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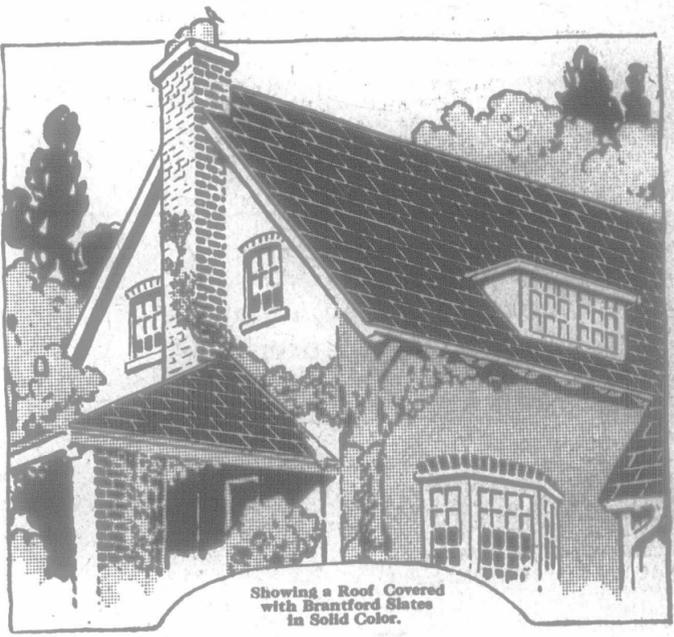
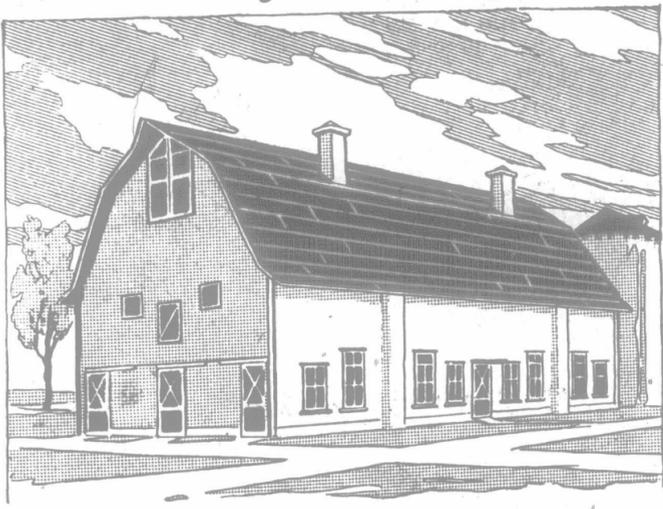
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Vol. LII.

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LONDON, ONTARIO, MAY 10, 1917

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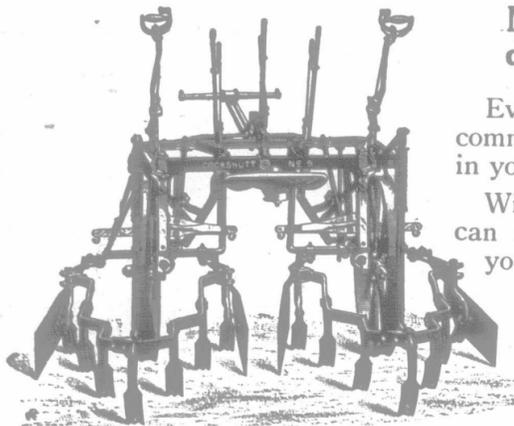
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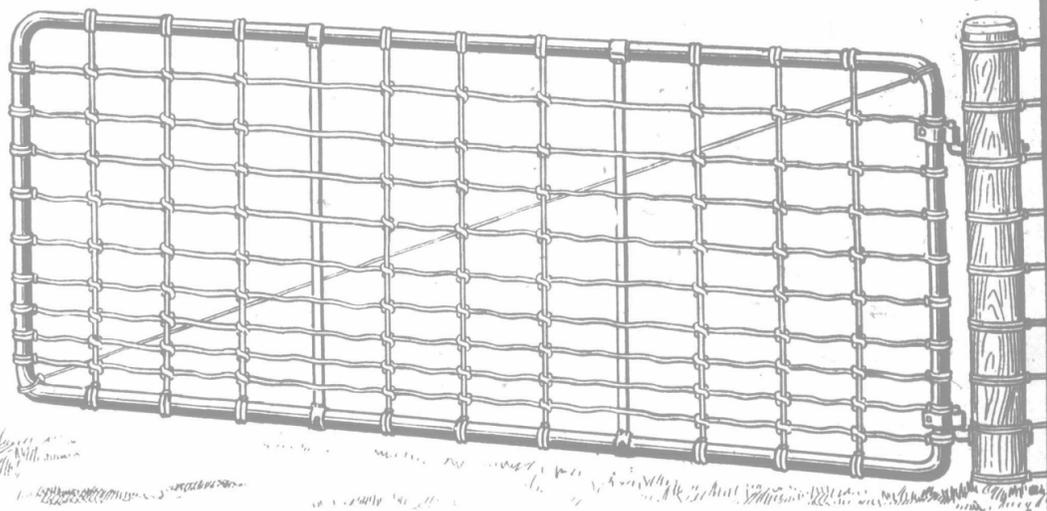
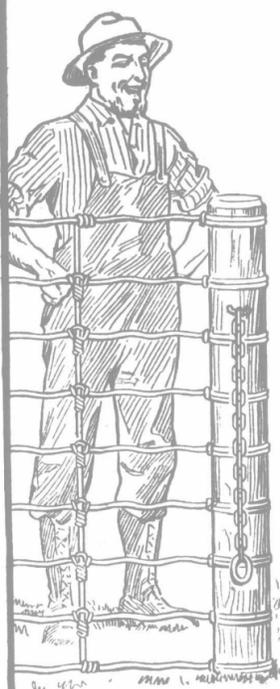
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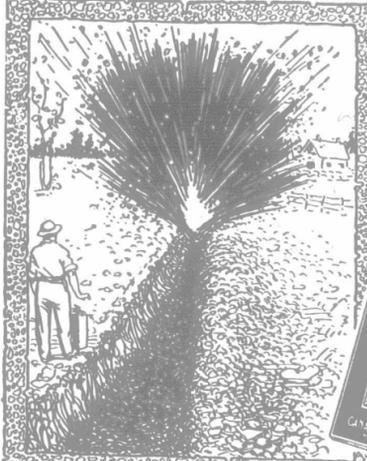
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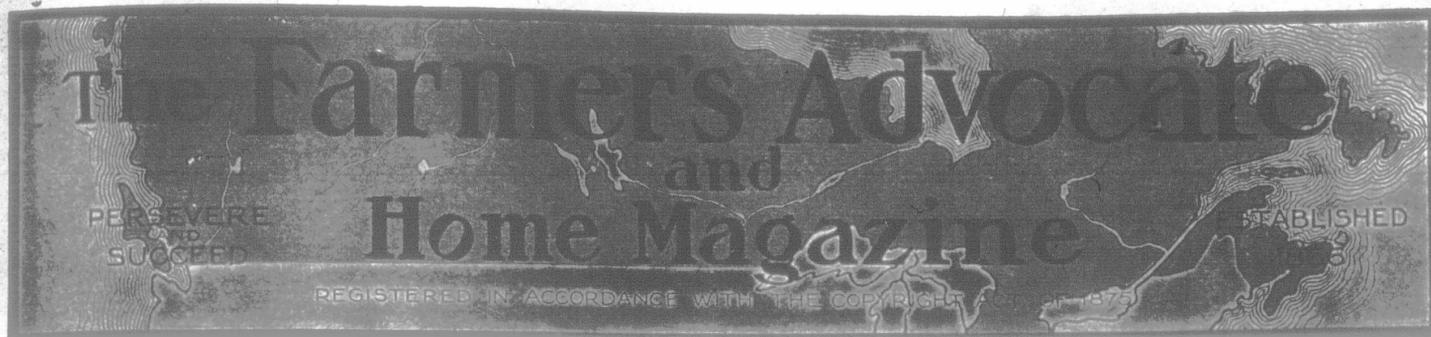
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LII.

LONDON, ONTARIO, MAY 10, 1917.

1285

EDITORIAL.

The in-foal mare is worth watching.

Satisfaction comes of doing things well.

It is time the sheep had their coats shed for them.

There is no excuse for leaving long tails on lambs.

The farm is now described as the second-line trench.

Keep a brood sow out of that large spring litter of nice bacon type.

Better a fair crop of oats or barley than a killed-out clover or wheat crop.

The Hindenburg line is now a party line—very busy and badly out of repair.

In Southern Ontario seeding, though a little late, went in a great deal better than in 1916.

There will be better summer feed where the grass is not eaten off too closely early in the spring.

Many calves that are killed are too good for veal with the present outlook for the beef industry.

With corn, as with the first-sown grains, the man who seeds early generally gets the best crop.

If it takes from six months to two years to train men to be soldiers how long will it take to train efficient farmers?

Put in all the corn and roots you can handle for such roughage will feed the stock and release more grain for human food.

Put the potatoes in as soon as possible. The man who only grows a few rows should, as a rule, get them in fairly early.

Good weather means more than anything else toward greater production this year, but the weather will not do all the work.

We get hundreds of questions regarding holidays for hired men, but never one about holidays for the farmer himself. He seldom gets any.

Weeds, as well as vegetables, grow in back-yard gardens unless the man with the hoe is there, not leaning on the implement but working it.

With wheat and all other products at present prices and going up, who would venture to say the farmer would not do his best to produce?

A campaign for the judicious use of what we do produce might be advisable. Most people eat too much; some drink too much, and, well, what's the use?

It is now time for those in charge of increased production campaigns to be laying plans for 1918. Farmers who desire to put in a bigger acreage in 1918 will need to do some summer planning and extra fall cultivation and they will require help.

Ideas regarding ways and means of increasing food products are somewhat differently expressed behind a four-horse team in the middle of a fifteen-acre field than they are around a table laden with delicacies in the grill room of the city club.

Get Ready For 1918.

The danger of a food shortage the world over has been repeatedly brought before the Canadian people, and particularly the Canadian farmer, during the past few weeks. With 40,000,000 men under arms and 20,000,000 others engaged in work necessary to their equipment, with a world war now nearly three years old and likely to continue for some months, food production becomes a problem not easy to solve. We have claimed that, in this country and particularly in this Province, too much of the appeal has been directed at the farmer. The farmer has been doing about all he can under the circumstances and we have held that it would be better to direct the appeal to city people and particularly to those who know farming conditions and to those others who seemingly have little understanding of the meaning of thrift. It is just as important at the present time that food be conserved as that it be produced. There is a great deal more food consumed than is necessary to the health of the consumers. There is also a great deal of what might be called waste in the form of money spent on luxuries at this time. However, Canada can lay plans to greatly increase production in 1918, and now is the time to begin. Indications are that whether the war goes into next year or not, food is likely to be scarce, even scarcer in 1918 than 1917. Farming is a business the plans for which cannot be changed very materially in a few days, a week, or even in a few months, but if the campaign for increased production for 1918 is now opened the acreage put in to cereals next year might be very materially increased. The start was made rather late to do a maximum amount of good this year, but it should be followed up. While it would be folly in many cases to break up old pastures and meadows which have been in sod for many years to be put in this spring, these might be broken after the hay was removed or later in the summer, after the flush of grass is past, and cultivated as a summer-fallow for the rest of the season. Some meadows which have been down only one to two years and where the land was in good condition might be sown to wheat this fall, and others after a thorough working this fall would be ready for spring crop. The plans for 1918 will be made this summer and fall and, in so far as possible, it would be wise to get as much land ready for crop in 1918 as the system of farming will stand. We feel sure the farmer will do his part in this connection, but he must have available considerably more help than at the present time if he is going to be able to handle the increased acreage even for next year. We are publishing this as a hint both to the men on the land and to those in charge of campaigns to increase production. Plans must be laid ahead several months and worked accordingly. Assure the farmer of reasonable help and he can increase acreages of cereals and special crops in 1918.

A Boost For Special Crops.

The call for increased production is likely to do one thing for the country, and that is to turn more attention to special crops. For instance, potatoes, and beans have received a boost this year which never would have come to them had not there been a danger of food shortage, in fact, an actual shortage of these two commodities during the past year. As a general thing where the land and climate are suited to a special crop and where the grower has time to properly look after it the specialty pays. The bean crop has been and will continue to be a profitable source of revenue on many farms, particularly in Southwestern Ontario, and it could be grown on a far wider area than is now planted to this legume. Potatoes can be successfully grown over almost all of Ontario, but the crop requires care to avoid losses from blight and rot. It is more than

likely that the acreage of potatoes and beans in Ontario, and of potatoes in the Eastern Provinces will be largely increased this year and it is well that it is so. By paying a little more attention to a few of these special crops the actual production of food products may be very materially increased. The average farm grows only a few rows of potatoes. As pointed out in a previous issue, the number might easily be doubled and along with them might very well be planted a few rows of beans. In sections particularly adapted to beans and potatoes larger fields will likely be planted to these crops, and through special crops a big increase in food production is almost sure to result.

Price and Cost of Production.

The average consumer fails to take into account when talking of the high prices which he must pay for farm produce of all kinds, the fact that the cost of production is a great deal higher now than it was a few years ago. The consumer thinks only of the price he pays for the goods he buys and does not take into consideration the fact that the labor, machinery, power and investment required to produce the goods is perhaps double or more of that of ten or fifteen years ago. The farmer of to-day is called upon to pay a wage more than double that paid less than two decades ago. He must also buy expensive implements and machinery at advanced prices. The up-keep of his farm grows more costly yearly. His investment, upon which he should make a reasonable interest, grows as the years go by, and all told he is making clear comparatively little more at the high prices of to-day than he did in the days of lower prices. This fact should be kept in mind. There is risk in farming; the weather plays a most important part in the annual output from the land. The farmer is not always assured of a crop when he plants his seed. He is not always sure that when he feeds shorts at over \$40 per ton, and other feeds proportionately high, to his live stock that the price per pound of the finished product, figured on the gains made by that stock, will pay him. It is just as impossible for the farmer to put grain, pork, beef, mutton, butter and eggs, and all the other farm products on the market at a low price when all the factors which enter into the production of these products have a higher value, as it would be for the manufacturer to pay high prices for his raw material, machinery and labor and then sell his finished product at the old-time lower rates.

Wages, City and Country.

Did you ever notice the difference in the value a city laboring man will put on board in the country and in the city? The average hired man going from the city to the country seems to value his room, board and laundry at very little. He looks only at the actual dollars which he is paid as wages, and he forgets that his room, board and laundry are just as good to him as the money which they represent would be. In the city, good board and room, together with laundry, the whole on a level with what he would get on the average Ontario farm would cost him at the present time close to \$30 per month. We have heard some state that \$1.50 per day, in the country is as good as \$3 or \$4 per day in the city. However, we just leave this for those who read it to think over. Nevertheless, city wages are so high at the present time that it is difficult for the farmer to obtain the help he would otherwise hire. A few nights ago we happened to be talking with a young man on a train coming west from Toronto. He was a man who had been raised on the farm and knew how to do all kinds of farm work, but according to his own statement he was making much more money in a factory in Toronto than he could on the farm. He said he was drawing \$55 a week and of

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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THE WILLIAM WELD COMPANY (Limited),
London, Canada

course no farmer could very well afford to pay such wages to a hired man. This may be an extreme case, but nevertheless it illustrates the fact that the demand for labor in the cities and the prices that city business can afford to pay have drawn and will continue to draw men, who are good farmers and know how to do the work necessary to increase production, away from the land. The present-day farmer is willing to pay a fair wage, but of course he cannot afford to give all he makes to hired men. He figures that with wages running from \$30 to \$50 per month, with board, he is paying about all his business will stand and in many cases more. Consequently, he has planned during the past few years to do with as little hired help as possible. An adjustment of wages between city and country would make a great difference in production, but this adjustment would also mean far-reaching economic changes affecting all business, urban and rural.

Preparation For Future Usefulness.

BY SANDY FRASER.

I wis lookin' ower a newspaper the ither day an' I ran across a letter frae a subscriber in which he wis askin' the editor some pretty hard questions. At least the editor seemed tae find them pretty hard, for he didna' mak' muckle o' a fist o' answerin' them.

In the first place the chap wanted tae ken whether there wis a God or no, an' gin there wis, why did he allow sic a thing as war tae exist on the earth an' tae destroy a' the works o' civilization ap' a progressive race, as well as the best pairt o' the race itself.

About a' the editor could tell him wis that this wis a free country, an' gin he didna' want tae believe in a' God, he didn't have tae. But he went on tae say that the presence of evil in this world wis something naeboddy understood. It wis what one mon had called, "the problem of the ages."

Noo, I dinna' believe in this way o' takin' it for granted that there are some things we canna' understand. Gin a' oor thinkers an' inventors had taken that ground, we would be awa' back in the dark ages yet, when men were afraid tae think for themselves, an' got punished gin they did. Oor forefathers didna'

understand muckle aboot wireless telegraphy, but sic a thing wis possible then an' wis juist waitin' for the mon wha wad dae thinkin' enough tae bring it intae existence. An' there's na reason that I can see why the same principle willna' apply tae the problems o' God's relation tae the Universe, an' tae mankind in particular. Gin we apply oor reason an' a wee bit o' common-sense tae this matter, as we dae tae oor ither problems in life, we'll get an answer tae the question. Noo, as tae why this war has been permitted tae tak' place, wi' a' its accompaniment o' suffering an' death. Are we no' all willing tae admit that man is in this world tae be educated an' fitted for some higher state o' existence where he will live a fuller an' mair useful life? An' we believe as weel that he is free tae choose his ain road, be it right or wrong. It's the only way tae mak' men sae far as we can see, tae pit their fortunes in their ain hands an' tae let them abide the consequences o' their choice. Noo, grantin' that this is the case, we'll juist suppose that one o' the nations o' the earth got tae thinkin' along wrang lines an' believin' in the auld idea that "might is right" an' a' that sort o' thing, an' first thing we kened they were pittin' their theories intae practice by makin' war on anither nation, for na reason but that they expected tae gain something by it, juist selfishness, naething less. Noo, what is this but the natural animal instinct comin' tae the top again; the auld instinct o' self-preservation, that mak's the beasts o' the forest fight for their food an' for their dens in the rocks. Na doot all mankind should be lang past this stage o' development, but it seems they're not. They appear tae be unco' subject tae relapses as yet.

But what I want tae ask is—how can man be taught tae choose the right way an' tae avoid the wrong, except by getting the experience that is the consequence o' his actions? What ither road is there for him tae travel frae the lower tae the higher life than the rocky highway o' effort an' mistakes an' consequently suffering? When we send the wee bairns tae school it is wi' the intention that they will get an education. We dinna' conseed the fact that they may hae a hard time o' it before they are through, for it's no' their present happiness that we're thinkin' maist aboot, but their future usefulness. Sae juist the same is it wi' ourselves. We're supposed tae be gettin' ready for future usefulness an' when we, as nations o' the world, lose sight o' this ideal an' get rinnin' off the track in oor chase aifter happiness, the only result we could expect, gin there's ony Ruler in the Universe at all, wis tae be brocht up wi' a short turn an' made tae realize what kind o' a precipice they were headed for. They say desperate diseases need desperate remedies, an' I think we maun a' admit that there wis guid reason for the application o' a remedy o' some kind or ither tae ilka one o' the nations o' the earth that are noo at war.

My idea amounts tae this. War is the natural result o' national wrang thinking an' living, but at the same time there is a higher Power than man taking a hand in the conflict, an' we've got tae reckon wi' this mind, gin we are tae get ony clear understanding o' passing events. This man-made world-war is being used as a means o' bringin' aboot a change in the ideals o' mankind and the proof o' this is brocht tae us almaist ilka day. Dae ye no' think that the change o' heart an' mind in Russia shows that something is at wark tryin' tae bring good oot o' a' this blunderin' an' wickedness o' man. An' suppose this nation-wide movement towards temperance gaes on tae its logical conclusion, will it no' be anither proof? I've no kind o' a doot that mankind will be kept movin' on, some way or ither, if no' by leadin' it 'ill be by drivin'. He can hauld himsel' back for a lang time by his stubbornness but he'll move along in the end.

This question o' why God allows the war reminds me o' the discussions I used tae listen tae lang ago, when the auld folks wad be arguin' aboot the reason for sin comin' intae the world. They had a hard time o' it explainin' how a good God could permit the presence o' sic an awfu' thing as sin on this earth. They didna' seem tae be able tae understand that it wis man that wis on the earth, wi' a' his load o' inherited animal passions an' instincts, as weel as his ignorance, an' that sin wis simply his lack o' ability or inclination tae control these passions an' instincts. They didna' realise how much o' an animal man is at best, an' how lang a struggle it must be tae acquire the knowledge that will help him tae raise himsel' frae the lower tae the higher life. When humanity has mastered itsel' an' attained tae perfect manhood there will be no sic a thing as wonderin' why sin cam' intae the world ony mair than the college graduate wonders why he couldna' read an' write when he started tae schule. As oor auld meenister says, "sin is a tendency towards degeneration", or as I wad pit it masel', "a gaein' doon hill". But I'm not one o' those that think the world is showin' this tendency at the present time, in spite o' the war an' a'. The majority o' mankind are hopin' an' warkin' an' fightin' for a better condection o' things an' while they dae that we dinna' need tae be afraid aboot the ootcome. Gin this war has proved onything it has proved that the world as a whole will sacrifice onything for a principle, even tae giving up life itsel', an' what mair could ye say for it. Some think the millenium is a lang ways aff yet, but a' the same it's gettin' nearer, provided we dinna' get tired an' gie up the fight. An' I dinna' think we'll dae that.

A cartoon recently published in an American paper depicted two men at a cross-roads. One shouldered his gun and took the way of the sign "To Arms"; the other shouldered his hoe and turned in the direction of the sign "To Farms". Both were ready to do their bit.

Nature's Diary.

A. B. KLUGH, M. A.

One of the most interesting phenomena in the study of Canadian bird life is the migration of sharp-shinned Hawks at Point Pelee. This point, which is a sand-spit some nine miles long, is the extreme southern tip of Canada. The migration of Sharp-shins is quite well marked in the spring, but it is in the fall that the great movement takes place, as at this season not only the adults, but immense numbers of juveniles are migrating. This heavy flight begins from September 10 to September 15 and lasts three or four days, and during this time there are Sharp-shins everywhere on the Point. As we walk through the woods they dart away between the tree trunks at every few steps. Just over the tops of the trees a steady stream of Sharp-shins beats up and down, while looking higher and higher one sees them at every level until the highest look like specks. Standing in an open place one can see two hundred at once—more by far than one would meet in ten years of ordinary field work. This stream of Hawks passes off the tip of the point and out over the lake towards the Ohio shore, and Saunders and Taverner, who stationed themselves on the observatory tower near the end of the point, counted 133 striking out over the lake in half an hour. During this migration the Sharp-shins are very bold and often dash by so closely that one can feel the wind of their wings on his cheek.

The effect of this great abundance of Sharp-shins upon the smaller birds and mammals is very marked and they keep close covert. The Blue Jay can hardly



Fig. 2—Cooper's Hawk.

be forced out of its grape-vines, the Towhee and Brown Thrasher slink deep within the tangle, and the Red Squirrel, for once, is silent, gathering his nuts and scurrying away hurriedly to a hollow tree. When forced into the open by hunger the first sight of a hawk causes the small birds to "freeze" instantly, and they remain absolutely motionless until the immediate danger has passed. And the efficiency of this "freezing" can be observed very well during the Sharp-shin migration, as none of us who have worked on the Point have ever seen a motionless bird taken by a Hawk, and Taverner has seen a Sharp-skin pass right by a flock of Cedar Waxwings which had "frozen" in the top of a dead tree.

One of the most interesting species to watch during the Sharp-shin migration is the Flicker. Time and time again I have seen the Hawks strike at these birds as they clung to the side of a tree, the Flicker remaining quiet until the Hawk was within a few feet, then with a quick hitch disappearing round the trunk. Often the Hawk would return and strike again and again but always with the same result. In this game the Flicker had all the advantage, as it had a circle of but a few inches to describe while the Hawk had one of many yards.

But in spite even of "freezing" and dodging the loss of bird-life during these Sharp-shin migrations is tremendous. All through the woods little bunches of feathers mark the end of some Sharp-shin victim, and from these feathers we identified Olive-backed Thrushes, Gray-cheeked Thrushes, Towhees, Blue Jays, Brown Thrashers, Red-eyed Vireos, Chipping Sparrows, Wood Pewees, Catbirds and various Warblers. The most frequent victims are the Olive-backed and Gray-cheeked Thrushes, and it appears as if the Sharp-shins follow these species in their migration and depend mainly on them for their food-supply. It is further probable that Point Pelee is selected by the Sharp-shins as a migration route because it is the great migration highway for the small birds of a considerable portion of Canada. The nest of this species is placed in the fork of a tree at from 15—30 feet from the ground, usually in a coniferous tree. It is composed of sticks and lined with bark strips. The eggs are 3-6 in number and period of incubation is 21 days.

Cooper's Hawk (*Accipiter cooperii*) is practically a large edition of the Sharp-shin, having the same outline, except that the end of the tail is rounded. This species is about eighteen inches in length. Cooper's Hawk has a wide range in Canada, being found from ocean to ocean, but it is not very common in any locality. It is an extremely destructive species feeding almost exclusively on birds up to and including the Ruffed Grouse and on Cotton-tails. It often carries off nearly full-grown chickens.

The American Goshawk (*Accipiter atricapillus*) may be recognized from its outline, which on account of the short, rounded wings and long tail, resembles that of the Sharp-shin and Cooper's, taken in conjunction with its large size. In the southern portions of Canada this species is seen only as a winter visitor. It breeds in the Maritime Provinces, Ungava, Northern Ontario and the forested country of Northern Saskatchewan, and Alberta. In British Columbia it is replaced by the closely allied sub-species the Western Goshawk. This species feeds largely on Ruffed Grouse and Hares, though it also takes such smaller birds as the Blue Jay, and Hairy Woodpecker. It carries off full-grown fowl and in the winter when it comes into the cities it often plays havoc with the pigeons.

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THE HORSE.

The Age of a Horse in Verse.

Two middle nippers you behold
Before the colt is two weeks old;
Before eight weeks two more will come;
Eight months, the "corners" cut the gum.

The outside grooves will disappear
From middle two in just one year;
In two years, from the second pair;
In three, the "corners," too, are bare.

At two, the middle nippers drop;
At three, the second pair can't stop;
When four years old the third pair goes;
At five, a full new set he shows.

The deep black spots will pass from view,
At six years, from the middle two;
The second pair at seven years;
At eight, the spots each "corner" clears.

From middle nippers, upper jaw,
At nine the black spots will withdraw;
The second pair at ten are white;
Eleven finds the "corners" light.

As time goes on the horsemen know
The oval teeth three-sided grow;
They longer get, project before
Till twenty, when we know no more.
—From Biggle's Horse Book.

Persistence of the Urachus in Foals.

Persistence of the urachus—pervious urachus—commonly called "Leaking navel" is not an uncommon condition in foals. The urine that is secreted is conveyed to the bladder in the normal manner, and a greater or less quantity of it is conveyed from the bladder by a tube or canal called the urachus. This tube, which is a foetal organ, extends from the lower and front part of the bladder to the umbilical or navel opening, through which it passes and then expands to form part of the foetal membranes or afterbirth. The normal function of the urachus is to convey from the bladder the urine that is secreted during foetal life. After birth its functions are no longer required as the urine escapes from the bladder by the urethra, or vagina, according to sex, hence the canal, under normal conditions, becomes obliterated.

It, however, not infrequently occurs that from causes not well understood or as a consequence of mal-formation, it becomes only partially or not at all obliterated, and urine continues to escape in drops or in a stream from the navel opening. This condition is more frequently noticed in males than in females, and appears to be more serious in the former.

While foals that suffer from this abnormality are usually weakly, the condition is often noticed in smart, strong foals, but if the discharge be not checked the patient in most cases soon becomes weak and unthrifty, although there are exceptions even to this, that is, cases in which the discharge continues and the colt thrives well for a considerable length of time. The condition is in some cases accompanied by that serious disease called septic arthritis, navel ill or joint ill, in which cases there are slight hopes of successful treatment. Many think that the two diseases are identical, but this is a mistake. They are two entirely distinct diseases or abnormal conditions, and, while in some cases they co-exist, there are many cases of each that do not become complicated by the other.

Symptoms.—The symptoms are readily recognized. The patient may or may not be weakly, but urine will be noticed escaping either in drops or a stream of greater or less volume, from the navel opening. This escape of urine may be more or less constant, or may be noticed only when the patient is making efforts to urinate. If the foal be weak and unthrifty it will lie most of the time, and instead of the navel drying up and the opening healing there will be a constant wetness of the parts and a refusal to heal. In most cases during urination the escape of fluid can be noticed by both the normal channel and the navel, but in some cases it all escapes by the latter. This indicates that the normal passage is not pervious. In some cases there is a false membrane, or possibly obstructions of other kinds, occluding the normal channel. In all cases where the condition continues the patient will sooner or later become weak and unthrifty and eventually die.

Treatment.—Before treatment is resorted to it is necessary to ascertain whether the normal channel is open, as if it be not and we prevent escape of urine through the urachus, it will not be able to escape at all and of course death will result, either from inflammation of the parts and exhaustion or from rupture of the bladder. In cases where the foal has been seen passing urine by the normal channel, of course, no further evidence is necessary, but where this has not been noticed a small catheter should be passed into the bladder to break down obstructions.

If the umbilical or navel cord protrudes below the abdomen it should be well dressed with a good disinfectant as a five per cent. solution of carbolic acid or a solution of corrosive sublimate, 10 grains to 8 ounces of water. When the end of the urachus can be seen and taken up by a forceps, it should be tied with a strong, silk thread that has been disinfected in the lotion. Even when the cord is broken off close to the abdomen

the vessel can sometimes be secured if the patient be held upon his back. When the urachus cannot be individually secured, the whole cord may be enclosed in the ligature, but it is better when possible to secure the urachus alone. The parts should then be dressed three or four times daily until healed, with the antiseptic. The parts enclosed in the ligature will slough off in a few days and healing should then be rapid. Clams may be used instead of a ligature, but most practitioners prefer the latter.

In cases where the canal cannot be secured as above some authorities advise the operation of cutting down upon it through the floor of the abdomen and securing it, but this is a critical and in most cases an unnecessary operation; an expert is required to perform it and very careful after-attention is necessary. Manufacturers of and dealers in certain proprietary medicines advertise specifics for the cure of this trouble without an operation. It is not our intention to discuss the value of these preparations. In most cases the application of slight caustics or strong astringents will be effective. Whatever preparation is used must be applied directly to the end of the urachus in order that it may be effective. In order that this may be done it is necessary to have the patient held upon his back and the dressing applied with a feather or small syringe. A mixture of equal parts of butter of antimony and tincture of myrrh, applied with a feather twice daily usually gives good results. Care must be taken not to apply it too freely, or to parts other than those upon which we wish to act.

In cases where intelligent treatment for this trouble is adopted early, a recovery usually takes place, provided there are no complications, but when treatment is neglected or deferred until the patient has become too greatly weakened, it is often unsuccessful. WHP.

sisting of six batteries of four guns each, approximately 1,146 men. While definite information as to the proportion of infantry, cavalry, and artillery to be included in the new army is not yet forthcoming, it is generally understood among army officials that an artillery battery of four guns will be allowed for each 1,000 infantry. It seems probable, therefore, that the first one million men placed under arms by the United States will be composed of 500 regiments of infantry totaling 750,000 men, 125 regiments of artillery totalling 143,250 men, and 100 regiments of cavalry totalling 130,000 men, making a grand total of a little over 1,000,000 men. The proportion of artillery certainly will not be less, and may be more, as actual warfare on European battlefields has demonstrated that overwhelming superiority in the artillery branch of the service is essential to efficient operation by the infantry.

It may be argued that there is no probability that the United States will prepare 100 regiments of cavalry, but in view of the danger from the Mexican situation, it appears to be the belief of well-informed army officers that at least that many cavalry regiments will be provided for in this year's mobilization.

To equip 500 regiments of infantry will require 34,500 riding horses, 56,000 draft mules, 12,500 pack mules, and 3,000 riding mules. One hundred and twenty-five regiments of artillery will require 137,025 horses, 10,000 draft mules, and 500 riding mules. The equipment of 100 regiments of cavalry will necessitate 154,100 horses, 15,200 draft mules, 2,900 pack mules, and 600 riding mules. The total number, therefore, required for the equipment of 500 regiments of infantry, 125 of artillery, and 100 of cavalry, will amount to 325,625 horses and 100,700 mules.

The army has at present only 70,000 head of horse

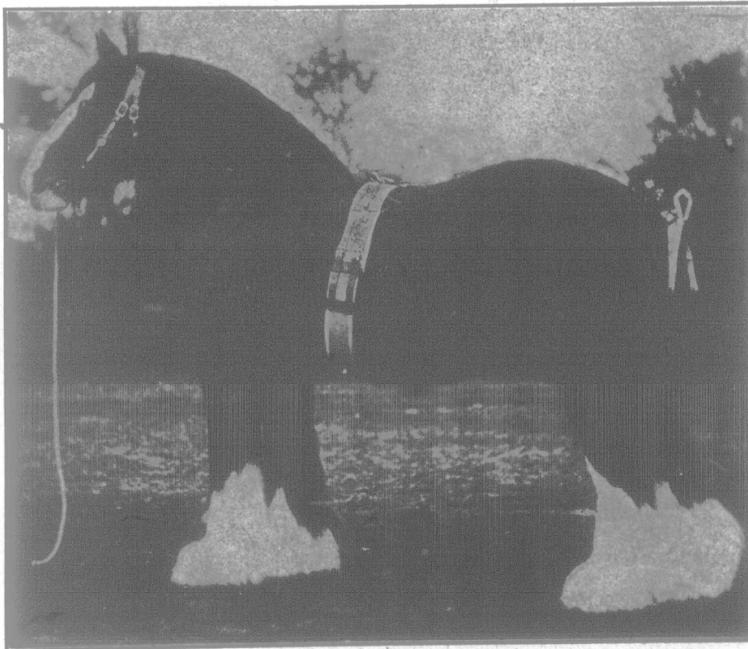
and mules. This means that approximately 350,000 head of horses and mules must be bought within the next six months. No information has yet been received from the army authorities in regard to how the purchase of these horses and mules will be made. In the judgment of experienced horsemen, however, the purchase of so large a number of horses and mules within the limited time available can best be accomplished by setting a definite price to be paid by the army for the different animals that will pass inspection for their respective classes, and by establishing ten or fifteen inspection points where horses and mules may be tendered for inspection. This will permit dealers, large or small, or even farmers, to consign

their horses directly to inspection points with definite information in regard to what they will obtain for them if they pass inspection. There seems to be no good reason why the producers of horses should not be permitted to sell them directly to the Government, if they pass inspection, instead of being obliged to sell them through some intervening contractor. It is earnestly to be hoped that the army officials will decide on some general plan.

It must not be forgotten that the allied nations are still in the market, and will continue to be. Their need for horses and mules is as great as for guns and ammunition; indeed, even more so, because they can manufacture the guns and ammunition in their own countries, but their resources in horses and mules have already been exhausted, and the United States is the only source from which they can obtain additional supplies. 853,116 head of horses and 289,062 head of mules have been exported, practically all of them for war purposes, during the 30 months ending March 1, 1917. In spite of the shortage of ships, 40,000 head of horses and mules were shipped in January, 1917, and more than 27,000 head in February, 1917.

Recent accounts from the battlefield relating the loss of hundreds of pieces of artillery by the Germans in recent operations, state that the loss of these pieces was due recently to the lack of artillery horses.

It is fortunate that the United States is well supplied with both horses and mules at the present time, but it is incumbent upon us, if we are to maintain our resources so as to effectually back up our armies and maintain maximum production on our farms, to see that every good mare is bred to a first-class stallion this season, and that every effort is made to save the foals that will be coming within the next six weeks. The war may yet be decided by the number of horses available to the respective belligerents, for on the far-flung battle lines and in the reserve made up of our farm



Champion's Clansman.
Champion Shire stallion at the recent Shire show in England.

Horses Required by the New American Army.

The following letter has just been received from Wayne Dinsmore, Secretary of the Percheron Society of America. It gives some idea of the numbers of horses that will be required by the new American army, and will be read with interest by all Canadian horsemen. It looks as if it would be good business to breed every available mare this year. Read Mr. Dinsmore's letter:

The passage of the Selective Draft measure by Congress makes certain the immediate preparation and equipment of an army of at least a million men in 1917. All preparations are being made for a war that will last three years, for, regardless of what civilians may think, army officials do not expect an early ending to the war into which the United States has been drawn.

The requirements of cavalry, infantry and artillery regiments in horses and mules are set forth in a letter just received by the writer from the War Department, Washington, D.C., to be as follows:

Cavalry Regiment.	Infantry Regiment.	Artillery Regiment.
1,541 horses	69 riding horses	1,097 horses
152 draft mules	112 draft mules	88 draft mules
29 pack mules	25 pack mules	4 riding mules
6 riding mules	6 riding mules	

These are minimum requirements, and do not take into account transportation trains required to forward supplies from terminal points to field bases. In other words, the number of animals specified above refer only to those actually needed with the troops.

The war strength of a regiment of infantry is approximately 1,500 men; of a regiment of cavalry approximately 1,300 men; of a regiment of artillery, con-

forces, the horse is the most important single factor aside from man.

LIVE STOCK.

Dipping is an operation that no sheep raiser should neglect.

Take good care of the wool; it is worth a lot of money.

Salt the herd at pasture as well as the cows coming to the stable every night.

The breeding swine will not take too much exercise. Give them every opportunity possible.

Keep the flies out of the stable as much as possible in the summer. The windows should be screened and darkened in stables where animals are kept.

It is preferable to tie the fleece with the neck piece rather than with binder twine, but don't use either one. Tie it with paper twine made for the purpose.

On April 19 the Iowa series of Angus sales was brought to a close, and on that occasion W. H. Cooper, Hedrick, Ia., sold 56 head for an average of \$330. The 12 bulls averaged \$174, and the 44 females \$372.

At Holbrook, Ia., on April 18, fifty-seven Angus cattle sold at an average price of \$600. The 19 bulls averaged \$440, and the 38 females \$675. These were selections from the herd of P. J. Donohoe. Brookside Edward by Black Dale, a son of Black Woodlawn, sold for \$1,525, being the top of the bulls.

During the heat of summer when the flies are thick, the spring calves are better in the stable with the windows screened. When thus confined it is well to have some green feed for them, such as clover, alfalfa, oats and peas, or some mixture of spring grain sown for the purpose. Don't forget this when sowing the small feeds near the buildings.

A splendid sale of Angus cattle was held at Atlantic, Ia., on April 17, when F. J. Roberts disposed of 41 head at an average price of \$621. The 11 bulls averaged \$581, and the 30 females catalogued \$636. At the head of the herd has been the Chicago grand champion of 1916, Epistos, purchased by Mr. Roberts at \$4,500. Most of the females sold were in calf to him. The top price on the females was \$1,000, while the young bull, Belmont A 3rd, realized \$2,000.

Feed and the Lamb Crop.

We have seen several flocks of breeding ewes this spring, and have talked with a number of owners who complain that their percentage of twin lambs this season is very small. In one flock which we recently visited only a very few ewes out of over forty produced more than one lamb. Breeders are inclined to lay the cause of so many single lambs to different sources, but this particular sheepman we believe hit the cause correctly when he mentioned the fact that pastures were very short and dry during the breeding season last fall. Those who have kept sheep for many years and have a record of their breeding results very often find that when the ewes are bred in failing condition, or at least not in the best of thrift, or in fact not gaining in flesh, the lamb crop is usually smaller than when feed is plentiful and the ewes have been allowed to gain up in condition after the lambs are weaned before being bred. There is a good point in this which should be remembered by all those who keep sheep; that is, to have the ewes gaining at the end of September and through October when the ram is turned with them, even though it requires a little grain to supplement the pastures. One thing was noticed in the flock mentioned; the yearling ewes, which of course were in higher condition owing to the fact that they had had no lambs, produced a higher percentage of twin lambs than did the older ewes which were not in as good condition and from which a heavy lamb crop had just been weaned.

There are those, however, who believe that a first-class single lamb is of nearly as much value as a pair of inferior quality. One thing is certain, single lambs make a more rapid growth and generally attain greater size and weight than twins. However, we still think that it pays to get as many twins as possible where feed is plentiful and the lambs get good attention.

The Colwill Sale.

The auction sale held by A. A. Colwill at Newcastle, Ont., on April 10, resulted very satisfactorily, the total received being \$3,750. Eight pure-bred Shorthorn cows averaged \$162 each, and five calves, from 2 to 6 months of age, averaged \$86. The grade cows and their calves sold for over \$100 each. Some of the pure-bred Shorthorn cows sold as follows: Lady Russel 3rd, \$215; Newcastle Kate (and calf), \$315; Lady Russel 4th, \$210; Roan Rosie, \$135; Newcastle Annie, \$165; Newcastle Laura, \$135; Newcastle Rosie 2nd, \$130; Newcastle Vida, \$130.

The Summer's Meat Supply on the Farm.

The members of farmers' families, as a rule, are not vegetarians. Agricultural life and work give one a healthy appetite that demands substantial food. Meat is necessary once a day, and in many country homes it appears on the table twice or three times. This constitutes a problem. The town or city butcher can display different cuts of beef, mutton, lamb and pork, and the urban dweller can choose according to his finances. However, the farmer should supply his own table from his farm, herds and flocks, so far as possible, or so far as it proves economical, and eliminate the cost of dealing. Almost everyone prefers a varied diet, and all should have it in order to keep in the best possible health and to maintain the system so it will measure up to the greatest degree of efficiency. To provide

The Beef-Ring.

A membership in a beef-ring will ensure a supply of fresh beef every week throughout the summer, and if the management is what it should be the quality of the meat will be all that could be desired. A ring is usually organized thus: Some interested parties in the district get the sufficient number to subscribe to the proposed scheme; then a meeting is called and the officers elected. A president, secretary-treasurer, three directors, and an inspector usually handle the business and look after the quality of the supply. The duty of an inspector is to examine the animals before being slaughtered and the carcasses afterwards, to see that none are diseased. If an animal is rejected while alive, its owner is expected to put in another later in the season, but if the carcass is condemned it is not delivered and no one gets beef that week. In such a case, the owner of the animal condemned after slaughtering is not expected to contribute another. Commonly, some member of the ring contracts to do the butchering, otherwise a local butcher is employed. Any initial expenses for a slaughter house or equipment is usually met by subscriptions from the members. The butcher is remunerated each week by the member who contributes the animal, but a price is agreed upon with the association. From \$2 to \$4 per head is the usual stipulation, while the hide, heart, liver, tallow, etc., revert to the one who supplies the animal in each case. Where the butcher delivers the meat other arrangements with regard to compensation are made. In determining the time that the different members are to supply animals, one custom is to put numbers in a hat (one, up to as many as are expected to contribute) and have them draw. The numbers on the slips thus drawn will indicate the order of supplying animals. However, alterations can be made by mutual agreement and the consent of the association, in order to accommodate the different members. As to the delivery of the supply, that can be settled locally. The butcher can deliver to each one and be remunerated for the same out of the organization funds, or the different members can call for their own. Very often a little more co-operation here will work to advantage. Groups of neighbors in different localities can take turns and get the supply for their immediate neighbors, week about.

A beef-ring may include sixteen, twenty, or twenty-four members. The twenty-share ring is, in a way, the most satisfactory, and frequently two families take one share, dividing the week's meat and the obligations. The carcass is usually cut so each shareholder gets a roast, a boil, and a piece of steak at one time. The members of the association agree on a certain price, and when the season is concluded and the business straightened out the account of each shareholder is balanced. If the animal one contributed weighed more than the amount of meat received, he is compensated in cash, and likewise those who have obtained more meat than they contributed in animals pay into the association to square the account.

An animal that will dress out about 400 pounds is most appropriate for a twenty-share ring. This gives each member twenty pounds per week, and if that is not sufficient two shares can be subscribed for. Similarly a share can be divided between two, giving each ten pounds weekly.

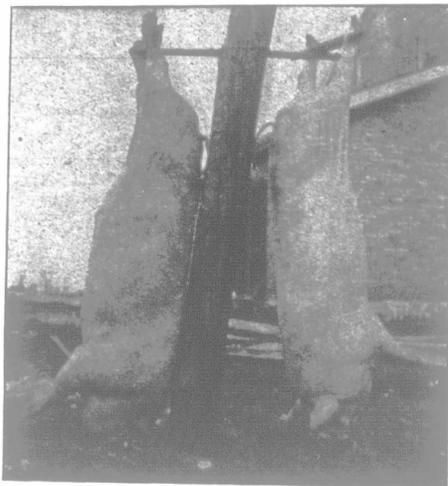
Figure 1 indicates how a side of beef may be divided for a twenty-share ring. The distribution of meat could be arranged in the following order, giving each a roast, a boil, and a piece of steak each week:

Roast	Boil	Steak
1	14	1
2	13	2
3	19	3
4	16	4
5	17	5
6	18	6
7	15	7
8	12	8
9	20	9
10	11	10

Figure 2 also shows how a side of beef may be divided for a twenty-share ring. The first ten members get the cuts shown with a piece of steak, and the remaining ten get exactly similar cuts from the other side.

Figure 3 represents a side of beef lying on a table ready to be cut up for a 16-share ring. For convenience cut the half in two, before taking down, at the line between roasts 4 and 5, leaving two ribs on the hind quarter. Divide the fore quarter again at the line (b). Number 9 represents the neck which is sawn off with three joints. Numbers 1, 2 and 3 represent roasts, each containing three joints. Number 4 is a roast with four joints, and number 14 the second rib cut, which is cut off leaving five ribs attached. Number 13 represents the first rib cut, to which are left four ribs. Number 10 represents the brisket and No. 12 indicates the shoulder, which lies directly under the brisket.

The hind quarter is divided at the line (d). Number 15 represents the flank, which should be cut off at the line (c). Numbers 6, 7 and 8 represent sirloin, rump No. 1 and rump No. 2 respectively, and should be divided as near the same as possible. Number 17 represents steak, and is generally cut in slices so that each member will secure a part. Number 16 represents the hind shank, after steak is taken off. The half of the beef is cut as just described and divided between the first eight members, giving each a roast, a boiling piece and a slice of steak. The other half of the



The Promise of a Good Summer's Meat Supply.

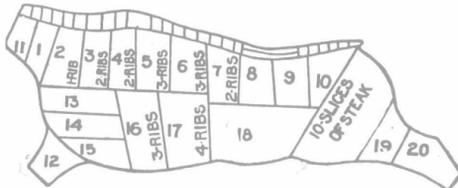


Fig. 1—Chart for a 20-Share Beef Ring.

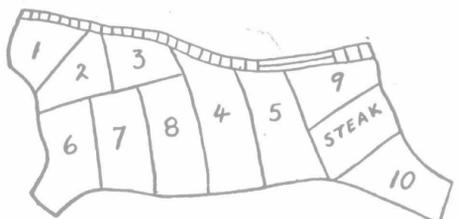


Fig. 2—Chart for a 20-Share Beef Ring.

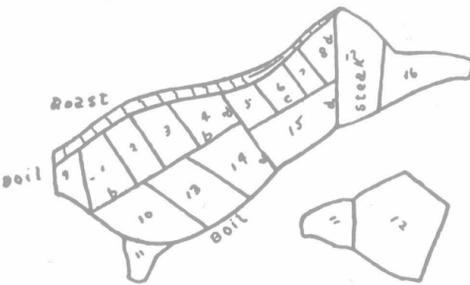


Fig. 3—Chart for a 16-Share Beef Ring.

this variation in the many dishes prepared, the women folk must have some variety to select from. Fresh beef is excellent, but people tire of it if placed before them continuously. The same is true of mutton, lamb, salt pork, fish and even turkey, duck or chicken. Yet, by a little forethought, preparation and arrangements early in the season, the problem can be solved by the farm home and a good supply of meat guaranteed the year round. It requires some organizing or co-operation, if you will, to furnish cuts of fresh meat in the hot part of the season, when one lives beyond the route of the local butcher. However, this difficulty is easily overcome. The beef-ring has been a great boon to country people in this regard. Farmers will not feel like butchering and consuming animals that the drovers will take at unprecedented prices, but what are we to do about it? All must eat.

beef will give similar cuts to the remaining eight shareholders.

Smoking the Summer Meat.

The smoke method of curing meat is not so common as it once was, but there are still many who prefer the smoke-cured product to the salty article.

It is not a difficult proposition to smoke the summer meat supply. A small, inexpensive building, 6 feet square and 8 feet high is quite sufficient, yet if the walls are constructed of brick, concrete or metal there is less danger from fire.

Before being placed in the smoke-house the meat should be rubbed with salt a couple of times and then left in pickle for a while. The brine or pickle should be strong enough to float a fresh egg, and if a slightly sweetish taste to the meat is desired a little molasses should be added.

Dry-Salt and Brine Cures.

To dry-salt hams and shoulders, rub them with 4 lbs. of salt, 1 1/2 lbs. of brown sugar and 2 ounces of pulverized saltpetre, to every 100 pounds of meat.

If plain salt pork is desired rub each piece of meat with fine, common salt, and pack closely in a barrel. Allow it to stand over night. The next day weigh out 10 pounds of salt and 2 ounces of saltpetre to each 100 pounds of meat, and dissolve in 4 gallons of boiling water.

Pickling Beef.

There are several recipes which give fairly good results with pickling beef. They vary somewhat in the amount of sugar and salt used. For fifty pounds of meat take two gallons of water, 4 pounds of salt, 2 pounds of brown sugar and one ounce of saltpetre.

Vessels in Which to Cure Meat.

A large, stone jar is the best vessel in which to cure

meat. Where this is not available a molasses or syrup barrel will do nicely, provided it is thoroughly scalded and cleansed. A barrel or a jar that has once held meat will do again and again unless meat has spoiled in it.

Semi-Cooking.

A very wholesome class of pork can be preserved in the following manner: Take pieces of side meat and rub them well with salt and brown sugar, about one-quarter of a pound of sugar to one pound of salt.

Sausage and Headcheese.

Sausage meat is cut in uniform pieces, and for each pound of meat one teaspoonful of salt and one of black pepper are frequently used; besides one teaspoonful of pulverized sage to five pounds of meat for seasoning.

Lamb and Mutton.

Lamb and mutton are seldom cured on the farm, and nowadays they are not made use of to as large an extent as formerly, but frequently at threshing or silo-filling time a lamb could be butchered and a side or quarters given to some neighbors who will repay at a later date when they have occasion to select from their flocks for slaughter.

Poultry.

The ordinary flock of farm poultry should furnish the table with considerable meat. During the summer and early autumn the hens often cease to lay, and in too many cases they do not start again till the following spring.

Rearing War Calves.

There is a feeling, in circles unacquainted with the live-stock industry, that calves of all breeds should be reared for beef, and not slaughtered at the tender age which places them in the class commonly known as veal.

Present conditions and the uncertainty of the future, however, do not warrant a niggard policy in feeding. Skimped and stunted animals seldom return profits. Calves should be started well with plenty of whole milk which is gradually changed to skim-milk, always fed at the same temperature—preferably at about blood heat.

Educating the Young Bovine.

Just recently we observed a calf, four weeks old, standing up to the manger in company with several of its kind, though somewhat his senior, and taking his feed of silage with apparently as much relish as did his older associates.

Meal Rations for Young Calves.

The following list compiled by Otis of the Kansas Station, will assist farmers in selecting rations for skim-milk calves:

- 1. A mixture of 5 pounds oats, 3 pounds bran, 1 pound cornmeal and 1 pound linseed meal
2. Whole oats, ground barley and bran.



A Bunch of Hogs Like This Will Pay For a Lot of Feed.

3. Ground barley with bran or shelled corn.
4. A mixture of 20 pounds cornmeal, 20 pounds oatmeal, 20 pounds oil meal, 10 pounds blood meal, and 5 pounds bone meal. Change to corn, oats and bran when the calf is three months old.

5. Whole oats and corn chop, the latter gradually replaced by shelled corn as the calf develops.

Among the dairymen in the United States the mixture of equal parts whole oats and wheat bran is popular, as is a mixture of 5 parts oats, 3 parts bran, 1 part linseed meal and 1 part cornmeal.

After the calf has been taught to eat the concentrates readily from a box, feed only what will be consumed at one time. At six weeks of age a calf will eat in the neighborhood of $\frac{1}{2}$ pound of concentrates daily. At two months about 1 pound, and at three months about 2 pounds. Silage, from well matured corn and free from mold, is a very good roughage. Roots cannot be excelled and should be supplied as soon as they will be eaten.

Scours in Calves.

Scours is one of the worst scourges of the young calf crop. What appears like the contagious form in the young calf herd is only an epidemic due to filthy utensils or unclean and unsanitary environments. The utensils, especially the pails, from which the calves are fed should be scalded after each feeding and exposed to the sun. Trouble when it appears can often be corrected by scalding the milk or feeding lime water up to one-third the total allowance of milk at each feeding. In every case the cause of the disease should first be determined and removed. Lime water is easily made by slaking some lump lime in water. The clear liquid standing at the top of the vessel, after the operation is complete, is the material required. So long as it is a saturated solution the lime-water will always be the same strength, for a quantity of water at a uniform temperature will combine with the same amount of lime in every case. Do not stir the sediment in the bottom when taking out the lime water, for the clear liquid at the top contains the desired properties. Another recipe often recommended is as follows: Powdered chalk, two ounces; powdered catechu, one ounce; ginger, one-half ounce; opium, two drams; peppermint water, one pint. Give a tablespoonful night and morning. It is well to first mildly purge the calf with two ounces of castor oil taken in some milk and after this has acted to give the cordial as recommended. There is usually some cause for the disease; either too much milk, dirty utensils, or hot and cold drinks fed alternately. First remove the cause.

Contagious or white scours is a more difficult trouble to combat. It is infectious and precaution should be exercised in cleaning and disinfecting the stable. As a remedy give the castor oil as previously advised. Mix one-half ounce of formalin with fifteen and one-half ounces of distilled or freshly-boiled water and keep in an amber-colored bottle to prevent chemical changes. The dose consists of one teaspoonful of the mixture per pound of milk for a young calf.

A Few Details in Summer Rearing.

Milk fed to calves from the pail should be as near the temperature of that drawn from the cow as it is possible to get it. In hot summer weather, however, the temperature might be lowered without bad results, but it should be fed at a uniform heat on every occasion. Changing from hot to cold drink is quite likely to induce digestive troubles. Cold milk at every feed is better than hot and cold fed alternately. Scald the pails after each feeding and leave them exposed to the sun. Also, scald frequently all utensils with which the milk comes in contact. Construct feeding stalls or stanchions so the calves may be fastened individually and obliged to drink from separate vessels. It is a bad practice indeed to allow two calves to poke their heads into the same pail, and even when one calf follows another in drinking from the same vessel, it is difficult to give each the required amount and to distribute evenly the contents of the pail, especially if it contains porridge as well as milk. Keep the calves in their stalls or stanchions until they have eaten some meal or roughage and will not suck each other when liberated. During the hot months of summer spring calves are better in the stable with the windows darkened and screened to exclude flies. Some fresh clover or green feed is relished when the young animals are so confined. If convenient, they should be allowed the run of a small pasture or paddock at night. Fresh water should be supplied frequently. It is a mistake to think that milk-fed calves do not require water.

THE FARM.

Rural Schools and the Public Health.

EDITOR "THE FARMER'S ADVOCATE":

The present great war is destroying life with amazing rapidity. In fact, the great leaders on each side are now estimating how long the war can last by calculating how soon the man power of the enemy will be exhausted or depleted. Our pacifists praise the blessings of peace and shudder at the horrors of war. Yet the death rate in our own and in the enemy's field force is not so terrible after all when compared with the death rate from preventable diseases at home. It is quite true that if war is prevented, the killing due to war will cease. But it must not be forgotten that very many of our peace casualties are equally avoidable if proper precautions are taken.

Indeed it is more lamentable to know that hundreds of thousands of deaths occur annually in every country

which are due to ignorance or neglect. Peaceful citizens, young children and babies are killed each year by infectious diseases; they are literally murdered by microbes, and never know or see what killed them.

We are impressed by the slaughter on the battlefields and in the trenches and are terribly shocked, but the needless loss of life in cities and villages hardly impresses us at all.

The war teaches us that we need to conserve our man power. Governments appoint conservation commissions to conserve our natural resources, that is to say, our trees and minerals, fishes and fur animals, birds and beasts. But there is no agency for conserving our health and life except the school. Boards of Health do a great deal for cities, but in the rural parts of our province, the school is the only institution capable of directing attention to the prolongation of life, preservation of health and prevention of disease.

For many reasons the country is supposed to be more healthy to live in than the city. But this is not always the case in reality. For example, over the whole of the United States, the city death rate is only slightly higher than the rural death rate, whereas in the State of New York the opposite is true. There the city death rate is actually lower than the rural death rate. In other words, a person has more chances of death in the country districts than in the cities of New York State. One of the reasons for this is the careful supervision of Boards of Health and a good water supply in cities.

Good Water.

In country places where people are dependent chiefly on wells, the typhoid fever plague is more common than in our most crowded cities. In mountainous districts, the wells seem so clear, the springs seem to pour forth beautiful water, and form the limpid streams so dear to the poet's heart, but it is precisely there that typhoid is a terrible scourge. The reason why shallow wells, springs and small streams are very dangerous is because any water coming from the surface of the ground is likely to contain disease germs. Surface water almost inevitably causes intestinal diseases, but deep artesian wells are usually safe, and so is rain water which has been kept free from pollution.

It is important, therefore, that wells should be properly located and built. Evidently, if a barn or stable be situated on a slope above the well, the well water will be contaminated by seepage from the refuse and manure. A well sunk in the stable itself will almost certainly be contaminated in this way. It is better to have a well located on high ground and away from stables or other outbuildings. A knowledge of proper hygiene in this respect is one of the practical methods of serving the public that the rural school can employ, for it is well known that the majority of farm wells are polluted by drainage. Careful surveys in the United States have shown that, on an average, sixty per cent. are so polluted and are endangering the health of the family.

It is strange that this lesson has to be taught in our modern rural schools, because the lesson was learned thousands of years ago by the old Romans, who knew that pure water is more necessary for health than large houses or good roads, although they did not have our modern knowledge of why impure water is bad for health. They did know, however, that it certainly was injurious and so spent huge sums in bringing water to their cities from uncontaminated sources. They were so sure of the fact that water from wells near which people lived was dangerous to health that they did not use water from the very river which flowed through the heart of their city. The Claudian aqueduct, built nearly two thousand years ago, rested on arches and stretched across valleys for scores of miles to carry the delicious water of the Latin mountains to the City of Rome.

Another nation that we usually despise as being backward and unprogressive, learned this lesson long ago, but instead of going to the trouble of building aqueducts, they merely use the water at hand and boil it before partaking of it. For instance, at Tientsin, in China, which is a large city with dirty streets and no proper sewage system, all waste matter and refuse is cast into the river. Furthermore thousands of Chinese boats lie anchored and serve as dwelling-houses for families, who live all the year round on the river. All their rubbish and disagreeable products are thrown overboard. The river, also, before it reaches Tientsin, passes hundreds of towns and villages and before it reaches the sea is yellowish brown in color and really poisonous. Yet the Chinese drink the water, but take the precaution of boiling it for a few minutes before use. Rich and poor place a few tea leaves in the water to make a good drink, but the boiling process is what makes it safe for human consumption. The boiling kills the microbes and the only microbe that is a good one is a dead one.

Pure Milk.

Another subject of instruction in rural schools that would be a great benefit to our rural people is a proper knowledge of the value of pure milk, both from the selling end and also from the consumer's point of view. Milk is such an important food that children are brought up entirely on it and convalescent patients are practically confined to milk as a food in a certain number of diseases, but to get good milk it is necessary to have healthy cows, free from diseases—of which the most common is tuberculosis. This is most prevalent in places where animals are shut up in barns that are damp, badly ventilated and insufficiently lighted. The fact that milk contains so much water makes it certain that impure water accessible to cows will inevitably contaminate the milk. Hence cleanliness is the lesson that must be thoroughly learned: Cleanliness in food and in the animal itself, in the milkers,

in the atmosphere, and in the utensils for containing the milk. In fact, extreme care in preventing dirt from coming in contact with the milk is the most essential lesson for farmers and their families to learn. The seriousness of allowing milk to be contaminated is known by studying the statistics of infantile mortality in our large cities during the summer when the conditions for growing microbes in the milk are most favorable.

Infectious Diseases.

But a knowledge of all infectious diseases should be learned at school. The most common, namely typhoid fever, scarlet fever, measles, whooping cough, mumps and diphtheria are all really dangerous diseases, although some parents believe that children have to have them, and that scarlet fever and measles are really innocent temporary troubles. On the other hand, these two are really very dangerous because they are apparently simple. There are many children in our schools suffering from weakened eyes because of carelessness after measles. There are others who suffer deafness as a result of measles or scarlet fever and in at least one case in Montreal, a young boy of fourteen is dangerously ill with Bright's Disease as a result of scarlet fever five years ago. Scarlet fever and measles are dangerous not only because four per cent. of cases result in death, but they are responsible for discharging ears, sore eyes and other troubles. Frequently they are infectious before a rash appears and after it disappears. Yet all these diseases are preventable. Food, flies and fingers are frequently the carriers. It is clear, therefore, that if children in our rural schools were taught the danger of these diseases, many old superstitions would die and much suffering and many deaths would be avoided. The modern demand that preventable deaths should be avoided, that children should not suffer from ignorance, that medical inspection should be introduced into schools to remedy or prevent such evils, makes it quite clear that the rural school is the main institution from which will spread the doctrine of health and hygienic living.

Tuberculosis.

The necessity of living as much out-of-doors as possible and breathing fresh air is well known to most people and yet tuberculosis is very prevalent in our country districts. Nearly one death in every eight is due to this cause and many suffer all their lives through tuberculosis of the bones or joints. This is a house disease, and has been known for hundreds of years and is one of the oldest we know. Even Hippocrates, a Greek doctor who lived about 400 B. C., said it was the most common and most fatal. Our farm houses are worse ventilated than city homes, and this is the explanation of the prevalence of the disease in rural communities. It was frequently thought to be incurable and hereditary. But now we know that it is curable and that undoubtedly it is communicated to others by sufferers. It spreads among cattle in the same way as among human beings and is to be found in dark, dirty, badly ventilated stables or houses. Therefore, fresh air, sunlight and cleanliness will prevent the development or growth of this disease.

Care of the Sense Organs.

Other important subjects for rural school children to learn include the care of the eyes, ears, teeth and nails. Clean teeth practically never decay and there are well known precautions which practically eliminate the cause of tooth decay, which is so dangerous to health, and is the cause of many functional and organic diseases not previously attributed to bad teeth. Our eyes are so important to us that one would think we would take few chances, and yet carelessness and ignorance and wrong use of the eyes result in short sight, astigmatism, and other troubles that are likely to grow worse instead of better with a lapse of time. The care of the ears also is an important precaution,—more particularly because the whole of the ear is not seen. Ignorant interference with pins or other dangerous instruments is likely to cause irremediable damage. Even the frequent use of some kinds of oil is unwise.

It is needless to mention the hundred and one other troubles arising from ignorance of the ordinary laws of hygiene, but public conscience has eliminated the common drinking cup and other death traps.

There are many functions of parents that have been taken over by the schools, and of these, undoubtedly, instruction in the laws of health is one of the most important duties that has been assumed by rural schools. The subject is now provided for very well in our provincial course of study, and in the textbooks prescribed either for the use of the pupils or for the use of the teacher. And, when we are told that no fewer than four hundred thousand of the rural population in the United States are killed every year by preventable and infectious diseases, it is quite clear that there is no subject so practical or that will give such handsome returns for the time spent upon it. From this point of view the rural school is of tremendous importance to the welfare of the community.

SINCLAIR LAIRD,
Dean of the School for Teachers,
Macdonald College, Que.

Hired Help.

EDITOR "THE FARMER'S ADVOCATE":

Many farmers will do without hired help rather than pay exorbitant wages to green hands from the cities and towns. From \$20 to \$25 per month and board is considered by many farmers to be as much as or more than inexperienced men are worth, and they are not willing to pay any more for that sort of help, although they are willing to pay from \$35 to \$40 a month

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for capable experienced men. School boys and store clerks and factory workers who have not had experience in farm work who want to learn farming and help in the increase production campaign, should be content with \$20 or \$25 a month and board, for several months until they learn the business and get experience. They should not expect to get as much or nearly as much as experienced farm hands.

Many thousands of farmers in Ontario are needing hired help, and needing it seriously, but they want it at reasonable wages or they will get along without it.

Oxford Co., Ont. WM. E. DE FOREST.

The Farm Survey.

EDITOR "THE FARMER'S ADVOCATE":

Under the caption "Farm Survey Needed Now," your editorial of April fifth sets forth essentially on analyses the following points:

1. That other business wishes to get acquainted with agriculture.

2. That there has been a general rural depopulation due to the relatively greater profits of other business.

3. That a survey of farm business would improve agriculture either by showing that it is profitable and can pay more wages, or that it is not highly profitable, and consequently obtain increased prices for farm products.

Undoubtedly a careful survey of many farms and, in fact all farms, would be of very great value. Business experts are employed in most other lines of work. Some companies maintain their own efficiency, men

who not only analyze their own business but, in so far as possible, study the work of all similar plants and even other organizations centering along other lines of production to get new ideas in economy of labor, cheapening of production, delivery, marketing, and all other lines that may affect their net profits. There is much evidence that the individual farmer should have and could profit from similar service. But it is very questionable if the exact facts regarding a farmer's business should be given to anyone but the farmer, or even if generalizations, based upon aggregates, should be broadcasted or made public. How many business concerns are taking the statements of cost of production, distribution, marketing, etc., within their plants and making them public for the general good? How many manufacturers of binders, mowers, plows, shoes, dressed meats, clothes, etc., are placing their efficiency experts' statements of their own business in the newspapers for the national good. And yet is not that what is represented in the farm survey? Farm surveys are not new. Many states of the Union to the south have followed them for years, and most of them have brought out statements of cost of production of cattle, horses, swine, eggs, hay and every other thing on the farm, showing the market returns and the farmer's labor income or profit. They usually show the weak spots in the farmer's management system and in this they are most valuable, but this feature should be pointed out to the individual, since practically no two cases can be treated alike.

We cannot greatly increase the price of milk by showing that it costs more to make good, clean, wholesome milk than the producer is receiving for it. Nor can we hammer down the price of beef by proclaiming the profits from sheep growing. The law of supply and

demand is the greatest regulator of prices. "There's a reason" why people eat grape nuts and pay more for them than the food constituents warrant and that reason is advertising, or in other words, demand.

The efficiency expert who makes the farm survey obtains and must obtain his information by the favor of the farmer. The farmer is a splendid co-operator in general, and will usually impart and part with most anything that will contribute to the common good. For that very reason care should be taken not to abuse his confidence, nor to make public that which is his private business.

It is a splendid thing to see other business wishing to co-operate with agriculture. It will be a splendid thing for the public when each business will lay all its cards on the table, but just why should the man whose business is with the land, whose turnover usually is only once in a year and sometimes only once in five years, and the larger part of whose investment is capital investment, be the first man to lay his business affairs entirely before the rest of his fellows? At least let him not be alone on the firing line, but let some other line of business take its stand in the same exposed position and see how long it can stand the gaff.

The farm survey is an excellent thing, but it must be wisely handled. For the sake of the farmers own greater business success it should be made, but the facts revealed should not be public property. It will show that farming is not one of those lines of business that show a large net profit nor a large labor income, neither will it cause a stampede of capital nor of labor toward the country. But an equalization of profits in various lines of business would help to attain that. Why not? B. C. EMPHISTOS.

Preparation for a War-Time Crop of Corn

This season of corn planting is again approaching and it is time to consider putting the final touches on the preparation of the seed bed, and testing the seed. Corn is looming higher each year in the estimation of stockmen and dairymen, who realize its value as a feed for live stock either as grain, stover or silage. Only certain portions of Ontario are suitable for growing corn for husking, but the crop can be grown for silage over the greater portion of Ontario and to a certain extent in the Western and Maritime Provinces. The prejudice against canning the crop in the silo, so that it will provide an ever ready, succulent, nutritious feed, is gradually diminishing, as it is proven conclusively in every part of the Province that silage does not cause decay of the animals' teeth, nor has it any detrimental effect on the stomach and digestive organs. On the contrary, it is readily eaten by all classes of stock, especially bovines, and considering the yield it is one of the most economical feeds grown on the average farm. Not only is corn grown to provide winter feed, but dairymen are erecting a second and third silo to store feed for their stock during the summer drought. Every silo erected increases the acreage for corn. When feeding dry corn-stalks out of the field, or mow where they have been stored, is practiced, the acreage is seldom as large as when the crop can be stored in a silo at the time of cutting. Dry corn-stalks provide good roughage so long as they can be kept from deteriorating from the effects of the elements. After January they gradually lose their feeding value, especially if they have been left in the open or have been over-run with rats and mice. Hence, while a silo is somewhat expensive it is an asset to the farm, and will keep the corn in good condition indefinitely.

Corn is a crop in which the yield is influenced to a greater extent by the quality of seed, seed bed, and summer cultivation than any of the other cereal crops. It responds to thorough cultivation from the time the rows can be followed until the growth prevents a horse and cultivator passing through without breaking down the stalks. It is a hot-weather crop and flourishes when other crops are being scorched by the sun's rays. Seldom is the average weight of feed per acre equalled by any other farm crop, unless it be sorghum, which is a plant of similar nature. It will pay to thoroughly prepare the seed bed, but it is advisable to wait until the soil warms up and the prospects are for warm weather before planting. It is essential for best results that conditions favor quick germination and continued growth. The seed is liable to rot in cold soil, and cold, wet weather after the plant is up gives it a set-back, from which it recovers but slowly. Consequently, it sometimes happens that a more even and stronger stand is secured by delaying seeding until the soil is quite warm, than by planting early in May although the ground may then be in good tilth. The time of planting varies with the season, and some seasons are much earlier than others.

The Soil for Corn.

If weather conditions are favorable corn does fairly well on most types of soil provided there is suitable drainage and plenty of humus. If there is one kind on which it does better than another, it is river flats or muck land. It revels in a soil where there is decaying vegetable matter and a large amount of nitrogen. The plant appears to be able to absorb the fertility furnished by the decaying of organic matter, as manure or sod, which gradually decays during the growing period and furnishes plant food during the time the crop requires it. As a rule, corn follows sod and if a clover sod is available, so much the better as the soil will be richer in nitrogen than that where timothy or natural grass has been growing. It is not wise to plant corn on land that is infested with white grubs or wire worms as these are

enemies of the crop. The objection to planting corn after stubble is that the soil usually becomes more compact which makes it more difficult for the tiny rootlets to penetrate into it. There is a difference of opinion as to whether spring or fall-plowed sod is best for corn. It is doubtful if the question will ever be settled, as conditions vary throughout the Province. On some soils it has been proven that the heaviest yield is secured from spring plowing while on others, equally good or better crops were produced when the sod was plowed in the fall. Each farmer must decide for himself which gives the better results on his particular land.

On fall-plowed sod it is sometimes difficult to incorporate the manure with the soil in the spring, owing to the fact that the sod has not rotted sufficiently to permit of using the plow. Care must be taken not to tear up the sod which is not rotted if trouble would be saved in summer cultivation. Many make a practice of spreading the manure on the sod during the winter and plowing it down early in the season before other work is rushing, or during wet spells when one cannot work on plowed land. Others allow the grass to grow until the middle of May and then plow it under, claiming that they get more organic matter in the soil than if they plowed earlier. The theory is that when sod is plowed in the spring, heat is generated by the decaying of manure and sod and this aids materially in making the growth of corn more rapid. Plowing from four to five inches deep in the spring proves very satisfactory on many types of soil. The disc and diamond-toothed harrow are the implements most used in pulverizing the soil and preparing the seed bed. The spring-toothed cultivator is liable to rip up the sod, which will give trouble later on.

Acreage to Plant.

It is generally advisable to put in plenty of corn as it can be fed green, ensiled, or dried and fed during the fall and early winter. Most stockmen consider it an advantage to have more than their silos will hold, as they can feed it in the fall and not have to open the silo until early winter. This leaves a supply of silage for later in the spring or probably enough for summer feeding. The number of head of cattle, the average yield, the amount fed daily, the period of feeding, and size of silo should be taken into consideration. From twenty-five to thirty-five pounds per day is a very good feed of silage for a mature cow; young cattle require a little less; about twenty pounds per day is an average feed. Sheep will not take over two or three pounds per day. A ten-ton-to-the-acre crop is a fair yield. True, some get a considerably heavier yield, but there are many who get less. Seven acres of corn of an average crop will fill a 12 by 35-foot silo, and will furnish silage for twenty cows for about 180 days. It takes eleven or twelve acres of corn to fill a 14 by 35-foot silo. It is advisable to put in a little more than what you consider will fill your silo, as climatic conditions may cause a light crop, and, if not, the extra feed will come in handy during the fall. In many sections it might pay to plant a few acres of a variety which will mature and can be husked to supply grain for fattening hogs and cattle.

Testing the Seed.

There are a number of standard varieties of corn, all of which do fairly well in Ontario. Some of them are a little earlier in maturing than others, and there is also a variation in the bulk of fodder which they produce. The flints will mature in the average season and can be husked. They are not grown very extensively for silage purposes, although experiments conducted in different parts of the Province have proven that they are heavier

yielders of fodder than most people have any idea of. The dents are generally chosen when planting for the silo. In a variety test two years in succession at "Weldwood Farm", Longfellow, a flint, gave the heaviest weight of fodder and the grain was mature. Compton's Early also proved to be a heavy yielder. Some of the heaviest yielding dents are the latest in maturing. Golden glow and certain strains of White Cap prove to be fairly early dents and it is quite possible for the grain to be in the glazed stage in the average season while they fully mature some years over quite a large section of Ontario. They also produce a large bulk of feed. Bailey is highly recommended in some districts, and Wisconsin No. 7 is grown extensively. Both varieties are heavy yielders and produce a large percentage of leaves to the stalk. They also cob up well, but outside of the seed-corn district the frost frequently catches them before the grain is ripe. All the dents mentioned are excellent varieties for silage purposes and there are other dents which do well. The flints have fine stalks, and are cleaned up by stock better than the dents, when fed without putting through the cutting-box. A little of the two flints mentioned might profitably be grown for the silo in some districts.

Corn for seed must be well matured when cut in the fall, and then thoroughly dried. Even then, the germination may be injured during the winter and spring by dampness or heating. For this reason it is advisable to buy the seed corn on the cob and then test the germination. There is greater danger of corn in bulk heating than when it is on the cob. Seed selection has been the means of doubling the yield of grain and at the same time increasing the quality of fodder in corn. When the seed is purchased on the ear the grain from the poor ears can be discarded, which may aid in increasing the yield. Testing the germination and vitality of the kernels is not a difficult task. Take a box about two inches deep and two and one-half feet square; fill it three-quarters full of sand or sawdust and divide it off into inch or inch and one-half squares, by driving nails in the edge of the box and stretching strings across. It is recommended that six kernels be taken from each ear; two from near the butt, tip and centre, and put them in one square in the tester. Number the ears and squares to correspond, so that the ear showing poor germination may be discarded. When the corn is put in the tester, cover it with a cloth and dampen; then put a little sawdust on top to hold the moisture. Place the tester in a room where the temperature is moderately warm. Growth should start in a few days and only those ears showing 100 per cent. germination should be saved for seed. It is also well to note the vitality which is designated by the sturdiness of the growth sent out by each kernel. The amount of seed required for an acre depends on the rate of seeding and whether planting in hills or drills. From fifteen to twenty good ears will plant an acre in hills, and give at least four kernels to a hill. Twice this amount is required when planting in drills. There are many who plant considerably thicker than this, claiming that by so doing they obtain a heavier weight of feed although they do not obtain the ears. Analyses have shown that thick-sown mature corn, which does not produce ears contains the food nutrients in very much the same proportion as a crop of the same degree of maturity which develops ears. It is possible to mature the stalk without the development of cobs. In two years when the seasons were entirely different, one being particularly dry while the other will long be remembered for the incessant rains, especially during the latter part of the growing period, the corn sown thickly in drills at "Weldwood" gave a considerably heavier yield than that sown more thinly in hills. The analysis

of the crop from the thick and thin seeding was similar at time of cutting as well as after it had been in the silo several months. Conditions vary in different districts and it is advisable to experiment a little on the individual farms in order to determine the best rate of seeding for the particular type of soil. It is generally considered that sowing thickly in drills produces the greater bulk of feed while hill planting affords better opportunity for the grain to mature.

Corn purchased in bulk should be tested as well as corn on the ear, in order to determine the quantity to sow per acre, as seed which only tests eighty per cent. germination must be planted considerably thicker than that which tests one hundred per cent.

Warm Soil Hastens Germination.

The yield of corn depends very largely on the start the plant gets in the spring. There should be no particular hurry about planting until danger from frost is over and the soil has become warm. Some years, planting may wisely be done the middle of May, while in others the best crop is secured from late May planting. The check-row planter is generally used where a large acreage of corn is grown in hills. It can be adjusted to plant at different rates per acre and at different widths. In the corn belt, hills are usually made 42 inches apart each way and the aim is to have at least four kernels to a hill. Some increase the number of rows by planting 42 inches one way and 36 the other. If a planter is not available and it is still desired to plant in hills, the hand corn planter may be used, although it is a little more difficult to plant at a uniform depth. If the field is at all weedy, having the corn in hills so that the ground can be cultivated both ways will facilitate cleaning the field, as very little hand hoeing will be necessary. For husking purposes the hill method is preferred to planting in rows. The latter, however, will usually give a little heavier crop of fodder. The ordinary grain drill proves quite satisfactory for sowing corn; the rows can be made 36 or 42 inches apart, and 30 or more pounds of seed will be required per acre. The check-row planter can also be used for sowing in rows. It is customary to plant one and one-half to two inches deep. If much deeper than this some of the plants fail to reach the surface, especially if the soil should be somewhat stiff or made hard by heavy rains. A light harrow can be used until the corn is three or four inches high to keep a fine mulch and destroy weeds. If the soil is loose, care must be taken in the use of the harrows after the plants are up. As soon as the rows can be followed a cultivator should be used every week, as corn is a crop which responds to cultivation during the summer.

In some districts a good deal of corn is destroyed by the crows, the greatest damage being done when conditions are unfavorable for quick growth. Applying a little coal tar to the seed before planting has in many cases proved effective in preventing loss from this source. The corn is put in a tub or bucket and a stick which has been dipped in tar is used to stir the corn. In this way it is possible to coat each kernel without using enough tar to interfere with planting. If there is any danger of the hay crop being light the feed supply for next winter can be augmented by putting in an increased acreage of corn.

As a Soldier Sees French Agriculture.

EDITOR "THE FARMER'S ADVOCATE":

As your paper is now classed by me as an old friend, I feel that I must write you and tell you how much I enjoy and appreciate your paper out here. It makes me feel a little homesick sometimes, and my mind wanders back to Canada and stays there, until I either drop off to sleep, or some duty calls me elsewhere. I read it every word, and just feast on its contents.

I cannot say very much about farming in this country as we are seldom where farming is carried on to any extent. Here and there are plots of winter wheat dotted with shell holes, as are the remainder of the fields. Otherwise farming is at a standstill in this vicinity. I have seen some very fine Percherons in some parts of the country. I remember one farmer who had fully a dozen fine mares and several stallions. He took great pride in these horses and himself escorted a friend and I around his barns and stables, showed us his cattle and hogs, and even his poultry. The horses, as I said before, were beautiful, and the cows good milkers, although I saw no method of weighing or testing the milk. The hogs were the usual large white bacon type with great floppy ears, which cover almost the entire face. The cream separator was kept in a back kitchen and compared with those of other farms was kept fairly clean. I saw no system of ventilation in any of the stables, save through the doors or windows, which were very small, and as far as I could see were never opened.

Concerning live stock, I think the Percheron is the favorite here, and many times one passes some splendid teams. They take good care of these horses, and I think they are well rewarded for their trouble.

They seem to specialize in one breed of cattle also, and that is the Red Flemish as far as I can gather. This is a breed very similar to the Devon of England. The cows are fine to look at. Very open in conformation, with great capacity and splendid udders, and make good beef.

I have seen but the one breed of hogs which is the large white bacon type with the big, floppy ears. They usually have good length and depth of side; great width across the loins, and carry excellent hams. I have seldom seen a poor bunch of hogs in the country.

I know little or nothing about sheep and only remember seeing a sheep, on one or two occasions. Once

during the summer we stayed for a day or so in a regular sheep country, where a great many flocks could be seen on the hills. It was in this part of the country that I turned my first furrow in France. I saw an old man plowing in a field near by and took his place behind the plow for a few minutes. I also saw some sheep during the winter a year ago, and the farmers seemed to be having trouble with foot rot or something of the kind.

As for crops, wheat heads the list of course, but in different parts of the country one sees different crops grown. In and around Belgium, hops seem to have been the main crop. Almost every farmer has his hop field. At first I used to wonder what the great maze of poles meant. The poles are from 6 inches to 1 foot in diameter at the base and about 18 feet to 20 feet long. These poles are set in rows about 4 feet apart and about 18 feet to 20 feet apart in the rows. Stout wires are strung along the tops of the poles, and the end ones braced firmly. A story went around when I first came out that two Irish "Tommies" were sitting outside their billet one day, when they saw all these poles wired, and ready for the hop plants.

"An what's all them there poles for out in the field?" says one.

"Them", the other replied, trying not to show his ignorance. "Why, them is wire entanglements for aeroplanes."

In this part of the country they made it a point to save all their liquid manure. A large pit under the barn answers this purpose. A large pump placed beside the barn, was used to pump it out into a tank and sprinkled on the land. Some farmers pumped it into barrels and bailed it out by hand. Anyhow they put a great value on the liquid manure.

Another part of the country possessed more orchards than I have had the pleasure of seeing or visiting since. Some of the fruit was good but I saw none, nor tasted any that could compare with our Canadian fruits. The trees never seem to have been attended to at all. The fruit was small, and was used mostly for making cider. Speaking of cider reminds me of the most beautiful little place I have seen in France. It was a little village of half a dozen houses with a tiny church over 800 years old, if I remember correctly. This little village was situated in a thickly wooded valley with very steep hills rising on each side, and was completely hidden from view until one was almost into the village itself. We used to get water from a little brook which ran through the place. What a clear, sparkling brook that was. Whenever I feel thirsty I think of that brook, and the little village and the old woman, who gave us cider, filled our waterbottles with it, and stuffed apples into our pockets.

While I am telling you about fruit I may as well tell you about an orchard which was just behind our front line trench. This was when we first came out here. We were not on the offensive at that time. We used to climb the trees, give them a good shake and drop to the ground, as we were in plain view of "Fritz's" front line when in the trees, we had to be mighty careful. Many a time "Fritz" swept those trees, with his machine guns. Nevertheless we used to make some nice apple and plum sauce in those trenches.

Roots are grown quite extensively, mostly mangels. They are sometimes stacked on the barn floor, or piled in the fields, covering them lightly with straw, then covering the whole with earth, leaving tufts of straw sticking out of the top for ventilation.

I have never seen a silo in this country and have only seen one or two patches of corn growing. One patch in particular I remember, because I made a raid on it one night, and got quite a few small but good ears from it, which I put in the cook's mulligan. We split them up between us when they were cooked. I am very fond of corn, and those ears made me smile. I can see the grin on the cook's face yet, and I had to hustle some to get my half of those ears.

Farm machinery is, I think, behind the times. A few Canadian-made implements are seen here and there, as well as American, but they are few. I have also seen one gang-plough drawn by a tractor. But most of the work is done by hand.

The farm houses here are, as a rule, very poorly arranged except that there are no out-houses. The barn and house are all one or nearly so, and sometimes it is hard to tell which door to go to in order to find the human inhabitants. In any case one has to clamber over piles of manure unless you care to splash around it. The front door usually looks across the manure pit to the stable opposite. The barn continues around one side till it joins the house. The other side nearest the road being left open. I haven't seen a house supplied with running water. The nearest has been a pump in the yard. I have never seen a bath in any house let alone a bathroom, or any other sanitary arrangement. In the larger towns and villages the inhabitants get their water supply from a kind of hydrant in the street. In Belgium and vicinity a great wheel is enclosed on the side of the house. A dog is shut up in this wheel, during working hours, and turns this wheel much the same as a squirrel in a cage. In this way power is provided for turning the separator, churn, or washing machine of which there are few in the country.

As I have never been very far back, and as farming is carried on mostly by the women and old men, there may be some excuse for the condition of things in general. But I do not think I would look for any improvement except in individual cases if I travelled the whole country, unless this part of the country is the exception and not the rule. The live stock is good, but the buildings and their equipment are poor.

Somewhere in France. SGT. P. H. ASHBY.

Entrance Exams. Postponed to Release Help.

EDITOR "THE FARMER'S ADVOCATE":

I have just finished reading Mr. McArthur's stirring letter, "Hired Men Galore for the Farmer," and note the interest and enthusiastic desire of our city friends to help out the situation.

Another source of supply might easily be added if the country boys and girls who are preparing for entrance exams in June could have a postponement of this season's exams until December or Easter, and have a supplemental examination at that time. For example, we have three sons and a daughter who expect to write in June. Sickness in the family held two back until all are writing together. Their ages range from 11 to 16 years. They are the oldest members of the family at home. If they write in June there will be no one to assist us in putting in the crops. They are all trained to farm work of all kinds, and should be at home for the spring work. Our school has twelve at the same stage of school work, and all are needed on the farms. No doubt this condition is more or less general throughout the province, and this source of labor might be made available without hardships to any.

If strangers are hired there will of necessity in most homes be more formality required in preparing meals and general house-keeping, which will add materially to the work of the housewife. This extra work will interfere with her looking after poultry, calves and garden, as no woman likes to have her household ways criticized by those accustomed to city conveniences and contrivances for lightening labor. So please help solve the problem by returning to the old system of two exams a year, or better still, one examination at Easter. EX-SCHOOL TEACHER.

Speed up Production of Foodstuffs.

EDITOR "THE FARMER'S ADVOCATE":

How often do we hear the farmers exhorted by the general public and both Governments to speed up production, and what are the inducements offered? We cannot win this war without munitions and food products. The Government has solved the munition problem by offering high prices for munitions so that manufacturers can pay higher wages and then make large profits. Furthermore, all their products are sold before made, they have no possibility of a loss and an assurance of profits, therefore, the munitions will be furnished; but if the manufacturers could not purchase material and hire labor to make munitions at these prices and have a profit they simply would quit manufacturing, and the Government would, if necessary, pay double the price to secure the munitions and quite rightly so, everything must be done regardless of expense to bring this war to a successful conclusion.

We must have food products, the farmers are urged to spend more money, work harder, get more help, more materials, do everything possible to speed up production, but what assistance does the farmer secure from the Government similar to that given to the munition manufacturers? If the farmer produces more food products and they cost him more than he can sell them for, the farmer stands the loss, he is urged to go ahead in an indefinite manner with no idea what his products will bring. He is to take all the chances. If the Government were so disposed they could double the food products, but they would have to take some of the risk, take some of the chances just as they have with munitions. It would be a problem to work out just how, but they might give a stated amount to every farmer for the acreage tilled, or for the products produced, or for the money spent in labor. The suggestion that the Government supply farm tractors for ploughing, which is slow and laborious work, is a good one; possibly a little late for this spring, but they should make a very low rate for the ploughing or even do it free to induce the farmers to till more land. If it had been known last winter that this spring the Government would plough all land in Ontario without expense to the farmers who would till this land, the result would be tens of thousands of acres ploughed and tilled which at present will not be worked and, therefore, will produce practically nothing.

The Governments practically say: "We must have munitions to save the nation," and they guarantee the munition manufacturers a good price. They also say, "We must have food products to save the nation," but they will neither guarantee nor pay the farmers anything; farmers take all the risk. The Government can secure all the products required if they will guarantee and pay the price the same as they are doing with the munition worker.

Some who do not understand the situation state that the farmer is receiving big prices and making lots of money. Possibly a farmer with a family of boys and girls to help him, and can get along without hiring labor, may be doing fairly well, although making simply a very small fraction, possibly one-hundredth part as much as the munition workers who are backed by the Government. But I do not believe that two men out of one hundred can buy a farm, allow for interest, repairs, depreciation, machinery, labor, and other expenses and not work on the farm themselves and make that farm pay its way. Thousands have failed even when they and their families spent all their time working on the farm.

The munition manufacturers are taking men from the farm because the Government is paying them such prices they can afford to pay very much higher wages than the farmer. If the Government were to put a price on the farmer's products and agree to purchase

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the products of the farmers, to give them the same percentage of profit they give to the manufacturers of munitions the problem would be solved, as farmers then could pay the wage, could buy machinery and produce the crops. But at present they have to take all the chances, and it is quite natural that they do not feel like spending more money than they will receive.

The question of gardening back lots is a good one, a great deal can be produced on them, and the work done by the owners in their spare time will not harm but improve their health. However, any man starting a small garden hiring all the labor will be out of pocket at the end of the season. The farmer does not appear to be a union man, the result being he takes what he can get. When the leather workers organize and strike and get a raise in wages, up goes the price of shoes. When the different building employees engaged in building strike and get a raise in wages, up go the rental rates. When the railroad employees strike and get a raise in wages, up go freight and passenger rates. When the miners strike and get a raise in wages, up goes the price of coal. The general public must pay for these things.

Welland Co., Ont.

O. H. GARNER.

Extra Rows of Beans.

EDITOR "THE FARMER'S ADVOCATE":

A member of the town council from one of our neighboring towns has been out looking for two hundred bags of potatoes for seed. In this town they intend to plant the vacant lots and the exhibition grounds with potatoes. I notice in a recent issue of "The Farmer's Advocate" that you ask the farmer to double his potato crop. Now, if the town and city people are going to make such an effort to grow potatoes and the farmer grows more than usual, what will be done with all the potatoes, providing we get a good crop? Potatoes are expensive this year for the simple reason that the crop was a total failure in many places last year. Possibly fifty per cent. of the farmers of Ontario are buying potatoes this year. Potatoes are a very perishable crop. They are liable to rot or freeze, and at best cannot be kept for more than a year. They can be used around the training camps,

but I doubt if the boys in the front trenches ever see potatoes, so I would not consider them very useful as a war food. Now, why not devote more attention to the growing of beans and less to potatoes? The labor in growing the crop would be less, for there isn't the spraying to do. The farmer can sow them with the grain drill in rows three feet apart. Pulling beans by hand is just as good a job as picking potatoes, and they can be stored in any dry place, "the woodshed would do." If left until cold weather they thresh well with a flail. Then there is their food value. If the city man has his own beans he needn't care if he doesn't get any meat, and there couldn't be anything better as an army food than beans. For home use there's a way of baking them in a closed crock in the oven that would make a shanty man think of the morning meal he used to get around the old caboose. I would say let us fill the extra rows in beans.

Renfrew Co., Ont.

R. M. WARREN.

[Note.—Our subscriber's suggestion is good. Grow beans as well as potatoes, but a few more potatoes on each farm will help release other food for the boys at the front. Grow both.—Editor.]

Automobiles, Farm Machinery and Farm Motors.

Something About Ignition.

We were invited the other day to take a drive with a man who had purchased a new six-cylinder car. He bought this machine largely upon its reputation and upon a guarantee that he would be given adequate service by the agents. For about a week prior to his accepting delivery, he was trained to operate the machine and to get his mind following every motion, with some definite idea as to what was taking place. Upon his first trip everything went all right until a muddy piece of road presented itself to view. All the initial difficulties were overcome but when he allowed his car to bump heavily into a deep hole, the power plant stalled. Some gratuitous advice was offered to him in a gentlemanly, courteous manner, but he absolutely refused to lift the hood of the automobile and insisted upon calling on the phone, the agents who represented the machine. They sent out a service car, and the mechanic in charge, lifted the hood and found that one of the electrical wires had fallen from its connection. Upon replacing it, the engine started in its customary excellent fashion. This little story will illustrate the fact that on many occasions you can remedy what from the driver's seat may appear to be serious ignition trouble. However, there are a great many instances where the amateur cannot do anything. It is impossible, in a popular article of this character, to give a general idea of ignition troubles and their remedies, because the language would necessarily be technical and not readily understood. The subject is a hard one to handle, but at least a small amount of useful truth can be brought home to the veriest novice.

Sometimes an owner blames his difficulties upon ignition when, as a matter of fact, his diagnosis is entirely wrong. If you have time, it is sometimes well to try out another ignition system upon your car. This will prove whether the original one contains some fault. We cannot recommend this system very highly, however, as it means the expenditure of much time. There

are occasions when the gasoline is not being delivered at the proper time and in fitting quantities to the cylinders. This causes a number of circumstances that might be directly attributed to ignition, but of course, wrongly so. Before you bring in your verdict of guilty against your ignition system, it is always well to determine fully that the carburetor is in perfect shape and the carburetor is not out of order.

There are about fifteen popular types of ignition apparatus, and it may be safely said that all of them render satisfaction under ordinary circumstances. If you should have trouble with any of them, we would suggest that, in the first place, you find out the exact distance between the spark plug points. If these are too far apart you may have immediately discovered where the annoyance lies. There may be a cable detached from a plug, or the cables may not have their connections properly arranged. Then, too, it is just possible that the insulation may have worn out or broken down in certain spots. Perhaps the next step would be to inspect the distributor and find out if it is filthy or short circuited. The distributor has a mighty important function to maintain and cleanliness is imperative at all times. This question of cleanliness applies equally well to the spark-plug gap which frequently, through the presence of dirt and foreign matter, develops a short circuit. There are two reasons for mishaps with the interrupter contacts. They may be pitted and then again, they may not maintain proper adjustment. Look well to them before going farther. If the insulator is covered with soot on the inside or with oil and filth externally, you may be confident that this condition of affairs is not resulting in any particular benefit.

From what you have read up to this stage, you can easily understand that ignition is a subject requiring a great deal of study. Perhaps in a modified sort of a way we have done something to encourage further reading, and if so, the purpose of this article has not been in vain. If you will keep what we have written

in mind, an occasion will arise, sooner or later, when you can perhaps utilize some of this advice to advantage. Getting a start in the proper handling of ignition is the main thing. Your every-day running will add to your supply of information. Knowledge upon this point is cumulative and based upon experience. The manufacturers of electrical equipment have endeavored to make their apparatus as fool-proof as possible, and it is well, before taking delivery of a car, to find out just what ready systems of prevention have been devised in order that amateurs may side-step any pitfalls. Upon one very popular system, we know that the makers have installed a ratchet wheel so that when the ignition switch is pulled out, this wheel creates a sound indicating that the connections from the battery are in perfect order. Should this ratchet wheel not give forth any sound, the driver is immediately convinced of the fact that some connection has fallen from its place, and so there is only one source of trouble for him to remedy. If, at any time, you have any specific question to ask, regarding ignition, we shall be glad to give you an answer in as popular language as possible and in a manner that may bring a ready understanding.

AUTO.

A Tool Kit.

What are the necessary requisites of a tool-kit for taking a medium trip? I am an amateur and don't quite know what is necessary.

A. A.

Ans.—Your tool-box should contain a tire pump, auto jack and handle, tire repair kit, hub cap wrench, starting crank, spark plug wrench and handle, valve cage wrench, demountable rim wrench, oil can, oil funnel, oil gun, a set of cotter pins, an extra spark plug, a trouble lamp cord assembly and instruction books. If your machine has a Delco starter, there should be a distributor wrench. In the small tool-kit the pockets should contain a supply of wrenches, a cold chisel, punch, pliers and screw-driver.

AUTO.

Canada's Young Farmers and Future Leaders.

A Five-Year Rotation For Mixed Farming.

EDITOR "THE FARMER'S ADVOCATE":

A thorough knowledge of the fundamental principles underlying agriculture is one of the first essentials to successful farming. A man must also plan his work and follow some definite system of cropping. There are many different rotations of crops which might be followed, but owing to the variation in the line of farming, the nature of the soil, etc., each farmer must figure out the one which will best suit his particular conditions. A man following mixed farming generally keeps different kinds of live stock, and of necessity is compelled to raise the different kinds of grains and fodder. The writer works a clay and clay-loam farm, and the rotation which he has figured out answers very nicely on the farm which consists of 100 acres, which is divided into five fields besides the 30 acres in fallow and bush, and 15 acres for buildings and orchard. The fields contain eleven acres, and a five-year rotation is followed.

Field No. 1 is plowed out of sod in the fall for corn the next year, manure is applied during the winter and spring. The soil is thoroughly worked and corn is planted in check rows. Before the last cultivation in the summer, rape is sown, which, if it grows, makes excellent pasture to finish lambs on, and they can be turned on it before the corn is cut as they do no harm to it. When possible the ground is plowed in the fall and the rape that is left makes excellent green manure. The following year oats are sown on this field and after they are harvested part of the field is prepared for fall wheat, to which manure is again applied. The balance of the field is fall plowed and manured during the winter. This is sown to barley and all the field is seeded down to furnish hay or pasture the next year. The first crop of clover is pastured or cut for hay, and the second

growth is occasionally saved for seed. The land is left in sod two years.

Eleven acres is plenty for corn; six acres being sufficient to fill a fair sized silo in an ordinary year, the silo being large enough to furnish feed for the number of cattle that can be kept on 100 acres. The balance of the corn is husked and when mixed with oats and barley provides grain enough for the horses, cattle and hogs.

The writer fails to see any disadvantages in the rotation, although I have noticed many disadvantages where a crop rotation is not followed. The advantages are many. The work is divided over a period of time, which enables one to care for his crops in season and to so improve the land that a higher yield can be produced from year to year, and weeds which are a menace to any farm are destroyed.

Lambton Co., Ont.

FARMER'S SON.

A Short Rotation Cleans the Farm.

EDITOR "THE FARMER'S ADVOCATE":

"A change is as good as a rest," is an old proverb that may be applied to farming. The class of farming we follow is raising cattle and finishing them on the place. Nothing but good, grade Shorthorn cows are kept on our farm, which is a heavy clay loam with a close subsoil that has a tendency to sour unless well underdrained. The rotation we follow is a crop of underdrained. The rotation we follow is a crop of corn and roots, on sod, followed by oats and hay, with wheat sown in the fall, and clover sown the succeeding spring. The advantage of this is that the hoed crop cleans the sod of any weeds, leaving it in good condition for the crop of oats and barley. The land is disked as soon as the grain is off, which helps to kill any weeds that may have survived. Then it is ploughed shallow and well worked for wheat. The following spring the clover and timothy seed are sown on top and harrowed in, which has a tendency to break up the

crust and prevent the moisture escaping. Another advantage of short rotation is the ploughing under of the clover. Then, there is couch grass to contend with. We all know that the longer this weed is left undisturbed the harder it is to get rid of, especially in the heavier soils.

Lambton Co., Ont.

A. D. L.

Crop Rotation Increased Yield by Thirty-Five Per Cent.

EDITOR "THE FARMER'S ADVOCATE":

Methods of crop rotation vary considerably with different farms. Each one has its own difficulties and own advantages depending on the kind of soil, the method of farming and climatic conditions. On ours mixed farming is generally followed and the principal kinds of stock are dairy Shorthorn cattle and Yorkshire hogs. The farm is of a clay loam fairly rolling and situated where an open winter has considerable effect, especially on the new seeding. With this foundation we wish to produce such crops as will most profitably fit into the rotation for the stock. On the average we plant nine to eleven acres of corn, four acres of roots, mainly turnips, and about one acre of potatoes. The grain crop generally covers thirty acres of which about five acres are in fall wheat. The clover meadows are about thirty acres in extent and the remainder of the farm is in pasture.

A short rotation under these circumstances is very difficult to follow. The main reason is that the hoed crop is not sufficiently large to permit of a three-year rotation. However, we do not try to stick steadfastly to any definite rule but place a deep-rooted crop after a shallow-rooted crop but even this is sometimes difficult by the introduction of alfalfa into the rotation and again by a failure in a catch of clover. The alfalfa crop puts any

field out of the short rotation and that, accompanied by other influences as a wet spring, a troublesome weed patch or lack of labor is the reason why we do not use any definite rule as to a yearly rotation.

A brief outline of the method used is as follows: About twenty-two acres are covered with manure each year, generally applied to the clover sod which has not been pastured or to the poorer parts of the pasture lot. The planting is done on this land and followed with grain crops for two years, meadows two years and pasture one year, which may then be sown to grain again. The portion of the manured land which is not planted is either sown to fall wheat or else to a grain crop in the spring and seeded down.

There are several advantages in this method. All the land receives the same amount of manure and some amount of cleaning crop. This constant changing from one crop to the other prevents weeds from taking possession of the fields, and prevents insects and fungous diseases which might become prevalent if cropped with the same crop each year. The soil is built up, rather than drained of its fertility, by cultivation, manuring, introduction of clover, and interchanging of crops which do not take the same proportion of good from the soil. This method has within the last ten years increased our yield from the same land at least thirty-five per cent.

Simcoe County, Ont.

T. A. WIGGINS.

A Four-Year Rotation Gives Results.

EDITOR "THE FARMER'S ADVOCATE":

I have tried rotation of crops, only a few years, but already see a great improvement in my farm, which is a sandy loam, with a gravel subsoil. Parts of it did not produce hay enough to pay for cutting, the year I bought the place. I built a silo, and root cellar, and made up my mind to try a four-year rotation. Corn or roots the first year; grain second year, seeded to timothy, and clover, mostly clover and hay third and fourth year. I spread what manure I had as evenly as I could, over what was plowed for corn and roots. It was spread very thinly the first year or two, but I supplemented it with some acid phosphate, and muriate of potash, also a little nitrate of soda. The first crop or two was rather light, and some of my neighbors told me I would get just as much feed with less work if I put the manure on half the ground, and not try to have so large a piece to cultivate. However, I thought the land was being sufficiently improved to pay for the

extra work, and results have proven that I was right, as I am now getting much better crops. As I work alone I do not have time to hoe and pull weeds on a large scale. What weeds are not killed with the cultivator or weeder go to seed; but I find I can kill them the next year. I do not plow the corn and root ground again, but commence as early as I can in the spring and harrow it once or twice each week till about the tenth of June, when it is in good condition to sow. Then I give it about eight hundred pounds air-slacked lime to the acre, and sow a mixture of wheat, oats and barley. This late grain I put into the silo, mixing it with the corn as well as I can. I sow a late oat and a six-rowed barley and plan to cut when the barley is ripe and the oats are just



Master Bassingthwaite and the Sheep he Raised.

turning. This grain silage is fed to fattening cattle running loose in pens, and when pigs are run along with the cattle there is no waste. It is much cheaper than threshing and grinding the grain. It also improves the corn silage if it is properly mixed, as it takes up some of the extra moisture in the corn that otherwise would be wasted, or would have a tendency to sour the silage, as our corn seldom gets as ripe as it should be in this section. The third year I put a little acid phosphate on the meadows.

As I wanted to try plowing in clover I started two years ago to run a three-year rotation, cutting only one crop of hay and plowing in the aftermath. As this makes a lot more plowing and work as well as costing more for seed, I think I will work back to a four-year rotation again and save some of the manure to top dress

after taking off the grain crops. A light dressing of manure put on often is a great deal better than a heavy dressing at longer intervals, especially on light soils. I think every farmer should follow a rotation of some kind. On light land a short rotation, but on heavier soils a longer one would be better, or at least, more economical. It permits the working of the farm in larger fields which is a great saving of time, takes fewer fences and keeps the farm in a better state of cultivation. It takes some time and trouble to get a rotation started on most farms, but the results will more than repay the trouble. I cut as much hay as I did before I started my three-year rotation and have two-thirds of the farm in hood crop and grain.

Compton County, Que.

E. H.

THE DAIRY.

Ayrshires in R. O. P. Have Average Test of 4.17 Per Cent. Fat.

During the period from March 14 to April 4 there were 21 Ayrshire cows and heifers qualified in the Record of Performance test. There were five in the mature class and three of them gave 10,000 lbs. of milk in the year. All produced over 400 lbs. of fat. Gipsy Maid of Hickory Hill leads the class with a record of 11,038 lbs. of milk and 438 lbs. of fat in 283 days. There were only three four-year-olds in the test, but all came pretty well up to the 9,000-lb. mark in milk production and their average test was 3.96 per cent. Auchencloigh Mina was first with a record of 8,986 lbs. of milk. Nine qualified in the three-year-old class and all had good average records. The highest in milk was Brookside Nancy, with 9,557 lbs. of milk and 404 lbs. of fat to her credit. Airmont Snowball was a few pounds short of the leader in milk, but exceeded her in fat by 33 lbs. This cow has an average test of 4.5 per cent. fat. Four two-year-olds qualified and Dairymaid of Hickory Hill 2nd., the highest producer in this class, has a record of 11,843 lbs. of milk and 457 lbs. of fat in 365 days. This is about 800 lbs. more milk than was produced by her stablemate which topped the mature class. Her average test was 3.85 per cent. The average test of the 21 cows and heifers was 4.17 per cent. fat. This is a slight increase over the test of the cows qualifying previous to this date.

Canada's Two Hundred Million Dollar Industry.

The dairy industry in Canada has had its ups and downs, but every adversity has steeled the hearts of those interested in the business and during the past few years there has been rapid growth and development. Not only has the quantity of milk and milk-products increased, but there has been a marked improvement in quality. This latter has doubtless been responsible for the increased consumption. While the value of dairy products has practically doubled for Canada since 1910, there is every reason to believe that the increase will continue at even a more rapid rate in the future. Never in the history of the industry was so much attention paid to good stock, high production and quality of the manufactured article as at the present. Consumers are beginning to realize that milk and its products are nutritious, palatable, easily digested yet cheap foods, as compared with other common articles of diet. This has increased the demand with which dairymen are keeping pace. There is every reason to believe that the demand will continue to increase, which will ensure a ready market for products of the dairy. True, the prices may drop, but when they do feed values will no doubt lower correspondingly so that dairymen may have a living wage. More efficient cows are being raised in many stables to replenish the herds so that milk may be produced at the lowest possible cost per hundredweight. Dairymen are studying their business and planning for the future as never before. The higher the quality of the goods they place on the market, the greater will be the consumption.

Dairying is known as the "billion-dollar industry" in the United States. In fact, the billion mark is now exceeded by five hundred million dollars a year. It is claimed to be the second largest industry in that country. What about dairying in Canada? It has been growing by leaps and bounds during the past few years, and almost reached the two-hundred-million mark in 1916; this is an increase of nearly 100 per cent. since 1910, and 200 per cent. since 1900. During that time the production per cow has increased by about 40 per cent. There has also been an appreciable increase in the price of dairy products. In 1900 the selling price of butter was a trifle over twenty cents per pound the Dominion over, while in 1910 it had increased to a shade over twenty-four cents. In 1916 butter reached the high level of thirty-three and one-half cents per pound in Western Ontario. The price of cheese has not remained stationary; from an average of ten cents per pound in 1900, it rose to 10.7 cents in 1910 throughout the Dominion, and to an average of 18 cents in 1916 in Ontario.

Realizing that dairy farming, especially where cream is sold and skim-milk fed on the farm, tends to build up the land or at least permits of selling a high-priced product which removes from the land the minimum of fertility, many farmers have gradually worked

into specialized dairying. While a few cows are kept on most farms, there are districts where every farm maintains a large herd. The cows are the main source of revenue. Grade animals are also being replaced by highly-bred stock. In these sections markets for milk, in the way of creameries, cheese factories and condenseries, have opened up, while a vast quantity of whole milk and cream are delivered or shipped to towns and cities for consumption. Creameries are comparatively new to the industry. It was only a few years ago that the most of the Canadian butter was manufactured in the farm dairy.

The amount of money invested in Canada's nearly three million cows is an immense sum, and they must produce a large amount of milk to pay interest on investment, for feed, care, housing, etc. Only those who are actually in the dairy business know the time and money it takes to run it properly. It is estimated that the total value of milk and its products almost reached two hundred million dollars last year. This is a large sum and gives some idea of the extent of the industry and of its value to the country. A large portion of the products were used in home consumption. There are over eight millions of people to feed in Canada, and milk in one or more forms enters into the diet of all every day, and several times a day. J. A. Ruddick, Dairy Commissioner, Ottawa, estimates that according to the last census the consumption of cheese per capita is between two and a half and three pounds per year, and of butter twenty-seven pounds. It is believed that consumption of these products has increased considerably since the time mentioned. In fact, the value of home consumption of dairy products is said to be increasing at the rate of three million dollars a year. The amount consumed as whole milk and cream is no negligible quantity. It will average about one glass or half pint per day. Multiply this by the number of days in the year, and by the total population, and it will be found that thousands of gallons of lacteal fluid are consumed each year. Yet this is but a small amount of this finest of beverages for mankind. It is more than a drink, it is a food. Every man, woman and child in country and city might drink at least two glasses per day, besides what is used in cooking and baking. It frequently occurs that the dairyman and his family are the smallest consumers of this healthful and economical food. Lack of knowledge of the real value of milk as a food is largely responsible for the all too small consumption. As people become more acquainted with the high food value of the nutrients contained in milk for producing bone and muscle and creating energy more milk will be consumed daily. At ten cents a quart milk is a cheaper food than many of the substances which make up the regular diet. Then, why not use more milk and so aid in further building up this great industry? The cleaner and better the quality, the more milk will

be consumed. Milk is worth more to-day than it was a decade ago because improvements on the farm have been made, better cows are now kept and the barns are cleaner, greater care is taken in caring for, handling and distributing the product. This has increased the cost of production and greatly improved the quality.

The consumption of butter per capita previously mentioned may be considered low by some people, but on making enquiries of several householders we find that it is a fair average. Many use butter more as a luxury than a food, and spread it sparingly on their bread and cakes. However, fats are essential to health and butter is the purest fuel-fat in the most digestible form. It also contains a portion of mineral matter for the building of bone. There is very little waste when butter is eaten, as it is readily digested and absorbed into the system. Again, improvement of quality has and will increase consumption. Poor butter is not wanted, but to make the best quality costs more than to manufacture the poorer grades, consequently the price must be higher in order to give a living wage to the man behind the cows, the manufacturers, and distributors.

Then, there is cheese, a palatable, nutritious food that is very sparingly eaten in Canada. We use it as a supplement to the meal, rather than as part of it. From the standpoint of energy value it compares favorably with such articles as meat, eggs, bread, etc., which none of us would care to do without. In some countries cheese forms the basis of the meals; why not in Canada where the finest-quality cheese in the world is made? It is made from whole milk and is a real food, and from a food-value basis will take the place of meat. It can also be utilized in making many appetizing dishes.

What about ice cream? Is it a luxury or a food? We use it as a luxury, but it contains all the nutrients of whole milk and cream, therefore, is a food. It really contains more actual nourishment than some of the dishes we consider essential. Then, why not use more of it? The ice-cream business is comparatively new, but has made phenomenal growth during the past ten years. In 1912 the estimated amount of cream used in the manufacture of ice cream in twenty-four cities was equivalent to nearly two million pounds of butter, or four million pounds of cheese. If the sweet cream sold were added, it would bring the total to the equivalent of six million pounds of butter. This was claimed to be an increase of about twenty per cent. over the preceding year. Since that period the consumption of this product has shown a large increase in towns and cities. In rural districts where this frozen product is not readily procured, the consumption is small.

The demand for condensed milk and milk powder also shows an increase. The home consumption of these products is difficult to estimate, but the export of these has increased from 238,729 pounds in 1912 to 13,247,834

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Factory Che Homemad Creamery B Homemad Condensed Milk and Cr cream...

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EDITOR "T

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pounds for the year ending March 31, 1916. While the figures are not yet available for 1916-17, it is believed that there has been a big increase. Casein and milk sugar are commercial products made from milk and their value amounts to a considerable sum in a year.

In 1912 the value of home consumption of milk and its products was estimated by Mr. Ruddick to be approximately one hundred million dollars. Increased production coupled with increased price brings the value of dairy products consumed at home and exported 1916 up to the two-hundred-million dollar mark. The total value of dairy products in the country can be only arrived at approximately when the census is taken. However, Mr. Ruddick has plans under way to provide for more frequent collection of statistics in this connection. The following shows the different dairy products and value of each in 1910:

Factory Cheese.....	\$21,587,124
Homemade Cheese.....	153,036
Creamery Butter.....	15,645,845
Homemade Butter.....	39,889,953
Condensed Milk.....	1,813,971
Milk and Cream consumed and used for ice cream.....	30,250,005

One glass of milk a day per capita and a yearly consumption of twenty-seven pounds of butter and from two and one-half to three pounds of cheese per capita, besides a small amount of ice cream and an export trade of dairy products, estimated at about forty million dollars for the year closing March, 1917, gives some idea of how the milk from Canada's herds is used.

There is no reason why there should not be an increased export trade, and as consumers realize more fully the high nutritive value of milk and its products, the home consumption will be further increased. More milk, butter and cheese could profitably be consumed by the dairymen's families, as well as by town and city folk. A market for dairy products is assured even if the output is greatly augmented by more and better cows. The labor scarcity will probably hamper enlarging the herds for a time, but without increasing the number of cows or amount of labor required it is possible to have a twenty-five per cent. greater production by better breeding and feeding. Dairymen are tackling this problem vigorously with the result that scrubs and boarder cows are being disposed of so that more attention can be given to the revenue producers.

Dairy products are staple articles of diet. They are nature's best foods and people are beginning to realize that even at the present prices they are economical foods. The dairy industry has experienced rapid development in the past, but the signs of the times are that the growth will be even greater in the future.

The Art of Milking.

EDITOR "THE FARMER'S ADVOCATE":

Not every one who milks does so in the proper way, or to the best advantage. Indeed, some do not even know there is a proper way, with them it is simply "milk the cow, and be done with it". While the milking machine is slowly winning its way to popularity—at least among dairymen with large herds, there are many farmers who have not as yet seen their way clear to use it. In the operation of milking there are three main essentials, viz.: thoroughness, ease and speed.

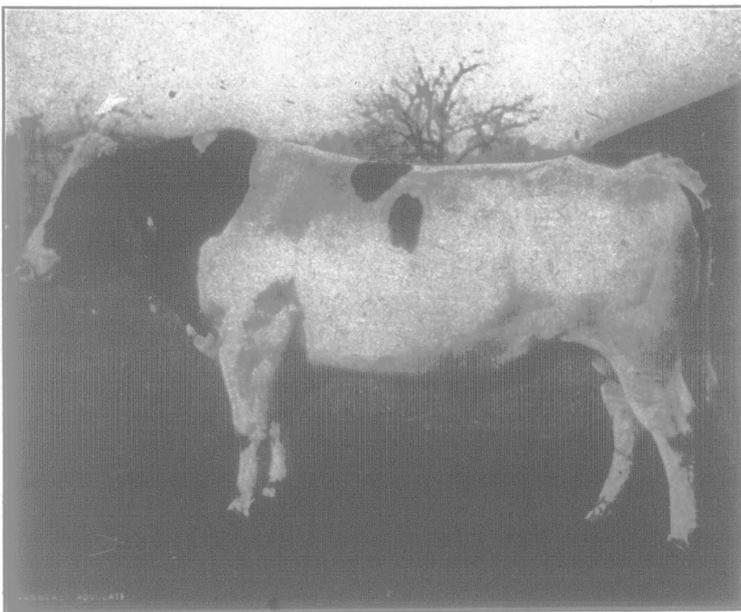
The first of these is very important. As far as possible all the milk contained in the udder at the time of milking should be removed. This is necessary if the cow is to measure up to her full capacity, as the secretion of milk is most rapid when the udder is emptied, becoming slower and slower as it fills again until it nearly ceases altogether. This is nature's way of protecting the cow against serious injury should a milking be accidentally missed. Were secretion to continue unchecked, it would mean disaster in the case of a heavy producer. Implied under the head of thoroughness is cleanliness. "All the milk and nothing but the milk," should be the motto.

Ease in milking is another important consideration often overlooked. A man will go on milking a hard cow year after year, failing to realize that he might better be milking two easy cows in place of her, for, by so doing, he would not only double production but in reality lessen the labor as well. When it is recognized that a really hard milker requires the time of two easy milkers, and at the same time imposes a much greater strain on the muscles of the arm and hand, it becomes evident that to keep such an animal in the herd is doubtful wisdom, to say the least. Unless for special reasons, such as extraordinary production or superior breeding, such a cow should be disposed of as soon as possible. Of course, there are degrees in this, as in other things, and in laying down this rule we have in mind only the more extreme cases. It sometimes happens, too, that the trouble may be remedied by an operation, and if the case seems to warrant it, the advice of a veterinarian should be obtained before drastic measures are adopted. Then, there are cows that, while not really hard to milk, are yet found to be more tiring than the average. These are usually fairly good producers, requiring a strong and somewhat lengthy stroke in milking. For such, the method I shall endeavor to explain has been found specially well adapted. I might say, that my own practice has been to milk my hard cow last. This appeals to me as the more scientific way. I remember in school this advice being given the class by the teacher, "In writing on examinations answer the easy questions first; then tackle your hard problems." I, for one, profited from the advice, as given, and it seems to me to be applicable here as well.

Now we come to the question of speed. In these strenuous wartime days, when production is the watchword, and labor is at a premium, anything which will tend to save valuable minutes is worth considering. My father, who was a California rancher and dairyman back in the seventies, and who, while there, handled a herd of over one hundred milch cows, was accounted a good milker in his time, and from him I received my first lesson in milking. For a number of years I followed his lead. His method was to milk diagonally with alternating full-hand strokes. That is to say, while with one hand he milked the right front quarter, with the other he milked the left hind quarter, and vice versa. His habit was to change frequently from the one position to the other. This way of milking has much to commend it. It is fairly speedy; the change in position is restful, and the hands being far apart, have great freedom of action. Yet, after some years of experience I have adopted a somewhat different method. I found that in this mode of milking the hind quarters required special attention at the last if the cow was to be thoroughly milked. The idea advanced to explain this was that the left hand not being as strong as the right did its work more slowly. This explanation did not satisfy me, however, and in the end I was able to prove—to my own satisfaction at least—that the true cause lay in the fact that the hind quarters contained the most milk. By milking the two front quarters against each other, and also doing the same with the two hind quarters the uneven finish was practically eliminated. But, here a new difficulty arose. The alternating movement of the hands, so closely placed, tended to more or less friction of the knuckles. This finally led to the adoption of my present method. Instead of the usual alternating strokes—first one hand, then the other—I make use of a double stroke,—both hands moving together in unison. In this way the front quarters can be milked together without friction or annoyance,

a substantial building so long as the floor is dry. In regard to feed, breeding geese require little attention if allowed to run in the pasture. When kept in confinement they must be provided with green feed. They will require a little grain during the winter and breeding season, but care must be taken to prevent the birds from becoming overfat. When overfat, soft-shelled eggs are very often the result. They should always have access to water both for drinking and bathing. During the winter when grass and such green feed are not available, pulped mangels and turnips apparently supply the requirements. Laying does not usually commence until near spring, and the egg is carefully covered after it is laid. In cold weather it should be removed as soon as possible to prevent chilling, but it is advisable to always have a nest egg of some kind and to leave the nest in as nearly as possible the same condition as the goose left it. When they go broody they carefully feather the nest. If desirous of breaking up broody geese, removing them and destroying the nest will very often give good results. Boxes or barrels which contain a considerable quantity of straw or other suitable litter placed in corners of the pen make very satisfactory nests. On account of the geese covering the eggs it is necessary that plenty of straw be available. It is customary to hatch the eggs with hens so as to keep the geese laying as long as possible. At the best, they do not produce very many eggs. While some have been known to lay as high as forty, eight to twenty is nearer the average. When setting the eggs under hens, the nest should be made fairly deep and five or six eggs are enough for one hen to cover. The period of incubation is 28 to 30 days. When hatched by the goose the eggs are dampened by moisture from her feathers, which indicates that it is necessary to dip the eggs in lukewarm water several days before the goslings are due to come out. The shells are very strong and it is frequently necessary to assist the young out of the shell.

The goslings should be allowed to remain warm and quiet in the nest for front twenty four to thirty-six hours after hatching, and for the first week every precaution should be taken to prevent them from being chilled. Give them water to drink and a plot of fresh grass to feed on, as this is their natural feed. Bread soaked in milk is very acceptable to the young birds and they do very well on it. After the first week they do not require much care. They can be kept in movable pens so as to permit of them securing new grass each day. A few boards or canvas nailed over the corner of the pen will provide shelter from the sun and storms. This will be used as a sleeping place and it must be kept clean. This is not difficult when the pens are



Sir Korndyke Boon 76562 C. H. B. 10588.
Sired by Pontiac Korndyke; dam, Fairview Korndyke Boon, 32.17 lbs. butter in 7 days, at 4 yrs. of age. Twenty daughters and ten sons of this great sire in A. C. Hallman's dispersion sale at Breslau, Ont., May 23, 1917.

also the hind quarters. By changing from the one position to the other at intervals as the milk slackens, a steady, even flow can be maintained. Several advantages may be claimed for this method. First, it is more speedy. This, while somewhat difficult to explain, may be easily proven. The gain in time is more noticeable in the semi-hard class demanding a strong, slow stroke, amounting in some cases to a difference of two or three minutes to a milking. In the "very easy" class it is less pronounced, yet, even here there is a gain, and because the work is accomplished more quickly and evenly it seems to be done with greater ease as well. In fact, thoroughness, ease and speed are all embodied. Try it for yourself and see.
Grenville Co., Ont. W. A. C.

POULTRY.

Raising a Flock of Geese.

As I contemplate keeping geese I would like information regarding the stock, equipment and management of the flock.
M. D.
Ans.—There are six recognized varieties of geese which are as follows: Emden, Toulouse, African, Chinese, Egyptian and Canadian or Wild goose. The first three mentioned are the largest and heaviest varieties. As a rule geese do not require a great deal of attention. They are creatures of habit and if started right they do not give much trouble. However, they are somewhat stubborn and become discontented if they are not permitted to follow up their own whims. They are a long-lived class of fowl and are known to breed successfully when from eight to ten years of age. They do not require

moved every day or so. While geese are water fowl, young goslings cannot stand a cold rain. We have seen the whole flock lying around, apparently dead, after a heavy rain storm. By immediate action it is possible to revive many by placing them in warm water and then drying and keeping them warm before the stove. They soon regain their strength and in a day or two appear none the worse for their experience. However, many goslings are lost because they are not found soon enough after a storm. If they become too much chilled they cannot be revived. After the first week cornmeal and shorts moistened and squeezed dry may be fed. It is a mistake to give sloppy feed. When the grass gets good they require very little feed other than what they can pick. As grass is their natural feed, there is less difficulty in raising goslings if hatching is delayed until the grass begins to grow. Some make a practice of keeping the geese in an enclosure, or fencing off a portion of the pasture field with goose-proof fencing. This prevents them getting into and destroying the growing crops. When the grass becomes short, fresh corn stalks and corn leaves are readily eaten. If given their liberty and they once find that the grain or roots in a certain field are fresh and palatable it is almost impossible to keep them out. They almost invariably discover some hole in the fence which will admit them. Pokes are sometimes put on the older geese to keep them out of fields where they are not wanted. These can be made by cutting a hole in a shingle, or a twig with a crotch on the end can be used. The two ends of the crotch can be tied sufficiently close together to prevent it being pulled over the head. It is essential that water be available to the birds during the summer. If a stream is handy, or even if it is some distance away and the geese once discover it, they will spend most of their time in the vicinity of the water. While some make

a practice of marketing what is known as green geese, the majority of this class of fowl are placed on the market after the cold weather sets in. A little grain is necessary to fatten them. Besides raising geese for meat, a considerable trade can sometimes be worked up in selling eggs for hatching purposes.

The beginner should purchase a good pair or trio in the fall, as it is very difficult to purchase geese in the spring. It does not cost very much to feed them through the winter and they will become accustomed to their surroundings in readiness for laying in the spring. Geese very often mate in pairs, although it is customary to have one male to two or three females. Once the geese commence laying and hatching they should not be interfered with if best results are to be obtained. The weights of geese according to the American standard are:

Variety	Adult		Young	
	Gander	Goose	Gander	Goose
Wild	12	10	10	8
China	12	10	10	8
African	20	16	18	14
Emden	20	18	18	16
Toulouse	20	18	18	15

These are about average weights, although it is not uncommon to have specimens go considerably above the weights mentioned. The Emdens and Toulouse are especially large birds and are used extensively in grading up the common stock. They are both more popular than the other three breeds.

THE APIARY.

A Sideline on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

It is surprising how few farmers, especially in this Province, keep bees. The price of butter, sugar and molasses has risen while the price of honey has not, and the people are only beginning to see that what a few years ago they thought was a luxury is really a necessity. Because of these facts the demand for honey has greatly increased and this is the chance for the farmer's son to have an apiary as a sideline on the farm.

I have heard it said that if a man is growing clover for seed it would pay him to keep a hundred colonies of bees even if they did not make any more than enough honey to feed themselves. The bees are also invaluable in pollinating our fruit trees and flowers.

The cost of starting an apiary is comparatively small and when considered in the light that a good, strong colony will produce in a good year honey to two or three times its own value, they beat the black foxes.

The equipment and the cost of starting with say two colonies to be managed for extracted honey would be as follows:

2 swarms	\$10.00
2, 10-frame hives (for swarms)	5.10
2, 10-frame supers	2.70
5 pounds light brood foundation	3.20
2 queen bee excluders	1.20
1 wire imbedder	30
1/2 lb. wire	15
1 smoker	1.25
1 bee veil	40
1 copy "A, B, C and X, Y, Z of Bee Culture"	2.50
1 honey extractor	10.25
Total	\$37.05

For "comb" honey the two supers would have to be changed to four "comb honey supers", the foundation could be cut down to 2 1/2 lbs. and the honey extractor could be omitted.

When the nation is calling for increased food production and when there is such a demand for honey, would this not be a good time for the farmer to make a start in the bee business?

P. E. I.

BEEKEEPER.

HORTICULTURE.

Advertising B. C. Fruit.

EDITOR "THE FARMER'S ADVOCATE":

The British Columbia Government has had a Market Commissioner on the Prairies each season, and last year Mr. McTaggart had charge of that work. The Okanagan Valley had a visit from him recently and his report and suggestions were indeed interesting. He said that the fruit growers were beginning to see how vital advertising was to the advancement of their business and that this was evidenced by their readiness to contribute a cent a box, for each box of apples sold, towards the maintenance of an advertising fund and the support of the B. C. Fruit Growers' Association. His talk was to the point and demonstrated what had been done to extend and hold the Prairie markets for B. C. fruit. He asserted that the Prairie farmer wants good apples and to believe otherwise is an error. To use the crate is a great mistake. They have room for No. 3's. that are well packed and in the cars with the No. 1's. and No. 2's., but the use of the crate for apples is a very poor move.

With reference to the strained relation of the Prairie organized farmers and the B. C. growers of fruit he had some first hand knowledge. The farmers had at first intended to boycott the B. C. apples after the tariff had been advanced but the intention had been to a great extent overcome by a frank talk between the B. C. representatives and those of the Prairies, but even yet there are some who strongly object to doing business with the B. C. fruit growers. The B. C. Fruit Growers' Association had been hard at work all summer trying to get the matter cleared up and had finally succeeded in getting the Grain Growers to send a representative to the B. C. Fruit Growers' Convention and they returned the compliment. The result was that this representative took back the growers' side of the question, which had done not a little in helping out matters on the 1916 crop.

Up to the present the Grain Growers have not been in a position to handle the fruit, and last year their deal with the Ontario apple growers was to a large extent a failure; the quantity of Spys falling short. The car shortage interfered as well as the fact that the poor quality of the fruit that was delivered caused keen disappointment.

Mr. McTaggart was of the opinion that the British and Australian embargo would have no lasting effect and we need not worry over that till it was finally settled and placed.

His statement of fruit sales reveals some interesting figures:

Exports to Great Britain.

From North America	9,000,000 boxes.
From United States	5,400,000 boxes.
From Canada	3,600,000 boxes.
Of the latter 50 per cent. went from Nova Scotia.	

He stated that the figures on the Prairies' consumption of apples revealed a fine field for advertising to increase the demand for they used in 1916 only 1,443,600 boxes distributed as follows:

From British Columbia, 648,800 boxes.
From United States, 388,000 boxes.
From Ontario, 369,000 boxes.
From Nova Scotia, 37,800 boxes.

He assured the growers that there was a pronounced swing in sentiment, over to the box-packed apples. There is nothing to fear, in his estimation, from the United States competition if we will advertise our varieties. That is our strong point to work on. We must educate the Prairies on the names of the varieties we grow and emphasize the fact that we really have a vastly superior quality. He showed what advertising could do. A number of car loads of sour cherries came into one of the Prairie cities all on one day and there was a glut, but it was dealt with by a vigorous advertising campaign, of only two days, in the local daily papers. There they told how cherries if put up without sugar could be kept all winter and used to make the most exquisite pies and when opened up in the winter the usual quantity of sugar could be added and the cherries sweetened for table use. The result was that every cherry was sold and the people asked for more, whereas the commission merchants were for letting the cherries go for what they would bring with no thought for the growers.

While on this phase of the subject he told of the experience of the Hood River growers who had advertised their apples into fame and then they stopped. They met with disaster and had to call in their salesmen and the N. W. Fruit Exchange usurped their business with their "Skookum Brand". They are now out trying to win back or rather create new markets by advertising, for they cannot win over their lost customers; those have been lost to them and they must create new markets at greater expense.

To show what effect B. C. advertising had in 1916 he stated that of 828 cars of mixed fruit sold on the Prairies, 403 were from British Columbia, 331 from United States and 94 from Ontario. As to what extent the retailers on the Prairies were working with the B. C. growers, he stated that retailers have frequently asked that advertising be placed in their local papers as they had bought a car of apples from So and So in Summerland or Kelowna or other points, showing that the private shippers were reaping the benefit of the advertising, and could afford as well as the larger shippers to contribute their share of a cent a box to help create new and to hold the old markets.

British Columbia.

WALTER M. WRIGHT.

Inspectors will Watch for Violations.

Some manufacturers have been induced to turn out berry boxes and fruit baskets which are not in accordance with the requirements of Section 326, of the Inspection and Sale Act, Part IX, which reads as follows:

"Every box of berries or currants offered for sale and every berry box manufactured and offered for sale, in Canada, shall be plainly marked on the side of the box, in black letters at least half an inch square, with the word 'Short,' unless it contains when level-full as nearly exactly as practicable,—

- (a) at least four-fifths of a quart, or,
- (b) two-fifths of a quart.

2. Every basket of fruit offered for sale in Canada, unless stamped on the side plainly in black letters, at least three-quarters of an inch deep and wide, with the word 'Quart' in full, preceded with the minimum number of quarts, omitting fractions, which the basket will hold when level-full, shall contain, when level-full, one or other of the following quantities:

- (a) Fifteen quarts or more.
- (b) Eleven quarts, and be five and three-fourths inches deep perpendicularly, eighteen and three-fourths inches in length, and eight inches in width, at the top of the basket, sixteen and three-fourths inches in length,



The Canadian Council of Agriculture.

Back row, left to right.—J. B. Musselman, Sask.; F. J. Collyer, Man.; Peter Wright, Man.; C. W. Brown, Alta.; R. M. Johnston, Sask.; J. L. Rooke, Sask.; E. J. Fream, Alta.; Jas. Robinson, Sask.; A. G. Hawkes, Sask.; W. D. Tregg, Alta. Second row.—Geo. F. Chipman, Min.; C. W. Gurney, Ont.; John Morrison, Man.; John F. Reid, Man.; P. J. Avison, Man.; J. S. Wood, Min.; J. W. Wood, Alta.; John Kennedy, Min.; Thomas Sils, Sask. Front row.—Fred W. Riddell, Sask.; T. A. Crerar, Man.; H. W. Wood, Alta.; R. McKenzie, Secy. of Council; J. A. Maharg, Sask.; R. C. Henders, Man.; C. Rice Jones, Alta.; Hon. George Langley, Sask.

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Cars..... Cattle..... Calves..... Hogs..... Sheep..... Horses.....

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and six and seven-eighths inches in width at the bottom of the basket, as nearly exactly as practicable, all measurements to be inside of the veneer proper and not to include the top band.

(c) Six quarts, and be four and one-half inches deep perpendicularly, fifteen and three-eighths inches in length and seven inches in width at the top of the basket, thirteen and one-half inches in length, and five and seven-eighths inches in width at the bottom of the basket, as nearly exactly as practicable, all measurements to be inside of the veneer proper and not to include the top band. Provided that the Governor-in-Council may, by proclamation, exempt any province from the operation of this section.

(d) Two and two-fifths quarts, as nearly exactly as practicable."

The fruit Branch at Ottawa, through their system of inspection, have endeavored to correct this evil regarding unlawful packages, but the desired results have not been forthcoming, so the Fruit Commissioner is now warning growers that the inspectors are advised to recommend prosecution in every case of violation found after May 1, 1917. In order to avoid penalties, growers should examine any packages now on hand, and if they are not of the dimensions prescribed in the Act they should be marked plainly on the side of the basket in black letters at least three-quarters of an inch deep and wide with the minimum number of quarts, and with the word "Short," in the case of berry boxes, as prescribed by the Act.

Notice is also given that violations of Section 321 of the Act will be watched for very closely. This section reads: "No person shall sell or offer, expose, or have in his possession for sale any fruit packed,—

(c) In any package in which the faced or shown surface gives a false representation of the contents of such package, and it shall be considered a false representation when more than fifteen per cent. of such fruit is substantially smaller in size than, or inferior in grade too, or different in variety from, the faced or shown surface of such package."

A Message From The Fruit Commissioner on Spraying.

EDITOR "THE FARMER'S ADVOCATE":

As the spraying season is advancing, I hope the fruit-growers will make preparation to carry out this work. Nothing is more important in the production of fruit, and unless it is thoroughly and carefully done no fruit grower can expect a good crop.

I am quite aware of the fact that many growers are somewhat discouraged owing to the embargo on fruit entering Great Britain, and are of the opinion that there will be no market for apples this year. That sentiment has prevailed at this time of the year for the past three seasons. Ever since the war began the growers of Ontario have more or less neglected their orchards. The result has been an actual shortage of apples, and instead of poor prices being realized in the fall for this fruit, they have been very much higher than in years previous to the war.

I quite appreciate the shortage of labor throughout Ontario, and my sympathies are with the fruit growers in endeavoring to do what they can in the performance of their own work. I know what this means from actual experience, but to those who can secure help I sincerely trust they will not overlook the importance of spraying in fruit production, as it is my opinion that those who take care of their orchards this year have reason to expect good prices in the fall.

There is no question that orchards are being neglected. There is a tendency on the part of the farmers to devote their energies to other lines of agriculture with the hope

that climatic conditions will be such as to give them a good crop of apples. I have been told by many that fully one-half of the growers who sprayed in former years will not spray this year. This, to my mind, is all the more reason why those who can do it should give their orchards the best possible attention.

Those who desire information regarding this work, should write the Ontario Department of Agriculture and secure Professor Caesar's spraying chart, or to the Experimental Farm, Ottawa, for W. T. Macoun's spray calendar, both of which will give all necessary details in regard to spraying.

In my travels throughout Canada, in an official capacity, during the past year, I had an opportunity of investigating many different methods of spraying, and I have concluded that the best results were obtained when the first application was made to the trees when the leaves were about one-quarter of an inch in diameter. Where there is no scale and commercial lime-sulphur is used, the spray should be diluted one to thirty with two pounds of arsenate of lead to 50 gallons of water, but if scale is on the trees, it should be diluted one to nine with the same strength of arsenate of lead. The next spray should be applied when the blossoms are showing pink and should be diluted one to thirty-five with the same strength of arsenate of lead as is used in the former mixture. If after the first spraying, hot weather causes the leaves and blossoms to open very quickly and there is no time to give the second application, it will not be necessary to do so, as the bright, warm weather will give very little opportunity for fungous growth. It will be found, however, under normal conditions, that the opening of the bud until the pink of the blossom covers two weeks, the weather being more or less cold and damp. It is at this time that many of the spores of apple scab secure a footing on the young leaves, and while it may not be apparent to the naked eye, yet the work has actually begun. It is therefore, very important, under such conditions, that the two sprayings be given before the blossoms open.

The third application should be made just after the blossoms have fallen. As the foliage is very easily injured at this time, I think it would be wise to use a weak mixture of lime sulphur, not stronger than one to forty, with the usual strength of arsenate of lead. In certain localities where the growth is very rank, I have seen serious foliage injury by using a strong spray. If it is thought necessary, another application of the same strength can be made in about ten days. Care should be taken at this time not to spray on very hot days, as serious blistering of the fruit and burning of the foliage have been caused, particularly if the tree is drenched with the spray.

D. JOHNSON.
Fruit Commissioner.

[Note.—Prof. Caesar's spray calendar, to which Commissioner Johnson refers, was published in "The Farmer's Advocate" issue of March 29.—EDITOR.]

FARM BULLETIN.

Two More Agricultural Appointments.

R. S. Duncan, for seven years District Representative of the Ontario Department of Agriculture at Port Hope, has been appointed to the new position of Superintendent of District Representatives in Ontario and assistant to C. F. Bailey, one of the Deputy Ministers of Agriculture.

Justus Miller, for a short time in District Representative work and more recently engaged in agricultural journalism, in Toronto, has been appointed Assistant

Commissioner of Agriculture to succeed W. R. Reek, who resigned to become Deputy Minister of Agriculture in New Brunswick.

Thorough Cultivation Essential to a Large Crop.

EDITOR "THE FARMER'S ADVOCATE":

In reading articles written by the young farmers, I notice that a good many prefer from 100 to 200 acres; well, that sounds good but I cannot imagine the person working 100 acres alone. It is an impossibility for any one man to do justice to a farm of that size. If a man buys a farm that is in good condition, how long will it remain so with the labor of one man? It takes a good stock to keep up a farm of that size, and likewise a good farm to keep up the stock. There must be feed grown for the different classes of stock; horses must be provided with hay and oats, cattle with clover, silage, turnips and grain, pigs with mangels, grain and milk, and the poultry will also consume a considerable quantity of grain. The man who puts in a crop on 100 acres looks after the corn and roots, harvests the hay and grain, does the plowing and fall cultivation, cuts and stores the corn, looks after the threshing, and harvests the potatoes, mangels and turnips, besides doing the many odd chores about the farm, will be kept exceptionally busy. For myself, I am a young man just starting on a farm and I find that by the time I work 65 acres and work it properly, I have all I can do.

Our soil is limestone clay and sandy loam, and I find that it pays to manure and to keep under hoed crop from twelve to fifteen acres per year. In this way about every five years I have all the place under a cultivated crop and this is the surest and best method of cleaning and enriching the land. I approve of a good acreage in corn and roots. They mean much work, but when you consider the amount of feed an acre of these crops produces and the benefit they are to the land in the way of cleaning it and preparing it for seeding down the next year, they are as profitable crops as can be grown. My method is to seed down after a cultivated crop, using barley or oats as a nurse crop. The land is left in sod two years and is plowed after the hay is cut the second year. It is kept well cultivated until late in the fall and is prepared for grain in the spring. As soon as the grain is harvested I plow shallow, or use the broad-shared cultivator, then keep the land well cultivated during September and October. In the spring this land is plowed about four inches deep, is given a coat of manure with the spreader and is thoroughly disked in preparation for corn and potatoes. Under this system noxious weeds and grass are kept in check.

I use as many wide implements as I can to save time. As my farm is only a few miles from the Muskoka District, corn and potatoes do very well but I have had no success with alfalfa and have decided to try sweet clover in place of it. Besides the 65 acres which are under cultivation, I have 40 acres of hard maple bush and rent 50 acres to supply pasture for the young cattle and colts. The past winter I had three horses and four colts, thirty-seven head of cattle and twelve pigs. Most of our cows freshened in the early winter so that the bulk of the milking is over by the time seeding is on. I believe that any young man who is contemplating starting farming for himself will find that 65 to 70 acres of land will be plenty for any man to work and work it properly.

Simcoe Co., Ont. YOUNG FARMER.

Banks to Lend Money to Farmers.

It has been announced that the Provincial Government in Ontario has made arrangements with the Bankers' Association, through the Organization of Resources Committee, whereby farmers who need money to purchase seed may receive reasonable credit at the branches of all banks in the Province.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, Monday, May 7, were 144 cars, 3,109 cattle, 370 calves, 1,508 hogs, 49 sheep and lambs. Choice, handy butcher cattle steady; balance of butchers, 15 to 25 cents lower. Cows and bulls steady; milkers and springers, stockers and feeders steady. Sheep and lambs strong. Calves steady. Hogs at last week's close.

The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	48	451	499
Cattle.....	609	4,328	4,937
Calves.....	438	2,321	2,759
Hogs.....	888	14,482	15,370
Sheep.....	175	207	382
Horses.....	20	709	729

The total receipts of live stock at the two yards for the corresponding week of 1916 were:

	City	Union	Total
Cars.....	35	410	445
Cattle.....	449	4,941	5,390
Calves.....	552	1,975	2,527
Hogs.....	577	11,148	11,725
Sheep.....	147	245	392
Horses.....	57	423	480

The combined receipts of live stock

at the two markets show an increase of 54 cars, 232 calves, 3,645 hogs, and 249 horses, but a decrease of 453 cattle and 10 sheep when compared with the corresponding week of 1916.

The week's trade in live stock opened at the Union Stock Yards with 2,255 cattle of all grades on sale. Trade in butcher steers and heifers was strong at prices steady to fifteen cents higher than the previous week's close. Forty steers, average weight 1,372 lbs., sold at \$12.60 per cwt., which is a new high record for straight loads of cattle; other butchers sold as follows: 40 steers, 1,230 lbs., at \$12.40; 107 steers and heifers, 1,090 to 1,170 lbs., at \$12, and 260 steers and heifers, 860 to 1,180 lbs., at \$11.75 to \$11.95 per cwt. Good butchers sold at \$11 to \$11.50; medium, \$10.50 to \$10.75, and common at \$9.50 to \$10.25.

Cows were also in strong demand, choice selling at \$10.25 to \$10.50, and 1, 1,500 lbs., at \$11.25; 1, 1,270 lbs., at \$10.75, and about 7 at \$11. Bulls sold \$10.75, and about 7 at \$11 for choice, a few at \$10.50 to \$11 for choice, a few at \$11.25; good bulls at \$9.75 to \$10.25, and common to medium at \$7.50 to \$9.25.

For the balance of the week trade was steady to slow without any change in price. Stockers and feeders were also price. One lot of strong and higher in price. One lot of 25 choice, short-keep, feeder steers,

1,050 lbs. each, sold at \$11.10 to \$11.25; steers 850 to 900 lbs., at \$9 to \$10; steers and heifers, 600 to 700 lbs., at \$8 to \$8.75. Grass cows sold at from \$7.25 to \$8.30.

Milkers and springers were strong and in demand. Choice cows selling at from \$100 to \$120 each, a few at from \$125 to \$139.50 each. One lot of 17 sold at \$107. Sheep and lambs were strong, the run was very light, choice yearling lambs sold at 14c. to 16½c. per lb., and culls at 9c. to 12c. per lb.; light sheep sold at 12c. to 14c. per lb., and heavy at 10c. to 11½c. per lb.

The calf market opened on Monday with choice selling at the previous week's prices, but common to medium were 25c. lower. For the balance of the week calves were slow, weak and from 50c. to 75c. lower in price. Hogs on Monday firm, fed and watered selling at \$16.90 to \$17. They became stronger during the week and the market closed with fed and watered selling at \$17 to \$17.15, and weighed off cars at \$17.25. Drovers and farmers will do well to remember that packers are deducting from \$1 to \$2 off light, unfinished hogs and thin feeder pigs.

Live Stock Quotations.—Heavy steers, choice, \$12.25 to \$12.50; good, \$11.75 to \$12. Butcher steers and heifers, choice,

\$11.75 to \$12; good, \$11 to \$11.50; medium, \$10.50 to \$10.75; common, \$9.50 to \$10.25. Cows, choice, \$10.25 to \$10.50; good, \$9.25 to \$9.75; medium, \$8.25 to \$9; common, \$7 to \$8. Canners and cutters, \$5.75 to \$6.50. Bulls, choice, \$10.50 to \$11; good, \$9.75 to \$10.25; medium, \$8.75 to \$9.25; common, \$7.50 to \$8.50. Stockers and feeders, best, \$9.50 to \$10.25; medium, \$8.25 to \$9; grass cows, \$7.25 to \$8.30. Milkers and springers, best, \$100 to \$120; medium, \$80 to \$90; common, \$60 to \$70. Lambs, spring lambs, \$7 to \$15 each; yearling lambs, choice, 14 to 16½c. per lb.; culls, 9c. to 12c. per lb. Sheep, light, 12c. to 14c. per lb.; heavy, 10c. to 11½c. per lb. Calves, choice, 11c. to 12c. per lb.; medium, 8½c. to 10½c. per lb.; common, 6c. to 8c. per lb.; heavy fat, 7c. to 9½c. per lb. Hogs, fed and watered, \$17 to \$17.15; weighed off cars, \$17.25.

Less \$2 to \$2.50 off sows, \$4 to \$6 off stags, \$1 off light hogs and \$2 off thin feeder pigs, and half of one per cent. government condemnation loss.

Breadstuffs.

Wheat.—Ontario, No. 2, winter, new, per car lot, \$2.78 to \$2.80; No. 3, winter, per car lot, \$2.76 to \$2.78, (according to freights outside). Manitoba, track, bay ports—No. 1 northern, \$2.94½; No. 2

northern, \$2.89½ No. 3 northern, \$2.84½ No. 4 wheat, \$2.52½.

Oats.—Ontario, No. 2 white, 74c. to 76c., nominal; No. 3 white, 73c. to 75c., nominal. Manitoba oats, (all rail delivered).—No. 2 C. W., 83½c.; No. 3 C. W., 81½c.; Extra No. 1 feed, 81½c.; No. 1 feed, 80c.

Barley.—Malting barley, according to freights outside, \$1.35 to \$1.37.

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

Corn.—American (track, Toronto), No. 3 yellow, \$1.63, nominal, subject to embargo.

Rye.—No. 2, \$1.88 to \$1.90, nominal. Flour.—Manitoba first patents, in jute bags, \$13.20; second patents, in jute bags, \$12.70; strong bakers' in jute bags, \$12.30. Ontario, winter, according to sample, \$11.50 to \$11.60 in bags, Toronto.

Hay and Millfeed.

Hay.—Track, Toronto, extra No. 2, per ton, \$11.50 to \$12.50; mixed, per ton, \$8.50 to \$11.

Straw.—Car lots, per ton, \$8 to \$9, track, Toronto.

Bran.—Per ton, \$42.

Shorts.—Per ton, \$45.

Good feed flour, per bag, \$3 to \$3.10.

Hides and Skins.

City hides, flat, 20c.; country hides, cured, 20c.; country hides, part cured, 18c.; country hides, green, 17½c.; calf skins, per lb., 25c.; kip skins, per lb., 20c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair, per lb., 42c.; horse hides, No. 1, \$6 to \$7; No. 2, \$5 to \$6. Wool, unwashed, fine, 43c. per lb.; wool, unwashed, coarse, 39c. per lb. Tallow, No. 1 cake, 11c. to 12c. per lb.; tallow, solids, 9c. to 10c. per lb.

Country Produce.

Butter.—Butter again remained stationary on the wholesales during the past week, selling as follows: Creamery, fresh-made pound squares, 44c. to 45c. per lb.; creamery solids, 42c. to 43c. per lb.; dairy, 32c. to 35c. per lb.; separator dairy, 38c. to 40c. per lb.

Eggs.—New-laid eggs firmed slightly, advanced in price, wholesale, selling at 38c. to 39c. per dozen.

Cheese.—The cheese market is very firm—June cheese, 28c. per lb.; new cheese at 27c. to 28c. per lb.; twins, 28½c. to 29c. per lb.

Honey remained stationary—with the supply gradually decreasing. Sixty-lb. tins, extracted, 12c. to 13½c. per lb.; the glass jars at \$1 to \$2 per dozen, and one-pound sections of comb honey bringing \$2 to \$3 per dozen.

Maple syrup shipments have not been very heavy, and as there is a keen demand the prices are firmer, 5-gal. tins, Imperial measure, selling at \$1.65 per gal.; 1-gal. tins at \$1.75 per gal.; 8-lb. tins at \$1.25.

Wholesale Fruits and Vegetables.

Trade has been rather dull on the wholesales the past few days owing to the extremely cold weather, with increasing arrivals of fresh fruits and vegetables.

Apples.—There are very few apples being offered, the small quantity of the boxed varieties selling at \$2.50 to \$3 per box.

Bananas have declined and now sell at \$2 to \$2.75 per bunch.

Grapefruit was quite firm in price, as the season is just about over, Florida selling at \$4.50 to \$5.50 per case, and Cuban at \$4 to \$4.50 per case.

Lemons declined, the Californias selling at \$3.50 to \$4 per case and Messinas at \$3.50 per case.

Oranges have not been of very good quality, the Navels selling at \$2.50 to \$3.50 per case.

Pineapples remained about stationary, Porto Ricos selling at \$4 to \$1.25 per case, and Cuban at \$3.25 to \$3.50 per case.

Rhubarb has not been coming in very freely and has remained unchanged in price at \$1 to \$1.25 per dozen bunches.

Strawberries have been arriving in large quantities and have been of excellent quality, the weather, however, hurt their sale, and they have declined to 25c. to 27c. per box.

Tomato shipments have also increased and, they, too have been of splendid quality, selling at \$4.50 to \$5.50 per six-basket crate.

Asparagus was plentiful, selling at \$3.75 to \$5 per case containing twelve large bunches.

New beans have come in in such large quantities the price declined to \$2.50 to \$3 per hamper for the green variety.

Cabbage has only come in in very

small quantities, selling at \$4.50 to \$5 per hamper and \$7 per crate.

Carrots.—The old carrots are just about done; new ones selling at \$2.25 per hamper.

Cauliflower has not been of very choice quality and sold at \$3 to \$3.75 per crate.

Cucumbers materially declined as they came so freely.

Onions declined slightly in price, Texas Bermudas, selling at \$3.75 to \$4 per crate.

Potatoes kept firm; N. B. Delawares selling at \$4.50 per bag; Ontarios at \$4.25 per bag; Westerns at \$4 to \$4.25 per bag.

Buffalo.

Cattle.—Values on shipping steers showed another decline at Buffalo last week, by reason of an oversupply and the inclination of the big killers to go slow and kill conservatively, with the present very high prices and intimations to the effect that the government might take a hand in fixing prices of food products.

Shipping steers, of which there were around forty to fifty loads, sold from 35c. to 50c. lower, best here selling at \$12.50, with the general range on shipping steers running from \$10.75 to \$12.25.

On handy butchering steers, trade was probably a dime to fifteen cents lower, though some fancy yearlings, about half steers and half heifers, sold up to \$12, general run of the best handy butchering steers being from \$10.25 to \$10.75. Fat cows and heifers generally sold at steady prices, demand being strong for all classes of females. Bulls ruled steady to shade lower, while stocker and feeder trade was firm, best stockers bringing up to \$9 to \$9.50. Milk cows and springers sold at about steady prices. A pretty good clearance was had during the week and trade closed up somewhat better than for the week's opening. Receipts for the week totaled 4,250 head, as against 5,075 for the previous week and 4,675 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$12 to \$12.50; fair to good, \$11 to \$11.75; plain, \$10.50 to \$10.75; very coarse and common, \$9.50 to \$10.25; best heavy Canadians, \$11.75 to \$12; fair to good, \$11.25 to \$11.50; common and plain, \$9.50 to \$10.50.

Butchering Steers.—Choice heavy, \$11 to \$11.75; fair to good, \$10 to \$10.50; best heavy, \$10.50 to \$11.00; fair to good \$10 to \$10.25; light and common, \$9.25 to \$9.50; yearlings, prime, \$11.50 to \$12.00; fair to good, \$10.25 to \$11.00.

Cows and Heifers.—Best heavy heifers, \$10.25 to \$11.50; best butchering heifers, \$9.00 to \$9.50; fair butchering heifers, \$8.25 to \$8.75; light and common, \$7.50 to \$8.00; very fancy fat cows, \$10.25 to \$10.50; best heavy fat cows, \$9.00 to \$9.50; good, butchering cows, \$7.75 to \$8.50; medium to fair, \$6.50 to \$7.50; cutters, \$6.25 to \$6.50; canners, \$4.75 to \$6.00.

Bulls.—Best heavy, \$9.50 to \$10.00; good butchering, \$8.50 to \$9.00.

Stockers and Feeders.—Best feeders, \$9.25 to \$9.50; common to fair, \$8.00 to \$8.50; best stockers, \$8.25 to \$8.50; common to good, \$7.50 to \$8.00.

Milkers and Springers, good to best in small lots, \$9.00 to \$11.50; in car loads, \$7.50 to \$8.50.

Hogs.—Prices were on the decline on the opening day last week. A \$16.25 top was made, however. Good weight hogs, which are bringing a big premium, were scarce and only a small percentage of the receipts sold above \$16.00. Tuesday a \$16.50 top was scored, although bulk sold from \$16.00 to \$16.10. Wednesday's market was lower, range being from \$15.90 to \$16.25. Thursday a few brought \$16.40, the balance selling from \$16.10 to \$16.35, and while one deck of heavy hogs sold Friday up to \$16.50, range on york-weight grades, which comprised the bulk of the receipts, was from \$16.00 to \$16.15. Pigs ranged from \$13.50 to \$14 with some strong-weight ones up to \$14.25 and \$14.50; roughs \$14 to \$14.25, and stags \$13.00 down. Last week receipts were 22,700 head, as against 17,361 head for the week before and 25,000 head for the same week a year ago.

Sheep and lambs.—Record prices were paid for shorn lambs last week. Monday the bulk of the top sold at \$14.25, Tuesday some made \$14.40, Wednesday's top was \$14.50, Thursday best ones dropped to \$14.35 and Friday the choice handy lots were back to \$14.50. Cull lambs sold up to \$12.75 and \$13.00, and heavy lambs, kinds weighing around

100 pounds, were not worth any more than the good culls. Sheep were held steady all week, top for wethers being \$11.50 and ewes went from \$11.00 down. Receipts for the week totaled 18,900 head, as against 12,700 head for the week previous and 23,600 head for the same week a year ago.

Calves.—Last week started with top veals selling generally at \$12.50, and a few late sales were made at \$12.75. After Monday the market was stronger and before the week was out, or on Friday, top veals were selling up to \$13.75. Supply was liberal, but nevertheless the demand was good and a good clearance was had from day to day. Cull grades sold well compared with tops, Friday's sales on the best throughouts being made from \$12.00 to \$12.50. Receipts last week aggregated 5,100 head, as compared with 4,967 head for the week previous and 4,500 head for the same week a year ago.

Montreal.

The price of cattle continues to strengthen from time to time and butchers are wondering where the advance will end. Last week the offering of choice steers was very light, and the bulk of the trading was ordinary stock, the price of which ranged from 9½c. to 10½c. per lb. Some choice steers and heifers brought around 12½c. and from that down to 11½c. per lb., while good stock ranged from 11½c. to 11½c. per lb. Butchers' cows sold at 8½c. to 10½c. per lb., and bulls at about 1c. above the price of cows. There was an active trade in calves. Supplies were large and there was a good demand both for local and domestic consumption as well as for export to the United States. Prices ranged all the way from 5½c. to 7c. for ordinary and up to 11c. and 11½c. for choice. Some small lots of old sheep sold at 10c. to 11c. and of yearling lambs at 14½c. to 15½c. per lb. The supply of the latter was also light. Spring lambs are becoming more plentiful, but sold at the price of \$8 to \$12 each, according to size. A further advance in the price of hogs took place and selected lots sold at 17½c. to 17½c. per lb., weighed off cars.

Horses.—Demand for horses was very light during last week. It is understood the Government is operating once more and that there is no difficulty in picking up a considerable quantity for their purpose. Farmers took a few animals for spring work. Otherwise the market was dull and steady, as follows: Heavy draft, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each; culls, \$50 to \$75 each; choice saddle and carriage \$200 to \$225 each.

Poultry.—Quotations on poultry were more or less nominal. Only cold storage stock was traded in. Turkeys were quoted at 26c. to 30c. per lb., chickens at 19c. to 25c. per lb., ducks about the same, and fowl and geese at 18c. to 23c. per lb.

Dressed Hogs.—With live hogs bringing the highest price ever paid, it was only natural that the market for dressed hogs would be very firm. Small lots of abattoir-dressed, fresh-killed stock are quoted at 23½c. to 24c. per lb.

Potatoes.—Although the statement is made that Canada has a large surplus of potatoes, the market continues as strong as ever. Sales of Quebec white potatoes were reported to have been made at \$4.15 per bag of 90-lbs. in car lots, while red stock was quoted at \$3.75 to \$3.85 per bag of 80 lbs. ex-store. Consumption is becoming very light at these figures but quite a quantity was purchased for seedling purposes.

Maple Syrup and Honey.—No change took place in this market. Syrup was quoted at \$1.40 to \$1.60 for 13-lb. tins; \$1.15 to \$1.25 for 10-lb. tins, and \$1.10 for 8-lb. tins. Sugar was 15c. Honey was unchanged at 15c. for white clover comb; 12c. for white extracted and brown clover comb; 11c. for brown extracted, and 10c. for buckwheat honey.

Eggs.—The supply of eggs is below requirements, more especially as the high price of many other foods is causing consumption of eggs to increase. There is a demand also for export. Sales of fresh gathered stock took place at 40c. per doz., which is an advance of several cents as compared with the previous week.

Butter.—The tendency of prices in this market was downward, but little

Incorporated 1855

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change took place during the week. New milk creamery was still quoted at 41½c. to 42c. per lb. for finest and about ½c. lower for fine. Best held creamery could be had for 39c. to 40c. per lb., while dairies ranged from 32c. to 37c. with Manitobas quoted at 31c. to 32c. per lb.

Grain.—Although the Winnipeg grain exchange took action to prevent speculation in wheat, and a severe break followed, the market recovered and was higher than ever, being reported that May wheat sold in Winnipeg at \$3 per bushel. Sales of Manitoba feed wheat were made in car lots at \$1.45; No. 2 Canadian Western oats were quoted at 81c.; No. 3 and No. 1 extra feed, at 79½c. and No. 1 feed, at 78½c., while No. 2 feed was quoted at 77½c. per bushel, ex-store. Manitoba feed barley was \$1.12 per bushel, ex-store. Canadian hand-picked beans \$8 to \$8.25, with three-pound pickers \$7.50 to \$7.75.

Flour.—New high records were again made in the price of flour last week, and the price advanced \$1.20 per barrel, in one day, making Manitoba first patents, \$14.50; seconds \$14 and strong bakers', \$13.80 per barrel, in bags. Ontario 90% patents were \$15.20 to \$13.50 per barrel, in wood, and \$6.35 to \$6.50 per bag.

Millfeed.—The market was exceedingly strong with bran in car lots selling at \$43 per ton; shorts, \$46; middlings, \$48 to \$50; mixed mouille, \$52 to \$53, and pure grain mouille, \$55 to \$57.

Hay.—The market for baled hay was steady with car lots of No. 2 still quoted at \$13.50 per ton; No. 3, \$12 to \$12.50, and clover mixed, \$11 to \$11.50.

Seeds.—Prices were steady at \$7 to \$12 per 100 lbs. for timothy, on track, Montreal; \$20 to \$25 for red clover and \$15 to \$25 for alsike.

Hides.—The market was steady at 30c. for spring lambs; \$4 each for sheep skins and \$7.50 for horse hides. Beef hides 25c., 26c. and 27c. per lb. Calf skins 38c. and 40c. Tallow 3c. to 5c. for rough and 8c. to 9c. for rendered.

Chicago.

Cattle.—Beeves, \$9 to \$13.40; stockers and feeders, \$7.15 to \$9.90; cows and heifers, \$6.25 to \$11.15; calves, \$8.75 to \$13.25.

Hogs.—Five cents to 10 cents lower. Light, \$14.65 to \$15.70; mixed, \$15.25 to \$15.80; heavy, \$15.20 to \$15.85; rough, \$15.20 to \$15.40; pigs, \$10 to \$13.75.

Sheep.—Lambs, native, \$13.50 to \$17.65.

Cheese Markets.

Napanee, no bids, no sales; London, 21½c. bid, no sales; Belleville, 20c. bid, no sales; Montreal, finest westerns, 27c. to 27½c.; finest easterns, 26c. to 26½c.; New York, fresh specials, 26½c. to 27c.; average run, 26½c. to 26½c.

Sale Dates.

May 23.—A. C. Hallman, R. 2, Breslau, Ont.; Holsteins.

June 14.—New England Ayrshire Club Consignment Sale, Springfield, Mass.; Ayrshires.

June 14.—W. A. McElroy, Chester-ville, Ont.; Holsteins.

June 28.—J. M. Gardhouse and J. A. Watt, Elora, Ont.; Shorthorns.

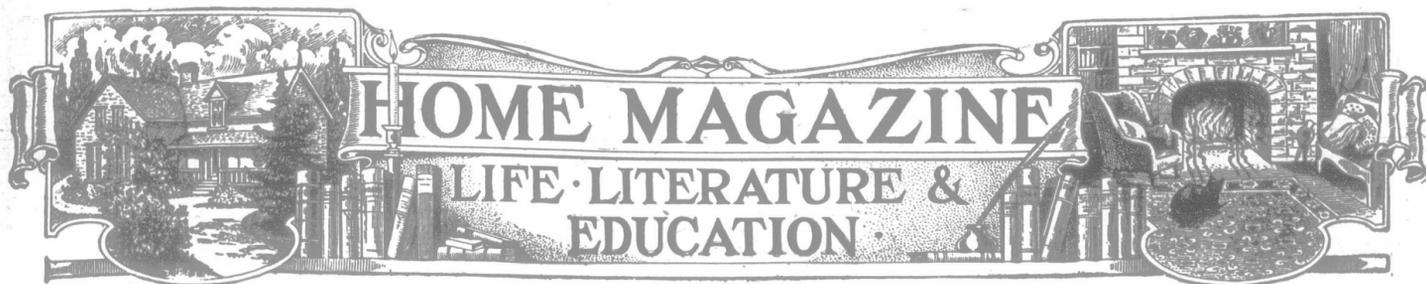
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It isn't raining rain to me
But fields of clover bloom,
Where any buccaneering bee
May find his board and room;
Here's health unto the happy
A fig for him who frets,
It isn't raining rain to me
It's raining violets.

ROBERT LOVEMAN.

Immanence.

I come in the little things,
Saieth the Lord:
Yea! on the glancing wings
Of eager birds, the softly pattering feet
Of furred and gentle beasts, I come to meet
Your hard and wayward heart. In brown
bright eyes
That peep from out the brake, I stand
confest,
On every nest
Where feathery Patience is content to
brood
And leaves her pleasure for the high
emprise
Of motherhood—
There doth My Godhead rest.
—[From Immanence, A Book of
Verses, by Evelyn Underhill (Dutton),
p. 1.]

A Talk About "The Country."

BY MARGARET RAIN.

For many years the cry in England and Scotland has gone up "Back to the Land", and wise men of all classes have not been backward in giving their reasons for rural depopulation and advising remedies for the present state of things. When newspaper editors found themselves scarce of interesting material wherewith to fill their columns they had only to start this subject and they were inundated with letters. It was generally considered that the loneliness of the country was the chief evil, and on all hands it was agreed the younger generation required more variety and pleasure in their lives than their fathers had had in their youth. Therefore, good people up and down got up courses of lectures little entertainments of one kind and another, parish libraries and workmen's clubs and reading rooms.

It seems as if this spirit of unrest was equally in evidence in Canada. Even we hear the returned soldiers, who surely have had enough thrills of late to make them long for the quiet and soothing sights and sounds of the country, do not seem at all eager to take possession of the land offered to them as a reward of their valour. Perhaps there has been a mistake in the direction our education has taken, and we have never had pointed out to us the significance of the sights and sounds that surround us. No day, indeed no moment of any day, need be uninteresting to the country dweller even when quite alone. We know too, how very lonely and uninterested one can feel in a crowd. It is not necessary to become students of natural history after the manner approved by science. Few of us have the patience or ability for this, many have not the inclination. We do not need to be great botanists to have such sympathy as Burns expressed in his little poem to a daisy, nor to know much of natural history to feel what the truth and poetry of his lines "To the Mouse". Just as good for our purpose is the experience of another poet, something we too must all have felt.

Many a thrill
Of kinship I confess to with the powers
Called Nature; animate, inanimate,
In parts or in the whole there's something
— there
Manlike that somehow meets the man
in me."

Animal life is like nearly all the things that nature has produced in one particular, its great meanings do not lie upon the surface. It is a deep into which our minds may let down their plummet again and again, yet feel that it has not touched bottom. The late Bishop Stanley once spoke incidentally of "The dark mystery of the animal mind". These words by suggesting the vastness and difficulty of the subject should inspire us with a wholesome reverence for it. We can never acquire worthy knowledge of any subject unless we approach it in such a spirit.

The attitude of mind towards the animals taken up by one who has been said to be the first poet America has produced, Walt Whitman, who by many is regarded as a seer, as the true poet should be, is noteworthy—He says:

"I think I could turn and live with animals they are so placid and self-contained.

"They bring me tokens of myself, they evince them plainly in their possession.

"I wonder where they got those tokens, Did I pass that way huge times ago and negligently drop them?"

Here is the east meeting the west with a vengeance. It is evident that the mind of this modern of the moderns is, in a sense, meeting in thought the ancient transmigrator; Buddhism, the faith of many of our fellow citizens of

escape, or on which it preys." A calm, concise statement this of that tremendous fact—the unity of life, its mental and moral unity as well as its physical. We are, in our inward man no less than in our outward, in our thoughts no less than in our hands and feet, what the lowly creatures and herbs and plants have made us.

But besides poet's dreams or the beliefs of the evolutionist there are many reasons why an ordinary person should love animals. One is that they have so long co-operated with man in the civilizing process. Without them we could not have been civilized at all. They not only fed and clothed us, but for long years their bone and sinew formed the principle motor we possessed. They did all our heavy work on the land at least until these two irresistible magicians—steam and electricity—took their place. Over and above this by their beauty they awoke in man's mind the artistic sense. They gave him something to think about in a non-utilitarian spirit. How much for instance of bright and bold human life, touched with the glamour of romance is associated with the horse.

"It is a beast for Perseus: he is pure air and fire and the dull elements of earth and water never appear in him, but only impatient stillness when his rider mounts him. . . . Nay the man hath no wit that cannot from the rising of the lark till the lodging of the lamb vary deserved praise on my palfrey, it is a theme as fluent as the sea; turn

just returned, for instance, and taking his first long rest on the house top; the piping of the curlew; the lark's song, that "Waterfall in the Sky"; the wild dove's flight, and strong and masterly; the lone heron with his slow wafting wing; the fox stealing across the braes, and then his eerie bark on nights of March among the hills; the thousands of insects flashing in the sun; bees humming among the clover. Such are the sights and sounds; that the country dweller sees and hears. Too often we fear they see and hear as though they heard them not, nor felt their beauty and significance.

Let us be thankful for these wild creatures that are left, for how decimated and dispirited is the animal kingdom now compared to what it once was. How many a beautiful creature of field and forest has had to bow its neck and go before the necessities of man! It is one of the prices we have to pay for progress. Nature appears to be wasteful through the abundance of her riches.

"So careful of the type she seems
So careless of the single life
So careful of the type? but, no,
From scarp'd cliff and quarried stone
She cries, "A thousand types are gone
I care for nothing, all shall go."

So it appears. We read of noble herds of the bison or the buffalo. It took less than two hundred years to wipe out and wind up his life history. Less than seventy years ago they actually swarmed in certain districts of America. Unfortunately for him the buffalo became of some value in the market, about five dollars it is said, and immediately the needy and greedy, white men, red men, went out in a wild crusade against him. It was not in hundreds, but in thousands and tens of thousands he was slaughtered. The broad prairies on which he and his progenitors had roamed and grazed, and made love, and battled over their loves, literally reeked with his blood. For what is animal life, what is the preservation of a species, what are the interests of science when placed against money? A few herds have been preserved I believe, and we rejoice to hear they are not too broken spirited, too much absorbed in the consciousness of their decadent state to breed and increase. But multiply as they may that moving blackness, outspread far as the eye could follow the level of the prairies, of which writers have spoken, will be seen no more.

"Silent a moment they gazed, then bellowing rushed o'er the prairies. And the whole mass became a cloud, a shade in the distance." Any great change in nature, any passing away of objects that have long been prominent upon it is impressive. Even the cutting down of the natural forests, those immense sanctuaries filled with dim religious light, so solemn and mysterious, as good a hunting ground for the civilized imagination as for the wild Indian hunter, stirs our emotions. And this although the great pines, the brush wood, the many mosses have given place to "corn which is the marrow of man."

It is one sign of an advance in ourselves that the wild creatures of the field have become one of our intellectual interests. We no longer regard them as so much food, as the savage did, or as so many obstacles in the path of an all-devouring agriculture, all devouring in respect that wild nature perishes before it. We take them hospitably into our mind, so to speak, as an object of study, they are links in the same chain as we ourselves, and there is a sense in which they made existence for us possible. Before Nature turned out man she tried her hand on the bird's wing, and on the vertebral column of the quadruped. She felt her way through the brute to the human. The life histories of the two form part of the same vast book—that mystic, unfathomable book, the book of life.



Leicester Ladies Painting the Edges of the Curbs White to Prevent Accidents in the Darkened Streets—Darkened as a Precaution.

this great empire, we understand holds this belief. Darwin had the wisdom, as far as possible, to eschew controversial subjects, but his philosophy may be held to involve the opinion that he too "passed that way". The thought that Walt Whitman may have pastured in miocene prairies and floated through miocene seas and that such an idea has been, with great thinkers, not a dream but a faith casts a glamour on the whole animal world. The awakened mind cannot again pass it by as common and unclean. As Darwin says, "The structure of every organic being is related in the most essential yet often hidden manner to that of all other organic beings with which it comes into competition for food and residence, or from which it has to

the sands into eloquent tongues, and my horse is argument for them all: 'tis a subject for a sovereign to reason on and for a sovereign's sovereign to ride on; and for the world familiar to us and unknown to lay apart their particular functions and wonder at him". (Shakespeare Henry V.) It is true. The man who loves not the horse is as much of a groundling, as poverty stricken and dubious in his character as the man who has not music in his soul.

We love, too, the slow-witted ox, now pasturing in the long summer days, now at his crib in winter with his nose among the sweet smelling hay, but perhaps the undomesticated, untamed creatures are those which appeal most to what of poetry is left in us. The swallow

It records not only an ascending, but scientists say, an unbroken series, in which one form runs into another, like the colors in a rainbow; and the last is what the first has made it, or enabled it to be. We are therefore debtors to the animals and as such owe them thanks and some measure of respect. We are beginning to show this in our better observation of their habits and in the legal protection we are giving to them. It is impossible for them to stand up against us in successful self-defence if we choose. Not their strength, not their courage, nor their swiftness, not their cunning, nor all these qualities combined are a match for those ruthless weapons of destruction we have invented. Something in us, something that is the growth of comparatively recent ages has moved us to strike a truce with them. We have passed and are passing laws to protect them in the time of their helplessness. It is well that along with the improvement in those weapons of destruction I have referred to, there has been going on a corresponding improvement or growth in ourselves, our higher nature. Especially has there been a growth in that sympathy which goes beyond the human to the lowlier forms, out of which, or rather from the same sources, the human has come. We preserve them from the same feeling that John Stuart Mill wished to preserve a few wild flowers, and not let "an improved agriculture wipe all natural beauty off the face of the earth". Let us preserve something of wild nature even although we do not produce quite so much food. No doubt the wild creatures waste and consume food, but they and the flowers and heaths appeal to our minds and imaginations: "Man cannot live by bread alone."

Undoubtedly if all the wild animals were swept away we would still retain representatives of them in the domesticated state. But would these satisfy us? There is something untamed in ourselves that leads us to love the wild in nature. In the first instance we pursue and kill the creatures of the field and forest. Afterwards, when our minds have a little further developed, we watch and study them. Are we prepared to face the effects which the total disappearance of the wild from the organic and the inorganic world would have upon our moral nature? No more storms and floods breaking bounds, no more conflagrations on earth or in the air, no birds and beasts living their own life in their own way, everything reduced to order—broken spirited, tame; man and his mark everywhere, the trail of him on all sides of the globe from pole to pole. Would not this state of things become to us a suffocating weariness?

Current Events.

Prohibition has been carried in Hull, Que., by a majority of 1,181.

Chile has broken off diplomatic relations with Germany. Argentina, also, because of the submarine menace of Germany, is becoming warlike in sentiment.

The French Commission to the United States, Field Marshal Joffre, M. Viviani and others, will visit Montreal this month. Tremendous ovations have greeted them everywhere in Washington.

The United States steamer "Rockingham", has been sunk by a German submarine, and 13 men are missing. It is believed that 279 men were drowned when the British transport "Arcadian" was torpedoed on April 15th.

The Chinese Minister to Germany has left Berlin and gone to Denmark.

The United States Congress endorsed conscription with a majority of 397 to 24.

The Royal Commission appointed last July to inquire into transportation problems in Canada recommend the immediate nationalization of the Grand Trunk, Grand Trunk Pacific and Canadian Northern Railways, and their amalgamation with the National Transcontinental and Intercolonial Railways into one great, publicly owned system operated by a Board of five Commissioners, who shall be absolutely independent and free from the danger of political interference.

Still the great battle in Northern France rages, day and night, over a 15-mile front east of Arras, and in the Champagne district where the French have opened an offensive. During the week the Canadian heroes who took Vimy Ridge advanced under shelter of a curtain of fire from the British forces, and succeeded in capturing the fortified villages of Arleux and Fresnoy, taking 200 prisoners. The Australians also distinguished themselves during the week. Meanwhile, French forces captured the important town of Craonne, and are, at time of going to press, waging a fearful battle on the Aisne heights. So the waters of the Scarpe and the Aisne run with blood, while airplanes fight from day to day in the air above. During the week General Haig's forces have succeeded in breaking the Hindenburg line at two points. . . . Along the Eastern front there are signs of renewed Teuton activity from the Pripet Marshes to Bulgaria. In Mesopotamia General Maude continues his victorious advance, and in Palestine British troops are within 10 miles of Jerusalem. . . . The greatest trouble to the Allies at present is the submarine menace, which must be coped with if supplies are to be sent regularly to Europe. Last week 51 vessels—chief freighters—were sunk. Nevertheless, optimism prevails among the Allies everywhere, and the British Empire has been greatly heartened by the statement, recently made by premier Lloyd George, that since June 1915 not a single gun has been lost by British troops.

In Russia where, naturally, things are still somewhat unsettled, a crisis that looked ugly for two or three days seems to be safely passed. The soldiers and workmen, it appears, took exception to the statement issued by the Provisional Government that the war would be fought to a finish. They claimed that the question was one that should be submitted to the people, and demands were made for the resignation of the Minister of Foreign Affairs. M. Miliukoff, however, on May 4th addressed the crowds from the balcony of the Government Building, and so reasonable were his explanations that his speech elicited cheers, and the disturbance subsided.

The Dollar Chain

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

Contributions from April 27 to May 4th: Mrs. L. W. Beveridge, Mrs. F. Miller, Mrs. H. McGregor and Mrs. Wm. L. Johnson, R. R. 5, Perth, Ont., a joint contribution of \$15.00; "M. C. F.", \$3.00; "Toronto", \$2.00; David A. Patton, Richmond Hill, Ont., \$2.00; Frank Wilson, Tupperville, Ont., \$2.50; "Gibraltar", R. 2, Ravenna, Ont., \$2.00; also a splendid collection amounting to \$30.10 sent by Mrs. Wm. Hoshal, from the Rorytorn and Viscount districts in Saskatchewan. The work of collecting this amount must have been very considerable, and we are pleased to be in a position to tell Mrs. Hoshal that the money has been sent to the Armenians by the most direct means available. Her list is as follows: Mrs. Wm. Hoshal, 50 cents; Thomas Swain, 50 cents; Mrs. Berg, \$1.35; M. Hogan, 50 cents; A. S. Harper, 50 cents; F. E. McNab, \$1.00; J. M. McDonald, \$1.00; Ethel Hizer, 25 cents; H. Garner, \$5.00; Jas. Ingham, \$1.00; Geo. A. Garner, \$5.00; Walter Kocks, 50 cents; Thos. Ketter, \$2.00; S. W. Holisnik, \$1.00; W. R. Turner, 50 cents; Wm. Eastman, \$1.00; A. G. Headrick, 50 cents; E. D. McCallum, 50 cents; J. Baines, \$1.00; Mrs. Wristen, 25 cents; Ernie Garner, \$1.00; Mrs. John McKenzie, \$1.00; Wm. Anderson, \$1.00; Wm. Timmerman, \$1.50; Mrs. D. McLean, 25 cents; Martin Berg, 50 cents.

Contributions for Byron Hospital for Tubercular soldiers ("Farmer's Advocate Readers' Ward") were as follows: "Subscriber", Croton, Ont., \$2.35; "Reader", Mt. Brydges, Ont., \$5.00; "Scotia", London, Ont., \$1.00; Anna Rebekah Lodge 118, Melbourne, Ont., \$20.00; "Bloomfield", Ont., \$1.00; "Helper", \$5.00; Frank Wilson, Tupperville, Ont., \$2.00; "Gibraltar", Ravenna, Ont., \$3.00.

The total amount received as yet for the Byron Hospital Ward is \$342.85,

leaving \$157.15 still to be made up for the equipment of the ward.

Amount previously acknowledged.....\$4,378.75
Total amount to May 4th.....\$4,474.70

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

Hope's Quiet Hour

Behold, He Prayeth!

Acts 9:11.

Lord, teach Thy Church the lesson,
Still in her darkest hour
Of weakness and of danger
To trust thy hidden power:
Thy grace by ways mysterious
The wrath of man can bind,
And in thy boldest foeman
Thy chosen saint can find.

—REV. J. ELLERTON.

There was excitement and consternation among the Christians in Damascus; for Saul of Tarsus was on his way there "breathing out threatenings and slaughter against the disciples of the Lord." He carried with him letters of authority, enabling him to imprison all who were bold enough to confess the Name of JESUS. Bad news travels fast, and the Christians were helpless to defend themselves from their fierce foeman. Can you imagine how families in Belgium villages felt as the German army came nearer and nearer, changing a land like the Garden of Eden into a desolate wilderness?

Then one of these trembling Christians saw the Lord in a vision, and was told that Saul of Tarsus needed his help. The fierce persecutor of the Church was humbly praying to Jesus of Nazareth. The man, who had been so spiritually blind that he could not recognize the Light of the world, was now helplessly groping in physical blindness; but his darkened soul had seen a great light. The proud Pharisee was humbly seeking someone to lead him by the hand.

More than a thousand years before men had exclaimed in astonishment concerning another Saul, who was also of the tribe of Benjamin: "Is Saul also among the prophets?" This saying became a proverb, and now the proverb is again marvellously fulfilled. The bold persecutor of the Church is a chosen vessel of Christ; the wolf has become a loyal and loving shepherd, ready to lay down his life for the sheep; "Saul of Tarsus" is changed into the great missionary, "St. Paul."

After that wonderful transformation no one need look hopelessly at any hardened opposer of Christ. The shepherd meets the wolf and stops him when there seems no hope of saving the sheep. But that is not enough for the Good Shepherd. His love goes out to the wolf, too; and that love conquers hate and changes the wolf into a noble protector of his weaker brethren. A wolf and a sheep-dog are near of kin, after all—as we are near of kin to our present relentless foes.

"God moves in a mysterious way
His wonders to perform."

And many men who went off to the war feeling—and expressing—the most determined opposition to the religion of Christ are now praying humbly to Him they once despised. Yesterday I received a letter from one of our readers, who told me that her son, "in the trenches" had written about a "talk" of one of the chaplains just before they left for France. The chaplain had said: "God is very near in the trenches!" and this young man wrote: "I believe a lot of the boys find Him there."

A chaplain, who had ministered to many dying soldiers, said: "We did not send over all the saints in Canada to do our share of the fighting. Some of our men have been hard cases, but I have yet to hear one avow himself an infidel or an unbeliever in a hereafter. The dying men have the instinct of immortality."

The thief on the cross acknowledged

that his punishment was just—it is evident he had not been a saint—and yet at the last he turned in humble appeal to the King of Love. Was his appeal refused? Does not the faintest cry of a repentant soul flash through space straight to Him who loves to save? Keble says:

"He listens to the silent tear
For all the anthems of the boundless sky."

I have just been reading a book, lately published in Boston, which is called, "One More Chance". It relates some of the experiences of a probation officer of Massachusetts in his attempts to rescue men and women from lives of vice and crime.

It is encouraging to read of the way kindness can reach the hearts of apparently hardened criminals. Many of the stories in the book tell how men who have defied the laws of God and man for many years "turn again home." To the surprise of all who know them it may be said of each of these repentant prodigals: "Behold, he prayeth!"

I have not space to introduce you to many of the men described—men who were won by Christ through the efforts of His faithful servants—but let us glance at one.

Here is a man from Poland who has brutally murdered his wife. His name is Schlidowski and he is waiting for trial. Look at this hardened murderer, as he presses his face against the steel bars which separate him from the chaplain and says fiercely: "I am an atheist, and I will have nothing of your God, your Christ or your Church."

The chaplain made no attempt to force religion upon him, but offered to teach him to read English. His kindness slowly melted the icy barrier between them, and the poor criminal poured out to his friend the story of his life. On Good Friday an unknown woman sent a box of fruit to the man who was condemned to die. The chaplain took it to him, saying: "Somebody has sent you a Good Friday gift, though as an unbeliever you may not know the significance of the day."

"It was the day on which bad men killed Christ," Schlidowski replied.

On Easter Day an Easter lily was left in his cell. Later in the day an officer discovered the man on his knees in prayer. He had torn up a newspaper and made a number of paper cones. These he had laid on the floor in the form of a cross. At the head of the cross was the Easter lily, and the murderer knelt at the foot of it asking pardon from God.

Then followed days of terrible remorse, when he tore his garments and shrieked aloud in his misery. His body wasted away until it was found necessary to remove him to the hospital and feed him there with liquid food. At last—as the day of execution drew near—his tortured spirit found peace in the certainty of the Father's forgiveness for Christ's sake. Then it was discovered that this man, who had declared himself an infidel, was wearing his hair and beard long "because Christ had worn his beard and hair long upon the Cross, and he desired so to die."

His lips were moving as he walked calmly to the electric chair, and when the chaplain asked whether there was anything he wished to say, he answered: "I pray often, lest I forget God."

My space is nearly filled and I have no time to describe other men and women, snatched like brands from the burning; but this one is enough to remind us that we are justified in hoping all things, when we remember the power and love of Him who came to seek and to save the lost.

As the thief on the cross turned to Christ in his last moments, as the fierce persecutor was stopped in his headlong course and fell upon his knees, saying: "Lord, what wilt Thou have me to do?" So it may be said to-day of many a man who has lived without God in the world: "Behold, he prayeth!"

Last Sunday a woman told me of a soldier she knew who had been one of a lot of men who had lain helpless under fire, early in the war. They had no ammunition, yet they were not quite without hope. This soldier said to my friend: "I don't believe anyone in the world ever prayed harder than we did."

And he came out alive!
Men may hurl their defiance in the

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GREATER CAPACITY: Without increasing the size or weight of the new bowl, its capacity has been increased.

SELF-CENTERING BOWL: The bowl is loosely supported upon the spindle and will run true and do perfect work even after long wear.

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EQUIPPED WITH SPEED INDICATOR: Every New De Laval is equipped with a Bell Speed Indicator, the "Warning Signal" which insures full capacity, thorough separation, proper speed and uniform cream.

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face of God, but some day they will need His love. Though they have turned their backs on Him, the love that died for them is still reaching out to save and defend them.

In 1639 this notice was posted in Japan. "So long as the sun warms the earth, let no Christian be so bold as to come to Japan; and let all know that if the king of Spain, or the Christians' God, or the great God of all violate this command, he shall pay for it with his head."

Now the Japanese Christians number hundreds of thousands.

Men may try to hold back the dawn, but light is stronger than darkness—as peace will in the end conquer war.

"Behold, he prayeth!" Those words

are joyously ringing through the courts of heaven about many who seem utterly forgetful of God. They may shut their lips and their hearts to men, and yet be reaching out after God with longings which cannot be expressed in words even to Him.

"Behold, he prayeth!" Are those words true of you? Are you daily pleading for another soul: "Lord, I pray Thee, open his eyes, that he may see?"

Then pray on, in sure confidence that your prayers cannot be unanswered.

—St. John says: "If we ask anything according to His will, He heareth us: and if we know that He heareth us, whatsoever we ask, we know that we have the petitions that we desired of Him."

DORA FARNCOMB.

Gifts From Readers.

An order for \$2.00 (for the Quiet Hour purse) has just arrived from a Quebec reader—"C. K. A." This gift will carry good cheer to some sick and discouraged people. The S. S. papers from "D. and G. M." have already gone on a mission of helpfulness in the wards of a hospital. Thanks to you all!

HOPE.

The Ingle Nook.
Mr. Britling.
(Concluded.)

It would take too much space to attempt to set forth here Mr Britling's

conclusions in regard to God, as given in his talk with Letty. Those who are interested must read the book for themselves. (The MacMillan Publishing Co., Toronto.) Just one little sentence, underlined in the copy that I read, will I give you: "Whatever was kind, whatever was tender; there was God."

So I shall conclude by quoting portions of a letter about other things written by Mr. Britling to the parents of Herr Heinrich.

Hugh has been killed; Herr Heinrich has died of his wounds, a prisoner in far-away Russia. The heart of Mr. Britling reaches out to the heart of that other father in Germany, and so, when he is returning the precious violin left in his care by the German lad, he writes

Famine and World-Hunger Are on Our Threshold!

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

—LLOYD-GEORGE.

The Crisis

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

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

Bread has gone to 28c. per four-pound loaf in England, for the first time since the Crimean War.

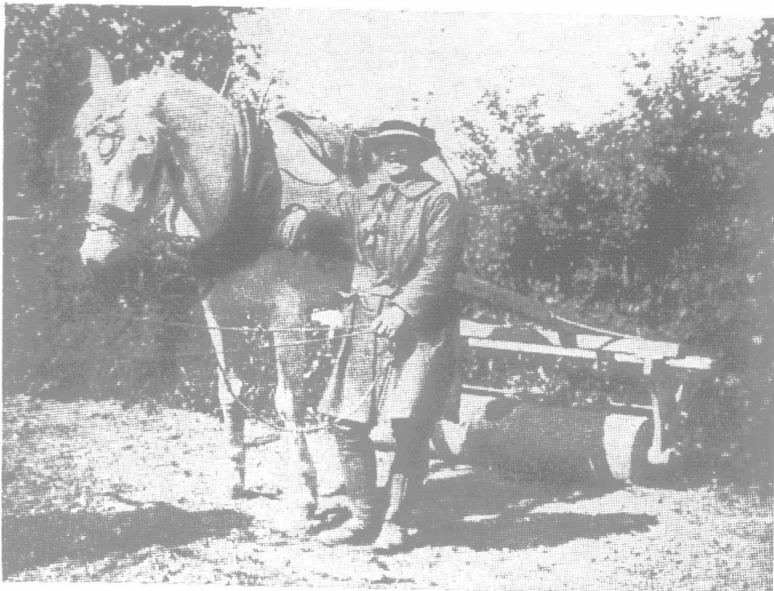
Lord Devonport, British Food Comptroller, proposes taking authority to search the houses of Great Britain to prevent food hoarding.

Forty million men, less the casualties, are now on active service.

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

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

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



—Photo from London (Eng.). Bystander
A FIFTEEN-YEAR-OLD GIRL AT WORK
Miss Alexandra Smith, one of the thousands of British women workers on the land. She recently won an All Comers' Champion prize for plowing

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

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

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

Will we help the acres to save the flag?

World-Hunger Stares Us in the Face

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

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

The United States Department of Agriculture, in its official report, announces the condition of the fall wheat crop (which is two-thirds of their total wheat crop) on April 1st, 1917, to be the poorest ever recorded, and predicts a yield of 244,000,000 bushels below the crop of 1915. The 1916 crop was poor. Even with favorable weather, the wheat crop of the

United States is likely to be the smallest in thirty-five years, not more than 65 per cent. of the normal crop.

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



ONTARIO

Republic has suffered droughts. Canada and the United States must wake up!

People are starving to-day in Belgium, in Serbia, in Poland, in Armenia, in many quarters of the globe.

Famine conditions are becoming more wide-spread every day.

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

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

The Problem for Ontario

The land under cultivation in Ontario in 1916 was 365,000 acres less than in 1915.

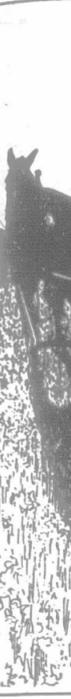
Consider how much LESS Ontario produced in 1916 than she raised in 1915:

	Acres.	Bushels.	1916 Acres.	DECREASE Bushels.
Fall Wheat—				
1916	704,867	14,942,050	105,315	9,794,961
1915	811,185	24,737,011		
Barley and Oats—				
1916	529,886	12,388,969	24,432	7,504,160
1915	552,318	19,893,129		
Peas and Beans—				
1916	95,542	1,243,979	31,401	799,070
1915	126,943	2,043,049		
Corn—				
1916	258,332	12,717,072	51,441	9,043,424
1915	309,773	21,760,496		
Potatoes and Carrots—				
1916	139,523	7,408,429	34,411	5,858,594
1915	173,934	13,267,023		
Mangel-Wurzels and Turnips—				
1916	42,793	9,756,015	8,906	15,600,303
1915	50,799	25,356,323		

Other crops show as critical decline.

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

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



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Food
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ships are

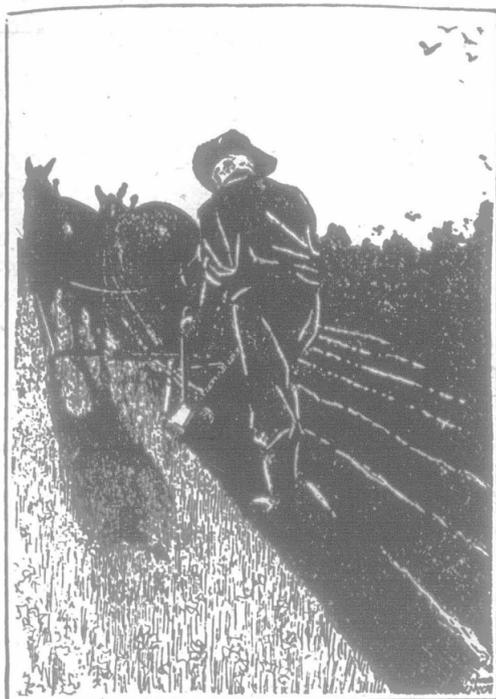
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Copyrighted by the International News Service, New York. —
—McCay in the New York American
THE SECOND-LINE TRENCHES

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

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

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

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

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

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

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

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



Copyrighted by E. S. McClure. —From the New York Evening Mail
HUNGER TIGHTENING HIS GRIP

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

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

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

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

**Organization of Resources Committee
Parliament Buildings, Toronto**

Chairman, His Honour, Sir John S. Hendrie, K.C.M.G., C.V.O., Lieutenant-Governor of Ontario; Vice-Chairmen, Honourable Sir William H. Hearst, K.C.M.G., Prime Minister of Ontario; N. W. Rowell, Esq., K.C., Leader of the Opposition; Secretary, Albert H. Abbott, Esq., Ph.D.

Food Production is the greatest Problem the World Faces To-day

Owing to destruction by submarines, ocean ships are scarce.

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

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

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

Why the Call to Canada is so Urgent

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

WE MUST PRODUCE MORE FOOD

WRIGLEY'S

THE PERFECT GUM

Let us make you acquainted with the new, luscious flavour—



It's all that the name suggests!

Wrigley quality—made where chewing gum making is a science.

Now three flavours

Chew it after every meal

Sealed Tight—Kept Right!

MADE IN CANADA

The Flavour Lasts

JF 11



Get it wherever confections are sold

The Comet Scuffler Increases Crop Production

It kills weeds rapidly, and saves many hours of hand hoeing. It increases the yield of potatoes, corn, roots and other vegetables by conserving the moisture they require.



Run this COMET SCUFFLER through your hoed crops once or twice a week, and note the plants thrive. The COMET is strong and durable. It is easily guided and does not run sideways.

Write to-day for illustrated catalog and prices.

PETER HAMILTON COMPANY, LIMITED
PETERBOROUGH, ONT.

THE VETERINARIAN

A valuable book which tells you about the treatment of diseases of your live stock, given FREE with a trial ton order of

LINSEED OIL CAKE

"Maple Leaf" Brand
Write to-day for lowest prices.
The Canada Linseed Oil Mills, Limited
Toronto and Montreal

SEED CORN FOR SALE

I still have a few hundred bushels of E-sex-grown seed, freight paid to clear. Bags free. 90 per cent germination. \$3.00 per bushel. White Cap, Yellow Dent, Imp. Leaming and Bailey.

Robt. W. Knister, Comber, Ontario

When writing advertisers will you please mention The Farmer's Advocate.

a letter, writes it over and over, searching for the right thing to say.

"It is you and I," he says finally, "who must stop these wars, these massacres of boys.

"Massacres of boys! That indeed is the essence of modern war. The killing off of the young. . . Fools and knaves politicians, tricksters and those who trade on the suspicions and thoughtless, generous angers of men, make wars; the indolence and modesty of the mass of men permit them. . . What needs to be said is that war must be put an end to, and that nobody else but you and me and all of us can do it. We have to do that for the love of our sons and our race and all that is human. War is no longer human; the chemist and the metallurgist have changed all that. My boy was shot through the eye; his brain was blown to pieces by some man who never knew what he had done. Think what that means! . . . "It is plain to me, surely it is plain to you and all the world, that war is now a mere putting of the torch to explosives that flare out to universal ruin. There is nothing for one sane man to write to another about in these days but the salvation of mankind from war.

" . . . I want to tell you quite plainly that I think that Germany, which is chief and central in this war, is most to blame for this war. . . I am persuaded that in the decade that ended with your overthrow of France in 1871, Germany turned her face towards evil, and that her refusal to treat France generously and to make friends with any other great power in the world, is the essential cause of this war. Germany triumphed—and she trampled on the loser. She set herself to prepare for further aggressions; long before this killing began she was making war upon land and sea, launching warships, building strategic railways, setting up a vast establishment of war material, straining all the world to keep pace with her threats. . . You did not want to unify the world. You wanted to set the foot of an intensely national Germany, a sentimental and illiberal Germany, a Germany that treasured the portraits of your ridiculous Kaiser and his litter of sons, a Germany wearing uniform and despising every kultur but her own upon the neck of a divided and humiliated mankind. It was an intolerable prospect. I had rather the whole world died."

And then he remembers that the mass of the German people were not responsible, wilfully, for the war. "Forgive me for writing 'you'," he adds, "You are as little responsible for that Germany as I am for—Sir Edward Grey. But this happened over you; you did not do your utmost to prevent it—even as England has happened, and I have let it happen over me."

He continues, then, about Britain, and France, and Belgium, and Serbia, and comes back to the British people. "We have been beginning that same great experiment that France and America and Switzerland, and China are making, the experiment of democracy. It is the newest form of human association, and we are still but half awake to its needs and necessary conditions. . . This age of the democratic republics that dawns is a new age. It has not yet lasted for a century. . . All new things are weak things; a rat can kill a man-child with ease; the greater the destiny, the weaker the immediate self-protection. And to me it seems that your complete and perfect imperialism, ruled by Germans for Germans, is in its scope and outlook a more antiquated and smaller and less noble thing than these sprawling, emergent giant democracies of the West that struggle so confusedly against it."

At the very last he comes back to the two lads, sacrificed to the war-Moloch that Germany, above all aspiring nations (and Mr. Britling does not excuse any one of them completely) pushed upon a throne. "Your boy, as no doubt you know, dreamt constantly of such a world peace as this that I foreshadow; he was more generous than his country. He could envisage war and hostility only as misunderstanding. He thought that a world that could explain itself clearly would surely be at peace. He was scheming always therefore for the perfection and propagation of Esperanto or Ido, or some such universal link. My youngster too was full of a kindred and yet larger dream, the dream of human science, which knows neither king nor country nor race.

HOMESEEKERS' EXCURSIONS



MAY 8th TO OCTOBER 30th
Every

TUESDAY

"ALL RAIL" - also by

THURSDAY'S STEAMER

"Great Lakes Routes"

(Season Navigation)

Your Future Is in the West

The fertile prairies have put Western Canada on the map. There are still thousands of acres waiting for the man who wants a home and prosperity. Take advantage of Low Rates and travel via

Canadian Pacific

Information from Canadian Pacific Ticket Agents, or W. B. Howard, District Passenger Agent, Toronto.

"These boys, these hopes, this war has killed.

With this I leave Mr. Britling Sets It Through.

But I should like to call your attention to a phrase in the portion I have quoted. Mr. Britling speaks of "a sentimental and illiberal Germany". I have often wondered just how much, with us all, mere sentiment is permitted to ruin things,—just to what extent we permit it to cloud over and hold back the things that pure reason would dictate. "Pure reason" sounds hard and cold, but it is not hard and cold. It is Truth, and nothing but Truth can eventually stand; mere sentiment, rosy though it may seem, must sooner or later shrivel and blacken before it. So let us look well to our thinking and our motives.

Mr. Britling says we are too modest and too indolent to stop war. He is right, but he might have added another "too", "too anxious to make money for ourselves." If all the common-people (who have to do the greater part of the fighting) all the world over, were to determine there should be no war, there would be no war. But everywhere we are too indolent to bother trying to understand things, or too busy making money to leave any time for it. We leave the manipulation of world-events to a few people at the head of each nation—and presently we find ourselves at war.

Of course it must be admitted that it is hard nowadays to make a living that most people have to keep grubbing away twenty-four hours in the day just to keep going.—But is there not just a possibility that if all the people everywhere took more time to understand things, and to use their one weapon, the ballot, making a living might not be so hard?—Think about that.

It all comes down to this—that our whole educational system is at fault. Everywhere in the world the children are taught wrong, chiefly by atmosphere and suggestion, and so the world suffers. They see everywhere worship of money and the things that money can buy—from fine clothes to political eminence (how often is a really poor man member of Parliament?) They are taught nationalism with religious assiduity, often by teachers who feel themselves performing a sacred duty in so doing. They hear Chinamen called "Chinks", and Italians, "Dagos". Almost never do they hear it said that our only reason for being here is that we may help the world and push things upwards. Not once in a twenty years, perhaps, do they hear of the "little brothers of the world" in lands other than our own.—What wonder if they grow up chauvinistic, puffed up with their own importance, intolerant of other nations, selfish? One of the curses of the world is that everywhere there is nationalism instead of internationalism, and in this, Germany, in her intense nationalism, has been perhaps the greatest offender.

It seems to me that the times will

FOR SALE

Odd Lots FENCING and Odd Size GATES

In the course of the year we find on our hands a large number of gates made wrong size by mistake, and also some sizes we do not now list.

We also, in the same way, accumulate a stock of odd-sized rolls of fence, and special styles.

The following is a partial list. We will mail a complete list to any fence or gate user applying.

Freight paid to Old Ontario stations on lots amounting to \$10.00 or over.

Order by lot number. Better give second choice Will divide lots when desired.

FENCING

The following excess amounts of fences made on special orders are first class and perfect in every particular. All No. 9 gauge, with stays 22 inches apart. All in 40-rod rolls.

LOT 1—300 rods, 8-bar, 32-inch hog fence, spacing 3-3½-4-5-7-7 inches at 45c. per rod.

LOT 2—350 rods, 7-bar, 44-inch, spaced 5-5½-7-8½-9-9 at 39c. per rod.

LOT 3—280 rods, 11-bar, 57-inch, spaced 2½-3-3½-4-5½-6½-7-7½-8½-9 at 62c. per rod.

The following fences are first class, but mostly in odd size rolls. These are all No. 9 gauge, stays 22 inches apart.

Lot	Rods	Wires	Height	Price Rod
4	29	5	37	\$0.30
5	40	6	40	.36
6	40	6	48	.35
7	40	7	44	.39
8	65	7	48	.41
9	40	9	36	.38
10	15	9	48	.50
11	10	9	51	.50
50	140	8	42	.47
Stays 12 inches apart.				
12	20	11	55	.60
13	10	10	48	.56
Medium Weight Fence.				
14	20	5	36	.26
15	29	6	42	.29
16	10	21	72	.75
51	240	8	40	.37

Lot	Rods	Wires	Height	Price Rod
Second Grade.				
17	20	5	37	\$0.25
18	10	6	40	.29
19	20	7	48	.35
20	80	7	44	.35
21	20	8	47	.39
22	15	9	48	.44
23	50	9	52	.44
24	20	10	48	.50

The following is No. 9 horizontals with No. 13 cross wires 8 inches apart.

Lot	Rods	Wires	Height	Price Rod
25	60	17	48	.60
26	10	13	42	.40

Victor Poultry Fence

This is No. 16 Gauge Galvanized Wire. Top and bottom No. 12. Uprights 6 inches apart.

LOT 28—30 rods, 23-bar, 58-inch, per rod, 49c.

LOT 29—30 rods, 15-bar, 36-inch, per rod, 35c.

LOT 30—20 rods, 17-bar, 48-inch. This lot has been unrolled, and is loose, but it is serviceable and cheap at 30c. per rod.

Acme Poultry Netting

45.....24-inch, per 150-ft. roll, \$2.50

LOT 46—1,000 lbs. No. 9 Coiled Wire. This has an occasional rust spot. Price per 100 lbs., \$3.70.

GATES

The following gates are first class, but are mostly odd size or odd style, or an overstock.

The first dimension is the space between posts the gate will fill. The second is the height. Prices include hinges and latch. Can supply any two fitted as one double.

Lawn Fences

Remnants of from 20 to 50 feet. Not painted. Will paint white or green for 2c. foot additional.

LOT	Style	Price per foot
31	30-inch, per foot	\$0.07
32	36- " " "	.09
33	42- " " "	.10
34	48- " " "	.11

LOT	Style	Price per foot
35	18-inch, per foot	\$0.06
36	30- " " "	.08
37	36- " " "	.10
38	42- " " "	.11
40	66- " " "	.20
41	72- " " "	.23

LOT	Style	Price per foot
42	36-inch, per foot	\$0.11
43	42- " " "	.12
44	48- " " "	.14

No. on Lot.	Hand.	Length.	Height.	Style.	Price each
53	2	2 ft. 6 in.	30	Page	\$1.50
55	3	2 ft. 6 in.	42	Acme	1.85
56	2	1 ft. 6 in.	34	Climax	1.25
60	2	5 ft. 6 in.	36	Page	2.50
62	4	5 ft. 6 in.	36	Acme	2.50
64	2	5 ft. 6 in.	48	Page	3.25
67	2	6 ft. 4 in.	30	Acme	2.50
74	12	4 ft. 6 in.	57	Page	2.50
75	2	3 ft. 6 in.	57	Acme	2.25
76	2	4 ft. 0 in.	57	Acme	2.50
80	3	5 ft. 0 in.	36	Acme	2.50
81	5	4 ft. 6 in.	36	Acme	2.25
82	2	4 ft. 6 in.	57	Acme	2.50
85	2	12 ft. 0 in.	36	Acme	4.50
89	15	4 ft. 6 in.	36	Page	2.50
90	3	4 ft. 0 in.	36	Page	2.50
92	2	4 ft. 6 in.	42	Page	2.50
95	6	9 ft. 0 in.	48	Page	3.25
97	13	7 ft. 0 in.	48	Page	3.50
98	2	8 ft. 0 in.	42	Page	3.00
100	3	11 ft. 0 in.	42	Page	4.75
102	18	6 ft.	42	Page	2.50
103	3	8 ft. 0 in.	40	Acme	3.00
108	3	8 ft. 0 in.	36	Climax	3.00

THE PAGE WIRE FENCE COMPANY
LIMITED.

Walkerville, Ontario



Can You Make a Good Pie?

Henry Ward Beecher once discoursed on pie crusts: "Let your paste be not like putty, nor rush to the other extreme and make it so flaky that one holds his breath while eating for fear of it blowing away. Let it not be plain like bread nor yet rich like cake."

Can you make a good pie? Watch the eyes of the man of the house—do they snap and sparkle when you bring on this favorite dessert? Handle your pastry gently. Keep the materials of your pie cold. Sweeten your fruit filling with Dominion Crystal Sugar and—be sure your oven is hot when you pop in your cold pie.

Dominion Crystal Sugar

DOMINION CRYSTAL SUGAR is an important consideration in successful pie making. Every sparkling crystal of concentrated sweetness is absolutely pure—every step of its manufacture is safeguarded with unceasing vigilance.

DOMINION CRYSTAL SUGAR adds to the natural deliciousness of pie fillings—sweetens tart fruits without destroying their fresh, fruit flavor.

DOMINION CRYSTAL SUGAR is the only sugar that may rightly be called "Canadian from the ground up."

We do import the finest of raw cane sugar and refine it. But our pride is in the product we make from Canadian sugar beets—its use is dictated by good judgment as well as patriotism.

Dominion Sugar Co., Limited
Wallaceburg Chatham Kitchener



POULTRY AND EGGS

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

A FEW BARRON COCKERELS S.-C. WHITE Leghorns to clear quickly, worth \$5.00 each will sell at \$1.00 each. This is a bargain. Eggs from everlasting layers \$1.00 per setting; \$5.00 per 100. Write, W. Darlison, Brantford, Ont.

BLACK SPANISH BRAHMAS, WHITE Leghorns, Hamburgs, White Guineas, Pearl Guineas, Bourbon Red Turkeys, bred right, priced right. Send stamp for mating list. John Annesser, Tilbury, Ont.

ANNESSEY'S 200-EGG STRAIN INDIAN Runner ducks. Lay more, eat less, more profitable than chickens. Send for circular and price, John Annesser, Tilbury, Ont.

ANCONAS, WINNERS AT OTTAWA; WHITE Wyandottes, bred-to-lay; R.-C. White Leghorns, headed by 1st Ontario cockerel; S.-C. White Leghorns, choice stock; eggs \$1.50 per setting. Peterson Bros., Warkworth, Ont.

BLACK MINORCAS—ROSE AND SINGLE comb, one dollar per setting. Prompt delivery. Fred Reike, Camperdown, Ont.

BRED-TO-LAY SINGLE-COMB WHITE LEG- horns. Pullets have laid continuously since five months of age. Eggs, one dollar per fifteen, four dollars per hundred. Addison H. Baird, R. R. 1, New Hamburg, Ont.

"BEAUTIFUL" WHITE ROCKS—LAST season's best layers; proven by trap nest to be worth-while pullets. These are mated to a son of 1st Ontario cock, '16.—A splendid pen, with show-room and trap nest in its make-up. Eggs at \$2 per 15. J. A. Butler, M.D., Newcastle, Ont.

BUFF ORPINGTON—HATCHING EGGS \$1.00 for 15. Nine chicks guaranteed. Extra heavy layers and silver cup winners. Hugh A. Scott, Caledonia, Ont.

BARRED ROCKS—PURE-BRED, HEAVY layers, \$1 per 15. L. S. Cressman, Hillcrest Farm, R. R. 1, New Hamburg, Ont.

CLARK'S FAMOUS BUFF AND WHITE Orpingtons; exhibition and laying strains; 18 years a specialist; 20 breeding pens Toronto National and Ontario Guelph Show winners. Eggs, \$2, \$3 and \$5 per setting. Grand utility laying strains, \$1.50 per 15; \$4.00 per 50; \$7.00 per 100. O. A. C. bred-to-lay Barred Rocks, direct from college best strain, \$1.50 per 15; \$4.00 per 50; \$7 per 100. Mating List free. J. W. Clark, "Cedar Row Farm," Cainsville, Ont., R. R. No. 1.

EGGS FOR HATCHING—SINGLE-COMB Brown Leghorns from imported stock, mated with vigorous cockerels; very persistent layers, getting 160 eggs daily from 220 hens. Price \$1 per 13; \$2.25 per 40; or \$5 per 100. W. C. Shearer, Bright P. O., Ont.

FAWN AND WHITE INDIAN RUNNERS, select matings; wonderful winter layers. Also Rouens. Fertile eggs, \$1.00 per 12. Ernest Howell, St. George, Ont.

GUILD STRAIN BARRED ROCKS; REAL winter layers. Eggs, \$1.50 per fifteen. Jas. O. Hunter, Route 1, Mt. Elgin, Ont.

MAMMOTH BARRED ROCKS. WE HAVE bred for heavy weight and persistent laying qualities, and we think we have succeeded. Eggs from three choice matings. John Annesser, Tilbury, Ont.

MUSCOVY DUCKS, AND EGGS FOR HATCH- ing. Apply J. A. Tancock, R. R. 1, Hyde Park, Ontario.

A. A. C. BRED-TO-LAY, SINGLE-COMB White Leghorn eggs, \$1.00 per setting of 15 eggs, \$4.50 per 100 eggs. Day-old chicks, 15c each. R. J. Graham, Saint Williams, Ont.

PRIZE-WINNING S.-C. WHITE AND BUFF Leghorns, \$5.00 a trio. White Wyandotte eggs, \$1.50 per 15. Leonard Foreman, Box 884, Collingwood, Ont.

SINGLE BARRED ROCKS, PURE-BRED trap-nest, heavy winter layers. Beauty and utility combined. Setting, \$2.00. 100% fertility guaranteed. Book order now. Particulars, F. Oldham, Barryfield, Kingston, Ont.

LEGAL DORCAS WHITE WYANDOTTES— New York State Fair Champions. Hatching eggs, \$3 and \$5 per setting. Send for free illustrated catalogue. John S. Martin, Drawer F., Port Dover, Ont.

SILVER-GRAY DORKING EGGS FROM Canada's best flock; \$3.00 per 15. Gordon Burns, Paris, Ont.

SELECTED PEN, SILVER-LACED Wyandottes. Eggs, \$1.50 per 15. S. H. Gunby, R. R. 3, Campbellville, Ont.

SINGLE-COMB WHITE LEGHORNS. Barred Rocks. Eggs, \$1.50 for 15 extra heavy layers, winners at Hamilton, Waterloo and Caledonia. Ten chicks guaranteed. Herb. Berscht, Caledonia, Ont.

SILVER CAMPINE AND WHITE Wyandotte eggs and chicks for sale. Winners of 36 prizes and a silver cup in 1916. Clark Bros., 127 High Street, London.

"SNOWFLAKE" S.-C. WHITE LEGHORNS, quality; quantity. Eggs, \$2.00 fifteen; \$6 per hundred. F. W. Burt, Paris, Ont.

WHITE WYANDOTTES A VERY CHOICE lot, exceptionally well-bred. Eggs \$1.50 per 15. Herbert German, Paris, R. R. No. 1, Ont.

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

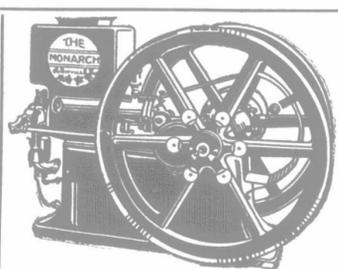
Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—A FEW VERY PROMISING Scotch Collie Pups; pure-bred; ready for shipment. Apply Uria Cressman, R. R. No. 1, New Hamburg, Ont.

PEDIGREED SCOTCH SABLE COLLIES, ready for shipment. Buy brains and beauty combined. George C. Burt, Hillsburg, Ont.

VETERAN LAND WARRANTS FOR SALE. Clear title. No homestead duties. If going west, write J. Shoemaker, 23 Fourth, Ottawa, Ont.

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Give us a trial order for groceries, root seeds, buggies, wagons, implements, oats and all mill feeds. Prices given on application.

As anticipated, there is a great scarcity of certain brands of flour, and prices have advanced rapidly during the last week.

United Farmers' Co-operative Co. Limited
Cor. King and Francis Sts., Toronto

not be right until, everywhere, in the schools and in the homes, a completely different foundation has been laid. When we learn to value work for the sake of the work rather than for its cash value; when we learn to forget boundary lines; when we begin to live in small houses notable for their artistic qualities rather than for the expenditure in money upon them; when we put the artistic and the intellectual everywhere ahead of possessions, and refuse to be forced into lavish and constant expenditure by the manipulations of manufacturers trying to sell goods; when we recognize that the best thing in the world is useful work, and that one kind of honest work is as good as another; when we aim at real culture—not *kultur*—for all the people; when we find out that only character counts, and learn to point out the best and wisest among us as the greatest among us;—when we come to all these things, then, without any question, there shall be no more war.

"Hoots!" says one, "Then we'll have the millennium!"—Well, what are we here for, if not to hurry the millennium? One thing sure—if nobody tries there will be no progress. It is only by trying that advancement is ever made, and the more that try the more speedy the advancement. Surely, as Wells points out, no trying can be too much, were it only to stop the possibility of war and the senseless massacre of the boys of the future.

On the bulletin board this morning appears this notice: "Chinese Governors favor entering war with Germany."

One wonders what is the real reason at the back of that. One thing is evident—the incentive of the great number who are sweeping to the front to-day to oppose the Teutons, is the vague hope that this war may end militarism forever. One learns that by talking with the boys in khaki.—Perhaps that, too, is the object of the Governors in China.

True, the Chinese president has his picture taken in military uniform: True, spruce Chinese troops are being trained throughout the great Republic. Upon account of these things many have feared a "yellow peril." At the same time it cannot be forgotten that until very recently the soldier in China was looked upon as among the lowest of the people. Chinese religion has never glorified war, and in the hearts of the 450,000,000 inhabitants there must be still more or less a prejudice against it. If China is becoming militaristic it is because western nations, by repeated aggression, have forced it upon her.—But perhaps—perhaps—China wants to enter the war against Germany because she sees a chance of killing, "not scotching," the snake of militarism. For yes—yes—the snake was most alive in Germany. Very few of us have forgotten that when, a few years ago, Britain, with Winston Churchill as her spokesman, proposed limitation of the armaments of all nations, it was Germany that refused.

And yet, the question comes up: Can war ever end war? Can anything end it but education against it, world union, world determination?

It seems impossible to keep from harking back and back to the war. I hope you will forgive me.

JUNIA.

The Beaver Circle

Senior Beavers' Letter Box.

Dear Puck and Beavers.—As I saw my last letter in print I thought I would try my luck again. Here in Lambton we are having a new school built. I think it will be very nice. We expect to get in it after the summer holidays in September. It is a two-story one with two rooms on each floor; they are quite a size. I guess I will have a year or two in it. I am now in the junior fourth. I have read quite a few books. Some are: "Andy Grant's Pluck," "Boy Scouts to the Rescue," "Boy Scouts Fire-Fighter," "Mildred Keith," "Mildred at Home," "Little Women and Good Wives", and a lot more.

I hope the w. p. b. is not hungry. I will close with some riddles:

As round as the moon as black as a coon with a tail.

Ans.—A frying-pan.

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When is a rock not a rock.
 Ans.—When it is a shamrock.
 What would you do if you got tired of Eaton (eating)?
 Ans.—Go to Simpson's.
 What would you do if you got tired of the World?
 Ans.—Take the Star.
 Lambton Mills, Ont. JEAN BELL, (age 13.)

Dear Puck and Beavers.—As I have never written to your Circle before, I thought I would write. I have read a great many books: "Rob the Ranger", "Wild Animals", "Tom Swift's Books". These are all excellent books to read. I wish one of the Beavers would tell me the answers to these riddles:
 1. As I was going over London Bridge I met a little boy crying; I asked him what was the matter. He said his mother dyed on Saturday and went to church on Sunday.
 2. What only letters of the alphabet would be late for dinner if all were invited?
 I hope the w. p. b. isn't hungry.
 FLORENCE HYNDMAN, (age 12).
 West Lorne, Ont.

Dear Puck and Beavers.—Here come your two cousins again. We are glad summer is coming as there wasn't much skating last winter. Our cousin is here for her holidays; her name is Mary Gascho. We are having some high times. We were hoping the rabbit would not forget the rest of the Beavers; he didn't forget us. We are great book worms. Some books we have read are: "Darkness and Daylight", "Mounds of Gold", "A Wicked Girl", and many others too numerous to mention. My other cousin has read "Beautiful Joe", "Aladdin and His Wonderful Lamp", "Forty Thieves" and many others. Will close with some riddles.
 1.—I haven't got it and I wouldn't like it, but if I had it I wouldn't give it for ten thousand dollars.
 Ans.—1. Baldhead.
 2. Twenty sheep on a gap, twenty more on top of that, six and seven twice eleven, two and three how much is that?
 Ans.—2. Five.
 We hope the waste paper basket is full of eggs so there is no room for this letter. With love to all, wishing some Beavers our age of fourteen would correspond with us. Our addresses: MISSES MARY AND MADELINE WAGLER.
 Millbank, Ontario.

Dear Puck and Beavers.—I thought I would write to you, for I like reading the other letters in the Advocate. My father has taken the Advocate for about eight years. I go to school every day, and like going; my teacher's name is Miss Campbell. I have not very far to go to school. There are sixteen going to our school. We have four trying their entrance. I am going to try for the senior fourth at holidays. Our teacher gave each of us five bulbs each the names are: crocus, snowballs, tulip, jonquil and narcissus. Mine all came out but the crocus and the narcissus.
 The 164th battalion went away on the second of April. Isn't this a terrible war? I wish we would win. By looks of things now they are cleaning up the Germans. Some of the books that I have read are—"Elsie Books", and some of Mildred's books and others. We have a rural school fair here every year. I have not been to one yet but would like too. Well I guess I will close.
 I would like someone to write to me.
 LAVINA DUFFY, Age 12, Jr. 4th class.
 R. R. 4, Grand Valley, Ont.

Dear Puck and Beavers.—It is quite a while since I have written you a letter but I have been a silent reader of your charming circle.
 I go to school at the Continuation school in West Lorne. I am in the first form. There are about twenty-five in the class. We have a rink on which we skate nearly every night we can. We have also a lot of fun playing hockey. I saw in one of the letters where a Beaver thought we should describe ourselves so I will describe myself. I have black hair, blue eyes, and a few freckles on my nose. I am a little over five feet tall and weigh ninety pounds. Well I guess I had better not make this letter too long or the w. p. w. will be on the watch, so I will close.
 ROBERT RYRLEY.
 West Lorne, Ont. Box 111.
 P. S.—I wish some Beavers would write to me.

Dear Puck and Beavers.—I received the book entitled "The Secret Garden". I never read it before, so it is entirely a new book to me.
 I always look forward to the Advocate coming. I run to meet the mail man the night I think it will be there. The first thing I do is look for the Beaver Circle. When it is not in, I am greatly disappointed.

I am not going to school at present, as the roads are bad, and I have two miles to go. I will be glad to see the spring come, as it has been such a long winter. I remain a little friend to the Beaver Circle.
 JEAN GILCHRIST.
 Shanty Bay, Ont.

Dear Puck and Beavers.—This is my second letter to your interesting Circle. I did not see my last letter in print, but had courage enough to write again. My father has taken the Farmer's Advocate as long as I can remember, and we like it fine. Our teacher's name is Miss Clemens; we all like her fine. I have about half a mile to go to school, and about a third of a mile to church. I am in the junior fourth class at school. I think I will try my examination this year. I have read quite a few books; some are: Little Women, Good Wives, Beautiful Joe, Black Joe, and a quite a few others. I don't think I will pass my exams. this year, because I cannot remember my grammar. Well, I will close with a few riddles and wish the Beaver Circle every success and Puck too.
 1. The poor have it, the rich want it, the miser spends it, and the spend-thrift saves it.
 Ans.—Nothing. Girls you want to make your parents guess that.
 2. What makes more noise under a gate than one pig?
 Ans.—Two pigs.
 Hope the w. p. b. has had its dinner and is full.
 MONA BESS MIDDLETON.
 (age 11) Jr. IV. class.
 R. R. No. 2, Merlin, Ont.

P. S.—I would like very well if some of the Beavers would write to me, and I will write to them.
 Spring.
 Oh, see the snow is nearly gone!
 The little buds are swelling with new life,
 The sparrow twitters to his new found mate;
 And grass is turning green close by the gate.
 The storm clouds fade away in haste,
 And really can't resist the pressure of a springtime breeze;
 Who could mistake such signs of spring as these.
 Oh, hear the noisy crow in meadow caw!
 Oh, hear the herald robin once more sing!
 For these are all God's creatures everyone,
 God's messengers of spring.
 And yet some strains of music I hear not,
 That last year came from every marshy vale,
 I wonder if the frog has now forgot;
 But, no I hear his notes break in once more.
 And blackbirds from some lofty spruce,
 Their presence soon make known,
 And every bird when nesting time comes near,
 For each dry twig and straw make use.

The farmer guides his plough with steady hand,
 And cattle graze upon the sunny hill,
 And everything is full of life and joy,
 For nature's creatures are exulting o'er the land.
 Written for the Beavers by,
 CHARLOTTE E. CARMICHAEL.
 R. R. No. 3, Ilderton, Ont.
 Dear Puck and Beavers.—This is my second letter to your charming circle. I did not see my last letter in print, but I saw my name in the honor roll.
 I go to school almost every day and I like everything I study except Geography and Grammar.
 Our teacher's name is Miss Black, and we all like her fine. I think she is the best teacher I have had.

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 The original brand with a 30-year reputation behind it. Every sheet true and uniform and heavily galvanized. A post card will bring you particulars
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A man said to us the other day:
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 Write for our booklet entitled "Profits from Savings." It shows you how to save and how to make your savings earn good profits with safety. Write for it now.

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Talk No. 1.—*The Value of Permanence*

THE name "MASSEY-HARRIS" stands for Stability, for Permanence, for Reliability. From a very small beginning *seventy years ago*, the business has steadily grown until now four large Canadian factories are kept busy supplying High-Grade Farm Implements to thousands of farmers all over the grain-growing world.

This steady growth has been due entirely to the fact that Massey-Harris Implements have given satisfaction—not only for a few years but for many years. We have in our office testimonials and photos of Massey-Harris Implements which have been in use for twenty to twenty-five years and *still doing good work*.

The experience gained in these seventy years of supplying progressive farmers of Canada and other lands with implements, and the knowledge secured by our large force of field experts who are constantly studying the farmers' needs, combined with our splendid facilities for manufacturing, enable us to produce a line of Farm Implements known the world over for their reliability.

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AGENCIES EVERYWHERE

I trapped a few skunks this winter and I am going to try to trap some more now, as they are a good price.

We had our first thunderstorm yesterday, but it did not last long. The snow is almost gone up here now, and almost everything is flooded. (Written March 27th.)

Well I guess I will close now, hoping the Beavers every success.

I remain your loving Beaver.

BERT WILSON.

R. R. 3, Warton, Ont.

P. S.—I wish some of the Beaver boys



THRESHERMEN

Read This!

Best 2-inch wire-lined Suction Hose in 15-, 20-, and 25-ft. lengths. Our price, 37c. per ft.

Write for our Illustrated Catalogue "Engineer's Bargains" Also General Supplies for Farmers

Windsor Supply Co. Windsor, Ont.

would write to me from New Ontario and tell me about themselves. B. W.

Honor Roll.—Harriet Greenlees, Lulu Greaves, Elsie Moore, Jack Code, Mary Cartwright.

Honor Roll.—George Hilts, Inez Barrer, Shirley Quinn, Milton Cook, Violet Tannahill, Cameron Edgar.

Beaver Circle Notes.

Letters written by Wilda Thompson and others have to be omitted because written on both sides of the paper.

Harriet Greenlees, (age 12), Alliston, Ont., wishes some of the Beavers to write to her. Also Mary Cartwright, R. R. 1, Londesboro', Ont.

Minnie Graham, R. 1, Corrie, wishes Nellie Bell to write to her.

Several Beavers have sent Arithmetic questions to be solved. As we do not wish the Beaver Circle given over to figures we ask that such questions be referred to "the teacher".

Several letters had to be left out because written on both sides of the paper, which is very awkward for the very busy printers.

Riddles.

Pray tell us, if you can,
Who is that highly favored man,
Who, though he's married many a wife
May be a bachelor all his life?

Ans.—A Clergyman. Sent by Norman Getz, Killaloe, Ont.

Where do you go on your twelfth birthday?

Ans.—Into your thirteenth year. Sent by Janet French, Gormley.

It's in mountains, not in hills,
It's in meadows, not in fields,
It's in me but not in you,
It's in men and women too.

Ans.—The letter "m". Sent by Ida Kennedy, Thorndale, Ont.

Sweet Peas.

Watch, and you'll see Mistress Mary go
Into her garden, with spade and hoe,
And a puckered brow and a dimpled cheek;

She really is too busy to speak.
For this is the very day, if you please,
When Mistress Mary must plant sweet peas.

Watch, very carefully, and you'll see
How she makes a hole for each little pea;
Drops one in here and one in there,
And smooths them over again with care.
It isn't so easy, whatever you say,
To plant sweet peas in the proper way.

Watch! You'll see something she doesn't know!

There, on the wall, sit the birds in a row,
Chirping and peeping, and trying to say,
"We'll eat up those peas when she goes away!"

But, perhaps, they only just mean to tease;

They wouldn't, surely, eat Mary's peas!

Junior Beavers' Letter Box.

Dear Puck and Beavers.—This is my first letter to your charming circle. My father has taken the Farmer's Advocate as long as I can remember. Our school is just across the road from our farm. I go to school every day. Our teacher's name is Miss Macleach; we like her fine. I suppose some of the Beavers went away for their Easter holidays. How many eggs did you eat for Easter? I ate three. We tapped about fifty trees this spring and made a little syrup. We had sugar and taffy each time we boiled. We had some little lambs the other day; one died. I have read a few books—Lamplighter, Black Beauty, Grim's Fairy Tales and a few others. As my letter is getting long I will close with a few riddles.

What is the oldest piece of furniture in the world? Ans.—A multiplication table.

What day in the year is commanded to go ahead? Ans.—March fourth, (forth.)

When a boy falls into the water what is the first thing he does? Ans.—He gets wet.

I hope the w. p. b. is killed at the war before my letter arrives.

DORTHY HENDERSON, age 10.

Strathroy, Ont., R. R. 5.

Dear Editor.—This is my second letter to your paper. I saw my letter in print the last time I wrote to you and it gave me courage to write another letter.

For a pet I have a dog. He is a water-spaniel and can swim well. He is not a good cow dog. We have a big pig. Sometimes I get on her back and have a ride. I have not much to say this time so I will close with a riddle.

A man killed four cats, three pigs and two lambs. How many lives were lost? Ans.—Forty-one. Because every cat has nine lives.

I remain your friend.

J. LLOYD WAGG.

Tekkumiah, Ont.

Dear Puck and Beavers.—I have a pet dog named Sport. I have a twin sister

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You'll Just Love This House Dress!

The very latest thing—a 2-piece Breakfast Set or House Dress—made of fine dark blue cambray. The middie is coat style, with large collar, 2 pockets, and long belt, prettily piped with bias-striped material. Buttons are of deep sea pearl. The skirt is cut very full and long, closed with 2 buttons at front, also tape that can be drawn to any size desired at the waist.

To introduce this House Dress, we are offering it at the very attractive price of \$1.85, and with each order we will send, absolutely free, a neat, sensible, dust cap to match the dress. This dress would cost far more than \$1.85 at any of the big city stores. We give you the entire 3-piece set for the price of one.

We might not be able to make this offer again, so don't delay, but write to-day. Remember our usual unreserved guarantee is behind this offer. If you are not entirely satisfied with the dress in every way, we will cheerfully refund your money with return charges added.

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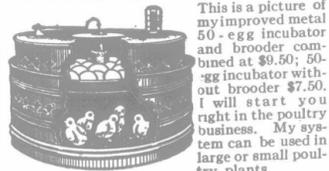
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KITCHENER, CANADA

named Mary. I am in the first class. My teacher's name is Miss Gale. I go a mile to school. I was six years old last November. Grandpa died last January; he was eighty-three years old. Aunt Effie died last January, she was one hundred years old. Papa tapped the trees last Friday, good-bye.

TILLIE McCORMICK.

Parkhill, Ont.

Dear Puck and Beavers.—I am writing this letter for the first time. My father has taken the "Farmer's Advocate" ever since he was married and grandpapa took it before him.

I live on a 200-acre farm. I have a mile and a half to go to school. My teacher's name is Miss Fielder, and we like her fine. I am in the Jr. Second Class. We have a library in our school and I have read quite a few books out of it. I have two sisters and three brothers. I guess I will close for this time. Wishing the Beaver Circle every success. Hoping this will escape the w. p. b.

ELLEN COSH, (age 8).

Bobcaygeon, Ont.

Dear Puck and Beavers.—This is my first letter to your charming Circle. My father has taken the Farmer's Advocate for a long time. I go to school every day I can. I like to read the letters. I am in the Primer book, and do the junior first arithmetic. The teacher says I am going to beat them all in the class. My teacher's name is Miss Elliot. I hope to see this letter in print. I will close with some riddles.

1. Old mother Twitchet has but one eye, and a long tail which she lets fly, and every time she goes through a gap, she leaves a bit of her tail in the trap.
Ans.—A needle and thread.

2. Black and white and red (read) all over.
Ans.—A newspaper.

MURRAY G. KERNIGHAN, (age 7).

R. R. No. 4, Goderich, Ont.

Dear Puck and Beavers.—It is a long time since I have written before, but I read the letters of the Beavers all the time. I have written three letters before and all were published. So I am writing again. My father takes the Farmer's Advocate and finds many useful things in it. I go to school every day I can. Our school is made of red brick, and was built a year and a half ago. There is a class room, basement furnace room, cloak rooms and the teacher's room. We got a new teacher at New Year's, and we all like her fine. I am going to try for the Senior Third on the twenty ninth and thirtieth of March. One Advocate reader at Rockwood wrote to me, and I answered her, but I guess she failed to get my letter, as I did not receive another letter from her. I would like her to answer. Well, I guess this is long enough. Hoping the w. p. b. is visiting when this arrives.

LOUISE FRASER, (age 11).

Bluevale, Ont.

Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous

Adjoining Land Owners.

1. A has land at west end of lot and only road out is through B's farm which was left in will. B always had a gate at east end of his farm till five years ago when A tore it down and said he would never shut it. Can B force A to close road gate or fence one side of lane?

2. Can A cut a notch in B's corner post and use it for his anchor post with out B's permission?
Ontario.

Ans.—1. We cannot tell without seeing the will in question, and probably also title papers.

2. Yes, if the corner post is partly on A's land; otherwise not.



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Even though you are not in the market for a separator to-day, drop us a line so that we can send you full information about this high grade machine. It may save you money.

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Sent free for one month's trial.

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dealer in your town show you the many exclusive features that make this the peer of all sound-reproducing instruments. Has tone-control pipes to absorb all blurring, scratching noises; concealed crank; made in many different styles of wood, finish and sizes. Plays all disc records.

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

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

Gossip.

Holsteins and Yorkshires at Clontarf.

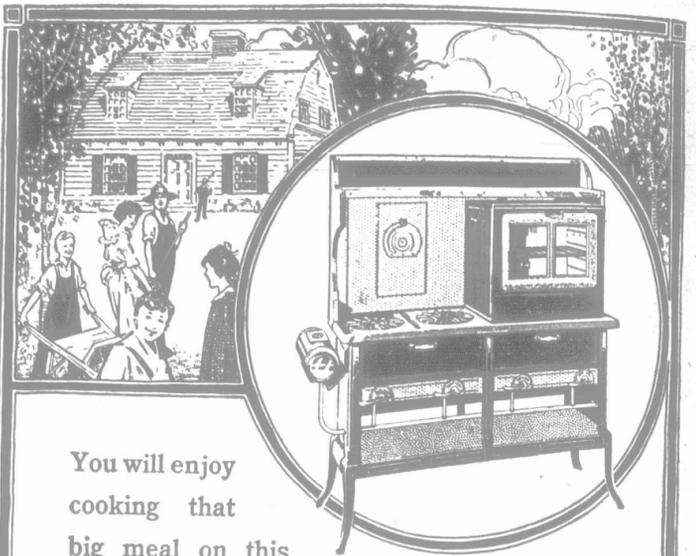
Manning W. Doherty of Clontarf Farm, near Cooksville, Ont., is offering as special a couple of well-bred young Holstein bulls. Both are choice individuals and of serviceable age. They are out of Mr. Doherty's best record cows, and are sired by his own herd sire, May Echo Segis De Kol whose sire, May Echo Lyons Segis, is out of Lawncrest May Echo, a daughter of Inka Sylvia Beet's Posch, the sire of May Echo Sylvia, the world's champion milk cow. There is at present also an exceptionally good lot of Yorkshires for sale including a few litters ready to wean, as well as breeding stock of serviceable age, both sexes. Full particulars may be had by writing Mr. Doherty at once. His post office address is Malton, Ont., R. R. 2.

Some Good Records at Low Banks.

There is probably no herd in Eastern Ontario that during the past few weeks, has been making more rapid strides toward record production than the Low Banks herd of pure-bred Holsteins owned by K. M. Dalgleish of Kenmore, Ont. With a number of mature cows Mr. Dalgleish has just finished testing 10 daughters of his senior herd sire, Fairview Korndyke Boy, which is a son of Pontiac Korndyke, and these have made the splendid average, at an average age of 2 years and 17 days, of 19.64 lbs. of butter and 436.2 lbs. of milk for 7 days. Low Banks Korkje Korndyke, at 2 years and 1 month, was highest with 23.15 lbs. of butter and 486.7 lbs. of milk for the 7 days and also came along with 45.32 lbs. of butter and 993.6 lbs. of milk for 14 days. Low Banks Lady Korndyke, age 2 years and 7 months, came next with 22.57 lbs. of butter and 444.8 lbs. of milk in 7 days, and 41.52 lbs. of butter and 808.4 lbs. of milk in 14 days. Low Banks Korndyke Paxton, at 2 years and one month, was the lowest with 17.50 lbs. of butter and 444 lbs. of milk in 7 days, and the entire lot made an average of 62.3 lbs. of milk per day. It is doubtful if there is another sire in Canada whose first 10 daughters to freshen average so well. Four of these, including the two highest record daughters, have bull calves which are now advertised for sale and these are sired by the junior sire, "Sir Echo", which is a son of Inka Sylvia Beet's Posch, the sire of May Echo Sylvia, the world's champion milk cow, and whose dam is the great May Echo, which made 31.34 lbs. of butter in 7 days at 11 years of age. A closer combination of May Echo and Pontiac Korndyke blood cannot be found than have these young bulls that with a number of others equally well bred make up Mr. Dalgleish's present offering. The others mentioned are from the more mature cows in the herd including such cows as Hester Pietje Netherland, 30.17 lbs.; Avondale Lady Pietje, a 24-lb daughter of Prince Hengerveld Pietje, and Paul De Kol Aaggie Queen 5th, which has just completed a 21-day record of 90.42 lbs. of butter and 20.20 lbs. of milk, while her 14-day record was 61.40 lbs. of butter and 1,384.3 lbs. of milk, and her 7-day record, 31.23 lbs. of butter and 707.7 lbs. of milk, her highest day's milk being 104 lbs. All these mentioned with the exception of the latter cow have bulls sired by Fairview Korndyke Boy, while she has a 3-months bull, by the May Echo sire. Mr. Dalgleish has been fortunate in getting bulls this year from all of his best record cows and they are going out quickly. The last calf mentioned is of about the strongest breeding we know of to-day at a moderate price. It will pay those in need of something choice to get full particulars regarding the Low Bank's offering at once.

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

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



You will enjoy cooking that big meal on this family size oil range. Everything so convenient. Each burner controllable to any desired heat. Equipped with the perfect-baking "Success" oven. Booklet free.

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Boy and girl agents make good pocket money

If you start getting new subscribers for the Farmer's Advocate and Home Magazine, and keep your profits together as you go along, you will soon have a nice little sum to buy the things you want.

- Vera Costello, aged 11, has made \$17.00 to date.
- Leonard Annett made \$10.00.
- James McGrogan made \$8.00.
- Norman Wilson, aged nine, made \$7.50.

These are just a few of our agents. We have over 300 altogether, and there is room for you, if you are willing to give the work a good trial.

You start out among your friends and neighbours, getting NEW subscriptions at \$1.50 a year in advance. We allow you a profit on each one, and send you a special money prize as soon as you have got ten NEW subscriptions.

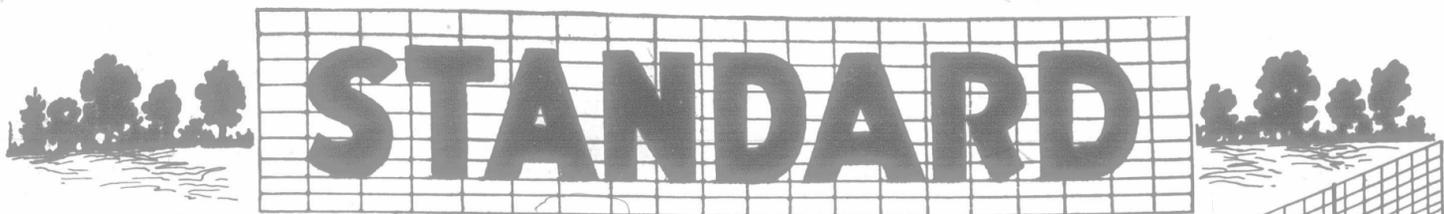
By writing away to relations and people you know through the country, you soon have a good list of subscriptions, and everyone you get will be glad they took the paper, on account of its value to them and the way it helps them to better farming. If you are willing to work earnestly at this in spare time, we want you to send in the coupon and let us get you started.

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it's made to last
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With less than one man per 100 acres for farm work you've got to use labor-saving, money-saving materials, and yet such necessary work as fencing must be done. Your crops must be protected. Here's where Standard Fencing and Steel Tube Fence Posts fit in big.

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Set a man and boy hammering in Standard Posts—rough ground or smooth—and they will do more work, quicker and better work than a gang of four, digging holes and putting in wooden posts. Why, it's just like driving in tent pegs! No back-breaking labor digging post holes, and you get a time-proof, storm-proof, decay-proof, CHEAPER job, at that. Standard Posts are a long way cheaper and better than cedar.

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Our Fence Hooks (supplied free) have a wonderful grip.

Sounds big, but good these days of labor scarcity, doesn't it? That's the Standard way, however. Use Standard Fence, and you get a heavy, solid, time-proof structure. It is all No. 9 gauge, Government Standard, high carbon steel wire, tough and springy, perfectly woven, therefore, easily and quickly put up. The tests Standard Fencing gets both before, during and after weaving are such you would wonder any fence could stand them. The galvanizing is specially thick and strong for greater protection against rust.

**STANDARD STEEL TUBE FENCE POSTS
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The popularity of Standard equipment is going up by leaps and bounds. Only one reason: Merit! Farm labor used to be cheap and often plentiful—to-day you have to do the work yourself or use "green" help. Standard goods are made for just such an emergency. Anyone who can drive stakes can drive in Standard Posts. Anyone with an ounce of gumption can stretch Standard Fence. These are not random statements. Thousands of "Standard" users will confirm them.

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Dear Sirs,—I have your favor of the 2nd regarding the steel tube fence which you sent us, and I am pleased to say that Standard Posts have given very good satisfaction indeed. We have used them almost entirely in connection with our sheep pasture, and they have proved satisfactory for this purpose.

Yours very truly,

(Signed) G. E. DAY.

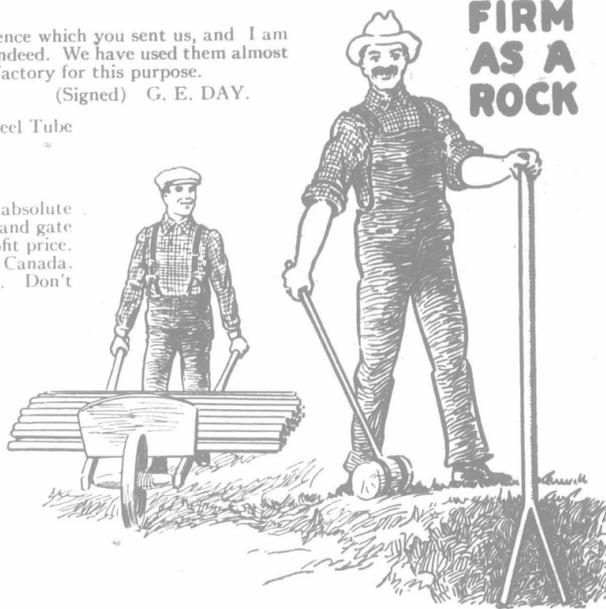
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It's the strongest ever written. We don't quibble or hedge. You get absolute satisfaction or your money back. We want you to put your fence, posts and gate needs up to us and see the quality goods you get at one low, factory-profit price.

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

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

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Through Tourist Sleeping Cars to WINNIPEG on above dates leaving Toronto 10.45 p.m., no change of cars, via Transcontinental Route.

Return Limit, Two Months. Exclusive of date of sale. Final return limit on all tickets, Dec. 31st. Berth reservations and full particulars at all Grand Trunk ticket offices or write C. E. HORNING, District Passenger Agent, Toronto, Ont.

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Wheat Prices Reach a High Level.

Under date of April 26 the Canada Atlantic Grain Co. Ltd., of Winnipeg, gives the following resume of market quotations and crop conditions.

Wheat.—Winnipeg May wheat sold within a fraction of \$2.70 per bushel and \$3.00 wheat is a reality in the American Southwest. These prices have shattered all precedents in the history of Grain Exchanges. Ordinary market factors have temporarily lost their influence. Weather conditions in winter wheat sections of the United States have improved greatly since the last Government report issued, and higher estimates of the probable yields are being received from many directions. Spring wheat seeding in the Northwest is progressing rapidly. Cool weather delayed seeding somewhat in Western Canada—at the same time the days are dry and clear, and the ground is reported to be in excellent condition and farmers will be able to complete seeding rapidly from now on. The season is really not backward, as seeding could be done here as late as the last week in May, if necessary.

The British Government holds a large amount of our May and July futures, sold against cash grain held in store Fort William, as well as that which is held in country elevators. The opening of navigation within the next few days will relieve the situation, since it will be possible for the holders of cash grain to liquidate their stocks and take back their hedges in the May and July. While the American markets report enormous premiums being paid for all kinds of cash grain over the futures, it is not the case in our market. No. 1 Northern wheat, which is perhaps the finest wheat grown on this Continent to-day is bringing but 1½c. premium over our May, and all other grades are selling at as wide discounts, if not wider discounts than they have at any time since the crop was harvested. That there is an abundance of wheat here, there is no question whatever, and perhaps now with the Tariff abolished, we shall be able to furnish the United States with sufficient wheat to produce the flour to satisfy the demands of the housewife, who is at present stocking up because of the fear of food scarcity there. Certainly the mills of the Eastern States can, if they wish, buy all the wheat they need from the highest to the lowest grade, out of the Canadian surplus.

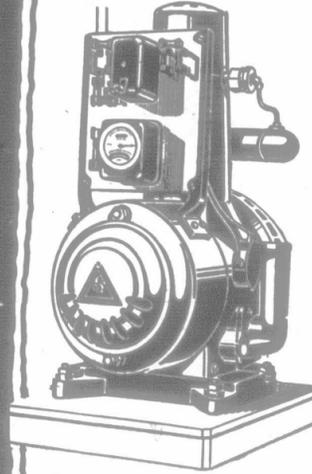
Primary receipts in the United States are comparatively light; in the neighborhood of 750,000 bushels daily. The United States visible supply decreased 3,996,000 bushels with the total this year 30,664,000 bushels, compared with 50,889,000 for the same week in 1916. The world's wheat shipments last week were 5,481,000 bushels, of which 3,971,000 bushels left the North American continent. Considerable increase in acreage is expected in the spring wheat territories of United States and Canada.

Oats.—May oats reached 76 cents per bushel during the week. The demand is keen both from exporters and Eastern Canadian points. Oats remained by far the cheapest cereal and it is confidently expected that May oats will easily sell over 80 cents per bushel, and there is a possibility of their reaching \$1.00 per bushel. There is no doubt with the daily advance in wheat products, that oatmeal and other products of oats will become more popular with the housewife owing to their relative cheapness.

Barley.—Sold up to \$1.23 for May delivery. Minneapolis buyers continue to take our barley which has been shipped to Duluth and pay the duty of 15 cents per bushel and the additional freight. The price of barley is high, but there is every indication that it will advance even from the present level.

Flax.—Flax remains firm with the undertone very strong. Supplies are light and the American crushers continue buying from day to day. The oil demand in the United States is reported to be extremely heavy. Flax prices are also expected to advance from this level.

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

This means electric light for the house—and all the convenience of safe, clean, brilliant light. It means electric light for barns and outbuildings. It means power to pump water, run the separator, the churn, the washing machine.

It means doing away with half the present drudgery of farm life. It means easier housework, easier chores. It means a healthier, happier family.

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McCormick's Sodas

So good that butter seems unnecessary

Stallion for Sale—"Fyvie Prince, imported Clydesdale stallion, sire Baron's Pride, 11 years old. Perfectly sound, and sure foal-getter. Weighs close to 1,800 lbs. This horse passed final inspection, and is graded No. 1. For further particulars apply to Wm. D. Macleod, R.R. No. 1, "Bonnie Brier," Dunvegan, Ont.

Rose-Comb Rhode Island Reds
Eggs for hatching, \$1.25 per fifteen. Good winter layers and good color.
Alex. McKinney. R. R. 1. Erin, Ontario
When writing please mention Advocate

Ontario Farm Conditions.

In view of the great importance of the farm crops for the current year and the consequent interest in their progress, the Ontario Department of Agriculture has made arrangements to have a report from their District Representatives forwarded at the end of each week. This information is received promptly in this way from all sections of the Province and will serve as a reliable guide to conditions in the country.

The following is a summary of the conditions during the last week in April:

The acreage of ploughing already done was well up to the average. Seeding was fairly well advanced on light soils, but the work was backward on heavy land. Notwithstanding the shortage of labor a good deal of spring grain is being put in and will be, oats and barley especially. Fall wheat, which was more or less set back by heaving, was picking up nicely in many quarters, but some of it was being ploughed up or re-seeded with barley. Clover was also injured by spring frosts on undrained land, and old fields were looking far from well, while the newer crop was more promising. Pastures were already looking inviting and some cattle were on the grass. Vegetable growing is likely to boom this season, judging by the seeding and planting reported. As an instance of the cost of seed, beans were selling at from \$8 to \$9 a bushel. Early potato planting was being rushed, but the seed was very scarce and dear. A heavy seeding was anticipated later on.

Fruit trees have survived the winter well, and were being pruned and given first spraying by progressive owners; but many orchards were very much neglected.

Cattle were reported as being sold off rapidly, beef animals fetching from \$10 to \$10.80 per cwt., but surplus horses were changing hands at moderate prices. Sheep were doing well with spring lambs, while hogs were still at a premium, selling at from \$15.50 to \$16.35 per cwt. Fodders and feeds of all kinds were scarce, and their cost in keeping with the prices of beef and pork. The milk supply was described as being about normal for the season, and dairymen were paying more attention to the care and quality of their herds. Cheese had just been sold to a local Board in Lennox and Addington for 28c. a lb.

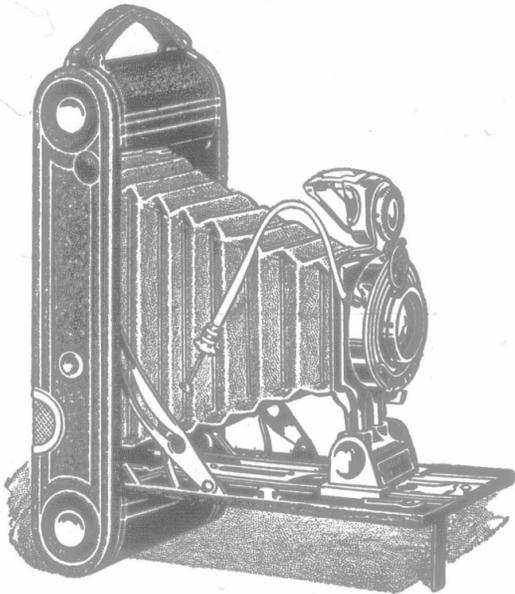
The scarcity of farm help was still a serious problem, although the aid of high school students was likely to lessen the strain somewhat. For instance, in the County of Welland from 50 to 60 students had been placed on farms, while 30 boys from Napanee Collegiate Institute had been secured to help in agricultural work. More horses were being used on larger implements, and there was much talk about the coming of the farm tractor. Skilled farm laborers, however, were harder to find than ever.

Gossip.

It was recently pointed out to the Organization of Resources Committee by the Department of Agriculture that one of the ways in which the Greater Food Production movement might be assisted this year, having regard to the scarcity of labor, would be through the development of the poultry industry as it takes little if any more help to feed a great number of poultry than a fewer number.

The Resources Committee followed up this matter by inviting representatives of the Poultry Industry to meet them at a recent meeting when the whole question was thoroughly gone into and discussed. The result of the meeting was the appointment of a special committee of expert poultry men to advise with the Resources Committee as to what should be done. Those forming the special Committee on Poultry are the following: William Barber, Hon. President, Western Ontario Poultry Association; J. E. Peart, Secretary, Confederation of Local Poultry Associations of Ontario; Prof. W. R. Graham of the Ontario Agricultural College; J. Lockie Wilson, Supt. of Agricultural and Horticultural Societies; Robt. H. Essex, Editor of Canadian Poultry Journal, Hamilton; W. R. Rollo of Hamilton.

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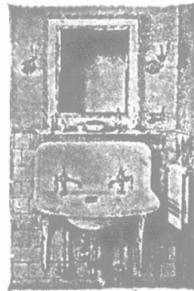
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Empire Water Supply Systems

are giving satisfaction in hundreds of homes to-day. They perform every water carrying service required in the house and barn by the simple turning of a tap. Learn more about this water system.

Send to-day for FREE CATALOGUE and INFORMATION BLANK, fill in the latter, mail it to us and we will select a system suited to your home without charge or obligation.

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Dead easy to clean

Price \$26.70 from \$26.70 up

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

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Cures the lameness from Bone-Spavins, Side-Bones, Ringbones, Curbs, Splints, etc., and absorbs the bunches; does not kill the hair, absorbs Capped Hocks, Begg-spavins, thick pastern joints; cures lameness in tendons; most powerful absorbent known; guaranteed, or money refunded. Mailed to any address. Price \$1.00.



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The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scars or Blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
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will clean it off without laying the horse up. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 8 K free. ABSORBINE, JR., antiseptic liniment for mankind. Reduces Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Rheumatism, Old Sores. Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F. 258 Lyman's Bldg., Montreal, Can.

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MILTON PRESSED BRICK COMPANY
Milton, Ontario

MORE HORSE-POWER

if your teams are equipped with

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

MESSRS. A. J. HICKMAN & CO.,

Hickman and Scruby, Court Lodge, Egerton, Kent, England, exporters of

PEDIGREED LIVE STOCK

of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

FOR SALE—
A number of choice pure-bred Clydesdale fillies and mares; one pair due to foal early in June. Apply to
J. B. CALDER,
R. R. 3, Glanford Station, Ont.

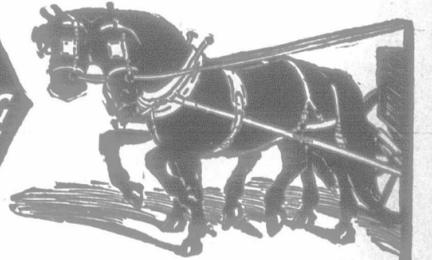
Gossip.

The Hallman Sale on May 23.

There is perhaps no breeder of Holstein cattle in Canada who is more favorably or widely known than A. C. Hallman, proprietor of the Spring Brook herd of cattle, advertised in our last issue for dispersal by public auction at the farm, Breslau, Ont., on Wednesday, May 23. As a breeder, Mr. Hallman has held a prominent place almost since the breed was first known in Canada, and as judge at all of the larger exhibitions his services have been sought more than those of any other one breeder in the Dominion. Exhibitors who have come out year after year before Mr. Hallman know that one type and one only would meet with his approval which at all times had to measure up to a certain high standard. In the Spring Brook herd, too, every animal has had to approach somewhere near this ideal and in this offering for May 23 we believe our readers will appreciate the size and all round smooth conformations that Mr. Hallman is putting up, absolutely without any reserve. Most of the more mature breeding females in the herd are descended from the Netherlands, Artis, Lady Fay, Clothilde and Aaggie families, imported by Hallman & Company in the early eighties, and in every single instance only the very best herd sires procurable were used. These descendants, which now make up all of the more mature cows are just a few years in advance, in so far as breeding is concerned, of the majority of herds which have been founded in more recent years. The younger females in the sale including nearly everything up to the four-year-olds are from this old foundation stock, and sired by the present senior sire in service, Sir Korndyke Boon, a son of Pontiac Korndyke and Fairview Korndyke Boon, a 32.17-lb. show cow that has never tested below 4.65 per cent. Sir Korndyke Boon is one of the strongest bred Pontiac Korndyke bulls in the world to-day, a grand individual and in all will have over 20 daughters in the sale. In addition to these there will be a number of granddaughters as well as 10 young sons including several show calves that are now ready for service. The majority of his daughters will be fresh or safe in calf to the junior herd sire, Sir Echo Posch, which will also be in the sale, subject to a reserve bid. This is one of the finest individual young sires in service in Canada, and his sire, Inka Sylvia Beet's Posch is also the sire of May Echo Sylvia, the champion milk producer of the world. His dam is May Darkness Echo, a 22.57-lb. three-year-old daughter of Sir May Darkness, the sire of Lulu Keyes, 36.40 lbs and other high-record cows. It is not often so close a combination of Pontiac Korndyke and May Echo blood can be found as the offspring of these daughters of Sir Korndyke Boon and Sir Echo Posch will contain. For full particulars regarding individual records, etc., write for illustrated catalogue and mention "The Farmer's Advocate". Remember everything in the herd is to be sold with the exception of one female from each of Mr. Hallman's individual families.

The other night
I went to the theater
With a lowbrow friend,
And the orchestra played
"Little Brown Jug",
And he thought
It was the national anthem
And stood up.
And I did, too,
Darn him.—Arkansas Gazette.

KEEP YOUR HORSES IN PRIME WORKING CONDITION



SOUND legs pull big loads. No horse with a Spavin, Splint, Curb, Ringbone, Bony Growth or Sprain, can do itself justice. Thousands of horsemen have been keeping their horses sound by using Kendall's Spavin Cure—the old reliable, safe remedy. Mr. Maurice Wayville, Amherstburg, Ont., wrote on April 20th last—"I cured a jack spavin with two bottles of your Spavin Cure. I am just taking off a bog spavin. It is the best liniment for sprains you can get for man or beast. I would like to have a copy of your 'Treatise on the Horse'."

KENDALL'S SPAVIN CURE

acts quickly, leaves no scars or blemishes, and costs little—\$1. a bottle—6 for \$5. Get our valuable book—"Treatise on the horse"—free at your druggist's, or write us
Dr. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A.

Make Your Crops Touch a New High Mark!

An experiment in 1913 on loamy soil showed that the limed portion of the land gave 1,865 lbs. of corn, while a similar piece—unlimed—gave only 690 lbs.

Lime is being used more and more, to correct the soil and get bigger, better results. Try an application of

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and judge for yourself. Let us send you folder containing valuable information, without charge.

BEACHVILLE WHITE LIME CO., Limited, Beachville, Ont.

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

B. ROTHWELL

BREEDER OF HIGH-CLASS CLYDESDALES

Write me for prices on champion mares. R. R. No. 1, OTTAWA, ONT.

Clontarf Farm MANNING W. DOHERTY Established 1870

Clydesdale Horses-Holstein Cattle-Yorkshire Hogs

We always have some choice young breeding stock to offer.

Post Office—Malton Nearest Station—Cooksville C.P.R.

OUR LATEST IMPORTATION OF CLYDESDALES

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

Woodlands Brown Swiss and Ponies

We have no Clydes. left for sale. Our special offering is Brown Swiss bulls out of high-testing and big producing dams. Strictly high-class. Also Shetland and Welsh ponies. R. BALLAGH & SON, GUELPH, ONTARIO

BURNFOOT STOCK FARM

Breeders of high-record, dual-purpose Shorthorns. We are now offering a fine red bull, calved Sept. 1, 1916. Sire, Burnfoot Chieftain, whose dam has an official record of 13,535 lbs. milk and 540 lbs. fat. Also a nice 12-month-old bull by same sire. Write for particulars, or better still, come and see our herd. Farm one mile north of Caledonia. S. A. MOORE, Proprietor, Caledonia, Ontario

IMPORTED SHORTHORN BULLS

We have several newly-imported bulls of serviceable age. Cruickshank, Marr and Duthie breeding, as well as a number of choice, home-bred young steers, got by our noted herd sire, Proud Monarch, by Royal Blood. Get our prices before buying elsewhere. RICHARDSON BROS., Columbus, Ont.

SCOTCH SHORTHORNS (Show Material—Both Sexes)

We are offering some extra quality in young bulls, two of the Emmeline family, fit for service now; one very promising Matchless bull calf (9 mos.); show bulls every one. Any person wanting something good of either sex will do well to see our herd. Geo. Gier & Son, R. M. D., WALDEMAR, ONTARIO R. R. Station, Grand Valley

BLAIRGOWRIE SHORTHORN OFFERING

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

IMPORTED SHORTHORNS

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

INSURE YOUR HORSES

against Death through Disease or Accident, Fire and Lightning. Our policies have the amplest and most liberal clauses of any of the other Companies. Our policy Holders have all the requisite guarantees as to the standing and solvency of the Company.

We insure: Stallions, Track Horses, Draft Horses, In-Foal Mares with or without insurance on the Foal, Cattle, Castration and Transit Risks, etc.

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Head Office, Room 721 Tower Building, Montreal, Que.



Lightens Work and Heightens Pleasure

It costs no more to get a really good Working or Outing Shirt—one that fits right, feels good, and wears splendidly. All you have to do is ask for, and see that you get, a "Deacon" Shirt. Sold at all good stores.

DEACON SHIRT COMPANY
BELLEVILLE • CANADA

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure

and it remains to-day the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

Fleming's Vest-Pocket Veterinary Adviser
Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.
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need careful watching. Kill all disease germs and prevent lice with



Pratt's Poultry Disinfectant
Spray Incubators, Brooders, Coops and Runways. Quick, sure, non-poisonous. 50c qt., \$1.50 gal.
Write for New Baby Chick Book. It's FREE.
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DR. BELL'S Veterinary Medical WONDER—10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers, and Distempers, etc. Send 25 cents for mailing, packing, etc. Agents wanted. Write address plainly. DR. BELL, V.S., KINGSTON, ONT.

WANTED

A Shorthorn bull and a Clydesdale stallion that are good breeders. Give price and breeding. Write: Box "Mc", Farmer's Advocate, London, Ont.

Alloway Lodge Stock Farm

Angus—Southdowns—Collies
SPECIAL this month:
CHOICE BULLS
ROBT. McEWEN, R.R. 4, London, Ont.

BROWN SWISS

Learn the merits of the Brown Swiss. Get acquainted and become a breeder of these cattle. For information, write to
RALPH H. LIBBY
Sec. of Canadian Brown Swiss Association
Stanstead, Quebec

Glenfoyle Shorthorns

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

Plaster Hill Herd

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

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

Questions and Answers.
Miscellaneous.

School Ground's Hay.

1. Is it legal for the Secretary-Treasurer of a school board to cut and remove the hay from the school grounds and allow the section what he thinks it is worth?

2. Should he not have put up notices and sold it by auction?

3. Would the act of doing so disqualify him for trustee? F. J. P.

Ans.—1. No.

2. Not unless directed to do so by the trustees. It was a matter for them to deal with.

3. We do not think so.

Tonic for Cow.

Could you give me a tonic for a cow under the following circumstances: Cow had a dead calf on Good Friday morning and retained the afterbirth. After 48 hours I tried to take it away but failed to reach one place. It all came away, however, on the fifth day. I gave carbolic acid, 30 drops daily, while discharge lasted. The cow looks thin and although bright has a tired look. She eats well but doesn't drink much. She refused to drink at all the first few days. She is giving 28 lbs. of milk daily and from 7 days cream I churned 7 1/4 lbs. of good butter although we use 3 quarts daily of whole milk. She is fed hay, and roots, also boiled hay-seed, oats and one pint of linseed meal. I give roots one day and the mixed boiled feed the next.
J. M. H.

Ans.—It usually takes a cow some time to fully recover from the effects of retention of afterbirth. It seems that the system becomes more or less poisoned and the cow will not do well until this is thrown off. As soon as grass comes, she can be turned on pasture and the fresh green feed will act as a tonic. You are giving her very satisfactory feed for her condition. One pound ground gentian, one quarter pound ginger, one-quarter pound powdered saltpetre, and one-quarter pound powdered iron sulphate, thoroughly mixed makes a very good tonic. Give one tablespoonful in the feed once daily.

Always Makes a Hit.

The Farmer's Advocate has received many letters of appreciation from the Canadian boys in England or "Somewhere in France". It is remarkable how they seem to enjoy reading papers from home and those of our readers who have relatives or friends overseas and who have forwarded the paper to them have rendered a service for which the boys seem very thankful. The following is an extract from a letter written by a Montreal soldier now at the front to his father:

"I was reading an article on British agriculture yesterday in which the writer stated that small holdings had been a failure, that if the present boom was to be sustained the land must be held in good-sized farms where hand labor would be superseded as far as possible by machines. He stated the cost of ploughing had been reduced from 9 shillings to 3 shillings per acre by the use of the motor tractor.

"In response to my request to Ottawa for publications the only thing which has arrived thus far is the 1915 report of the Experimental Farms. However, I have never before had opportunity to read this publication so carefully, and find a great deal of interest in it. The report of Dr. Shutt, Dominion chemist, is most interesting, even apart from the fact that he had considerable in about the limestone work in N. B., in which might naturally be expected to catch my eye.

"When I left the English mess I was requested by two different members to leave behind the copies of The Farmer's Advocate which had accumulated while I was there. It is a paper which always seems to make a hit."

Settle the Silo Question

—and settle it for good. Do away with repairs, with tightening of lugs and adjusting of hoops. Know that your silo won't blow over. Be sure of perfect silage at all times. Build the worryless, efficient

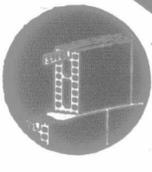


Permanency and Prosperity! Not the Hollow Tile Barn and Silo They will "Last for Generations."

Natco Imperishable Silo
"The Silo that Lasts for Generations"

Its hollow, vitrified, clay tile are impervious to air and moisture—they preserve the silage sweet and juicy. The dead air spaces in the wall resist frost—making it the silo for severe climates. The continuous, reinforcing bands laid in the mortar hold it in a grasp of steel. It is a silo of efficiency, and a silo you'll be proud of. Send for our silo catalog describing it fully.

Also get our splendid new book, "Natco On The Farm," describing other farm buildings made of Natco Hollow Tile and just as efficient. Both books free. We have many farm building plans to submit, and will help you solve your building problems, free. What are you going to build? Let's hear from you. Write today.

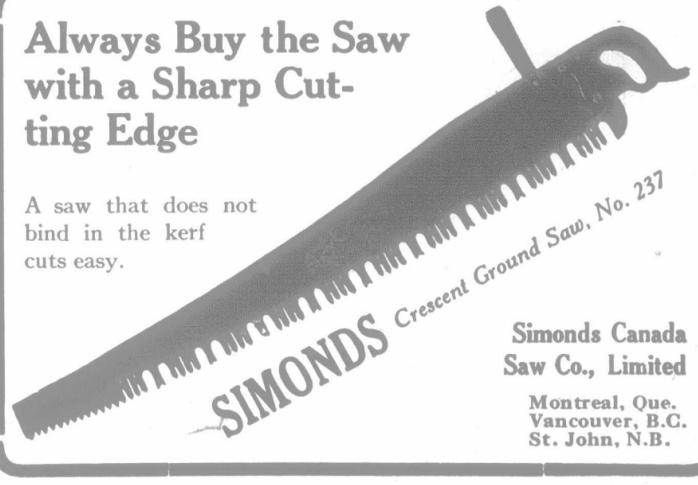


Natco Silo Wall. Note perforated shell, providing firm anchorage for mortar joints.

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Always Buy the Saw with a Sharp Cutting Edge

A saw that does not bind in the kerf cuts easy.



Simonds Canada Saw Co., Limited

Montreal, Que. Vancouver, B.C. St. John, N.B.

ESCANA FARM SHORTHORNS

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

OAKLAND SHORTHORNS—BULLS

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

Glengow Shorthorns, Cotswolds

For the present, we have sold all the Cotswolds we wish to spare, but we have a choice offering in young bulls fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple. **WM. SMITH, Columbus, Ont.; Myrtle, C.P.R.; Brooklyn, G.T.R.; Oshawa, C.N.R.**

SPRING VALLEY SHORTHORNS

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

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

Shorthorns and Shropshires—T. L. Mercer, Markdale, Ont.

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

WILLOWBANK STOCK FARM SHORTHORN HERD

Established 1855. This large and old-established herd has at the head the two great bulls: Imported Roan Chief =60865=, a Butterfly; and the prizewinning bull, Browndale =80112=, a Mina. An extra good lot of young stock to offer of either sex. Splendid condition. Good families of both milking strain and beef.
JAMES DOUGLAS, Caledonia, Ontario

SALEM SHORTHORNS

Nothing for sale at present. Annual sale June 28th. **Tel. 101, Elora, Ont.**

IMPORTED SHORTHORNS

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

Costs No More Than a "Span" —

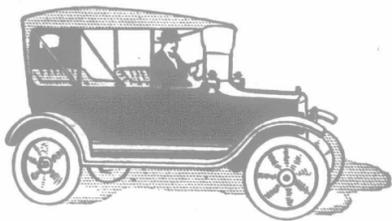


It seems almost impossible, but it is true that you can get a handsome, comfortable, speedy 5-passenger Ford motor car for no more than it would cost you for a span of good driving horses, a carriage and harness.

The initial cost of a Ford car is so small that every progressive farmer can readily purchase one.

And who wouldn't rather motor to town, to church, to the railway station, to the neighbor's, than drive? — especially when it is three times as fast to motor, more comfortable and less expensive.

The low cost of running the Ford makes motoring possible for the masses, where it was formerly a rich man's luxury. It makes motoring a matter of good business, especially for those whose time is valuable. And with labor so scarce no one needs the time-saving Ford so much as the busy farmer!



Ford

Touring - - \$495

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HEADQUARTERS FOR COTTONSEED MEAL BRANDS

"American Red Tag"; Protein 38½%, Fat 6%.
"Surety Brand"; Protein 36%, Fat 5.50%.
"Creamo Cotton Seed Feed Meal"; Protein 20 to 25%, Fat 6%.
Mills conveniently located in the south, in every cotton-growing state.
Prices on application in car lots or less.
Fred Smith, 32 and 34 Front St. W., Toronto.

SHORTHORNS — Pail-fillers for sale. Young bull and heifers out of high-record cows. A few young cows and bulls with extra good breeding and quality. **PETER CHRISTIE & SON,** Manchester P.O., Port Perry, Ont. Co.

"Maple Leaf Farm"
Shorthorns; Shropshires; both sexes. Mail orders satisfactorily filled.
J. BAKER, R. R. 1, Hampton, Ont.

Mardella Shorthorns — Bulls females; sires; quality; breeding dual-purpose cattle over 40 years. The Duke—dam gave 13,599 lbs. milk; 474 lbs. butter-fat—at the head. **THOMAS GRAHAM, Port Perry, Ont. R. R.**

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

Imported Shorthorns

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

Creekside Farm Shorthorns We have for sale at present a number of young things by our former herd sire, Clan Alpine (the Claret-bred bull, by Proud Monarch). We like them; so will you. If it's young bulls, or a few females you need, we would welcome a visit from you. Write or phone. Visitors met by appointment.
Geo. Ferguson, Elora Stn., C.P.R., G.T.R., Salem, Ontario

Spruce Glen Shorthorns of such popular strains as Minas, Fames, Miss Ramadens, Florences, Emily, etc. Have still a few young bulls—thick, mellow fello s, fit for service. **James McPherson & Sons, Dundalk, Ontario**

Quality Chicken Meat.

EDITOR "THE FARMER'S ADVOCATE":
Crate feeding on milk mashes will do more to put quality in chicken meat than any other practice. The small portion of the consuming public that have eaten crate, milk-fed poultry have no desire to purchase the range and yard fattened birds, as there is such a great difference in the quality of the meat of the birds handled under the two different systems.

Crate feeding on milk mashes is a simple process that may be practised on few or many birds. At the Experimental Station for Vancouver Island, slat crates to accommodate eighty birds were prepared, and five birds of an average weight of three and one-half pounds were confined in each section. These birds were fed for a period of fourteen days and made an average gain of two pounds per bird. The meal mixture used was sixty per cent wheat middlings and forty per cent corn meal. To this meal mixture was added three ounces of salt for each 100 pounds used. The birds were starved for twenty-four hours and given a mild dose of Epsom salts before feeding commenced. They were fed sparingly the first day and the quantity of feed increased at each meal until they were on full feed at the end of the third day. The allotted quantity of meal for each feed was mixed with sour skim milk to the consistency of porridge. Three feeds were given each day at intervals of six hours. Grit was supplied once each week and chopped green Swiss chard was given daily at noon.

The quantity of the meal mixture and skim-milk required for a pound of gain was but one pound, thirteen and a half ounces of meal and three pounds four ounces of skim-milk. Valuing the meal at three cents per pound and the skim-milk at fifty cents per hundred pounds, the cost of each pound of gain was seven and a half cents.

Starting with three and a half pound thin birds and increasing them to five and a half pounds high quality birds at a cost of fifteen cents each, the five and a half pounds of first quality chicken meat was sold for twenty-seven cents per pound, which was an advance of nine cents over the ruling price for the not specially fed birds. Thin, three and a half pound birds were selling at eighteen cents per pound or sixty-three cents per bird. The added fattening weight brought them up to the five and a half pound weight and increased the quality and value of the original three and a half pounds so they were sold for one dollar and forty-eight cents per bird. In other words, a sixty-three cent chicken was, by the crate-milk-feeding method, at a cost of fifteen cents, converted into a first-quality chicken that sold readily at one dollar and forty-eight cents. Quality in table poultry will lift the industry to the level attained by other competing food products. Cull poultry will always be just as hard to sell as cull apples. Try crate milk-feeding a few birds for your own table, eat them and you will not want any other kind. Quality will count with you ever afterwards.

EXPERIMENTAL FARMS NOTE.

"What are the passengers looking out of the windows for?" asked a nervous lady as the conductor came through the train.

"We ran over a cat, madam," said the conductor.

"Was the cat on the track?" she next asked.

"Oh, no, ma'am," assured the conductor. "The locomotive chased him up an alley."

Everything was going splendidly at the charity bazaar.

The visitors were even buying anti-macassars, knitted egg-cosies, kettle-holders, and illuminated texts, while a few hardy veterans were buying books about the war.

Presently the vicar's son came to a stall surrounded by a silent but feverish crowd. Breathing was bated. Hands were clenched. Strangers looked at strangers in some curious spirit of kinship. Old men trembled. Young maidens stood with mouths wide open.

"I say," asked the young man, "what's all the trouble here? Anything exciting going on—what?"

"Hush!" said the nearest man. "Keep quiet, please! We're raffling for a new-laid egg, and we're just waiting for the draw!"

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I am the system in galvanized and run trough, expensive advise me pumping the idea was to eavetrough engine pump I have one and can n would you

Ans.—I supply of to have While it to have t troughs int there by would adv to take car a water sup An engine prove sati

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2. Wha offence?

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miles an h it turn ov and injur collect dar path for p the road ditches w on.

4. Is i wagon an is a good is two roo

Ans.—I



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The Real Asphalt Roofing

Don't confuse Paroid with ordinary ready roofings. Paroid has the record of 19 years of proven service and is the choice of farmers, and is used on Government Military Camp Buildings.

NEPONBET Paroid ROOFING

Insist on the Genuine Paroid and your roofs will be weather-proof and fire-resisting; your buildings will be warmer in winter.

Paroid has the Grey surface. Also made with crushed slate surface, Red and Green. Complete kit and unconditional guarantee with each roll; it is the easiest of all roofings to lay. The Neponset dealer is a man worth dealing with.

BIRD & SON Dept. B HAMILTON, ONT.
The largest manufacturers of Roofings, Wall Boards, and Roofing Felt in Canada
Warehouses: Winnipeg, Calgary, Vancouver, Montreal, St. John, Edmonton

SPECIAL! SPECIAL! SPECIAL!

The most important announcement of the year.

40 HOLSTEINS 40

Thirty Females Ten Bulls

1883—The Old Reliable Spring Brook Herd—1917
will be dispersed by Public Auction, at the farm,

Breslau, Ont., Wednesday, May 23, 1917

The best breeding and the best lot individually that has come into any sale-ring this year. The more mature females are all direct descendants of the old imported cows that laid the foundation for the Spring Brook Herd in 1883.

Twenty of the younger cows and heifers are daughters of the great 32.17-lb.-bred son of Pontiac Korndyke, Sir Korndyke Boon. The young bulls, most of which are of serviceable age, are all sons or grandsons of this great Pontiac Korndyke sire. His daughters are nearly all fresh, or safe in calf to our junior sire, Sir Echo Posch, a son of Inka Sylvia Beets Posch, who is also the sire of May Echo Sylvia, the champion milk producer of the world. His dam is a sister to Lulu Keyes, 36.40 lbs. of butter in seven days. Sir Echo Posch will be sold subject to a reserve bid.

Apply for catalogue early. Cattle will all be sold between trains. Those from points south will be met at Kitchener on morning of sale.

A. C. Hallman, Spring Brook Farm, Breslau, Ont.

The Bissell Steel Roller has a rigid steel frame—no wood whatever. Large roller bearings and strong 2" axles insure durability and great strength. The Bissell is a 3-drum Roller of good weight, built to stand hard usage and give great service. Write Dept. W for free catalogue.
T. E. BISSELL CO., LTD., Elora, Ont.

Questions and Answers. Miscellaneous.

Tank Versus Cistern.

I am thinking of putting in a water system in my barn and having a large galvanized tank in a mow in the barn and run the water from there into a trough. Galvanized tanks are very expensive at the present time. Would you advise me digging a cistern and then pumping the water into the trough? My idea was to have the tank filled from the eavetrough. Would a 1½ horse-power engine pump the water into the tank? I have one of this size for pulping turnips, and can move it to the cistern. What would you advise?
J. W. F.

Ans.—In order to furnish a regular supply of water it would be necessary to have an exceptionally large tank. While it might save considerable work to have the water run from the eavetroughs into a tank in the barn, and from there by gravitation to the trough, we would advise having a cistern besides to take care of the overflow and so ensure a water supply when rains are not frequent. An engine of the size mentioned would prove satisfactory in pumping water.

Travel on Highway.

1. A is travelling on the road with a wagon. B overtakes him with an automobile and blows his horn three times but A does not give half of the road. A has the habit of not giving half of the road to an automobile and he says he will never give it. Can B bring A before a police magistrate and make him pay a fine?

2. What is the fine for the first offence?

3. B starts with his automobile and five of his family. He overtakes A's son, 14 years of age, going to school. A's son is in the centre of the travelling road, walking, B blows his horn 3 times. A's son looks back but stays in the centre of the road. When B gets within five feet of A's son he turns his auto to the left very suddenly to save the life of the boy. The automobile going at 18 miles an hour, turning so suddenly made it turn over and wrecked the automobile and injured all the occupants. Can B collect damages from A? There is a good path for people to walk on both sides of the road between the road and the ditches which A's son could have walked on.

4. Is it legal for people to walk on wagon and automobile track when there is a good walk on each side of road between road and ditch?
J. G.

Ans.—1. Yes.

Mr. Holstein Breeder—

It is customary in selecting a herd sire to choose one backed by great records. Do not forget the individual. We breed to a standard for *individuality* and *production*, therefore choose your next sire from either Lakeview Dutchland Hengerveld 2nd, Grand Champion at the Canadian National Ex. and Western Fair, 1916, with a Can. Champ. 3-year-old sister with 34.66 lbs. butter in 7 days; or from Pietertje Ormsby Beauty, with 3 generations of over 30-lb. cows, or by King Sylvia Keyes, whose 20 nearest relatives average for 7 days, 29.97 lbs. butter and whose dam and 5 sisters average 112.5 lbs. milk in 7 days. All faultless individuals. Prices, extended pedigrees and photos on request. Correspondence solicited.
W. G. BAILEY, Oak Park Stock Farm R. R. No. 4, PARIS, ONT., CANADA

20,177 lbs. milk, 780 lbs. butter

is the official record of "Barkeyje Hengerveld" (9906), the first 20,000-lb. 4-year-old in Canada. We offer a young sire, born Oct. 16, out of a 2-year-old daughter of this great cow, sired by a son of "Calamity Johanna Nig" 25,443 lbs. milk, 1,007½ lbs. butter (semi-official) in one year, 108 lbs. milk in one day. Sire's sire "May Echo Prince", a son of May Echo, ¼ brother to "May Echo Sylvia" 152 lbs. milk in one day; 1,005 lbs. milk, 41.00 lbs. butter in 7 days. This calf is a beauty and is priced very reasonable. Write us.
JOSEPH O'REILLY, R. R. No. 9, PETERBORO, ONT.

Edgeley Stock Farm The home of Canada's greatest producing Jersey, SUNBEAM OF EDGELEY, the Sweepstakes Dairy Cow at the recent Guelph test; is also the champion R.O.P. butter cow for Canada. Would a grandson or great-grandson of this famous cow improve your herd? We have them. Write for particulars.
JAS. BAGG & SON, Woodbridge, C.P.R.; Concord, G.T.R. EDGELEY, ONT.

PIONEER FARM HOLSTEIN HERD Of long-distance record makers, the kind that milk heavy and test around 4 per cent. the whole year. Of the six highest butter-fat records of two-year-olds in Canadian R.O.P., one half were bred at Pioneer Farm. Young bulls for sale from dams of the same breeding as these and sired by Canary Hartog, whose three nearest dams average 30 lbs. butter in 7 days and 108 lbs. milk in one day.
WALBURN RIVERS, R. R. No. 5, INGERSOLL, ONT. Phone 343L., Ingersoll Independent

HOLSTEIN BULLS—HOLSTEIN FEMALES King Walker Pride is our present herd sire; he is a son of the great King Walker and the noted show cow Pride Hengerveld Lennox, 30.11 lbs. of butter in 7 days. We still have a few sons of his left, and all are from our own high-record dams. Could also spare several two-year-old heifers. Come and see our herd. Colver V. Robbins, Perry Sta., M.C.R., Fenwick Sta., T.H. & B., Wallandport, Ont.

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

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

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

LOW BANKS FARM HOLSTEINS Our herd sire Fairview Korndyke Boy's first ten daughters to freshen averaged 19.64 lbs. of butter and 436.2 lbs. of milk in 7 days. Eight of these are still in our herd, and four have young bulls by Sir Echo. We also have a son of Fairview Korndyke Boy and our 31.23-lb. cow. You should write quick if you want these.
K. M. DALGLEISH, KENMORE, ONTARIO

LYNDENWOOD HOLSTEINS Present offering, a bull, 16 months, whose dam won 2nd, Ottawa Dairy Test, 1916. One 11-months bull from a 20-lb. 2-year-old cow. Some fine bull calves from 2 to 5 months; also some choice young cows and heifers with good official records and from R. of M. dams. Write for prices or come and see them.
W. J. BAILEY LYNDENWOOD FARM JARVIS, ONT.

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

2. \$1 to \$20.
3. We do not think that B is in a position to do so.
4. Yes; but if a person so walking is overtaken by any vehicle or horseman travelling at greater speed he must quietly turn out to the right and allow the vehicle or horseman to pass. If he does not so turn out he is liable to a fine of \$1 to \$20.

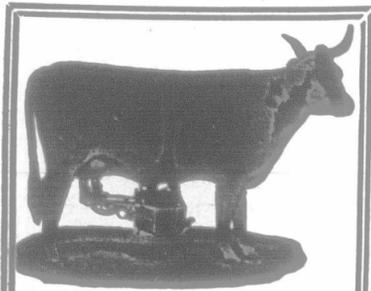
Bees Wintered Well.

On April 5 a report form was sent to members of The Ontario Beekeepers' Association asking for a statement of their winter losses and the prospects for the 1917 honey crop. On account of the backward season only a small number of these have come in to date. These are quite favorable as to the wintering of bees, except that in the most southern counties the loss is reported to be very heavy. This can no doubt be accounted for by the fact that it is a common practice where bees will winter fairly well in an average season without extra protection to let them go at that. Then a severe winter comes and kills them off in large numbers. I have noticed the same condition in these counties repeatedly and have warned the beekeepers accordingly, but only a few pay much attention and the others continue to lose heavily from time to time. What loss is reported in other counties is caused principally by insufficient stores owing to the extra heavy consumption of food during the winter. The scarcity of fall pasturage no doubt had something to do with this condition.

Clover is reported to have wintered well generally, but the cold weather of April has injured it seriously and it will require very favorable weather from this out to guarantee even an average crop.

There is scarcely any 1916 honey in the country. Two or three small lots, principally 60-lb. cans, have been reported. Buyers are scouring the country to get what they can, and to contract for the new crop. A number of firms who have never touched honey before are out to buy this year. Beekeepers will probably do well to hesitate about contracting in advance, unless at a very attractive figure. It would seem an utter impossibility for the demand for honey to be supplied within the next year or so at least.

MORLEY PETTIT, Provincial Apiarist.



THE OMEGA MILKING MACHINE

has three advantages over other machines: Transparent celluloid milking tubes instead of rubber ones which harbor germs and are difficult to clean. Pail and teat cups are suspended from the back of the animal. The udder has no weight to carry. The pail cannot be knocked over and the teat-cups cannot fall on the stable floor and suck up straw or filth. The OMEGA milks fast and milks clean.

OMEGA—The Best by Test

The OMEGA is used and recommended by Mr. R. R. Ness, of Howick, Que., one of the largest importers and breeders of record Ayrshire cattle in Canada. He writes regarding the Omega as follows: "It certainly has all other machines beaten in point of cleanliness with those celluloid tubes instead of rubber, the pail hanging on the cow's back—never touching the floor, the position in which the teat-cups are held insuring the most cleanly way of milking known to-day."

WRITE NOW for our FREE illustrated booklet describing the many superior features of the OMEGA.

C. Richardson & Co., St. Mary's Ontario

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 FULLY GUARANTEED
 CREAM
 SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for only \$16.95. Closely skims warm or cold milk. Makes heavy or light cream. Bowl a sanitary marvel, easily cleaned. Different from picture, which illustrates larger capacity machines. See our easy **Monthly Payment Plan**. Shipments made promptly from Winnipeg, Man., Toronto, Ont., and St. John, N. S. Whether dairy is large or small, write for handsome free catalog and easy payment plan. **AMERICAN SEPARATOR CO.** Box 2,200 Bainbridge, N. Y.

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

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

Enough said. Write for fuller particulars to

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 Kitchener, Ontario

LIVINGSTON BRAND

The purest and best.

OIL CAKE MEAL

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

18 HOLSTEIN BULLS FOR SALE

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

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

Advocate Ads Pay

Questions and Answers. Miscellaneous.

Rural Mail Box.

A man buys a farm, pays for it and takes possession. Some time after he has taken possession, the former proprietor claims the Rural Delivery Mail-Box and goes to sell it to another party. Can he lawfully take that mail box and sell it or does it justly belong to the new proprietor?

W. J. S.

Ans.—Section 13 of the Rural Mail Delivery Regulation states that the box is the absolute property of its original purchaser and he is therefore at liberty to carry it away with him after giving due notice to the Department. The sale of a farm does not include the sale of the Rural Mail Delivery Box, therefore, the new proprietor of the farm would have to purchase another box.

P. M. C.

Treating Barley for Smut.

Kindly let me know the full particulars regarding hot-water treatment of barley for smut. Does it prove a success?

Ans.—The loose smut of barley winters over in the form of a fungous thread which penetrates and develops in the kernel at the time it is forming. For treating barley the temperature of the water should be 125 degrees F., and the grain allowed to remain in it for 15 minutes. A couple of degrees lower than this would be ineffective against the smut organisms and over 131 degrees will destroy the germination of the grain. It is necessary to bring the temperature of the grain up to nearly the required heat and place it from there into the vessel containing water at 125 degrees. This method of treating is not practicable for a large amount of seed, but may be used for treating seed for a small plot. It should be planted a considerable distance from the main field, in order to prevent the crop on the plot from becoming infected. If properly done the treatment is effective.

Tuberculosis in Flock—Sow is a Poor Milker.

I purchased a pure-bred sow and had her shipped to me on March 13. She farrowed April 7. There were only two pigs and one of them was dead. The one that she is raising is not growing very satisfactorily. The sow is fed on bran, shorts and mangels, but does not seem to produce enough milk for the one pig. She is thirteen months old and this is her first litter. Do you advise breeding her again, or would it be better to fatten and sell her?

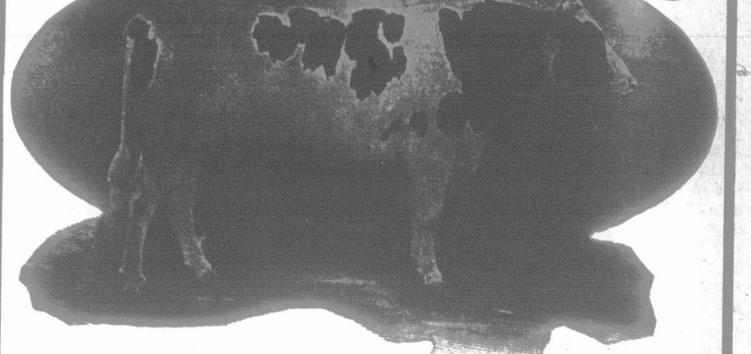
2. My hens took diarrhoea and became very dull and light in weight and in three or four days they would die. The feed consists of wheat and corn, with bran and shorts for a mash at noon. What is the trouble? What cure do you advise? Several of the hens lose their feathers in front of the neck; what is the cause?

E. P.

Ans.—1. If the sow is well bred and is a typical, growthy individual, we would be inclined to breed her again as sometimes a young sow which has been shipped near farrowing time does not feed her young as well as she will later on. It is very often noticed that a sow raising only two or three pigs will dry up in all but two or three teats. The same thing is true when raising quite a large litter; there may be fourteen teats but only ten or twelve producing milk.

2. We are inclined to think that your birds are suffering from tuberculosis. This is a disease which cannot be cured and drastic measures must be resorted to to prevent it spreading to other members of the flock. Kill all birds that are badly affected and it is well to get rid of those showing the first symptoms. Clean up the pen and yard and spray thoroughly with some good disinfectant. If a large number of the birds are diseased, it might be well to get rid of the entire flock and then start in afresh, having a general clean-up of the poultry pen, runs, utensils, etc. Loss of feathers may be due to several conditions. It is sometimes caused by the birds poking their heads through a wire fence in search of grain or green feed, eating out of unsuitable troughs will cause it, and, again, it is just possible that the birds have the habit of picking out a few of the feathers. It quite frequently happens that the feathers drop out on the breast and neck in the spring.

MANOR FARM



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

My two little boys advertised last week, are sold. I have a few babies left, really good ones, from 19-lb. two-year-olds to 26-lb. Jr. four-year-olds. Just drop a line for extended pedigrees and photos, or better still, call and look them over, and also see their daddy, who will be pleased to see you.

Yours truly,
 KING.

GORDON S. GOODERHAM
 CLARKSON, ONT.

At Service

MAY SYLVIA PONTIAC CORNUCOPIA

His dam, May Echo Pontiac is a grand individual, never tested on account of accident but still with a three-fourths udder, with a possibility of being tested this season. She is a daughter of May Echo Sylvia, the world's greatest combined milk and butter cow, who is dam of Avondale Pontiac Echo, now eased to Messrs. Burnaby and Wallace. Also dam of champion Sylvia Echo Pontiac, Mr. A. C. Hardy's herd sire, the only 41-lb. sires in Canada. May Echo Pontiac's sire, King Pontiac Artis Canada has more high-testing two-year-old daughters than any bull in Canada; also a great many three-year-olds with high tests.

Book your orders early as only a limited number of cows bred.

W. F. ELLIOT, Secretary, Bell Phone, UNIONVILLE, ONT.

HIGHLAND LAKE FARMS

Herd sire, Avondale Pontiac Echo (under lease) a son of May Echo Sylvia, the world's record cow for milk production, and Canadian record for butter, 41 lbs. Only one other 41-lb. bull in Canada. Our herd of one hundred includes nearly fifty daughters of a 33.31-lb. son of the great King Segis, brother to the sires of three world's record butter cows: Mature, 50.68; sr. 4-year-old, 46.84; Jr. 4-year-old, 40.22 lbs. Junior herd sire, King Segis Pontiac Canada, a half brother to Avondale Pontiac Echo, out of a 30-lb Segis cow. He is for sale.

If this combination of breeding interests you, write for prices on either males or females.
R. W. E. BURNABY, Farm at Stop 55, Yonge Street Radial, JEFFERSON, ONTARIO

Hospital for Insane--Hamilton, Ont.

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

Apply to Superintendent

ROYCROFT FARM HOLSTEINS

FORMERLY THE HET LOO HERD

We have a few exceptionally nice, straight, 9, 10 and 12-month heifers, principally all from high-record cows we have purchased in both Ontario and United States. They are all from good-record sires, but as our stabling is limited we are offering these at prices away below their value, so we may keep only those of our own breeding. They will not remain with us long. Write quick if you want them.

WE ARE AT PRESENT OFFERING THE SERVICES OF KING SEGIS ALCARTRA SPOFFORD TO A LIMITED NUMBER OF APPROVED COWS. WRITE FOR PARTICULARS.

W. L. SHAW, PROPRIETOR Gordon S. Manhard, Superintendent, Newmarket, Ontario

SUNNYBROOK FARM HOLSTEINS

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

JOSEPH KILGORE, Sunnybrook Farm, EGLINTON, ONT.

Phone: Toronto, Adelaide 3900, or Belmont 184.

SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day and their average butter records are over 35 lbs. a week. We have 50 heifers and young bulls to offer, by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON, R. R. 2, Hamilton, Ont. Phone 7160

Questions and Answers. Miscellaneous.

Removing Stumps.

My apple orchard was killed with scale. What is the best and quickest way of removing the trees? I have been told to cut them off close to the ground and bore a hole in the stump and fill it with saltpetre. In three or four months they will then burn quite readily. What do you consider the best means of getting rid of stumps?

Ans.—It takes an apple stump a long time to rot off and the idea of putting saltpetre, oil and other material into the stump to hasten decay does not always work out in practice. Either use stumping powder and blast the stumps out, or else secure a stump lifter which proves satisfactory.

Thick Milk.

I have a cow which is going dry at present but is not expected to freshen until the first of July. She gives thick milk. She is in good condition and is fleshing up instead of giving much milk. What is the cause of thick milk and what can I do to stop it? Will she be all right when she freshens?

Ans.—It frequently happens that a cow near the end of the lactation period will produce rather thick milk. It is doubtful if anything can be done to remedy it. Sometimes the milk will get thick or ropy a short time after it is drawn. This is due to a bacteria which develops very rapidly in milk. A thorough scalding of all utensils and not rinsing in cold water is recommended. No doubt the cow will produce normal milk when she again freshens.

Colic—Acute Indigestion.

- 1. What treatment do you recommend for colic?
2. What treatment do you recommend for acute indigestion?

Ans.—There are two kinds of colic which give considerable trouble; the first is spasmodic, due to improper feed, sudden changes, over-feeding, water when heated. The symptoms are general uneasiness, pawing and rolling at frequent intervals. When the first symptom is noticed, drench with 1 1/2 ounces each of laudanum, sweet spirits of nitre and tincture of belladonna in a pint of water. Repeat in two hours if necessary. Flatulent colic is generally caused by a change in food, or too much succulent and easily fermented food, as green clover. The symptoms are much the same as for spasmodic colic but not quite so violent and the pain is continuous. Bloating soon occurs. Drench with 2 to 3 ounces of oil of turpentine in a pint of raw linseed oil and repeat in two hours if necessary.

2. Treatment for acute indigestion is a drench of 2 to 3 ounces oil of turpentine in a pint of raw linseed oil. Apply hot cloths to the abdomen and if pain is severe give 2 drams of solid extract of belladonna. This may be repeated in two hours if it is necessary. It is also advisable to give injections per rectum.

Sowing Salt to Check Wireworm.

I have 8 acres of land which was manured and plowed last fall, which I would like to sow to corn this year. The sow thistle is very bad in it, but the field is in too good shape to leave idle. I can't afford to summer fallow it and it is too dirty for a spring crop. As it is a second plowing after sod, I am afraid of wireworm. Would you advise sowing salt? How much would you advise sowing per acre? Is there any other means of preventing the wireworm?

Ans.—Some claim that salt will prevent the wireworms from working, but it is doubtful whether it is safe to apply enough salt to the land to guarantee its effectiveness in destroying the worms. Common salt in itself contains none of the constituents essential to the growth of plants, but it probably aids in promoting the liberation of some of the plant essentials. It is not advisable to apply more than two or three hundred pounds to the acre, as brine is detrimental to vegetation and that amount would have no effect on the wireworms, except to stimulate the growth of the corn. We know of no way of preventing the wireworm from attacking the crops, except a short rotation of crops. If the land was not in sod over a couple of years before being broken up, the wireworms should not be bad.



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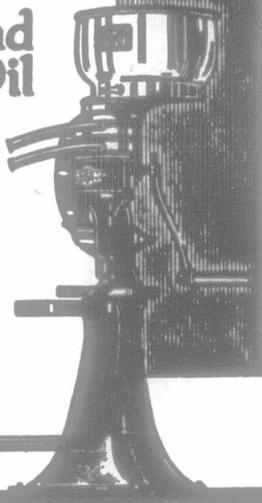
such as the close fitting bearings and adjustments of a hand separator, demands a special lubricant in order to work efficiently.

Standard Hand Separator Oil

is especially manufactured for this purpose. It is absolutely free from all impurities, cannot gum, and besides giving superior lubrication where it is needed, protects the separator from seam rust and corrosion.

Put up in pint, quart, half-gal., gal. and 4-gal. cans. Sold by reliable dealers everywhere.

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If you are in need of a Cream Separator

Let us ship you a

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Six Sizes—135—200—250—375—600 and 800 lbs. capacities. DETACHABLE SPINDLE, OIL SPLASH and loose discs. We GUARANTEE these machines to be built of the best material, first-class workmanship, skim clean, easy to turn and wash. Cash prices very low. Must satisfy or money refunded. Sold on easy terms if desired. Write to-day for catalogue and local agent's address.

King Separator Works of Canada

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

ASK ANY SHIPPER

about our service and prompt returns.

Ask for prices.

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

The Toronto Creamery Co., Limited Church Street, Toronto

JERSEY BULLS

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

Twenty-minute trolley ride from Niagara Falls. Berkshire Boars all ages. Shropshire and Southdown Sheep

LARKIN FARMS, QUEENSTON, ONTARIO

Young BRAMPTON JERSEYS Bulls

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

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

Glenhurst Ayrshires For 50 years I have been breeding the great Flos tribe of Ayrshires; dozens of them, have been 60-lb. cows. I have lots of them get 60 lbs. a day on twice-a-day milking. Young bulls 1 to 10 months of age, females all ages. If this kind of production appeals to you, write me. James Benning, Williamstown, Ont.

LINCOLNS C. NICHOLSON, of Horkstow, Lincolnshire, England

has for sale Pedigree Lincoln Long Wool Rams and Ewes from his world-famous flock of ALL DUDDING-BRED SHEEP. By winning the CHAMPION and "ALL" the first prizes in the two-shear and yearling-ram classes at the Royal Show of England, 1915, all previous records were broken. Coates Shorthorns and Lincoln Red Shorthorns also for sale.

STATION: BARNETBY

Glencairn Ayrshires Herd established 60 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont., Copetown Stn., G.T.R.

Choice Offering in Ayrshires At Special Prices. Several young bulls of serviceable ages. All from R. O. P. sires and dams. Come and see them. Jno. A. Morrison, Mount Elgin, Ontario

City View Ayrshires for April—One R.O.P. cow, fresh; two bulls for service, and a few choice bull calves. JAS. BEGG & SON, St. Thomas, Ont.

JERSEY BULL FOR SALE Lord Torano—5889—has the quality and size. For particulars, write to CASTLE HILL FARM, Magog, Quebec William Lyall, Prop., Fred Smiley, Mgr.

Jerseys for Sale One bull, twelve months, and one bull calf; also yearling heifers and heifer calves, sired by imported bull and from high-testing dams. Write: Chas. E. Rogers, Ingersoll, Ont.



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Windsor Cheese Salt
 Made in Canada
 THE CANADIAN SALT CO. LIMITED

BLACK LEG LOSSES SURELY PREVENTED
 by CUTTER'S BLACKLEG PILLS
 Low-priced, fresh, reliable, preferred by western stock men, because they protect where other vaccines fail.
 Write for booklet and testimonials.
 10-dose pig. Blackleg Pills, \$1.00
 50-dose pig. Blackleg Pills, \$4.00
 Use any injector, but Cutter's simplest and strongest.
 The superiority of Cutter products is due to over 15 years of specializing in VACCINES AND SERUMS ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.
 The Cutter Laboratory, Berkeley, Cal., or Chicago, Ill.

Special Offer of Tamworth Breeding Stock

Several boars fit for service. 15 young sows in pig. Pedigree papers supplied when shipped.

Herold's Farms, Beamsville, Ontario
 (Niagara District)

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

Meadow Brook Yorkshires

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

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

Morrison Tamworths and Shorthorns. Bred from the prizewinning herds of England. Tamworths, both sexes, 20 young sows, bred to farrow in June and July. Young boars from 2 to 5 months old; Shorthorns of the best milking strain. Chas. Currie, Morrison, Ont.

TAMWORTHS

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

DUROC JERSEY SWINE

My herd won all the champion prizes at London, Toronto and Windsor, 1916. Young stock for sale, pairs not akin. Come and see them, or write. Trains met by appointment.
Culbert Malott, R. R. No. 3, Wheatley, Ont.

Sunnyside Chester Whites and Dorsets In Chester Whites we have both sexes, any age, bred from our champions of many years. In Dorsets we have ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London, and Guelph winners. **W. E. Wright, & Son, Glanworth, Ont.**

Pine Grove Yorkshires Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.
Joseph Featherston & Son, Streetsville, Ont.

PROSPECT HILL BERKSHIRES Young stock, either sex, for sale, from our imported sows and boar; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right. **John Weir & Son, Paris, Ont., R. R. 1**

Polands, Durocs and Berkshires Young stock at all times, both sexes and all ages. Can also supply anything in Dorsets or South-downs. Everything priced to sell.
Cecil Stobbs, Leamington, Ont.

Questions and Answers. Miscellaneous.

Feeding Rabbits.

I have four young rabbits about the size of kittens and would like to know what to feed them. I have been giving them a little new milk, grass and clover hay.
J. P.

Ans.—The ration is very satisfactory, but you might add a turnip or carrot occasionally.

Planting Trees.

Would it be advisable to plant cherry and apple trees where trees died some years ago? Should oaks be planted around young trees? How large should the holes be?
R. A. P.

Ans.—It is not generally considered to be a good plan to plant young trees in the same place where old trees have grown. The soil is more or less depleted of fertility by the older trees and, therefore, it is harder for the young trees to make satisfactory growth. The size of the hole will depend largely on the extent of the root system of the trees. Dig deep enough so a little surface soil can be put in the bottom and when the tree is set it will be the same depth as it was in the nursery. It wants to be wide enough so that the roots can be spread out similar to the way they naturally grow. Oats are sometimes grown in a young orchard, but two or three feet at least should be left on either side of the trees. If the idea is putting a few oat kernels around the tree roots, we might say that it is not a general practice although we have heard of such being done with small plants.

Wool in Stomach—Raising a Calf.

1. I have a young calf which is allowed to run with its mother in a large box stall. I was told that the calf would do better if kept by itself and allowed to suck three times a day; which plan is the better?

2. A lamb died suddenly a few days ago and thinking the cause was wool taken into the stomach, I had a post-mortem examination but could find no wool. Where do you look for wool in the stomach. Could there be any other cause for death?

3. I have a horse which, when pulling hard, breathes with a loud sound or roar. It is not heaves. What is the cause and how can I cure it? Is there any danger of the horse dying suddenly?

4. I have a young sow which was very cross with her first litter of pigs. She killed a number and we endeavored to raise what was left on the bottle, by feeding oil and diluted cow's milk with sugar. However, they all died. Is there any preventative for the animal's wildness? Is it safe to breed her again? Can young pigs be successfully reared in an artificial way?

5. Can duck eggs be hatched successfully in an incubator?
A. R.

Ans.—1. Either way gives very good results. When the calf is allowed to run with the cow they can both be turned on pasture and will give no trouble night and morning. The other way the cow very often becomes uneasy and occasionally comes to the stable during the day in search of her offspring.

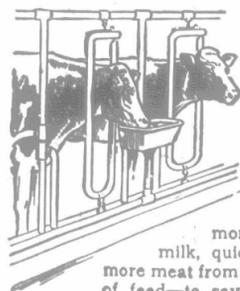
2. The wool ball would be found in the passage leading from the stomach. Lambs frequently die without any apparent cause. It is sometimes difficult to diagnose the case or give successful treatment.

3. The loud noise or roaring under extra exertion is generally due to weakness of the larynx following distemper, influenza, or local injury to the throat. Once established it is generally considered to be incurable. In the early stages repeated light blistering helps. There is always the possibility of the trouble seriously affecting the throat and causing death. However, under ordinary work it is not probable that death will result directly from this disease.

4. Prevention is in having the sow acquainted with her pen and quieted down as much as possible by frequent handling. It is a difficult problem starting young pigs on cow's milk. After they are a week or two old and they can be taught to drink out of a trough or pen they get along fairly well. Warm cow's milk, sweetened a little, is readily taken by the young pigs and after they once get a start they do fairly well.

5. Yes.

Power Pumping Pays for Itself on the Stock Farm



"WATERING THE STOCK" takes on a different meaning the day you put a **Toronto Engine** on the job. With a tank and the necessary piping and fittings it will keep a constant supply of fresh water, at a moderate temperature, in front of every animal as it stands in the stall. Compared with a drink or two a day from an icy trough, pumped full by hand, this up-to-date method saves more than its cost in better health, more milk, quicker growth and more meat from the same amount of feed—to say nothing of the hours it saves in doing the chores.



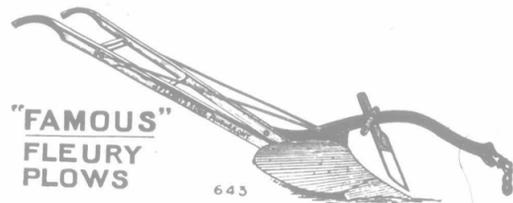
The saving in the stables is great enough to pay for running water throughout the house too, with all the comforts of lavatory, bath room, hot water heating and hot water on tap for housework, baths and shaving—in fact, the advantages of a city home.

Toronto Pumping Outfits are provided to suit every possible combination of conditions, and give long service with the least possible attention. Typical outfits illustrated in our Booklet will give you plenty of ideas. The Engine is by no means limited to pumping, but can be connected also with feed cutter, root pulper, fanning mill, cream separator, mechanical milker, churn, grindstone—any machine that needs power.

The shortage of help, and the big money there is now in live stock and dairy products, makes it doubly important for you to install **Toronto Power**. Write us for illustrated Booklets giving full information about **Engines and Pumping Outfits**.

We also manufacture **Windmills, Silos, Stable Equipment, Etc.**
Ontario Wind Engine and Pump Co. Limited
 Dept. "F"
TORONTO and MONTREAL.

Famous Fleury Plows



Lightest in Draft
 A few more furrows each day.

Easiest to Hold
 A long day with less fatigue for horses and man.

Highest Quality of Work
 Clean land and a better crop.

The above is the testimony of TENS of THOUSANDS of Canada's best farmers.

J. FLEURY'S SONS, AURORA, ONTARIO
 MEDALS AND DIPLOMAS, WORLD'S FAIRS, CHICAGO AND PARIS

YORKSHIRES

Litter of fourteen about ready to wean; also a number of older females. Address:
WELWOOD FARM, Farmer's Advocate, London, - Ontario

ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, R. R. 1, Brantford, Ont
 Langford Station on Brantford and Hamilton Railway.

Duroc Jersey Swine

Just home from quarantine; Brookwater Principle Orion, sired by that great sire, The Principle 4, that has proven himself one of the greatest sires in the U. S., which we are stock for sale at all times. Pairs furnished not akin.
L. A. PARDO & SONS, R. R. No. 1, CHARING CROSS, ONTARIO

BERKSHIRES

My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.
R. R. No. 1, Stratford, Ontario
 Shakespeare Station, G. T. R.

LYNNORE ENGLISH BERKSHIRES

FOR SALE—Young stock of both sexes, bred from imported animals, high-class in type and quality. Also, we are now offering for sale highly-bred imported stock boar and sows. Write for particulars
F. WALLACE COCKSHUTT, BRANTFORD, ONT.
 Lynnore Stock Farm—English Dairy Shorthorns and Berkshire Pigs

Sarnia Fence Prices

Advance June 10th, 1917

Direct from Factory to Farm

Take advantage of these close prices for immediate delivery

A recent announcement of another advance in the price of wire products makes the present market price approximately two and one-half times the market price of 1914, before the outbreak of the war, and many manufacturers are paying a bonus of \$3.00 to \$5.00 per ton for reasonably prompt delivery.

With the entrance of the United States into the war, prices on all steel are advancing and delivery dates becoming more uncertain. The enormous tonnage of steel which will be required by the government for the manufacture of ammunition, guns and the building of ships will make it almost impossible to obtain steel for domestic purposes at any price, as government orders will be given preference.

We cannot urge too strongly to anticipate your future requirements and BUY NOW. Owing to the tremendously increased cost of raw material, the advance in freight rates and present labor condition, we are forced to advance all prices on June 10, 1917. In the very near future it will not be a question of price, but the problem will be to get delivery at any price.

We are in a position to make immediate delivery on a limited tonnage at the prices quoted herewith, but when our present stock is expired, prices and delivery will be very indefinite. Mail your order to-day and assure yourself of prompt delivery at the low price.

For Prices Delivered in
New Ontario, Quebec and
Maritime Provinces

Add 3c. per rod to the prices of fence quoted herewith, 25c. advance for gates and stretchers, 10c. per sack of staples and 10c. per coil of brace wire.

Guarantee

We guarantee our fence to be made from the best galvanized hard steel wire both, stay, line wire and knot, and to be the most perfectly woven fence on the market, and of full Government gauge No. 9 wire.

Notice

These prices are freight prepaid to any station in Old Ontario on shipments in lots of 200 pounds or over.

Remit direct to The Sarnia Fence Co., Ltd., Sarnia, Ont., by Post Office order, money order, or bank draft.

We want your order whether for one bale or a carload.

Send Your Order To-day.

Cash With the Order Saves Expense, and You Get the Benefit of the Saving in the Price

	Price Delivered in Old Ontario before June 10, '17	Price Delivered in Old Ontario after June 10, '17
4-34-0 HORSE AND CATTLE FENCE. Has 4 line wires, 34 in. high, 9 stays per rod. Made of all No. 9 wire. Spacing, 11, 11, 12. Weight 5½ lbs. per rod. Price per rod.....	25c.	27c.
5-40-0 HORSE AND CATTLE FENCE. Has 5 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 10, 10, 10, 10. Weight per rod, 6½ lbs. Price per rod.....	30c.	32c.
6-40-0 HORSE AND CATTLE FENCE. Has 6 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 7, 7, 8, 9, 9. Weight per rod, 7½ lbs. Price per rod.....	34c.	36c.
7-40-0 HORSE, CATTLE AND SHEEP FENCE. Has 7 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 6, 6, 7, 7½, 8½. Weight per rod, 8½ lbs. Price per rod.....	38c.	41c.
7-48-0 HORSE AND CATTLE FENCE. Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 6, 7, 9, 10, 11. Weight per rod, 9 lbs. Price per rod.....	38c.	41c.
8-40 GENERAL STOCK FENCE. Has 8 line wires, 40 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 5, 6, 6, 6, 6, 6. Weight per rod, 10½ lbs. Price per rod.....	47c.	50c.
8-48 GENERAL STOCK FENCE. Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 4, 5, 6, 7, 8, 8, 9. Weight per rod, 11 lbs. Price per rod.....	49c.	52c.
9-48-0 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod, 11 lbs. Price per rod.....	50c.	53c.
9-48-0 SPECIAL HORSE AND CATTLE FENCE. Has 9 line wires 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 6, 6, 6, 6, 6, 6, 6. Weight per rod, 11 lbs. Price per rod.....	50c.	53c.
9-48 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod, 12 lbs. Price per rod, freight prepaid.....	54c.	58c.
10-50 HORSE, CATTLE, SHEEP AND HOG FENCE. Has 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 3½, 3½, 4½, 5½, 6, 8, 8, 8. Weight per rod, 13½ lbs. Price per rod.....	60c.	64c.
POULTRY FENCE		
18-50-P STOCK AND POULTRY FENCE. Has 18 line wires 50 in. high, 24 stays to the rod, top and bottom wire No. 9 filling, No. 13 hard steel wire, spacing, 1½, 1½, 1½, 1½, 1½, 1½, 2¼, 2¼, 3, 3½, 4, 4½, 4½, 5. Weight, 12½ lbs.....	60c.	64c.
WALK GATE 3½x48.....	\$2.75	\$3.00
FARM GATE 12x48.....	5.25	5.50
FARM GATE 13x48.....	5.50	5.75
FARM GATE 14x48.....	5.75	6.00
FARM GATE 16x48.....	6.25	6.50
STAPLES GALVANIZED. 1½ in. per box of 25 staples.....	1.20	1.30
BRACE WIRE. No. 9. Soft, per coil 25 lb.....	1.20	1.30
STRETCHER. All iron top and bottom draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price.....	9.50	10.00

All No. 9
7-48-0-38c.

Freight Paid

Price

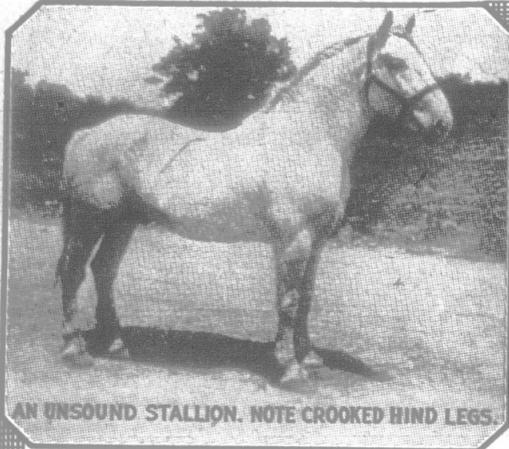
Sarnia Fence is sold Direct from Factory to Farmer for cash. By our uniqueselling plan we eliminate everything that adds unnecessarily to the price of our fence, such as excessive overhead expense, Travellers' expense, Jobber's profit, Dealer's profit, bad debts, and charges for handling two or possibly three times. Thus we give you our fence at first cost.

Sarnia Fence is made in what is conceded by the best Industrial experts to be the best equipped and most economical fence factory in America.

Combining these features—Our Direct Selling Policy—Our Low Cost of manufacture, our unconditional Guarantee, and the fact that we are not connected in any way with Manufacturers' combines, for the elimination of competition and the maintenance of high prices we believe you will give us credit for being in a position to sell you the best fence it is possible to make at the lowest possible cost.

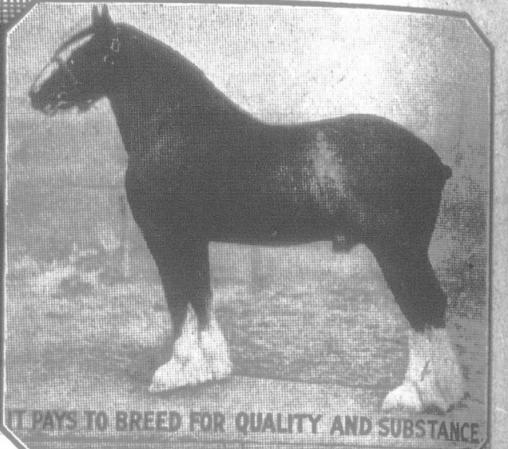
The Sarnia Fence Company, Limited, Sarnia, Ont.

Fence put up in 20, 30 and 40-Rod Rolls Only



AN UNSOUND STALLION. NOTE CROOKED HIND LEGS.

THE SCRUB SIRE must go



IT PAYS TO BREED FOR QUALITY AND SUBSTANCE.

He is the Great Menace to the Development of Ontario's Live Stock Industry To-day

Look at the market toppers in beef classes. Study the prize-winning bacon pigs, and the high-producing dairy cows. Consider the horses with clean, strong limbs, and strongly muscled bodies. Are they the progeny of scrub sires? If not, then why tolerate the scrub sire?

Throughout North America, stallions are inspected and licensed to give preference and to emphasize the value of the pure-bred. If America places a high value on the pure-bred horse, and the same natural law prevails in all classes of stock, should not similar emphasis be placed on all classes by the owners, without legal restrictions?

Ontario has 775,732 horses, 2,734,767 cattle, 908,066 sheep, and 1,735,254 swine. Their numbers might be larger, but if every animal were the product of a good, pure-bred sire their value would be much greater.

The Scrub Sire is Easily Recognized.

He may be an animal which lacks breeding, has faulty conformation and no individuality.

Or an animal which has good conformation but no breeding. He is not a sure getter. The progeny will lack uniformity.

Or he may have a pedigree but may lack in vigor and in conformation.

Why are British Sires Imported?

Why do Ontario stockmen and Argentine ranchers buy large numbers of pure-bred stock in Great Britain? Because:—

They are shrewd business men.

They understand the natural law "Like tends to produce like."

They know great Britain has the best, because the British stockmen have for generations used the best pure-bred sires obtainable.

They know that stock from sires which have a line of pure-bred ancestry for generations will be uniform in size, of good quality, and true to type.

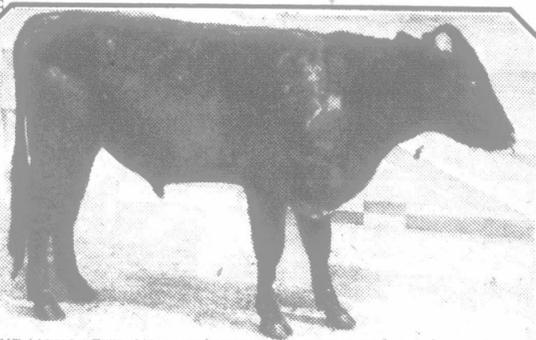
Some of the Results of Good Breeding.

The milk records of 55 grade cows in a certain Ontario herd were kept from 1895 until 1907, and a pure-bred bull only was used during the period.



ONTARIO

ONTARIO DEPARTMENT OF AGRICULTURE

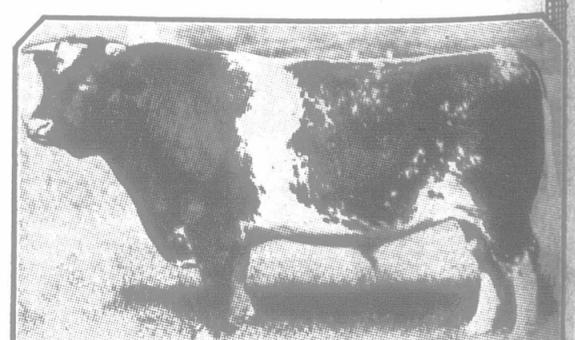


THE MENACE TO ONTARIO'S CATTLE INDUSTRY. DON'T USE HIM

Parliament Buildings,
TORONTO

SIR WM. H. HEARST
Minister of Agriculture.

G. C. CREELMAN
Commissioner of Agriculture



LIKE BEGETS LIKE. THIS KIND PAYS.

Very few cows were purchased, the females being reared and retained in the herd. In 1895 the herd average was 3,600 lbs. per cow per year. In 1907 this average had risen to 8,006 lbs. The records show a gradual increase year by year. What others have done, you can do.

The average production per cow in Ontario is about 4,000 lbs. annually. Many give more, but the scrub cows which are the progeny of scrub sires reduce the average; if the scrub cows were reduced in number, then the average production would soon reach 6,000 lbs. or 8,000 lbs. per annum.

Here's Another Result.

In one section 12 pure-bred rams were purchased, but several grades were also used. Careful comparisons were made. When the lambs were sold 12 lbs. per lamb extra was credited to the use of the pure-breds. The rams cost \$15 each. Ask yourself: Was it a good investment?

Is it any wonder that successful stock raisers insistently demand pedigree, type, vigor and individuality in stock sires? They know that "Like tends to produce like." They have realized that immense losses are incurred yearly because scrub sires are retained upon a large percentage of Ontario farms. The labor is just as great, the food consumed is the same, but the returns are much less.

Sell the Scrub.

If you own a scrub sire, sell him while the price for meat is high. Buy a good pure-bred. An animal which looks cheap and has a cheap pedigree is dear at any price. The real value of an animal is estimated by its earning power, either as a producer of dairy products or meat, or as a breeder of stock.

Successful co-operation with natural laws is vital in agriculture. They are infallible and beyond our control, except as we offer opportunities for them to become a part of our every-day operations. Nature makes no charge for services rendered but collects toll when her laws are ignored.

Every farmer should co-operate with nature by eliminating the scrub. Buy a good animal and give nature an opportunity to assist him rather than retard his progress.

Aim for Quality and Quantity, "Feed, Breed and Weed".