begins in the deliberate search for the signs of heavenly bounty. It begins in counting one's blessings. It is the cultivation of an eye for the divine footprints along the roads of drudgery and ordinary work. And in this deliberate way we cultivate the habit of praise. The tokens of Providence unveil themselves like an unbroken line of light, and the heart follows the line with instinctive song. We are having now a fruitful security when we are moving in the pathway that leads to spiritual habit.

A Health Problem

ILL-NOURISHED school children are not few, for there is probably not a single under grade school room that does not have in it one or more children who suffer from malnutrition. This is a health problem of the first magnitude, not because the health officers do not know how to solve it, but because the people won't let them, except in a few instances. In a few instances the nutrition is low because of disease, but generally it is because of that parental ignorance known as unhygienic living. Tea, coffee and rotten teeth will knock out the nutrition of any child. At irregular hours, candy between meals, getting late to bed and sleeping in unventilated rooms, will also play the deuce with a child's nutrition. An unbalanced diet is a great criterion of undertone, and so is rapid eating.

Malnutrition is rarely the result of lack of food. There is more malnutrition and wasting among country school children than among those in cities. This fact is well established. Soggy bread, fried meats, fried potatoes, soggy pie, do up many children. Most people don't know and many will not believe or heed, when told that milk is absolutely necessary to keep a growing child in health. Milk contains growing substances found in no other food. Every school child should have at least one pint of milk in his noon lunch and should consume not less than one quart each day. It is safe to say a well enforced law making it not assault upon children for parents not to give them clean milk, would greatly lessen child morbidity and mortality. It would also result in a larger percentage of eligibles for soldiers.

I suggest a law, because most parents will not accept education and act in this matter, as is abundantly proved by extended experience. I am greatly in favor of spoiling the short coffin business and raising child health.—Indiana State Board of Health.

Make Blankets Wear Longer

THE price of woollen blankets continues to soar upward, and fortunate is the housewife who has a goodly supply on hand. Blankets will wear out, however, and when they begin to show signs of going into holes or wearing thin, it is a good plan to do something which will lengthen their wearing period. Here's a way to lengthen the wearing possibilities of a blanket or comforter, even if fairly badly worn:

First wash the article and mend the holes or baste strong places over them. Then measure your old cover and buy covering enough for both sides—a bit of gay cretonne will transform the oldest blanket into a bright bedroom ornament.

When you're ready to cover it lay the article on the bottom cover on the floor, place the upper cover on top, and straighten out all wrinkles. Then with strong cotton thread, run through close enough to hold the inside firm, and turn edges in, stitching all around. Thus you can easily transform an almost "worn out" blanket into a bed covering that will be pretty well used for years. And not only will you have saved money for yourself, but you will also have saved blanket material for the nation.

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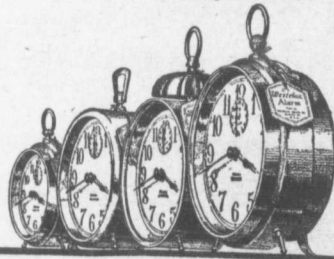
It is not reasonable to expect that a machine which has won the highest award at all the world's exhibitions; that has won every contest of any importance since typewriting became recognized as a science—is it not reasonable that such a machine should be worth more?

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Stop Cream Waste!

Cream Means Dollars
It is like throwing dollars away to waste cream these days. It is worse than waste-ful. It is a crime. Yet good, rich cream is being lost to the place owing to inferior separation.

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United Farm Women in the West

ALL of our readers who are interested in the United Farm Women of Ontario movement will find it helpful to follow the work being carried on by the various branches of the women's organizations in Western Canada. The secretary-treasurer of the U.F.W.A. at Quernessy, Sask., reports in the Grain Growers' Guide on some of the work they have been doing, stating that one duty which they performed was to collect 30 dozen fresh eggs and send them to the Returned Soldiers' Vocational School in Saskatoon. Twenty-six quarts of preserved fruit and pickles were also donated to the same school and in a short time more eggs will be sent. In connection with this branch also they have succeeded in getting a movement on foot whereby a petition is being circulated, asking two of the municipal councils to take joint action in securing the services of another physician to be during the summer and this month they anticipate having a joint meeting with a neighboring branch. Ten cent collections are taken at the meetings which are held at the Social Service Council, Red Cross and Ambulance Funds.

The High River branch in Alberta reports live work being done. Last winter a rest room was secured, it being a room which had formerly rented as a store, right in the centre of the business part of the town. It is fitted with a lavatory and little kitchen and heated by the use of mothers with babies while in town are also supplied. By conducting a lunch counter at their Agricultural Fair, over \$75.00 was taken. The monthly meetings of this branch are well attended and such live subjects as "Parental and Dower Law," "First Aid," "Gardening," etc., have been taken up.

At a meeting held at Monitor, Alta., some weeks ago, a speaker from headquarters was present who dealt very fully with the woman's aspect of the farmers' movement. He spoke of the political significance of their position now that they had the vote and instanced the Dower Law to show that women were now being treated with a little more justice. With regard to cooperative buying of fruits, etc., this speaker pointed out that crates of cherries had been bought for \$155, which cost \$5 at the stores, peaches at 80 cents, apples at 90 cents and other fruits in season equally cheap. This fruit had been secured direct from the grower.

The main branch of the United Farm Women of Alberta has been doing good work since being organized a little over a year ago. Such subjects as Home Economics, First Aid, Physical Culture, Suggestions for Feeding Thrashing Gangs, Culture of House Plants, Turkey Raising, and Dominion and Provincial Government have been discussed at their meetings. A feature of their work this year was an auction sale held last March. Canvassers were appointed in each of the school districts with the result that on the day of the sale, goods of all descriptions from a saddle horse to a doll's hat were auctioned. The local canvasser conducted the sale, with the result that with the addition of the proceeds from three box socials which had been held previously, the sum of \$1,215 was handed over to the Red Cross Society. The Central Office of the United Farm Women of Alberta has issued a pamphlet entitled "Working Hints for U.F.W.A. Locals" written by the present Mrs. W. H. Parby. It covers the details of the work of the association and also contains a short history of the organization, the aims of the U.F.W.A., reasons why farm women should belong to an association of this kind, lending their support to the farmers' movement, a plan of work, rules

for conducting meetings and a chapter dealing with work amongst the boys and girls, also other valuable information. Copies of this pamphlet have been sent to the secretaries of the U.F.W.A. locals free of charge. It is possible that our Ontario women who are interested in the United Farm Women of Ontario might be able to secure a few copies of this pamphlet.

The Home Club

Impressions of the Farm
THE prose poem which appears below, was sent us recently by "Just Me" with the following explanation: "The cloak is a letter sent by my 13-year-old brother sent my mother during holidays which he spent on the farm. He does not aspire to being a Wall-Mason or a Sam Ray (like his father), but he amuses us with his queer epistles. Mother says she never can guess ahead what his letters will be, but they are always original and altogether unexpected."

The "Bum side of the Farm."
It's all quite well for you to talk about the fun upon a farm, and how it makes you big and tall, and strengthens up your arm. But if you think it's lots of fun to milk the cows and shovel hay, and do a hundred other jobs, why just you try it for a day. In this wee story that I write I do not tell of cheer and charm; I do not breeze breezily, I call it the "Bum side of the farm." I'm not downhearted, no, not I; I'm merely telling you my thoughts. So please do not be hard on me, excuse poor writing and bad bits.

I came down here when school was done; I bot myself a big straw hat. Of course I tho't 'twould be great fun, but guess I've changed my mind on that. It's work, work, work from morn till eve, and when you're tho't start work once more. We stop three times a day for meals, and once to sleep, all that makes four. At five a.m. I hear a shout, "Get up! It's nearly noon by now." I rub my eyes and tumble out, and go and fetch the moody cow. "But wading thro' the knee deep grass, when with the dew it's cold and wet, may be all right for geese and ducks, but none of it for thee, you bet. And when I get them there, they go to beat the gosh-blinked cars, because they're being bit by fleas. And then I chase them all around, they run away and jump the fence. It ain't no use to cuss at them, because they are so god-darned dense. At last I get them to the barn, and spray them fleas off their sides. When they're off they don't give a darn, there's nothin' now to bite their hides. And then I get my old milk stool, and by a cow pull it in place, and then I go to work with her tail, she nicks me in the face. I soak her back a nice swift kick, she gives a jump and then keeps still, she now everything goes nice and slick, so now it's a pretty job! It's pull, pull, pull, then pull some more. Some of the milk goes in the pail, some goes on me—some on the floor.

Next thing I've got to pump them water, for which I never get no thanks, for oh! it is a long hard job, trying to fill those living tanks. After are sore, and my hand a while I get them filled, my hand that I've been nearly killed. I feel as tho' my back would break. And so the pasture they must go, and on when the watering is all done, back to the pasture they must go, and on upon one foot. And then a toddle to the house, wash hands and face and comb my hair.

At the breakfast table I sit myself gratefully down upon a chair. I eat then the rest sit down to eat. So much you'd think I'd best. At 5:

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ling up I'm hard to beat; we eat to live, and live I must. But when I'm filled up to the top, and am as heavy as two logs, I'll go to my perch once more, and go and feed the puff hogs.

Now feeding hogs is,—well, 'nuff said! Anyway it isn't play, and I would rather go to bed and stay there all the dig-dogged day. The pigs they snort and grunt and squeal. They're easily made to hear a mile away. Sometimes they run between my legs and dump me in a pall of woe.

And now the sun's out good and strong, I feel as tho' I'm really bo'ed, but to the field we move along to where the hay has all been collected, and then I fork, and fork, and fork, but holy cats! the sun is hot! If you want a place to make you sweat, you'll find the hay field is the spot. It seems a week, a month, a year, and how much more I cannot tell, before I hear those words of cheer: "Oh, come to dinner, hear the bell!" Right after dinner we begin once more to fork the dog-goned hay. With sweat I'm wet right to the skin, but this is what they call hay-day. And this work all afternoon at it and on until its supper time. I do believe it's just as hard as thinking up this wooty rhyme.

At night I do not say old chores and as what I did at morning light, and after shutting the barn door, I say I'm tired, so good-night. Now, I've only named about one-third of all the chores I have to do. You might get tresser than me, if I should tell them all to you. At times you know, we've different work—sometimes it's stooking oats or wheat. All the hired man can't shirk aholt, he always likes to eat. So after all, it's work, work, work, and when you're thro' start work again. And I'm sleepy now, I guess I'll close, so long amen.

Up to Us Women

By S. J. L. Huron County, Ont.
 In a large town not so very far from my home I accompanied a friend whom I was visiting on a small shopping expedition. The butcher shops were closed, so meat was sought in one of the groceries. There was bacon, cooked ham, sausage and pot pie meat in the window, also an occasional fry and considerable dust. As we entered, a man was sweeping the floor with a dry broom and the air was filled with dust, which settled on bread, cakes, dried fruits, fresh fruits, meat—everything.
 "That meat should be in the refrigerator," I whispered agast.
 "Probably they have just taken it out," answered my companion soothingly.
 Just then a big cat jumped down from the show window. What things she had licked or partaken of I did not know, but a murmur of veiled disgust escaped me.
 The man who waited on us was very busy, very fat, wore a none too clean apron, and I did not like the look of his hands. Down the corner of his mouth had rolled a streak of tobacco juice. Among his other pleasing attributes was an air of independence. It was obvious what a kind of reply he made to criticism, either of him or his methods.
 Potted meat was chosen, because it happened to be both cheaper and more patriotic. How that man did handle it with his dirty hands! He took it out and off the scales, which also looked as though soap suds would do it good. What mattered it that the meat was wrapped in oiled paper as well as clean wrapping paper when it had received such unsanitary treatment beforehand? It was just another example of inferior respectability.
 "One would think that the least a storekeeper might do before waiting on customers would be to wash his face and hands," I remarked indignantly.
 "Oh, you have to put up with such things," replied my companion, not without mingling.
 In that reply lies the secret of the

whole matter. We have to put up with conditions because we do, not because we need to. The Local Women's Council in Toronto may be thanked for urging laws compelling fruit stores to keep fruit and vegetables unexposed to the flies, dust and dirt of the street. Their example should be followed in strictness. Let them banish the grocery cart, the butcher's dog, and demand that meats and other edibles that are easily contaminated be kept in a refrigerator or under glass. I saw in a refrigerator in a store window the other day and the heat and flies had spoiled it entirely. In Toronto, even in small shops, oil paper coverings are used over watermelon and netting over small fruits. This is not only sanitary, but also saves the food. Representative women from each community should get together and demand clean, sanitary stores and services. In some places a polite written request to certain storekeepers, asking that certain details be corrected, might be sufficient. In others the request might be backed up by a threat of boycott. And if dealers are too stubborn, the women must be prepared to carry out the boycott, even if it involves having supplies shipped in to a temporary store of their own. Whatever the difficulties, however, the health and self-respect of the community is worth the effort.

We do not have to put up with unclean food. It seems too bad at the shoulders of our women. But it is undeniably their responsibility. Whereas formerly they had to go about such things in a slow, roundabout way, women are now in a position to attack these problems directly and with assurance—for which let us be truly thankful.

COOK'S CORNER

Canning Tomatoes Whole

SOME people have canned tomatoes whole and found to their sorrow that when a jar was opened for use that they were off flavor and a failure. Other would like to can tomatoes whole, but are rather sceptical, because they might have. Still others successfully can whole every year quite satisfaction to the housewife to have whole tomatoes for use in salads, or various other ways in the middle of winter, and are rather trying out. Herewith are directions, which if followed to the letter, are claimed to produce ideal canned tomatoes:

Select fresh, ripe, firm tomatoes. They will cook, ripeness and quality. Grease of ripeness and quality, and wash each berry. Wash, scald one-half to a skin loosely, but do not allow them to remain in the cold water. Cut out the stem end, taking care not to cut into the seeds which are in the pulp will later be scattered through the liquid. Remove the skins.

Pack the tomatoes whole in the jars, doing one jar from the beginning to another. Shake down well, hitting on base of jar with palm of hand, and also press with a tablespoon, but avoid crushing.

Do not add water. Hot tomato pulp may be added, otherwise add no liquid whatever. Tomatoes are an exception to the general rule of hot water for vegetables, and hot water or hot syrup for fruits. A large part of the tomato is water. It is not necessary to add anything but one level teaspoonful of salt to each quart, and if liked, one-half teaspoonful of sugar. The tomato pulp for home canning,

made from large and broken tomatoes, cooked and strained, should have one teaspoonful of salt to each quart, and should be poured hot into the filled jars, allowing it to enter the spaces. Put on rubber and top, adjust top ball or screw top on with thumb and little finger. Sterilize in minutes in hot water bath, or 16 minutes under five or ten pounds steam pressure. Remove, tighten, seal and cool.

Wheat Substitute Proportion

THOSE of us who are faithfully trying to make use of wheat substitutes, sometimes find it difficult in order to secure best results. The following table of measurements, has been carefully worked out in the States Food Administration and of the U.S. Department of Agriculture Office of Home Economics, and should prove helpful:

- In substituting for one cup of flour use the following measurements. Each is equal in weight to a cup of flour.
- B barley 1 1/2 cups
 - Buckwheat 1 1/2 cups
 - Corn flour 3/4 cup
 - Corn meal (coarse) 3/4 cup (scant)
 - Corn meal (fine) 1 cup (scant)
 - Cracked corn 3/4 cup
 - Peanut flour 3/4 cup (scant)
 - Potato flour 1 cup (scant)
 - Rice flour 3/4 cup
 - Rollod oats 1 1/2 cups
 - Rollod oats (ground in meat chopper) 1 1/2 cups
 - Soy-bean flour 1 1/2 cups
 - Sweet potato flour 1 1/2 cups
- This table will help you to make good griddle cakes, muffins, cakes, cookies, dry biscuits, and all of raisin bread without using any wheat flour.

You will not need new recipes. Just use the ones your family has always liked, but for each cup of flour use the amount of substitute given in the table.

The only difference is the substitution for the wheat flour. Everything else remains the same. You can change all of your recipes in a similar way.

Canadians on Their Honor

THE Canada Food Board says: Do householders in Canada seek to evade the food regulations? Are the evasions of Canada conniving at that they were off flavor and a failure. Other would like to can tomatoes whole, but are rather sceptical, because they might have. Still others successfully can whole every year quite satisfaction to the housewife to have whole tomatoes for use in salads, or various other ways in the middle of winter, and are rather trying out. Herewith are directions, which if followed to the letter, are claimed to produce ideal canned tomatoes:

The main object of the Canada Food Board is to supply Great Britain and the Allies with vital foods. With this in view food regulations are made, which, if respected by the people of Canada, will enable Canada to keep faith with the Allies on food.

Do the people of Canada want to keep faith with the Allies on food? They do. Are the people of Canada keeping faith with the Allies on food? They are.

To take any other position is to suggest that the people of Canada would rather keep their pre-war food habits than keep faith with the Allies on food. No true Canadian is breaking the regulations of the Canada Food Board for he knows those regulations are made in order that the people of Britain and the Allies and the Canadian army at the front may be properly fed. Who of us will eat what should be conserved for the Canadian army at the front?

The hearts of the people of Canada are sound and in this war to a finish. Food is a first class munition of war and Canadians so wise and brave will be time enough to go in for rations in Canada when the people of Canada refuse to conform to national efforts to conserve food for Great Britain and the Allies and the Canadian army at the front. When that time comes a policeman, not a food controller, will be needed.



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In Union There is Strength

The Martintown Farmers' Club

EDITOR, Farm and Dairy.—Martintown Farmers' Club was organized a little over a year ago with about 15 members. Since then the membership has increased to about 70. A short-ly after organization, and when our membership was quite small, we commenced to do business with the United Farmers' Cooperative Company, and in less than a year have done one business to the extent of \$15,000. This business has been almost entirely in milk feeds, with the exception of about 200 bushels of seed corn. The volume of business would have been much larger could we have secured our full requirements in this line. Our members are apparently well satisfied with this method of doing business. We deliver the feed to our members of the car, but it seems to me that much better results might be achieved if we had a place to store our supplies. Then we would be in a position to buy when anything was offered at a reasonable price, and store same until required by the different members. In this way I believe we would at all times be in a position to supply the requirements of our members, and greatly increase the amount of business done each year.

We have not as yet done anything in the way of cooperative marketing of our farm produce, and it seems to me that there are great possibilities to be developed along this line. Something might be done toward the marketing of dairy products cooperatively. There seems to be a growing desire in Eastern Ontario, particularly among dairymen supplying milk for cheese making purposes, that something be attempted in this matter. There are of the opinion that they have not been justly treated in the price set for cheese for the seasons of 1917-18, and that only by a united and organized effort, giving their part to market their products cooperatively can they hope to secure a remunerative price for their cheese. I sincerely hope the dairymen of Ontario will give this matter the consideration its importance merits between now and the opening of the season of 1919.—D. A. Ross, secretary, Martintown, Ont.

A Club With Ideals

EDITOR, Farm and Dairy.—We have been conducting our business on a rather different plan from last year. Mr. C. Smith has charge of the hog buying, and I am secretary of the flour and seed department. Since April last, when I took charge, we have done about \$16,500 worth of business in our department, and this would have been greatly increased if we could have bought bran and shorts. For the past three months we have not been able to buy a carload. Owing to the fact that the farmers of this vicinity had a good crop of oats and barley last year there has not been so great a demand for hog and dairy feed.

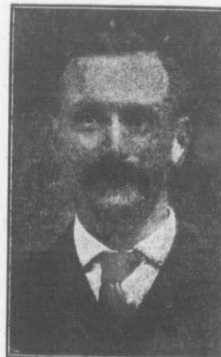
I believe the farmers have been well satisfied with our efforts, and I feel there are great possibilities in cooperative business, but it requires organization and education. A better system of cooperation would be to sell everything at the prevailing prices in our town and, yearly or semi-yearly, pay dividends of any surplus which may have accrued to the members of our club.

Our great object is to bring the farmers together—to forget they were formerly Tories and Ontarians—to realize that all their interests are identical, and, if possible, to have representation in Parliament, that we may have fair legislation for agriculturists.—James Cleland, secretary, Lefrow, Ont.

United Farmers of B. C.

(Continued from page 2.)

One of the questions which was decided on at the last annual meeting was the question of an official organ. It was decided that the B. C. Farmer, a magazine formerly known as Fruit and Farm, should be offered this position. An arrangement was made with this magazine whereby the secretary of each local was to send in news regarding his district, including the workings of the association, business transacted and other items of general interest to the organization. A section of the paper was to be held for these reports. In return for this work the official organ agreed that where clubs and members were sending in their local reports the magazine should be supplied at 75c per year instead of \$1, where over 10 and



Geo. Clark, Pres. of the United Farmers of B. C.

under 20 members were enrolled. If over 20 were sent in the subscription would be 50 cts. per year. This arrangement works out very satisfactorily. It provides a sound increase in circulation on the part of the B. C. Farmer, whereby the paper becomes circulated in the proper class of people, and it provides the publicity for the workings of the association which is necessary to its welfare. Though both the United Farmers of British Columbia, and their official organ are but in their beginnings, by proper cooperation between the two and by proper cooperation between the United Farmers of British Columbia will be as highly respected by those with whom they have to deal as are those of their brother farmers in the Prairie Provinces.

Cheese Advances Two Cents

THE Dairy Produce Commission announces that all cheese purchases from the factories after Monday, September 30, will be paid for at twenty-five cents per pound for No. 1 grade f.a.s. Montreal, being an advance of two cents per pound over the price paid since the beginning of the present season.

When twenty-three cents was agreed upon in the spring it was understood that it was to cover the whole season, but in view of the recent general advance in the value of dairy products the Commission felt justified in asking the British Ministry of Food to authorize a two-cent increase.

Government Commandeers all Butter Stock in Canada for Forty Days

Drastic Regulations. Allowance of Two Pounds of Creamery Fat's Per Month

ALL creamery butter made in the Provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec between the 30th of September and the 9th day of November, 1918, both days inclusive, will be commandeered under the authority of an order in Council passed Sept. 30.

The reason for this action is that Great Britain and her allies need Canadian creamery butter. The British Ministry of Food urgently asks Canada to increase her shipments of creamery butter.

Two Pounds Per Month Per Person.—One-half pound of butter or oleomargarine per month per person is the allowance in Great Britain to-day. The order in Council puts Canadian consumers on a creamery butter allowance of two pounds of butter per person per month, as compared with the half-pound allowance in Great Britain.

For months Great Britain and her allies have been short of butter, and this condition bids fair to continue, as Atlantic tonnage is needed for transporting troops and supplies. Foodstuffs in Canada for export must be assembled at ocean ports to take advantage of space whenever offered.

The principle of the common table for all forces fighting the Hun is the basis of the order in Council limiting the consumption of creamery butter. Canadians will not have to go without butter, but they are now asked to eat less of it.

Text of the Order.

The text of the order in Council, one of the most important food orders issued, is as follows:—

His Excellency the Governor-General in Council, on the recommendation of the Minister of Agriculture and on the recommendation of the Canada Food Board, pursuant to urgent requests from the British Ministry of Food for increased shipments of Food for export to the scarcity in Great Britain, permitting of only two ounces of butter or oleomargarine to each person a week, is pleased under and by virtue of the War Measures Act of 1914, or otherwise vested in the Governor-General in Council, to make the following regulations, and the same are hereby made and enacted accordingly:

(1) Manufacturers of creamery butter shall deliver all such butter made in the Provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec between the 30th of September and the 9th of November, 1918, both days inclusive, to a cold-storage warehouse at Montreal designated by the Dairy Produce Commission at the following prices:

Prices Set.

Grade No. 1, 4 1/2 cents per pound; grade No. 2, 4 1/4 cents per pound; grade No. 3, 4 1/2 cents per pound, delivered at warehouse, Montreal, freight and cartage paid.

(2) No person shall sell to the Dairy Produce Commission any creamery butter manufactured before the 30th of September, 1918, at a price in excess of the following:

Grade No. 1, 4 1/2 cents per pound; grade No. 2, 4 1/4 cents per pound, delivered at warehouse, Montreal, freight and cartage paid.

Weekly Returns.

(3) Every manufacturer of creamery butter in the Provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec shall make weekly returns to the Canada Food Board showing the quantity of butter manufactured by them, the names of persons to whom sold, and the quantities and prices of each sale during the week, and the quantity on hand at the end of the week.

Month's Supply the Limit.

(4) No person, except a dealer licensed by the Canada Food Board to deal in butter, shall hold or have in his possession, or under his control at any one time, creamery butter more than is sufficient for his ordinary requirements for a period not exceeding thirty days.

(5) No person shall sell to any person, except to a dealer licensed by the Canada Food Board, creamery butter more creamery butter than is sufficient for his ordinary requirements for a period not exceeding thirty days. In this and the last preceding section "thirty days" requirements shall not exceed two pounds of butter for each member of the household.

Sixteen Warehouses Designated.

The Canada Food Board has issued the following letter to the creameries:

As provided for in order in Council P.C. No. 2,402, the Dairy Produce Commission designates cold-storage warehouses of the undermentioned cities at Montreal as warehouses to which all Canadian creamery butter packed in "soids," 66-pound boxes or tuns, may be shipped for export.

These Montreal firms will pay for all butter delivered to them immediately after grading by the Dairy Produce Commission's graders, and weighing by the official weighers, including only freight and cartage to warehouse from the prices mentioned in the order. They have arranged to receive and prepare the butter for export in accordance with the rules of the Dairy Produce Commission:

- Olive & Dorion, 55 William street;
- Hodgson Bros. & Rowson, 99 Whittia street;
- Lovell & Christmas, Ltd., 112 King street;
- The A. A. Ayer Co., Ltd., 619 St. Paul street west; James Anderson, Ltd., 612-614 St. Paul street west;
- The William Davies Co., Ltd., Mill street;
- Matthews-Bickwell, Ltd., Mill street;
- Swift-Canadian Co., Ltd., 599 Craig street west; a Société Coopérative Agricole des Fromagers de Québec, 61-63 William street;
- James Dairymple & Sons, 660 St. Paul street west;
- J. A. Millancourt, Ltd., 618 St. Paul street west; Gault, Langlois Co., Ltd., 105 St. Paul street west;
- W. Champagne, 173 St. Paul street west;
- Z. Lémoges, 36 William street;
- Whyte Packing Co., 22 William street;
- George Hodge & Son, 120 King street, all of Montreal.

The commission reserve the right to make changes in the above list as may be deemed necessary from time to time.

Western Sales Cancelled.

Montreal merchants have agreed, at the request of the Canada Food Board, to cancel all purchases made from dealers at points west of Montreal from and including Friday, September 27, and have sent the following telegram to the persons from whom butter has been purchased:

"Because of commandeering order and the request of the Canada Food Board that a sufficient quantity of butter be left in the West to provide for necessary requirements, you may cancel sale made to us if you so desire."

- First Farmer:—"If sure did see a fine milking machine!"
- Second Farmer:—"Some no patented contraption, eh?"
- First Farmer:—"Pool proof and never fails. Best of its sort on the market. Guaranteed not to hurt the cow nor fall down on the job. It's the finest thing of its kind that ever struck a farm."
- Second Farmer:—"What make is it?"
- First Farmer:—"The' cow herself. It's known as 'th' 1918 calf."

SEED CORN

Buy your seed corn this fall. Home-grown seed will be dear and hard to get next spring.

We have about 500 bushels of GOLD GLOW, the earliest of all field corns, fully matured in August. Ready to ship in bulk here, \$3.00 per bushel of 70 lbs. f.o.b. Wheatley.

LORNE DERBYSHIRE

Wheatley - - Ontario

CREAM WANTED

For better service and higher market prices, ship your cream to us. Cans supplied free. Watch this space for prices. Our price next week 46c per lb. fat. A card brings particulars.

MUTUAL DAIRY AND CREAMERY CO.

743 King St., W. Toronto

SMALL QUANTITY STATIONERY—100 sheets of letter paper 8 x 11 1/2 inches, printed with name and address in colors, in Ontario \$2.25, other provinces extra postage. Cash with order—Farmers' Printery, Beaverton, Ont.

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DAIRY
Peterboro, Ont.

A
Dollar
Bill

The Makers' Corner

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

Improving Manitoba's Creamery Butter

SINCE the Manitoba Creameries scored so satisfactory a success by winning the first honors at the Canadian National Exhibition at Toronto this fall, considerable enquiry as to the secret of the excellence of Manitoba Creamery butter has come from various quarters to Mr. L. A. Gibson, Dairy Commissioner for the Province.

One reason for success, Mr. Gibson points out, is in the enlargement of the business. In 1912 Manitoba imported 55 carloads of creamery butter and exported none. Up to the present date this year we have exported 100 carloads, besides supplying our own trade. This has been accomplished in spite of the high prices to be obtained by growing wheat. It is easier to secure live wheat in an industry if it is going ahead.

Three leading means in effecting betterment are cited:

1. Grading of cream at creameries and payment on a quality basis.
2. Introduction of pasteurization and other improved creamery methods.
3. Government grading of butter.

Cream Grading.

Four well defined grades for cream have been outlined for the creameries, and most of the operators buy cream on the quality basis. A spread of several cents per pound is maintained between the various grades.

Pasteurization.

One outstanding reason for dairy progress has been the fact that practically all Manitoba creameries have adopted the pasteurization method of treating cream. They were encouraged to do this by the Dairy Branch, which has already carried on a considerable number of experiments along this line. Mr. Gibson says: "Pasteurization makes the butter a safer article of food, and prevents the development of a fishy flavor when placed in storage." The willingness of creamerymen to instal the rather expensive machinery in view of the worth of commendation in part of the gain in price goes to the patrons.

Not only has there been a wider practise of pasteurization, but the method has been changed. Instead of heating the cream to 140 or 145 degrees F. and holding for 20 to 30 minutes, as advocated previously, it is now held for 10 minutes at a temperature of 170 F. This minute, is now recommended. This destroys a class of unorganized ferments or enzymes which survive the lower temperature.

Mr. Gibson says: "We found that butter made from practically sweet cream, and treated as above, will hold 'up' in storage for a period of 12 to 18 months, where butter made from raw months, where butter made from cream which has undergone deterioration in a few months, and in some cases only a few weeks. The general adoption of pasteurization, with a low acidity pasteurization, by the dairy industry cream, places our dairy industry practically upon a new basis, more particularly in relation to the export trade. We endeavor to make a butter which is mild, sweet and clean in flavor, with the texture firm and fine, using from two to two and one-half per cent salt."

"So through the keeping qualities of our product, I might mention that the Silver Manitoba butter which won the Silver Cup—for highest scoring butter—at the Canadian National Exhibition, with

a score of 98.18, was over a month old when judged."

Grading of Butter.

The Manitoba Dairy Branch grades the creamery butter, mostly while passing through or coming on the Winter certificate is issued only for that butter made from properly pasteurized cream, the sampling of all the creamery butter enables the Dairy Branch to keep closely with the creamery. By also methods of every creamery. By also keeping in closest touch, on the other hand, with the buyers of butter, and by interpreting their wishes to the creamery men, who are in direct touch with the producers of cream, a complete chain of contact from one end to the other is maintained.

In determining which lots of butter shall be given a Government grade certificate, the Dairy Branch makes laboratory tests with the Storck test. By this test the degree of heat used in and in this way the giving of certificate to butter devoid of good keeping qualities can be guarded against.

Changes in Saskatchewan

THE Saskatchewan Dairy Division has undergone another change in its personnel. Mr. F. M. Logan, who has been Dairy Commissioner for the province, since his resignation of W. A. Wilson, who left resignation of the Department to become manager of the Saskatchewan Cooperative Creameries Ltd., is now following in Mr. Wilson's track and has now joined the creamery company as assistant manager. Mr. Percy Reid, who has been an inspector for the Dairy Branch, succeeds Mr. Logan as Dairy Commissioner.

Mr. Reid was born and reared on a dairy farm near Georgetown, Ont. He entered the Ontario Agricultural College in 1909, taking the regular college course. In 1908 he took a special course. In 1908 he took a special course at Guelph, and in 1910 went to Saskatchewan. Since that date he has been in close touch with dairy development in the province and has therefore the knowledge necessary to take hold of the ledge necessary as Commissioner. We should add that during the last winter Mr. Reid attended a special dairy course at the Iowa State College and course at the Iowa State College and spent several weeks studying the creamery and cold storage plants of Iowa, Nebraska and Minnesota.

Farm Management

Winter Preparations

THIS is the season of the year when every farmer should be considering the putting of his farm buildings in the best shape possible for the winter housing of his live stock. Attention should be given to cleanliness, (2) light, (3) ventilation, and (4) warmth.

First, the farmer should see that all dirt and cobwebs that may have accumulated through the summer are swept down and a good coat of white wash applied with a certain amount of a disinfectant, such as is used on all farms, should be given to the walls, in order to eliminate as much as possible any disease which may be present.

Second—See that there are as many windows as possible in your buildings and that the glass is tight in all of them, for there is no better preventive of disease than plenty of light. If it is not possible to have double windows for all your stables be sure to use what you have on windows on the north side in order to conserve heat.

Third—Ventilation is one of the most important things in live stock industry, and unfortunately, one that there is not enough stress laid upon, for without proper ventilation, it is

practically impossible to get the good, healthy development and benefit from feed consumed that we should have in our live stock.

Fourth—It is also very important to see that all boarding is tightly nailed down and all cracks closed in order to keep as uniform a temperature as possible in your buildings. It is also very detrimental to our live stock at certain times.

The Experimental Farm system is pleased all the times to forward bulletins on farm buildings, ventilation, etc., also answer questions and help prepare plans of such farms. Farm men may require any of these services by writing the Central Experimental Farm, Ottawa.

Fumigate Stored Grain

BECAUSE a large amount of the 1918 harvest of grain must be stored in large quantities on farms before it can be handled by the elevators and freight cars, methods of fumigation for weevil, etc., often cause a loss from 10 to 20 per cent in the grain, as being sent out by the entomologists at the Ohio Experiment Station.

Experiments show that from 5 to 8 pounds of carbon bisulphide, when saturated into burlap sacks and these thrust into bins, will destroy all the weevil in 1,000 cubic feet of stored grain in a bin 12 by 12 by 7 feet. To render the liquid more effective as it slowly evaporates, the bins should be made as tight as possible by using heavy paper over the cracks.

Carbon bisulphide gas is heavier than air and hence settles down upon the grain when applied, but since it diffuses much more effectively than air it works better on warm days, at about 70 degrees, than on cold days. All bins should be kept tight for 36 hours, following the application, but not longer than 40 hours if the grain is to be used for seed. Fumigation for longer periods may injure the germination, but not the edibility of the grains. The gas is explosive, and should not be used in connection with lights or fires.

Attention to Plant Diseases After Harvest

THE plant pathologists of the Experimental Farm inform us that one of the many destructive plant diseases, none are more difficult to control than those living over in the soil. Year after year, notwithstanding the practice of crop rotation, the effects of soil infection often become so pronounced as to cause what is popularly known as "soil sickness". One of the most notorious of these diseases is clover and alfalfa wilt (Sclerotinia) which has given rise to the belief that land may become "soil sick" with this disease. It is clover sick. This disease has been known to show up in the Continent of America, and unless prompt precautionary measures are taken there is a possibility of the disease spreading to similar losses here to what it does in Europe.

This disease similar in nature attacks beans, and there are other instances which call for a word of general advice on matters of general interest, whether gathered in the field, garden or orchard, there is manifested a general indifference and neglect towards the part of some growers towards the crops in which the ground, trees or bushes are left. Were it not known to them that with the return of the ground from a crop there exist myriads of dormant forms of serious diseases (and insect pests) ready for hibernation!

Mummified fruits in orchards left as disturbed, either on the trees or on the ground, give rise to a new outbreak of brown rot in spring. Mould under affords only limited protection, since it safely burying material which spring plowing will bring to the surface of the soil

once more. Freely better measures field, garden and well after the better, after a given season, should be the result, lead should be brought to burn return the fields, etc., in orchard followed by the result, and field greatly be

Rye is a valuable for a co-ed. Aside from when sown harder than as a substitute sections grow and as No other valuable for all these cases of withstanding of production any benefit. A mixture also has been hitroy veten fertilizing has been found in the tion seedling.

FARM

M. Percy Reid
REMEMBER
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once more after successful hibernation. Prevention, as usual, is decidedly better than cure, and sanitary measures are just as important in field, garden or orchard as in stables and dwellings. As soon as possible after the harvest of such crop—or better, after the growing season is over—a general clean-up is most essential. Where possible, all refuse should be collected, diseased or rotten fruits, leaves, stalks, haulms, etc., should be gathered and the whole destroyed by fire. Material that will not burn readily, such as is common on the fields after harvesting—roots, potatoes, etc.—should be buried in a pit. In orchards, where such measures are followed by the usual dormant sprays, the results will be most beneficial, and field and garden crops will also greatly benefit.

Rye as a Cover Crop

RYE is one of the most dependable crops for plant planting when a cover or catch crop is desired. Aside from its value as a cover crop during the winter, rye, even when sown late in the fall is much harder than wheat and may be used as a substitute for the wheat crop in sections where wheat cannot be grown easily.

No other crops tested have been as valuable for cover crops as rye, the list including rape, cowhorn turnips, timothy, red clover, sweet clover, soybeans, wheat and alfalfa. Practically all these crops were incapable either of withstanding the winter freezing or of producing enough growth to be of any benefit when utilized as green manures.

A mixture of rye and hairy vetch also has been found dependable; the hairy vetch being a legume, some nitrogen is added to the soil by its growth, thus providing a high-priced fertilizing element at a low cost. It has been found that a mixture of 60 pounds of rye and 25 pounds of hairy vetch is practicable for the combination seeding.

FARM CHATS

Tinkering

H. Percy Blanchard, Hants Co., N.S.

REMEMBER when I was a small boy, my grandfather had a clock. It was not the one that was too long for the shelf—but it had stopped short, never to go again, all right. So I was permitted to try my practice hand on it. I took it apart, but when I came to assemble it again, I found the man who made it had put in four wheels too many. At the same time, in spite of my simplified gearing, the clock refused to keep time, or anything else but quiet. It was worse than a letter carrier; it would not even strike.

I then did what a wise man would have done first; called in expert assistance. The watch-maker examined the clock for a moment, and then very seriously asked me why I did not bring the clock direct to him instead of taking it to the blacksmith first.

It was all right, I suppose I deserved it. At the same time, the machinery which we ordinarily handle can be greatly helped as well as injured, by just this which some call "tinkering." Some men are specially gifted in regard to machinery, others can hardly take up a monkey wrench without doing damage to something. With such born mechanics as first mentioned, the mower, binder, the car or tractor can get a bolt tightened, or some little repair done fully as well as if the thing was sent to the shop or garage. No machine will run forever, and the "stitch in time" means much. But it often happens that Henry hears the remark (not addressed to him) that "Henry is forever tinkering at that old mower, or that car or something," and finally Henry

feels he is at fault. Now, it is all right to put in half an hour a day currying the horses, but that time spent on a machine is "forever tinkering."

So at last Henry feels guilty every time he takes a spanner in his hand. Accordingly, machinery on a farm gets just as little attention as is possible, so long as it goes, and if at last Henry has to fix it, someone greets him with: "What is that thing out of commission again?" What if a horse never got oats till he started to stagger, or went to the forge till his last shoe came off? We are very careful of the parlor organ lest it get even a scratch, but a bit of fine machinery of equal value has to take chances any old way, because "there is no sense in Henry everlastingly tinkering at it."

The day of the tractor is here, and unless Henry is given just as free a

hand to groom it and clean it that John has in regard to the horses, it will perish as quietly as horses under the same neglectful circumstances.

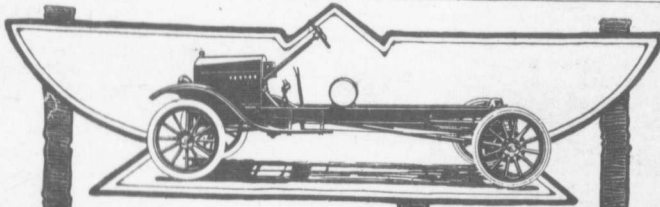
Corn Silage for Hogs

By E. L. McCaskey.

A CROWD of farmers, myself included, were standing in the machinery section of the Canadian National Exhibition watching a power attachment to a Ford car operate a buzz saw. I was not acquainted with any of the bunch, but with the freedom of farmers on a holiday, I dropped into conversation with the man next me. While discussing the merits of the Ford car as a source of farm power, I learned that my new friend was from away down in Eastern Ontario, Dundas County, if I remember rightly, and that he had a very novel way of feeding pigs. I be-

lieve his method is worth passing on. This man grows hogs on silage and cheese factory whey to weigh 200 lbs. at 5½ months old. This isn't ordinary silage, however. He grows a husking variety of corn, which is seeded thinly, and is practically ripe when it is cut into the silo. Almost two-thirds of the weight of such corn is in the ear, and the silage is consequently very rich in grain. This man has found that corn fed via the silo produces a satisfactory growth and keeps the hogs more healthy and vigorous than when the grain is fed pure. In addition to the silage they get all of the cheese factory whey that they will eat. I am curious to know if anybody else has tried pig feeding on this same plan.

The earlier the calf is taken from its mother the less the strain on the patience in teaching it to drink.

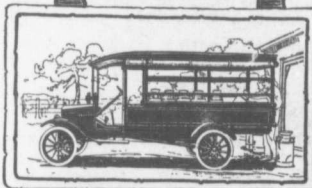


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Notes, Queries and Answers

Bloody Milk

WHAT can be done for a cow which gives bloody milk? The cow I refer to is a pretty good one and an easy milker, but this summer she started giving bloody milk in one test. I have another cow affected in the same way, but intend drying her off. Would you advise drying off the other one, or is there some cure for the trouble?—A. J. York Co., N.H.

This is due to rupture of small blood vessels in the quarter. It may be caused by an injury or by inflammation of the quarter. Some cows are predisposed to the trouble on account of congenital or acquired weakness of the vessels. Such animals are liable to be affected at any time without appreciable cause. Bathe the quarter frequently with cold water and give her one ounce of tincture of iron in a pint of cold

water as a douche, twice daily, until the milk becomes pure.

Horse Trouble

I HAVE a horse 10 years old which stands when hitched up, with his front hind legs extended backward. He has not been foundered. Is this a disease or also has a dry cough at intervals.—C. M. Oxford Co., Ont.

The method of standing is simply a habit. We know of no method of checking it.

Chronic coughs are very hard to check. Give him every morning 1 dram powdered opium, 1 1/2 drams dram extract of belladonna, 30 grains digitalis, and 1 dram camphor, with sufficient oil of tar to make plastic. Roll in tissue paper and administer as a ball, or mix with a pint of water and give as a drench.

Loss of Quarter

I HAVE a three-year-old heifer that lost a test last spring through a gland being coming inactive. I think I did not apply proper treatment soon enough. Would it be possible by bathing and massaging

to recover the test, and would the flow of milk (if any) be likely to part? She is a fairly good milker.—E. S. Missisquoi Co., Que.

It is possible that the activity of the quarter may be regained after frequent calving. Your suggestion of frequent massaging is good. In addition draw the test frequently until well marked activity is noticed. Bathing action sets in. If the quarter becomes active we cannot see why the flow of milk should not pay. If there is a milk obstruction in the milk duct it will be necessary to get a veterinarian to operate.

Fatality in Calves

I LOST three calves this summer with some disease. I noticed in the evening that a calf was acting strange and in the morning it had a slight cough and drank scarcely any milk. The following evening it could not get up without help, breathed very heavily as if there was something wrong with its lungs and coughed at the mouth. Under the jaws and throat there was a swelling and the other calves took about a week after another in a few hours. Would it be possible that young calves like them would take

tuberculosis? They had lots of grass and water.—F. E. Addington Co., Ont.

It is quite possible for such young calves to have tuberculosis, but we do not think that these calves suffered from it. The symptoms of tuberculosis do not appear so suddenly, nor does the disease cause death so soon. We are of the opinion that your calves died of black-quarter, for which no cure has been discovered. It is caused by a virus existing on the herbage or in the soil, especially in low-lying ground. Prevention consists in keeping young cattle away from infected fodder or rendering them immune by inoculating with anti-black-quarter preparations, which, with the necessary instruments and instructions, can be procured from manufacturing chemists or the Health of Animals Branch Parliament Buildings, Ottawa, Ont. It would have required a postmortem by a veterinarian to have definitely determined the cause of death.

Milking the cows out clean lengthens the lactation period.

Streaky butter is often due to uneven salting and working.

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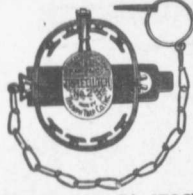
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A Prominent Granger Talks of His Tractor

W. E. Wardell, Master of the Elgin County Grange, is an Enthusiastic Power Farmer—His Power Team a Tractor and a Small Gasoline Engine.

W. E. WARDSELL is an enthusiastic granger and a staunch supporter of the United Farmers' movement in Ontario. In the last few months he has become an enthusiastic power farmer as well. Recently he was visited on his farm by a representative of the St. Thomas Times-Journal who is pleased to sign himself "A. S. Paragus," and Mr. Wardell's experience is so interestingly told that we reproduce it herewith in Farm and Dairy. After a few remarks of his own on the new relationship of women to field work brought about by the tractor, the reporter lets Mr. Wardell tell his own story as follows:

"Our tractor saves one team guy. Lots of the time we turn all the horses down in the wood lot for pasture, a great deal cheaper feeding 'em in the stables, I can assure you. When we cultivate corn, the tractor saves us six horses.

"Yes, we can do most everything with it. We can use it to plow, disc, mow, rake and draw in hay and cultivate corn. It takes the place of a team and works more expeditiously. The tractor we have is five horse power on the draw bar and ten on the fly wheel. It is a little smaller, however, for a larger, which will be nine horse power on the draw bar and 18 on the wheel. We will be able to thresh with that.

"And also to use more farm tools at the same time. The one asset in a tractor is the speed which you gain in working. When you put one fourth disc behind another, the front one goes with an outthrow and the last with an inthrow, you have done just the same work on the land by one trip over it that you would by going twice and haying half over with a three-horse team. You are getting twice as much done in a certain length of time as you would with the team.

A Tractor Doesn't Strike For An Eight Hour Day.

"But when you add to the double disc outfit, a cultivator on behind, (as we calculate we will be able to do with the nine horse power we expect to get) we will be doing three times as much in a day as we would with the team, at this variety of work.

"We are well satisfied with the work of the tractor we have. When a tractor's new it don't pay at first to let it run more than two miles an hour till it gets its bearings. But even then we cultivated 17 acres in seven hours—36 in a day and a half easy.

"We will be able to do with half the horses we have been using. On a 250 acre farm we generally use six horses. We expect to be able to dispense with half that number. There are things that be said in favor of using horses on land; and things also in favor of a tractor. A tractor has this advantage over horses, you can work it straight through in rush time as long as you yourself can work. A horse can't stand that gait. It must be rested and given regular hours.

I asked about the expense of a tractor.

"Cost of Oats and Gasoline. "I think," said Mr. Wardell, "it compares favorably with the expense of horses—in fact, about the same. The tractor uses about a gallon of gasoline an hour, say \$3.50 worth of gas in a long working day. When it is not working it costs nothing. Now reckon feed for six horses, four quarts of oats each three times a day, plus hay at present prices. And a working horse you keep fed up even when off duty for a day—not much difference in the expense, is there.

"Of course the tractor's not going to do away with all our horses. But when it takes the brunt, the horses

go to the woodlot and that's cheap feed."

On the War-Tank Principle.

"How about a tractor on war tank?" someone wanted to know.

"Who the land's unit for a tractor, it's unit for a tractor. I think a team will pack the ground worse. As for getting stalled, as some fear, a five horse power tractor can go where a 60 horse power automobile cannot. It's more on the order of a war tank. Our tractor pulled a buzz-saw on skids with seven men through a mirey place in a swamp last spring and didn't get stuck.

"And I took it out into the woods and brought up two 50-foot stacks of lumber—a six-horse load."

Mr. Wardell's tractor is fitted to use coal-oil as well as gasoline, and all of this make in the future will have electric lights and self-starters. Of this variety Mr. Wardell expects his new one to be when he exchanges. He has had to buy no new expensive implements to go with his tractor.

The Gasoline Engine.

The equipment side of farming is coming more and more to the fore. Mr. Wardell, besides his tractor, has a two and one-half horse power gasoline engine which he makes use of in what seemed to be a surprising number of ways. It turns the grindstone for him and a woodturning lathe, runs an old-fashioned drag saw, a buzz-saw and a rip-saw (anything under two-inch plank, as fence slats and the like) turns the fanning mill, pumps water for the stock and the milk cooling, runs the cream separator, the washing machine, the churn and the feed grinder and acts as a generator for an electric light system he has been putting in. He uses it also with a concrete mixer for the many jobs of cement work that nowadays appear upon every farm.

Junior Farmers at Ottawa

THE following is a list of the highest winners in the Junior Farmers' Judging Competition at the Central Canada Exhibition, Ottawa. The possible score in each class was 200.

- Sheep: A. M. Ewart, R. R. No. 2, Perth, score 185; Garrett Poopat, Northfield, 173; Merritt Campbell, Finch, 150; Archie Morrison, Wales, 148; Wm. G. Harris, Merrickville, 140.
- Clarence R. Wilson, Merrickville, 140.
- Heavy Horses: Geo. E. Wiggins, Kemptville, 176; E. S. Graham, Almonte, 166; Lloyd Tait, Northfield, 145; W. H. Strong, Perth, 143; Sidney J. Munroe, Cornwall, 129; Garrett Poopat, Northfield, 115.

- Beef Cattle: Wm. Thompson, Union River, 165; Geo. E. Wiggins, Kemptville, 158; Clarence E. Wilson, Merrickville, 150; H. L. Thompson, Cummings Bridge, 140; A. M. Ewart, Perth, 135; Trevor R. Beckett, Kemptville, 130.

- Dairy Cattle: R. Bruce Ness, Howick, Que., 178; Douglas Ness, Howick, 173; Harold P. Scott, Donville, 167; D. A. V. McKinnon, Alexandria, 166; Wm. G. Harris, Northwood, 151; Hibbert Vipond, Cummings Bridge, 149.

- Swine: Jas. B. Plankett, Kemptville, 178; Harvey L. Thompson, Clayton, 158; Trevor R. Beckett, Kemptville, 154; Floyd Shaver, Winchester Springs, 160; Cephus L. Irons, 159; E. S. Graham, Almonte, 158.

A Wentworth county subscriber, Mr. C. B. Shaver, wants a cheap and simple recipe for tanning hides; preferably one that will take the hair off. Can any of our Folks supply Mr. Shaver with such a recipe? If you can, please write Farm and Dairy about it.

AYRSHIRES

If you want Ayrshires of the right kind, write us. Possibly we have what you want. PALMER BROTHERS NORWICH, ONTARIO

PLEASANT VIEW AYRSHIRES

Young calves, either sex; several from B. O. P. cows. It will pay to come and see or write for prices if wanting anything in choice Ayrshires. A. HENDERSON R. R. No. 4 ATHENS, ONTARIO

ELMCREST AYRSHIRES.

Herd Sire—Glenhurst Torrs Master, sired by Leamessnock Comet. Stock for sale, all ages, at reasonable prices, 75 head to pick from. Some good young bulls. Call or write for prices. SANDILAND BROTHERS WILLIAMSTOWN, ONTARIO.

SPRUCEHURST AYRSHIRES AND YORKSHIRES

We have 5 grand calves from high-testing dams. They are 4 and 5 months old—at \$50.00 each Three (3) Yorkshire pigs 3 months old at \$30.00 each—1 boar and 2 sows. D. LEITCH & SON, R. R. 2, CORNWALL, ONT.

LAKESIDE AYRSHIRES

A choice selection of young bulls for sale from Record of Performance (Imp.), Edgley, Jay us, all ages, at reasonable prices, 75 head to pick from. Some good young bulls. Call or write for prices. JAMES DARG & SONS (Woodbridge, C.P.R., Concord, O.T.R.), EDGLEY, ONT. Proprietors: GEO. H. MONTGOMERY Dominion Express Bldg., Montreal. Manager: D. McARTHUR, Phillipsburg, Que.

THE EDGELEY CHAMPION HERD OF JERSEYS.

Write us about your next herd sire. We now have some of our present herd sire, Edgley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgley, Jay us, all ages, at reasonable prices, 75 head to pick from. Some good young bulls. Call or write for prices. JAMES DARG & SONS (Woodbridge, C.P.R., Concord, O.T.R.), EDGLEY, ONT.

45—PRIVATE CHRISTMAS GREETING Card Sample Book Free. Men and women already making \$5 up daily in spare time. Bradley Garretsons, Brantford, Ont.

PAIDWORKERS WANTED—Chiefly for dairy work or large farm; no outdoor work; some knowledge of dairy machinery desirable—small quantity bottles each week. Apply 'Ayrshire,' c/o Farm and Dairy.

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Divide your stock and they stay where you put them. Stand sure for all kinds. Can't rust, sag or break down. Shows best results. Best security fence with veritable farm fence made and built everywhere.

SEND FOR CATALOG of all kinds of fencing for farms, ranches, parks, pleasure, lawns, etc. Free, convenient, tested and true. See the advantages in open territory.

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TORONTO Litter Carrier

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Jottings From the District Representatives

MR. FRANK O'DONNELL, of this district, is the first farmer, I believe for miles around, to have his farm completely under-drained. Two years ago he drained 40 acres, and last year, which was the first crop, he learned that the drains were more than paid for by the first crop. This year he undertook to drain the other 60 acres. This will cost him over \$1,200, but over against this he has fields that he has 20 acres of field spring wheat which is heavier than the field he had last year, which yielded 35 bushels to the acre. He expects to get 40 bushels to the acre of this wheat field, which is drained, and this will bring him more than \$1,600. He claims that this field of wheat will pay for the draining of the 60 acres this year. Over and above this he has 50 acres of oats on a drained field, which is very good. Mr. O'Donnell is strong in his opinion that drains will pay for themselves in at least two years, and in his case they have done more than that. It is to be hoped that many other farmers in this district will follow his example.—R. H. Clemens, Wellington County.

WE attended a meeting held in Orange Valley, near Markdale, for the purpose of organizing a Farmers' Club. About forty farmers were on hand. The club was organized and arrangements were made for another meeting next week to consider the drafting of constitution by-laws and to complete arrangements for shipping live stock with the other clubs of the vicinity. This meeting marks the beginning of a movement to strengthen all the live stock shipping centres whose executives are now too high owing to small shipments.—H. C. Duff, Grey County.

I SPENT part of two days this week in the north part of the county, and around Minden, in Haliburton County, where I have some sweet clover experiments going. The object was to demonstrate the suitability or otherwise of sweet clover for the granite soils of the north. Three lots of seed, 20 lbs. each, were distributed to farmers in different sections. One of them went on light sandy and the other two on soil containing a fair amount of clay. The first mentioned was almost a total failure and one of the others nearly so. The third, however, was a good success. The seed for this plot was sown with alfalfa, red clover and timothy, and sown a year ago last spring. On parts of the field these crops killed out, leaving nothing but the sweet clover. Since this plot was sown by other farmers in that section have sown quantities of sweet clover. These will be watched with a good deal of interest. Incidentally I might mention that crops all through the north are better than I have ever seen them, and stock also look exceptionally well. There is still plenty of pasture. They have had some light frost, which did slight damage to tender crops.—A. A. Knight, Victoria County.

WE called on Mr. A. S. Donald, of Kilsyth, where we found, while inspecting his piggery, that he

is making use of self-feeders in all pens where the hogs weigh 100 lbs. or more. Mr. Donald stated this method of feeding last winter and claims that he never obtained more satisfactory results. As a result, he was able to keep more hogs in each pen, and by letting the hogs into the yard for exercise, there were no evil effects from overcroding. Mr. Donald is one of our farmers who answered the call for "greater hog production." The adoption of self-feeders was absolutely necessary as the result of the increase in hogs proving too great for the trough capacity of his pens. And now he intends to stay with the method which has necessarily forced him to adopt.—H. C. Duff, Grey County.

THROUGH the Arthur and Drayton district at the present time hundreds of people can be seen pulling the village of Arthur has done very well. Here a few weeks ago I suggested to a couple of the leading citizens that they get all the town people out some evening and try to pull ten acres of it, and then turn the money over to the Women's Patriotic Society. The Women's Patriotic Society took it up at once, they advertised the scheme, and the first night there were about 75 out and they pulled about four acres. The second evening there were over 100, and they pulled about the same amount. It seems to me that hundreds of farmerettes have come into the town of Arthur during the last two weeks. You can go out in any part of the district and see a dozen or more small tents in the fields or under the trees, or alongside of some bush. Many Indians from Brantford and Southampton have come in, and they make splendid pullers. I would judge there were a couple of hundred of them in the district at the present time.—R. H. Clemens, Wellington Co.

ON Thursday and Friday I was up to the Bruce Peninsula and assisted a farmer up there to start his tractor. This man farms about 400 acres, and is about 25 miles from the nearest station. I spent some little time with Mr. Langdon, the Live Stock Shipping Club manager at Lion's Head. He handles a large part of the stock produced on the peninsula—hogs, sheep and cattle. At present they are making arrangements for shipping out their pens, and have the farmers on a bond for \$100,000, and he informed us that in a day he could easily have secured \$200,000. This allows the manager to give an advance to any farmer after he agrees to ship his grain. They have regular contract forms and the farmer pays his own interest. This is one of our most backward districts in every respect, but as far as cooperative farming is concerned, many of the best counties of Ontario might very profitably study their methods.—N. C. MacFar, Bruce County.

The production of the dairy cow is like interest on a bank account. It keeps coming both day and night. The cow is making milk, while her owner is sleeping.

20,000 LB. BREEDING

I am offering these daughters of Pontiac Korydyke Plus. He is sired by John Sylvia Beets plus the sire of May Echo Sylvia Beets plus. Dam is Sylvia Artie, 21 1/2 lbs. butter in 7 days, 20,941 lbs. milk and 1,044 dam in 555 P.M. In the city, she has four-year-old of Canada for year-work, only one cow in Canada to produce over 20,000 lbs. milk in one year and average 4 lbs. per day.

Heifer No. 1—Born Feb. 14th, 1917, bred July 9th, 1918. Dam gave 20,120 lbs. milk in 1 year.

Heifer No. 2—Born Sept. 23rd, 1916, bred Feb. 12th, 1918. Dam gave 13,407 lbs. milk in one year as a 2-year-old and is a daughter of the 20,120 lbs. cow above.

Heifer No. 3—Born Oct. 6th, 1916, bred Feb. 15th, 1918. Dam, Spink Lady DeKol, 18 1/2 lbs. butter in 7 days and 14,970 lbs. milk in 1 year as a 2-year-old. Also others of equal breeding. Write or come and see them. Prices right.

W. LEMON Lynden, Ont.

The "O'Reilly Stock Farm" Holsteins

headed by "King Segis Pontiac Posch" son of the \$50,000 bull. We have one beautiful young bull fit for service and some younger that we are offering at very reasonable prices. Write us before you decide on anything in the Holstein line. It will pay you.

JOSEPH O'REILLY R.R. No. 9 PETERBORO, ONT.

\$110.

This is the price for quick sale that we have put upon one of the best young sires we have turned out. He is a son of KING KORYDYKE JOHANNNA a choice son of 7 nearest dams average 20 1/2 lbs. and 11 nearest dams average 23 1/2 lbs. and 23 tested dams average 27 3/4 lbs. butter in 7 days. His own dam is a 23-lb. daughter of GRACE PAYNE and SIBB COLANTHIA with 20 P.M. strong and an I.O.M. dam. This fellow is clean, starchy, straight and COUGHLIN BROS., R. R. No. 5, PETERBOROUGH, ONTARIO.

FORSTERCREST FARM

offers Holstein Friesian bulls from six months to a year old; one over a year, won special for best Holstein, any age, at Jarvis fair, 1917. Where can you beat this R. R. BROCK, R. R. No. 5, SIMCOE, ONTARIO.

Bull Calf of Royal Breeding

Born Dec. 27, 1917. He is a beauty, a show animal. His sire's seven nearest dams average over 30 lbs. butter in 7 days, his 11 nearest over 28, and his 23 nearest over 27 lbs. butter in 7 days. His dam, a Korydyke heifer, is a grand producer. Price, \$175. Write or come and see him.

JOHN M. MONTLE, Prop. Sunnyside Stock Farm STANSTEAD, QUE.

A Necessity at a Bargain

A three-year-old Bull, guaranteed sure and quiet, from a 31-lb. cow, that milked 637 lbs. in 7 days and 88 lbs. in one day. We bought him back after his dam raised her record. He is sired by a grandson of King Walker. Write us about him.

Arbogast Bros. Sebringville, Ont.

Highland Lake Farms

For Sale—Two extra good (30 lb.) thirty pound bulls ready for heavy service. Priced to sell. Also younger ones by a son of May Echo Sylvia.

R. W. E. BURNABY Jefferson, Ontario
Farm at Stop 55, Yonge St. Road

His 2 Nearest Dams Average 38.82

His dam, sire's dam, grand sire's dam and great grand sire's dam, average 38.82 lbs. butter in seven days, and over 112 lbs. milk in one day, which is not equaled by any other bull in Canada. His name is OHEMSBY JANE BURKE. His services may be hired by YOU. Cows and heifers in calf to him for sale. If you need a HOLSTEIN BULL, write us.

R. M. HOLTBV, R. R. No. 4, PORT PERRY, ONT.

CLOVER BAR STOCK FARM OFFERS

A few choice young bulls for sale, from heavy producing dams, sired by a son of Francy 3rd. Write now for description, photo and price.

F. SMITH R. R. No. 3, STRATFORD, ONT.

THE OLD SUMMER HILL FARM

The home of the highest priced Canadian bred Oxford ram ever sold in Canada, sold to a Missouri man for \$300. We have for sale 250 Oxford ewes from 1 to 5 years old, 50 selected yr. to 2 yr. rams for sale or breeding purposes, 100 rams and 100 ewe lambs of superior quality and a limited supply of ewes fitted for show purposes. Just sold a show flock to H. S. Currie, of Caster, Alta., which won 1st on aged ewe, 1st on yr. ewe, 1st on ewe lamb, Champion ewe and Reserve, bred and raised by this firm. Also we have, from Ontario. They were Duroc Jersey swine of the best breeding, and recorded, young boars and a stud ram, 1, 2, 3 yr. old, and 40 Shrop. lambs all recorded, and sows ready to wean at moderate prices.

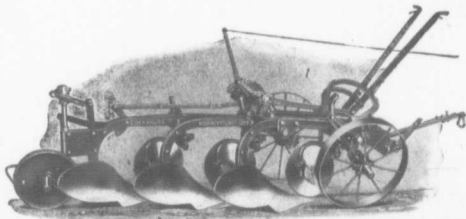
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Any soil, any service successfully met

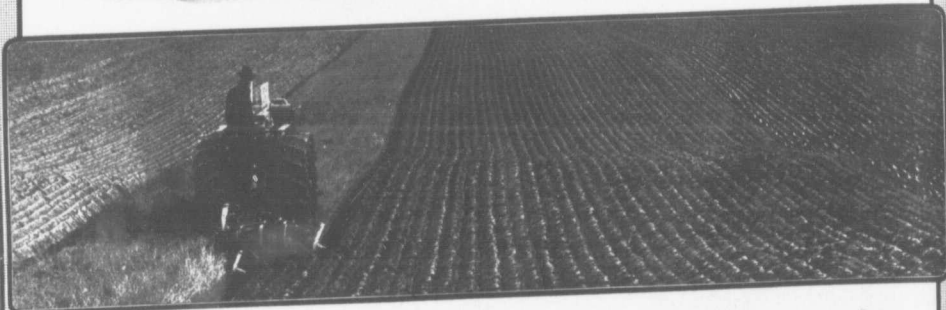
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Because it's made by a firm who have specialized for a lifetime in the making of high-grade plows to suit Canadian farming conditions. Because we've embodied in it scientific design, and the highest quality materials and workmanship which our close acquaintance with field conditions all over Canada shows us is necessary for this plow to do its best work in these serious times.



Cockshutt 3-Furrow Plow

Can be turned into a 2-furrow plow in a few minutes when conditions demand it. Cord within easy reach of Tractor operator's hand works automatic power lift, raising bottoms high and level when you want them out of the ground, and lowering them again when you wish. Easily operated levers are also conveniently placed for varying depth of cut. The hitch is instantly adjustable to suit any make of tractor.



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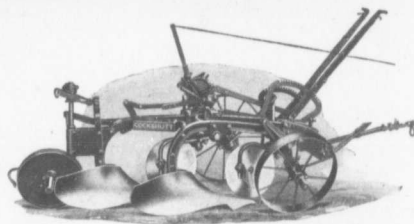
Remember—your "team" is only half complete when you've bought your tractor. You must have the right plow because that is what actually works your land. We have so many splendid letters from successful farmers who use the Cockshutt Light Tractor Plow that we know it is giving every satisfaction—no matter how hard the service or how tough the land.

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Cockshutt 2-Furrow Light Tractor Plow... can be quickly turned into a 3-Furrow Plow by the addition of a few parts

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