

The Farming World

A PAPER FOR
Farmers and Stockmen

Fencers and Farmers



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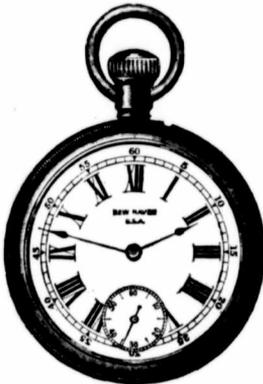
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The Farming World

For Farmers and Stockmen

VOL. XIX

JULY 23rd, 1901

No. 4

Cheese Factory Improvement.

NO question is of greater importance to the country at the present time than the proper equipment of our cheese factories and creameries for making the finest quality of cheese and butter. Especially is this true of Canadian cheese factories. It would seem as if years ago our dairymen had decided to put no more money into buildings and equipment for cheese-making purposes, and consequently we have to-day a condition of affairs that places the whole dairy industry of this country in serious jeopardy. What with small, poorly equipped and unsanitary factories and badly ventilated curing-rooms and totally inadequate conditions for curing cheese properly, this important Canadian industry has lost prestige in the old land and materially weakened its influence upon the British market.

Under these circumstances we may be pardoned for referring to this question once more. A few weeks ago we gave it as our opinion that the cheese buyers of this country do not discriminate sufficiently in price as between first-class, medium and poor factories when buying. We are still of the same opinion and believe that we shall never have the improvement we ought to have in the way of better buildings, better equipment, better milk and a better product all round till a sufficient premium is paid to induce dairymen to carry on the business in the very best way. Further, we believe that the day is coming when more discrimination in price must and will be made by our dealers, and then the well-equipped and up-to-date factory will be given its proper place at the cheese board, while the medium and inferior concern will be forced either to accept a cent or two per lb. less for its product, or to make the improvements that our dairy teachers and others interested in the business are advocating.

But why wait for this condition of affairs to arrive? Why not begin to improve right away even if the buyers are not paying a sufficient premium for first-class quality? By making curing room conditions such that the temperature can be controlled at all times even if no special advance in price is obtained, factories can save more than the cost of the improvement in one season by lessening the loss from shrinkage during the hot weather. Prof. Dean in dealing with the question of the sub-earth duct and heated cheese elsewhere in this issue gives some rather startling figures, showing the losses our dairymen are sustaining every year from heated

cheese. Let our dairymen examine these figures carefully and thoughtfully and they cannot but come to the conclusion that it is exceedingly poor business to continue to make cheese year after year with these leaks unstoppered. Surely the time for action has come.

The Labor Question in the West.

(By our special Western correspondent.)

Manitoba is now struggling with a labor problem. Harvest is rapidly approaching, the first of August will see some early fields ready for the binder, and the farmers are calling for men to help take off the crop. This circumstance is of annual recurrence, and hitherto the efforts of the Government and the railways have been equal to the occasion, but this year's conditions are so extraordinary that it seems doubtful whether the usual methods will prove adequate to cope with the situation.

Ordinarily a large number of men can be secured from the towns and cities; this year these cannot be counted upon. The building trade is unusually active—buildings to the value of \$2,000,000 are now under construction in Winnipeg alone—and this, with the large amount of railway construction employs every available man. It may be said that there is not an idle man in the province.

Again, the amount of help required is greatly in excess of former years. Not only is the area in crop over half a million acres greater than ever before, but the crop itself is unusually heavy and will be moved with much more than ordinary labor. The grain stands very thick, and the straw is of extra length. It is not in one-half or three-fourths of the province that such conditions prevail; they are universal. Every county reports the same state of affairs.

In past years large numbers of men have gone from the Eastern Provinces to work in the harvest fields of Manitoba. The "harvest laborers" excursions have come to be recognized as an annual institution, and many young men go every year. In 1898 these excursions carried over 5,000; in 1899 over 10,000 men, and in neither case was the supply equal to the demand.

Judging from the experience of these years, and the conditions above stated the Province of Manitoba will require 20,000 men from outside

points. This figure was stated in a recent speech of Premier Roblin, who doubtless had given the matter careful consideration before making such an announcement.

Can Ontario furnish such a number! A few may go from other provinces, but it is here the main supply must be sought. The men are here but can they be spared? Harvest is over, but plowing and threshing and other fall work demands attention. The inducement of a cheap trip to see the Golden West in all the glory of the great harvest, combined with a certainty of high wages for three or four months' work will undoubtedly lure every available man to go.

Supposing the requisite number can be secured, are the railways able to handle such an exodus? The first contingent of 10,000 men should be on the ground by the 10th of August, the second a week later. These must be carried for a distance averaging 1,600 miles. To carry them will require 410 passenger coaches and about 70 baggage cars, and this will be in addition to ordinary heavy traffic of the season. If the cars employed for the first excursion can be returned in time for the second, the task will be lessened, but, in any case it will call forth every resource of the railway companies.

These excursionists will carry away a great deal of money which should properly be kept in the country. As high as \$2 per day has, in the past, been paid; but suppose that each man carries back the low average savings of \$50 the total cash taken out of the province would amount to one million dollars. There is a moral in this, but the Manitoba farmers must learn it for themselves.

Some Beef Cattle Figures.

Beef eaters increasing faster than the Cattle supply.

The last estimate of the number of cattle in the United States published by the Department of Agriculture at Washington has created no little stir in some live stock centres. The feeling among men in the business is that the estimate is too low. If, however, the estimate is fairly correct, then they claim that the United States is rapidly approaching a beef famine. To show this, we cannot do better than give the following analysis of the Government figures by the Denver Record-Stockman. It says: "The last government estimate of the number of cattle in the country outside of milch cows, was 28,000,-

000, approximately. The best estimates of the number of head required for consumption annually is 8,000,000. Either the government estimate is far below the actual number in the country, or the demand is exceeding the supply every year at an alarming rate. Let some stockman set down and try to classify this total and also classify the demand. Here is one way it may be done to make the supply equal the demand:

Number of cows.....	11,000,000
Yearling heifers.....	4,000,000
Yearling steers.....	4,000,000
Two-year-old steers.....	3,500,000
Three-year-old steers and over.....	2,000,000
Bulls.....	500,000
Total.....	28,000,000

Now from this classification make up the year's supply for market as follows:

Yearling steers.....	500,000
Two-year-old steers.....	2,000,000
Threes and over.....	1,500,000
Cows, heifers, and bulls.....	4,000,000
Total.....	8,000,000

This plan will leave a few old steers but does not add anything to the number of breeding cows. Any way that it can be figured, it will be found impossible to increase the number of cows and breeding stock without sacrificing the number of old steers. Either the government estimates are far too low or the estimated consumption is too large. We are inclined to the belief that the government total will be found too low. Thirty-two million head will be closer to the actual supply in this country. It is nearly time, however, that the government had some reliable figures. If their estimated figures are correct, the country is rapidly approaching a beef famine."

In addition to the above there are other features of the situation of perhaps greater interest to Canadian breeders. It is estimated that Great Britain imported last year of meat \$200,000,000 worth of which the United States supplied about 65 per cent. or \$130,000,000 worth. If the number of beef animals is as stated and if, as it is claimed, there are 20,000,000 more beef eaters in the United States than there were twenty years ago then the time is fast approaching when America's exportation of meat will grow appreciably less. During the past twenty years the number of cattle in the United States has been reduced by 11,000,000, while there is a greater demand for early matured or baby beef and cattle are being marketed about one year younger than formerly. These changed conditions, logically reasoned out, mean that the United States will in the future not be the formidable competitor in the beef markets of the world that she has been in the past. At any rate Canada's prospects for largely extending her trade in beef cattle were never as bright as they are at the present time. The farmer and stockman, however, must see to it that he is raising and breeding the right quality for this trade. Only the best are wanted.

The North-West Trade

Some valuable data dealing with this important industry.

The report of the Department of Agriculture for the North-west Territories makes interesting reading, especially for stockmen. That portion of the Dominion has lately become one of our largest purchasers as well as exporters of cattle. The cattle purchased are chiefly stockers for feeding purposes, though the number of pure bred bulls that are yearly going into the Territories is increasing every year. A large proportion of these are purchased in Ontario and sent out under reduced rates through the Dominion Live Stock Association.

The following extracts from the report are worth careful perusal by eastern as well as western breeders and cattlemen:

"Export cattle from the Calgary district brought 3½ cents per lb. live weight, averaging somewhere about \$50 per head. In the Lethbridge district the same class of cattle brought about the same price. From \$40 to \$42 per head was paid for light cattle. Exporters from the Medicine Hat and Lethbridge districts averaged about \$15 per head, being largely threes and fours. The prices paid for Prince Albert, Battleford, Yorkton, Touchwood Hills, Moosomin, Dundurn and Regina cattle ranged from \$40 to \$45 for three to four year old steers; the majority bringing \$45. Export dealers were prepared to pay for choice heifers and steers, weighed off cars at Winnipeg and tipping the scales at 1,200 lbs., \$3.75 per cwt., purchasers assuming freight. As a general rule, our stockmen obtained \$50 per head for four-year-olds and \$45 for three-year-olds.

An interesting feature of the cattle business of the Territories is the movement from Ontario, Manitoba and the farming districts of the Territories to Southern Alberta and Western Assiniboia. The importation from Ontario amounted to 11,434, from Montana 24,896, from Saskatchewan 738, from Eastern Assiniboia 4,996 and from Northern Alberta 222, making the total influx of cattle into the ranching districts of the Territories 42,286. The total export of cattle from the whole of the North-west Territories for 1899 was 41,471, while during the past year 55,129 head were exported, showing an increase of 13,658 in favor of the latter. The shipment of stockers from Ontario and Manitoba into the Territories, amounting to over 36,000 head, is significant indicating an enormous increase in the export business a few years hence when these animals have reached maturity. The values of stockers at various points in the Territories during the past year were as follows:

	Yearlings	Two-year-olds
Medicine Hat.....	\$16 to \$18	\$23 to \$25
Calgary.....	18 to 20	25 to 27.50
High River.....	18 to 18.50	28
Millarville.....	19 to 20	25 to 27.55
New Oxley.....		25
Maple Creek.....	17 to 19	22 to 24

"Eighteen bulls were imported from the Province of Manitoba and forty-seven from Ontario, making a total of

sixty-five as compared to forty-eight imported under the same arrangement during the previous year. The total cost per head of the Ontario shipment including local freight charges, feed, attendance en route and incidental expenses, was \$9.30 per head, and for the Manitoba shipment \$4.10 per head. The total expenditure for the whole shipment was \$511.46 and the revenue was \$325, involving an expenditure of public funds of \$186.26, being a little less than \$3.00 per head. Considering that the animals were gathered from thirty-one different railway points in Manitoba and Ontario and distributed to thirty-two stations in the Territories, involving heavy shunting charges and frequent local shipments, as the expense of the department, this is apparently an economical management as could be expected under the circumstances."

"When this work was first taken in hand a necessity for Government assistance existed. While, even at that time, a very considerable number of purebred bulls were brought into the Territories, they were chiefly consigned to important stock centres such as Calgary, High River, Lethbridge, Macleod, Yorkton and other points in the ranching districts. During the last couple of years, the state of affairs has largely undergone a change, as there is now hardly a town or village of any importance throughout the whole of the Territories where purebred bulls are not being offered for sale by local importers. Another departure which will in the future greatly facilitate the exchange of purebred bulls and enable the smaller stockmen to purchase suitable animals, is the public auction sales of purebred stock which have now been inaugurated by the Purebred Cattle Breeders' Association and to which local breeders can consign their surplus animals. There can be no reasonable doubt that the efforts of the department to place Territorial stockmen in a position to purchase animals in the eastern provinces and land them in the Territories at a uniform rate of \$5.00 per head, has been productive of much good and was instrumental in stimulating private enterprise to meet existing requirements. It is confidently hoped that in the course of a few years, the necessity for Government action, which existed when the scheme was first formulated, will be effectually removed, when the field may with safety be left to the efforts of private individuals."

A Few Pointers on Swine Breeding.

The hog is perhaps the most profitable animal kept to-day on a Canadian farm. With the bacon hog bringing from \$7 to \$7.50 per cwt. live weight there should be money in the business of swine raising in this country.

To successfully rear swine some attention must be given to the type and to breeding. The really first-class animal which tops the market cannot be produced without this attention. There are some breeds adapted to the bacon trade and there are others that are not. It is for the farmer to select from among these the breed or

type best suited to his purpose and develop his herd accordingly.

To become a skilled and successful breeder of swine what may be called the minor as well as the important points of an animal must be noted. The characteristic features of the different breeds must be noted and the points of distinction marked. It may seem rather absurd to some to attach importance to points which appear to have little bearing on the meat-producing powers of the animal. These are often looked upon as fancy points merely set up at the whim of a few prominent breeders. And yet they are of very great importance in determining the purity of the breed and the ability of the animal to produce type.

The points of breeds are a guarantee of the purity of a breed, and although a cross-bred animal may happily show none but those desirable, the chances are that those who best know a particular breed may trace a deviation in the breeding from its general appearance. Those less well acquainted with the breed must look to the hall-marks for guidance, and it is unwise for them to select a pig, no matter how useful a pig he may look, if the points are not correct.

A pig that is the result of recent crossing may cause great harm in a pedigree herd, because he will introduce the undesirable results of cross-breeding, upsetting the continuous labors of many generations. Among ordinary pig stock he will be a cross-bred put to cross-breeds, and therefore the produce will be mongrels. When these results are taken into consideration, the value of the recognized long established points of a breed must be obvious, notwithstanding their apparently trivial nature, until their meaning is understood.

It is in taking these so-called fancy points into consideration that safety is secured and support given to the pedigree. These fancy points therefore have a substantial value and should be given attention in selecting an animal for breeding purposes. They are important guides in making a selection and without them the purity of breeds cannot be so well maintained.

A good place to gain information in regard to these fancy points in all different breeds is at the leading fair shows. Here we find the best types of the different breeds for inspection and no one cannot but be greatly benefited by making a careful and minute examination of the different breeds of animals to be exhibited at our leading fairs.

Profit in Sheep.

One of our American exchanges figures out the profits from keeping sheep on the farm as follows, the figures given being for prices south of the line which are higher, especially for wool, than those in Canada :

"They are light feeders and largely will live on what the other stock will not eat. They make frequent returns. Lambs and wool every year. A good ewe will clip about eight pounds of wool, which at 25 cents a pound is \$2.00. A lamb should weigh 100 lbs at four and one-half months old and sell for \$5.00, thus the sheep

brings in an income of \$7.00 for the year. After deducting for value of feed there will be a large margin for profit. The inexperienced person intending to keep sheep should read some books on the subject and subscribe for a paper devoted to this industry, as while they do not require much care yet there are a few essential requirements looking to their health, and care, that are quite necessary to understand."

Facts About the Silo.

Twenty years' experience in the use of the silo has brought out some facts about which all are agreed, says the Jersey Bulletin, and they state the facts as follows :

First.—That a larger amount of healthful cattle food can be preserved in the silo in better condition at less expense of labor, and land, than by any other method known.

Second.—That silage comes nearer being a perfect substitute for the succulent food of the pasture than any other food that can be had in the winter.

Third.—Thirty pounds a day is enough silage for an average-sized Jersey cow. Larger cattle will eat more.

Fourth.—A cubic foot of silage from the middle of a medium-sized silo will average about forty-five pounds.

Fifth.—For 182 days, or half a year an average Jersey cow will require about six tons of silage allowing for unavoidable waste.

Sixth.—The circular silo, made of good hard wood staves, is the cheapest and best.

Seventh.—Fifteen feet in diameter and thirty feet a good depth. Such a silo will hold about 200 tons of silage, cut in half inch lengths.

Eighth.—Corn just passing out of roasting ear stage is the best single material for silage. Corn and cow peas are the best combined materials.

Ninth.—Silage is as valuable in summer as in winter.

tilator from rooms two and three, all the cold air at ordinary times was taken into these rooms and little or no air entered room No. 1. This is a simple and inexpensive method of increasing the draft of cool air into the curing room.

PIPE CONNECTIONS WITH SMOKE STACK.

To bring the cool air into No. 1 room, we have recently connected a 14 inch galvanized iron pipe with the smoke stack from the boiler. This pipe opens into the curing room near the ceiling at the side farthest from where the duct enters the room, and enters the smoke pipe going to the brick chimney. As our smoke pipe and curing room are close together, we did not require more than about eight feet of pipe with two elbows to make the connection. When the connection was made, the draft at once increased from the duct; and at the time of writing we have a constant stream of cool air where formerly there was little when the air was stationary outside. Where it is convenient to connect a pipe from the curing room with the smoke stack or chimney, there is no doubt but that it is an effectual way to overcome the chief weakness of the sub-earth duct.

I may add that we tried a patent ventilator last year to increase the draft, but it was a failure; so we removed it this spring.

PROTECT DUCT FROM FROST.

While it may seem somewhat out of place to be writing about frost in July, let me say that I have recently examined the ends of the tile in our duct, made of six rows of ordinary drain tile, six inches in diameter, placed six feet in the ground; and I find at the intake end that several of the tile are split, evidently with the action of the frost. This fall we purpose filling the intake curb with pea straw or some other frost protection to prevent the cold air entering the tile during the winter. We think this will be a saving of the tile, and also add to the usefulness of the duct.

PROTECT THE CHEESE FROM HEAT.

The recent drop of nearly one cent per pound in the price of cheese has been attributed to the heat-affecting the quality. What folly it seems for manufacturers of cheese to waste valuable products in this way. Let us see how this figures out in two Counties of Ontario,—one east and one west.

The County of Leeds has about 85 cheese factories in operation which made an average of at least 6 cheese per day for the last two weeks. A loss of one cent per pound means a loss of about \$4.20 per factory. The 85 factories would lose \$357 per day, and in two weeks the loss in this one County would amount to over \$4,000.

Oxford County has about 44 factories averaging 10 cheese per day. This means a loss of \$7 per day for each factory,—\$308 for 44, and about \$3,700 for the County in two weeks. This is nearly \$8,000 for the two counties in two weeks. Does it pay to allow cheese to become heated?

O. A. C., July 13th, 1901.

H. H. DEAN.

CORRESPONDENCE.

The Sub-Earth Duct and Heated Cheese.

Editor THE FARMING WORLD

The great weakness of the sub-earth duct as a means of cooling curing-rooms is the difficulty of getting the cool air from the duct into the curing room when the air is calm outside.

This season, we have adopted two means of improving the draft into the room, both of which are satisfactory. Our curing room is divided into three compartments, each of which is connected with the duct. Two of the rooms have the outlet for warm air in one ventilator, which is connected with the rooms in the attic. On the ventilator from these two rooms we placed

A REVERSE COWL,

i. e., the mouth of the cowl has the vane so attached that instead of facing towards the wind, it faces from the wind. With this cowl on the ven-

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially
Representing the Farmers' Interests

Edited by JAMES FOWLER

Sugar Beetlets.

Cultivate! Cultivate! Cultivate!

The better you cultivate the better your crop will be.

There are a few fields not yet fully thinned, don't neglect them.

Kill the weeds before they kill your beet crop.

A beet crop follows a clover crop with excellent results. Prepare your clover field for beets next year.

That corn field would also produce a good crop of beets. Arrange to grow them.

Your children can do nearly all the work in the beet field. Give the boys an acre each to grow beets, and let them have the money for themselves.

Some of the girls would also take charge of a small plot, if they were sure of having the returns for their work.

The good wife, who has been getting the money for the eggs and butter, would also find time to look after an acre of beets, and would see that it was properly done, if she was given the \$60 to \$75 that the acre would produce.

If you don't care to grow beets yourself, don't discourage others. Let the rest of the family grow them and have the profits.

Every farmer should grow beets and now is the time to make your plans for next year.

If you don't know anything about growing beets, it is time you did. Subscribe for *The Farming World*, read their sugar beet news, and ask the editor all sorts of questions. What he does not know about growing beets would fill a very large book, but he can give you some valuable information.

Pointers on Harvesting.

Let the beets be fully ripened before harvesting.

A few warm days and cool nights may sometimes bring the beet to complete maturity and give it its full value.

A sure sign of the ripeness of the beet is the change of the dark green color of the beet field into a light yellowish green.

As beets shrink considerably if shipped in warm weather it is advisable to ship as late as possible.

Do not let the beets dry out before shipping, as the drying reduces your tonnage.

Where beets are used for stock feeding only the tops need be removed.

If you are shipping your beets this year, try feeding the tops, and watch the results.

Prepare your land for next season's crop. You will find a market in Ontario for all the beets you can raise.

Make up your mind that you will grow beets one year as an experiment, and select your best land for that purpose.

Dunnville Active.

The people of Dunnville are very much alive to the advantages of a sugar factory in their town, and are making strenuous efforts to induce the company just being organized in Toronto, to locate there with good prospects of attaining their object. The one thing required, in addition to the inducements already offered as the acreage contracts with the farmers, and there seems to be no doubt in the minds of those having the matter in hand that there will be no trouble on that point. It is expected that the town council, assisted by the township councils and county councils will undertake the work of securing contracts for at least 5,000 acres. The reports from the experimental plots of beets now under the supervision of the Government are most flattering, and the entire farming interests are enthusiastic over their prospects for a change to a new crop, and an increase to their dairy interests by the advantages in the way of feed to be obtained from the establishment of a sugar factory. The officers of the sugar company will visit Dunnville shortly, taking their experts with them, and will make a very careful examination of the farms in that vicinity, before definitely deciding to accept the proposition made them.

Newmarket Progressing.

Several important meetings have been held recently by parties interested in the establishment of a sugar factory at Newmarket. A committee has in hand the matter of securing stock subscriptions to the amount of \$100,000, and it is thought that with this amount outside capitalists with sufficient money will take hold and build the plant. The farmers are willing to grow the beets if a market is secured, and the promoters of the enterprise feel well satisfied with the outlook for a factory for next year.

Glowing Reports from Wiarnton.

Glowing reports still keep coming in from Wiarnton as to their success in securing stock subscriptions to their enterprise. Now that the prospects seem so bright the farmers who had lost confidence owing to the delay, are taking the matter up again enthusiastically, and are subscribing freely for stock—their stock being

payable in beets. It is fully expected that all the capital required will be secured within the next two months, and the work of building the factory will be started this fall.

The Crop Report.

The weather recently has been ideal for the sugar beets, and reports from all sections are most favorable. In sections where it was supposed the spring rains had drowned out the crop it is found that very little damage was done, and some of these plots are now showing the best results. On the whole, the farmers have followed instructions, closely, and are well satisfied with the prospects. This has reference to the experimental plots under the supervision of the Government. In the western part of the province where large quantities are grown this year for shipment to Michigan, reports are also favorable, the Michigan factories having their own experts looking after the crop. There is a tendency by the farmer to neglect the cultivation, but they are doing remarkably well for their first year, and the results will more than satisfy him. If the farmer finds it a paying crop at \$3.00 per ton to ship to Michigan, he will much more readily engage in growing beets for a Canadian factory at \$4.00 per ton. There will be several factories in this country next year.

The Outlook at Wiarnton.

Pointers on Preparing Soil and Seeding.

Mr. Geo. I. Overholt, Wiarnton, Ont., sends us the following report of the outlook and conditions of the sugar beet industry in that district:

"Would you kindly permit me through the pages of your valuable paper, to insert a short article on the present outlook of the sugar beet crop in this section.

Having been appointed as one of the instructors for the growing of sugar beets, by the Wiarnton Beet Sugar Co. Ltd., of this town, I consider it a duty I owe the Company and also the public to give a short report of the beet crop in and around Wiarnton. I can report that in most instances, the present outlook far exceeds that of last year, both in growth and stand. Many farmers have tried the experiment this year for the first time, while others have been growing them for years. Some of the beet fields are models of perfection, and I doubt if there are any fields in this Province that can surpass them, and where the rules laid down by the Company have been closely followed good crops are the result.

Some of the farmers in this section

have got an intelligent grasp of the sugar beet culture, and those who have given it a fair trial, maintain that there is no other crop a farmer can raise that is as profitable.

In order that a good crop may be expected, great attention must be given to the preparation of the soil, the time of seeding, quantity of seed sown per acre, sown at the proper depth, and then proper attention to the plant, and at the proper time.

I. Preparation of the Soil.—This must be done in the fall of the year, if a grain crop has preceded the plot, intended for sugar beets. As soon as the grain is drawn in off the field the stubble must be turned down, by a gang-plow or cultivator, and in a few weeks all the obnoxious weeds will germinate. Then late in the fall plough down to a depth of about 10 inches and where there is a hard bottom follow with a sub-soil plough and have the whole stirred up to a depth of about 14 or 15 inches. This gives the beets a chance to get down, and when the fall rains come it will serve as a reservoir to hold moisture. When the drought of summer sets in the tap-root and other fibres of the beet, will naturally go down for moisture, and will thus be sustained during the drought of summer.

SOWING.

II. Preparation of the soil for sowing.—This must be done with great care and precision, a few extra hours or days, spent in working the soil up to a fine tilth will amply repay him for his trouble when the young plants appear. This work must be done as shallow as possible.

III.—Sowing of the Seed.—We cannot set any cast iron rule as to the proper time for sowing, as the seasons and soils are changeable, but this rule should strictly be observed, viz., Sow as early as possible.

THE KIND AND QUANTITY.

IV. The kind and quantity of seed.—With regard to quality, sow none but the very best. Let the Company purchase the seed, it will be cheaper to the purchaser, and then there will be no danger of sowing inferior seed. Now as to quantity. This, I find among growers, is the hardest to enforce. When you suggest from 12 to 16 lbs. per acre, with rows from 18 to 20 inches apart, they begin to think you are trying to perpetrate an outrage on them, or the Company is wanting to make money out of their seed. Now, the quantity of seed is a very important question. One farmer living about two miles from Warton, by accident sowed 43 lbs. of seed on two acres. What is the result? He has an even stand, nearly every 8 inches he has a beet. Did it pay him? Many others sowed from 14 to 16 lbs to the acre, and in every instance a good stand has been secured. Others sowed from 3 to 9 lbs per acre, and a very thip uneven stand is the result. Beet culture is not mangold or turnip culture. "Whatsoever a man soweth that shall he also reap." The proper implement for sowing, of course, is a seeder made for the

purpose, but as these are very scarce in Canada at present, we must use our grain seeders. Stop up enough spouts to leave the rows 18 or 20 in. apart, and then sow very shallow, from $\frac{3}{4}$ to $\frac{1}{2}$ in. in depth. If the soil is very loose roll before sowing, and always roll after, as it levels down the land and presses down the dirt firmly around the seed and germination will follow much sooner. I will not say any more on this point at present, but will close by wishing the beet sugar industry and its promoters every success.

Warton is the pioneer of the introduction of the beet sugar industry into Ontario, having obtained a charter in 1896. The land and soil around Warton is peculiarly adapted for the raising of sugar beets as the land is composed of a strong limestone formation. Acreage and capital are being rapidly secured, and a factory in Warton is almost a guaranteed fact now.

Beets in Prince Edward Island

The report of the Dominion Agricultural Department, 1900, in regard to the growing of sugar beets in P.E.I., is as follows:

The question of the possibility of growing, in Prince Edward Island, beets rich enough to make sugar extraction profitable, having recently received considerable attention in that province, we have analysed at the instance of Mr. A. Callaghan, Charlottetown, a number of roots raised there at various points during the past season.

The information furnished respecting them is very meagre and simply states that "the seed was sown in the middle of June and the crop was harvested November 10. The drills were 18 inches apart, and the beets about 6 inches apart in the drill."

The results show that these beets are for the most part rich in saccharine matter; indeed, they compare very favourably with those grown for sugar manufacture in Europe and the United States. Judging from the sugar content and degree of purity I am of the opinion the averages obtained indicate that a beet suitable for profitable sugar extraction can be grown in Prince Edward Island. The amount of work done in this investigation is not sufficient, however, to allow us to speak definitely, or deci-

sively as to the success of the industry, if it were established.

In Manitoba.

It is obvious that we are not yet in a position to speak definitely as to the possibility of growing in Manitoba a beet with a high sugar content, owing to the exceptional character of the past season, the fact that all the roots examined did not receive special attention or culture necessary for the best results, and that the samples represent but two localities in the province. Further work another year, when the season is normal will be necessary to determine that question. It is only right however, to point out that in many parts of Manitoba the climatic conditions for the purpose of sugar beet growing, which must comprise a sufficient and well distributed rainfall in the early months of growth, a high mean summer temperature and absence of early autumn frost, are not such as to lead us to regard with sanguineness the prospect of obtaining many areas that could furnish an ample supply of rich beets, without which, of course, profitable sugar manufacture would be impossible.

The sugar content is not high and the co-efficient of purity is low; indeed, the results are far from encouraging.—Report Agricultural Dept, Ottawa.

Preparation of the Ground.

On clay loam the plowing should be done in the fall and the ground left in the furrow through the winter. The subsoiling should, as far as possible, be done in the fall. Where the soil is a sandy loam, verging toward clear sand, the plowing may be deferred until spring, still using the subsoil plow where needed. Whether the ground be plowed in the fall or spring, it must be made fine and mellow by frequent harrowing. The roller is used in a dry season, only on either sandy or lumpy ground. It is discarded entirely on wet land or upon soils containing much clay. If the roller is used a harrow follows immediately to prevent the escape of moisture. Make the top of the soil as near perfectly level as possible. Do not sow the seed until the soil is in the condition of an ideal garden. If rain threatens, it is wise to postpone putting in the seed until a shower shall have germinated the weed



The Vessot Subsoiler

Attaches to any plow, does all the work of a subsoil plow and does it better, with no extra draft on the horse.

Write for Circular

\$5.00

S. VESSOT & CO.

108 FRONT STREET EAST

Factory at JOLIETTE, QUE.

TORONTO

seeds, then the young plants are killed by a smoothing harrow, thus saving part of the labor of weeding by hand later.

Encourage the Industry.

Mr. Wm. Webb, of London, writes to the Free Press as follows:

Farmers throughout the Western Peninsula are greatly discouraged by the ravages of that destructive pest the Hessian fly, many acres of wheat being ruined by its encroachments, whilst the greater portion of the remainder is seriously damaged. No satisfactory remedy for the extermination of the fly has, as yet, been introduced. In the meantime, as the progressive farmer is anxious to procure some more profitable crop upon which dependence can be placed, I would suggest utilizing a portion of the acreage now devoted to wheat to the cultivation of the sugar beet. I have made an exhaustive study of this new departure in Canadian agriculture, have consulted the best authorities available, and instituted inquiries among friends in Michigan engaged in the enterprise, and a unanimous expression of confidence in the growing of the sugar beet exhibited by every person from whom I obtained information; the splendid results obtained by them from their crops, the increased acreage they intend to devote to the beets, encourage me in predicting that immense possibilities await the Canadian farmer in this connection.

The present appearance of the beets sown in this section is magnificent, indicating an abundant harvest. The industry, though in its infancy in Michigan (three years established) has made phenomenal progress and cultivators of the beet have realized handsome profits from their enterprise. The Canadian farmers cannot do better than give the projected refineries their co-operation and assistance by contracting for acreage, as it has been successfully demonstrated that our soil and climate are unsurpassed for the profitable production of the beets, and there is far more profit in this crop than in any other with which the land could be seeded. The establishment of these industries would be of incalculable benefit to the community at large,

employing a great many hands, and manufacturing their own sugar, of which article we now import immense quantities.

An Expert Opinion.

Herbert Myrick, in his valuable book, entitled, "Sugar, a New and Profitable Industry," writes, "The pulp from beets after the sugar is extracted, makes an admirable feed for all stock, horses, cattle, sheep, swine and poultry. Yet its value for this purpose is only beginning to be appreciated in this country, though in Europe the farmers would no more think of allowing beet pulp to go to waste than our farmers would think of curing hay for fuel. At the Utah factory, a Feeding Company has contracted for all the pulp for a series of years, and have erected adjacent to the factory a complete system of sheep and feeding pens. Two thousand head of cattle are fattened here each season for market. They eat the pulp greedily, consuming from 100 to 125 lbs per head, each day, besides about 15 lbs. of hay. These cattle command a very good market, the meat being very juicy and tender. The cattle fatten quickly under proper conditions, and as the Company gets the pulp for nothing, except the cost of removing it from the factory, the enterprise is a profitable one."

"To agriculture it affords a new crop that puts into the farmer's pocket money that would otherwise go out of his community and out of the country; by thus reducing the area of other crops it helps all farm values; the beet requires good farming, and is an educator in thrift and does not rob the soil.

"To labor, the beet sugar industry offers a new field for employers of both skilled and unskilled labor of all ages, and pays a satisfactory price for it in money that would otherwise go out of the community and out of the country.

"To capital, it pays a fair return, and under proper management should prove an absolutely safe investment.

"To other industries, the beet sugar business contributes largely. The annual expenditure for labor and materials, such as coal, lime, coke, bagging, chemicals, oils, etc., would amount to millions of dollars.

"To real estate, the beet sugar industry creates value."

Progress in Michigan.

Some reasons why the Sugar Beet Industry has made such rapid progress in that State.

Three years ago no beet sugar was manufactured in the State of Michigan. This year that State will probably produce more tons of sugar than any other State in the Union. This might appear as though the people of Michigan have rushed into a business of which they knew nothing about and were taking great chances while it is yet in an experimental stage. This, however is not wholly true. Mr. Chas. F. Saylor, Special Agent of the Department of Agriculture, in writing to the Sugar Beet Industry of the United States says of Michigan: "In recent years Michigan has been among the foremost of the States agitating this question. Probably no State in the Union has given more attention to scientific experimentation in order to arrive at a correct understanding of the conditions in the State. The State experiment station at Lansing conducted experiments all over the State, sending out seeds and information as to the best methods of planting, cultivating and harvesting. At the close of the season the station systematically analyzed specimen beets from each farmer's plot, ascertaining the sugar content and purity of the beets grown in the various sections. The experiment station has covered an enormous amount of work of this kind and published the results so that the public might be generally advised as to the condition of the State of Michigan in all its various sections for growing sugar beets and also the conditions that obtain in the State for manufacturing them into sugar."

These conditions are peculiarly favorable for several reasons: The State has an intelligent, active farming community; the soil appears adapted to growing sugar beets; the sugar content and purity of the beets ran very high throughout the experiments of several years. Michigan has an abundant supply of cheap fuel in her coal deposits; a good quality of limestone is easily accessible; large market centres are near, which will make a sure demand for the product; there are competing railroads, with probably as low freight tariffs as are enjoyed by any section of the country. In addition to this there is water transportation to some of the large trade centres, such as Chicago, Milwaukee and Detroit."

E. H. DYER & CO.

Builders of

SUGAR
MACHINERY

Cleveland, Ohio

Will contract to build complete beet sugar plants, including all machinery and buildings; also furnish the necessary technical and skilled help to operate them.

The Kilby Manufacturing Co.
Founders and Machinists

Corner Lake and
Kirtland Streets,

CLEVELAND, OHIO

New York Office:
220 Broadway.

Builders of Complete Machinery for Beet, Cane and Glucose
Sugar Houses and Refineries.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep and Swine Breeders' Association, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1; Swine Breeders', \$2.
BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the swine breeders' Association this includes a copy of the swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while the name and address of each member, and the stock he has for sale are published once a month, and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeder's Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals, should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

A. P. WESTERVELT, Secretary, Parliament Buildings, Toronto, Ont.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations, in the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Boy wanted to do chores around a farm. Wages \$10 a month and board. No. 838. a

Good chicken plucker wanted. Good wages paid the right person. No. 839 a

Man and wife wanted to work on farm in Halton County. Good wages paid to good man. Wife to act as housekeeper. Only owner and hired man to work for. Good home for reliable people. No. 840. a

Domestic Help Wanted.

First class housekeeper wanted at once. Cow kept for milk and butter. Hired help board themselves except a day laborer occasionally. One man only to work for. First class references required. Also state remuneration expected. No. 836 b

Competent housekeeper wanted for widower with three children. Nurse kept for the children. No help boarded in the house. No milking. Situation permanent to right person. No. 837. b

Good strong girl wanted for general work on farm three miles from Toronto. Wages \$12 a month. Wanted immediately. Address Mrs. J. H. Taylor, Todmorden, Ont. b

Situations Wanted.

Position wanted by young man 28 years of age, steady and competent. Used to all kinds of general farm work. Can commence work at once. No. 939. b

Position wanted on a farm or ranch in Manitoba or British Columbia, as foreman. No. 941.

Position wanted in Ontario or the West by young man 20 years of age on a farm where he can gain experience. Has always lived on a farm where a good deal of butter is made; good milker, and handy in carpenter line. Can give good references if necessary. No. 940. a

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Swine Entries at the Pan-American.

The following is the number of entries in the different classes of swine at the Pan-American Exposition:

Berkshires.....	5
Chester Whites.....	2
Small Yorkshires.....	1
Large Yorkshires.....	2
Tamworths.....	2
Poland Chinas.....	3
Essex.....	2
Cheshire.....	2
Victoria.....	1

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to the Superintendent he will be put in direct communication with the Institute that has carried on the work.

G. C. CREELMAN, Superintendent Farmers' Institutes.

Women's Institute of South Wentworth.

YEAR ENDING JUNE, 1901.

The Women's Institute of South Wentworth began the past year's series of meetings Oct. 11th, 1900, with a very successful open meeting.

Mrs. J. Hoodless interested the audience with an address on "The advantages of an agricultural education for women," and Prof. G. C. Creelman on "The Province of Ontario."

The secretary read the annual report, and Mrs. S. H. Nelson, President, occupied the chair.

Solos were sung by Mrs. Gordon, of Hamilton, and Howard's orchestra furnished good music.

During the year nine meetings have been held, which have been varied and full of interest.

On April 11th a very profitable afternoon and evening were spent. The afternoon meeting was held at the Park House, Stony Creek battle-ground. Mrs. Hoodless addressed the Institute on the formation of a Canadian branch of the International, Agricultural and Horticultural Union and urged the Institute to affiliate. It was moved by Mrs. Erland Lee, seconded by Mrs. J. H. McNeilly that the Institute join the union, which was carried unanimously.

Miss Agnes Smith, of Hamilton, gave her opinion on the "Advantage of a thorough training for girls at the O.A.C. Guelph," which was full of interest and practical hints for those who anticipated attending the college.

Miss Cassie Stewart, of Carluke, read an instructive paper on "The properties and bacteria of milk." A paper prepared and read by Mrs. Erland Lee on "Backbone—Mental and Physical," was very much appreciated.

Dainty refreshments were served and a pleasant time spent in examining the old curios of the Women's Wentworth Historical Society. In the evening Prof. Harrison, of O. A. C., Guelph, delivered a very instructive address on "Milk as an agency in the conveyance of disease," followed by discussion which helped to bring out the various points.

Mr. Erland Lee interested the audience by explaining the importance of "Women's Institutes and their Work." Other papers which have been of much benefit to the Institute are as follows:

"Higher Physical Life of Women," by Miss Blanche Davis, of the Viavi Co.

"The law of kindness," "Conservation of energy," "Science and art of home-making," "Our late beloved Queen," "Our trip to Banff and the Rockies," "The Spring Dragon," "Experiences in a school for trained nurses," and an interesting address and lesson on "First aid to the injured."

The annual meeting was held at the home of Mrs. E. D. Smith, Helderleigh.

The election of officers resulted as follows:—

President—Mrs. F. M. Carpenter, Fruitland.
 1st Vice-President—Mrs. J. H. McNeill, Stony Creek.
 2nd Vice-President—Mrs. Erland Lee, Stony Creek.
 Secretary-Treasurer—Miss M. E. Nash, Stony Creek.
 Auditors—Miss L. King, Stony Creek; Miss J. Carpenter, Fruitland.
 Reporter—Mrs. Wm. Rogers, Stony Creek.

M. E. NASH,
 Secy.-Treas.

Middlesex Farmers' Excursion to the Ontario Agricultural College and Farm.

The annual excursion of the East Middlesex Farmers' Institute took place in June to the Ontario Agricultural College and Experimental Farm at Guelph. Despite ominous appearance of the morning skies, the number taking advantage of the outing was large, amounting to nearly 600 people. The rainfall, which was happily of short duration, did not hinder, to any appreciable extent, the sight seeing at the farm, which was evidently much enjoyed by the visitors. An ample free lunch was provided for the large company in the gymnasium.

PRESIDENT MILLS WELCOMES THE GUESTS

After the refreshments had been disposed of, President Mills, of the O. A. C., gave an address, welcoming the farmers, their wives, sons and daughters, of whom there was a goodly representation. He pointed out and directed them to the different places of interest in connection with the college and experimental farm. He said he objected to the term "Model" Farm which was so frequently applied to the institution; he stated that it was distinctly an "experimental" farm; that where experiments were being made there must of necessity be imperfections, hence a "model" farm, in the true sense of the word, would not fulfill the purpose for which such an institution was intended.

NECESSITY FOR THOROUGH EDUCATION.

The president emphasized the necessity of giving the farmers' sons a thorough education. The boy who left his home to make his own way in the world as a doctor or lawyer, obtained a first-class training, whereas, the current idea was that the tiller of the soil did not need so much time and money spent on his education. This state of affairs should not be, farmers should see to it that their sons who remained at home should receive as thorough training for their work as the brothers who enter the professions. The speaker dwelt upon the non-political character of the college. This could not be seen to better advantage, perhaps, than in the appointees to the staff. In one department alone no less than three Conservatives had held positions. The only thing considered in making appointments to fill vacancies in the staff was the special fitness of the candidate.

THE COLLEGE AND FARM

The Agricultural College and Exper-

imental Farm is situated about a mile and a quarter from the city. The location is in the center of an extensive agricultural and noted stock raising district, readily accessible by rail from all parts of the province. The farm in connection with the institution consists of 550 acres. The land is divided as follows: 345 acres worked as an ordinary farm, 43 acres in experimental plots, 90 acres occupied by buildings, lawn, garden, arboretum, nursery, forest tree plantations, dairy department and poultry department. Ten acres are in lanes and roads, while 62 acres comprise the uncleared and broken land.

THE SPACIOUS CAMPUS

which is really the introduction one receives upon visiting the Agricultural College, is deserving of special mention. The rich green grass, which still retains its verdure, despite the fact that the time-worn sign, "Keep Off the Grass," is not in evidence, forms a pleasing sight. The trees and shrubbery, which are all named and classified, much to the convenience of the casual visitor, are arranged so as to produce the most pleasing effect. The designers of this landscape gardening have recognized that "True art is nature to advantage dressed," and consequently the spruce hewed to forms of symmetry is not to be seen. Wholesome lessons in beautifying the home might be obtained from even a few hours' study of this ideal college lawn.

THE FARM EQUIPMENT

is suitable for the work of the institution. It consists of large and commodious farm buildings, with all modern improvements, and good samples male and female, of eight breeds of cattle, nine breeds of sheep and five breeds of swine, all of which are kept for the instruction of students in attendance at the college.

MORE ROOM.

There is at present lack of accommodation for students in residence, which defect will shortly be remedied by the conversion into dormitories of portions of the main building formerly used for library and museum. The improvements will provide accommodations for 50 additional students. The new building in course of erection, the result of the Massey donation, will comprise a convocation hall, together with a reading room and library. The Ontario Government is providing a new building, to be fitted up with biological and physical class rooms, together with laboratories and a museum.

There are in attendance students from Argentine, Great Britain and other faraway places, but the bulk of those patronizing the college are from this province. This alone is testimony as to the increasing popularity of the college, both at home and abroad.

THE DAIRY DEPARTMENT

is complete for instruction in all the details of milk testing, butter making, cheese making, running of cream separators, handling of milk, etc.

Miss Laura Rose, instructor in but-

ter making, gave some valuable hints on the subject of salting, working and preparing butter for the market. Her address was instructive and practical, owing to the fact that she illustrated her methods by performing the operations in the presence of her audience.

Prof. Dean gave a short talk in connection with dairy matters, and answered questions put by his hearers. Every courtesy was shown the visitors by the instructors and those connected with the college, and no pains were spared that would tend to make the visit to the Experimental Farm a source of profit as well as pleasure.

NEW MEMBERS.

A considerable number of new members were added to the list of the East Middlesex Farmers' Institute, and considering the amount of benefit to be derived by farmers from a perusal of the literature sent out by the department of agriculture, no farmer should neglect this important phase of his own calling.

Another Orchard Meeting

FRUIT STATION ON THE ST. LAWRENCE.

The annual meeting of the Farmers' Institute of South Grenville was held at this place on June 12th, according to previous arrangements made by Mr. Creelman, Superintendent of Farmers' Institutes. The attendance was small, numbering about thirty-five. The continued rains of May and early June delayed farmers with spring seeding and planting, and they are busy now with work that should have been done two or three weeks ago. However, the different sections of the riding were well represented, some driving fifteen or sixteen miles to attend.

PROF. MACOUN SPEAKS.

Prof. Macoun, Horticulturist Central Experimental Farm, Ottawa, assisted me in receiving visitors, and gave timely and valuable information during the day.

Shortly before noon the institute members held their annual meeting, elected officers and selected places for holding two regular and four supplementary meetings next winter.

After lunch, or basket picnic, a barrel of Bordeaux mixture and Paris green was prepared and sprayed on full grown apple trees, care being taken to show both the right and wrong way to prepare the mixture and how to spray a large tree from four sides so as to cover the tree thoroughly and evenly with the finest spray possible. After the spraying was disposed of the soil was removed for a depth of 8 or 9 inches at a point directly in the centre of a square between four trees in well cultivated ground to show visitors the complete network of rootlets that occupy every inch of ground in an orchard of 15 years old or over, and illustrating the necessity of applying fertilizers to the whole surface and not around the stump of the tree.

PRUNING.

Prof. Macoun paid particular attention to the matter of pruning, using

typical specimens to illustrate the value of a close headed tree for this section of the country, explaining and showing the injury by sun-scald where the main branches or trunk is exposed to the hot and bright sun of spring and summer.

While walking through the experimental orchard we endeavored to point out the most promising and desirable varieties and also gave practical illustrations in budding, grafting, inarching, bridgework, etc.

Before closing the meeting the Professor gave an address, touching on fruit topics generally and gave descriptions of desirable varieties of apples for planting in this section.

DIRECTOR JONES ON ORCHARD MANAGEMENT.

I also gave them a short talk on cultivation, drainage, humus, mechanical condition of the soil, fertilizers, etc., and also touched upon the question of our most injurious insects, classifying them in groups to show the special benefits of early, medium and late sprayings.

The visitors seemed much interested, and I am sure returned to their homes feeling that they had had a profitable and pleasant day.

HAROLD JONES, Director.
Maitland, June 18th, 1901.

Agriculture as an Occupation.

By Wm. T. Howson, Norwood, Ont.

Agriculture is the best and most independent business in the world, because it supplies the necessities of life. It favors, strengthens and increases population. It creates and maintains manufactures, it strengthens every kind of industry; it is the surest source of any country's wealth, and as for our own country, Canada, it is our greatest resource. To-day what advertises Canada like the products of the farm, the butter, cheese, bacon and grain which we ship to England?

In farming we are associated with nature in its purity and simplicity, and hence it is associated naturally with good morals. It is said that the people living in the immediate vicinity of the Alps pass their whole lives quite unconscious of the beauties of nature that surround them. Let us be watchful of the different phases of nature that present themselves to us on the farm.

The sportsman takes a great deal of pleasure from hunting and killing wild animals. Can we not take as much pleasure in treating them kindly and by studying their nature increase our capacities for imbibing knowledge.

A WHOLESOME BUSINESS

Now, health is the first and greatest blessing of life. This is preserved and fortified by the practice of agriculture. When a man loses his health in the towns and cities where does he go to regain it, but to the country? Health is substantial wealth, and for rare opportunities of self improvement, long life and sturdy independence, farming is the best business in the world.

DO NOT BELITTLE YOUR CALLING.

As young men entering upon farm life we should not have too low a conception of our calling. There are prizes enough that may be won by every earnest worker. Though our names may never be known outside of our own locality, yet at the end of life we have the satisfaction of saying "I have done my best"; we have accomplished as much as he who "has worn the laurel wreath or warrior's crown." Wealth, birth, official position may gain for a man eternal courtesies but they never will gain for a man true respect. True respect is only won by the cultured mind and pure and noble character. And for that cultured mind and pure and noble character let each of us aim.

There is a prevailing idea that for a man to appear to good advantage in private life he must be a graduate of some Collegiate Institute, College or University. For an example of this: At the late political contest a young farmer was taking the platform to deliver an address, when an old gentleman in the audience asked him "Are ye a l'yer, that ye are gettin' up ter tack to us?" From this we get that man's idea of what a person should be who would presume to address a meeting. The farmers constitute eighty per cent of the people of this country, and the lawyers only contribute one fifteenth of one per cent of the population. If the farmer wishes to take the platform should it not be allowed him?

A COLLEGE EDUCATION NOT ESSENTIAL TO SUCCESS

That high classical education which I spoke of is desirable, but I do not consider it an absolute necessity to either fit a man for public or private life. This world has been illuminated just as brightly by men who never studied inside a college or university. For instance compare Stephenson, Franklin, Edison and Watts, with many who have had this opportunity. But how do we find such men as Stephenson spending their time? Why in studying from house to workshop and from workshop to house. Look at what this man has done for the world in inventing the railway engine. What is of greater benefit to the world than that? Let each one answer that question for himself. A similar case is that of Edison, who has made the most wonderful advances in the electrical world. Gentlemen! Ignorance in this country is voluntary misfortune. After a boy leaves the public school, if he spends his spare time in study and gaining practical information, he can grow up and appear to just as good advantage as he who has grown up in the bloom of a college education. He can have a much better store of practical knowledge without which a man is poor indeed. Only a few of every community have the advantage of college education, and only a small per cent. of these ever return to the farm.

The standard of the different colleges is being raised each year. It now takes longer for the professional man to get his diploma, and he is receiving a better education than he was in former times. But why should

not this be? Should the professional men not advance with the times? Then does it not behoove the farmer to make the best use of his time and receive the best possible education if he expects to cope with the professional men?

VALUE OF HOME STUDY

The best place to receive a good practical education is at the Ontario Agricultural College, Guelph. I might say much of the benefits of a course in that institution, but the great majority of us have not an opportunity of attending such a source of learning, and I consider it of more value to proceed with a few words on the value of home study. Supposing we spend only one half hour per day in summer and two hours per day in winter, estimate the amount we would accomplish at the end of the year, and imagine our standing at the end of ten years.

We would have an education suitable for any society! Gentlemen! Banks may break, riches may flee, but intellectual investments we have made will be as law increasing as the waters of the St. Lawrence, Amazon or Mississippi rivers.

It is not altogether for our own benefit that we should obtain a good education, but also for those with whom we come in contact. Again, there is a law in nature, "Never stand still," and this is the case with the person intellectually, we are either gaining in mind or losing.

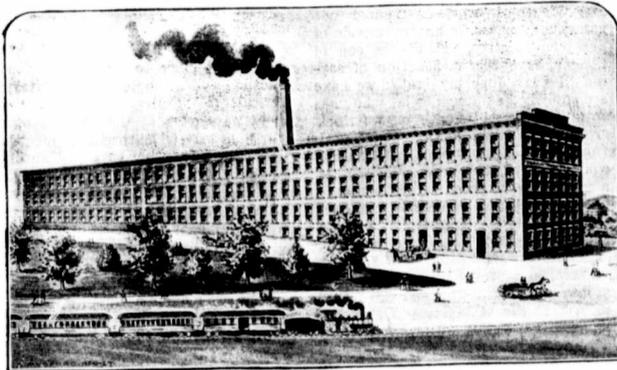
Now, after speaking of improvement along different lines, I would not forget that of temperance. The greatest detriment to the success of young men is that of the liquor traffic. The use of the intoxicant should be the great thing that young men should guard against. Ninety per cent of the crime, four-fifths of the paupers, come directly or indirectly from the use of strong drink. The scripture says, "Look not upon the wine when it is red, when it giveth its color to the cup, when it moveth itself aright, for at last it biteth like a serpent and stingeth like an adder." Am I unreasonable when I state that the liquors of to-day which contain copperas, arsenic, resin, acid and vitrol, madden the brain, poison the blood and brutalize the drinker. Now, as young men, the flower of our country and the coming statesmen of the twentieth century, would it not be advisable to abstain from the use of that living dragon, whiskey and its fellow destroyers.

In conclusion, I would say high ideals are all right, but better than castles in the air is to keep our aims just beyond our reach, and be sure to attain what we are each day striving for; each day finding a new ideal to be accomplished before the sun has set; a little nobler each day, and a little better than yesterday.

We should always, I think, keep in mind the old maxim:

"True worth is in being, not seeming;
Doing each day that goes by
Some little good, not in the dreaming
Of great things to do by and by."

Farm Implement Department



Vermont Farm Machinery Co.'s Factory, Bellows Falls, Vt.

A Cream Separator Factory.

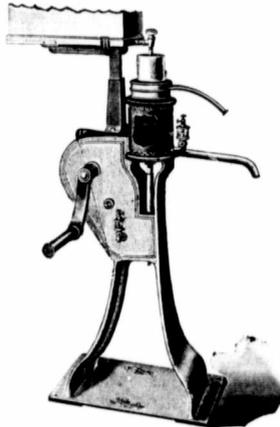
No line of machinery used in connection with agriculture has shown so much advancement as that used in connection with the dairy. It is becoming more perfect every year, and at the beginning of the new century we find it occupying a place in the development of agricultural machinery unexcelled by any other line.

The gradual improvement that has been made in this line is well illustrated by the growth of the Vermont Farm Machine Co.'s establishment at Bellows Falls, Vt., two views of which accompany this article. The main building is 355 feet long and 69 feet wide, and three stories and a basement in height. One view shows a portion of the machine shop, which occupies nearly half of the first floor, and gives our readers some idea of the thoroughly modern machinery used by this company in the manufacture of their goods. They have their own electric light plant and a complete line of telephone connections throughout the works.

They commenced business about 30 years ago over a livery stable, and employed two men. The business soon increased and they moved to larger and better quarters, where they remained until increased business again compelled them to move. Here they first occupied one floor, then two floors, but the business continuing to increase and they were forced to seek still larger quarters and moved again. Here they remained for several years, during which time they were burned out, making the second time they suffered loss by fire. The business kept increasing all the time and outgrew these quarters also, and then a building was erected wholly and especially for their use, and it is here that they are now. Although this building has been enlarged from what it was when first put up, yet it hardly meets their present requirements, the business having reached such large proportions.

The original name of the Company was the Hartford Sorghum Machine

Co., makers of evaporators only. Later the name was changed to the present one and by the addition of new lines, such as the making of ma-



Improved United States Separator.

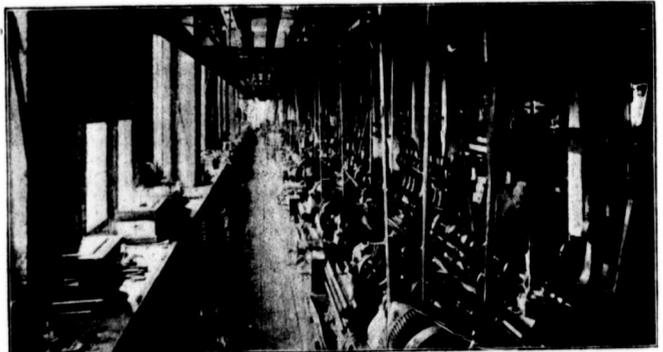
rakes, mowing machines, cultivators, the business began to assume large proportions. Their entrance into

dairy lines began with the making of the Cooley Creamer, which became so popular that the making of rakes, mowers, etc., was discontinued. Then followed the making of all kinds of dairy appliances, such as butter workers, Babcock testers, vats, etc., which caused the business to expand at a very rapid rate.

The last but by no means the least article to be manufactured by them is the Improved United States Centrifugal Cream Separator. They first handled them as sole licensees, but later bought the patents and are now, and have been for some years, the sole manufacturers. Since then they have made many improvements in both the bowl and running parts, and to-day their merit has become so known that the capacity of the factory is taxed to the utmost to meet the demand.

The Improved U. S. Separators are made in a variety and number of styles to suit the needs of the purchaser. From the small size with a capacity of 150 to 175 pounds of milk per hour for those with a small herd of cows who wish a machine at a moderate price, to the large factory sizes with a capacity of 3,000 pounds or more per hour, their efficiency has been proved many times.

One of their hobbies is the cream-gathering system for creameries. The number of creameries using this system is constantly increasing, which is proof positive of its profitability. By this system the cream is separated at home by the patrons, then carried to the factory by the cream gatherer. Formerly a creaming can such as the Cooley Creamer was used by the patron, but since the introduction of the cream separator, it has come largely into use for this purpose. The separator not only gets all the cream all the time, but the skim-milk is warm and sweet to feed to the stock, which is quite an important item. Another advantage to the cream-gathering system that should not be overlooked, is that all danger of spreading disease by getting skim-milk mixed with that from infected herds is avoided.



Interior View of Machine Shop.

This company also furnish outfits for the whole milk factory where the milk is taken to the factory and there separated—where that system is preferred.

post hole digger retails at \$5.00 and yet the farmer breaks his back for a week over a day's work, and calls it economy. S. W. G.

more about this very interesting machine. Here the operator, Mr. Slivinski, was kept busy answering the many questions put to him, and in a genial and clever manner described the different points of the mower.

An announcement was made that the machine would be shown in actual work at the Agricultural Park at a certain hour, and when the time set for the starting of the mower ar-

Farmers vs. Combinations.

At the present time when so much is being said about the condition of the farmer it would not be out of place to look around a little and see what pointers the farmer can get from corporate bodies. Harnsworth the London millionaire, attributes his great success to using the best and most up to date machinery. His example argues that no man can afford to handicap himself by using old or inadequate tools. What farmer of the present day would undertake to cradle a large crop of wheat?

Railway Companies must replace burned fences with utmost expediency. Certainly a railway like the C.P.R. or G.T.R. can afford to be at a great expenditure of time if a farmer can afford to do so. But since they can not, much less can a farmer. Still the farmer will content himself with spending a whole day with a few yards of fence, while if his tools were up to date he could do as much again, thus saving enough in one day to equip himself with a most useful tool and one that will last a life time.

Some time ago the writer happened to be in the office of Hall & Son, Toronto, when they were shipping Beaver post hole diggers to one of the largest railway Companies in Canada in dozen lots. These tools are being

A Novel Dominion Day Celebration.

One of the special attractions on Dominion Day at Lindsay, Ont. was the automobile mower, manufactured



by the Deering Harvester Co. It was a novel and interesting sight, and many farmers saw it in operation, and examined it in every way and we cannot do better than give the following extract taken from the Lindsay Post:

"This Company bears the reputation of being first with any new improvement or invention for making more easy the work of hay-making and harvesting, and of course are the first Company to manufacture an automobile mower.

During the procession in the morning much attention was attracted by the machine, and when the parade was concluded the automobile was run down in front of Mr. Thos. Hickey's wareroom, where an immense crowd immediately formed to learn

rived thousands of people were waiting at the place appointed to see hay cut by a mower run without horses. Everyone was impressed by the ease and simplicity with which this machine is handled and operated. A number of farmers were allowed to get on the seat and cut around the plot, finding no difficulty in controlling the machine. On close inspection it was found that the automobile, like all Deering mowers, did a superior class of work. The piece of ground on which this mower cut was very uneven and put the machine to a very severe test, but as the cutter bars of all Deering mowers readily conform to any unevenness or roughness of the ground, the automobile mower did first-class work, cutting very close and clean."



Beaver Post-Hole Digger.

placed on every section of their roads, where the farmer, however, is often content to work away with a log or an old-fashioned auger, nursing his wrath against the men who have outstripped him, just because he would not equip himself for success. This is only one of many instances, and it is one very common, and most unreasonable. The Beaver

The Model Dairy

Report of Pan-American Model Dairy test, giving totals for each herd complete for the week ending July 9th, 1901.

NAME OF HERD.	Lbs. of Milk.	Percent. Fat.	Amount of Butter.	Value at 25c. per lb.	Value Hay fed.	Value Silage fed.	Value Grain fed.	Total Cost of Feed.	Profit.
Holstein	1505.5	15.70	55.62	13.90	1.10	1.32	3.30	5.72	8.18
Shorthorns.....	1301.5	17.6	73.76	13.44	1.40	1.10	3.72	6.22	7.22
French Canadian	1072.0	18.90	47.84	11.97	1.40	.97	3.00	5.37	6.60
Guernseys.....	1100.7	22.35	57.74	14.45	1.55	.63	3.18	5.36	9.09
Ayrshires.....	1274.6	18.15	54.44	13.62	1.30	.74	3.21	5.25	8.37
Polled Jerseys....	853.8	22.65	45.40	11.35	1.73	.51	1.80	4.04	7.31
Jerseys.....	1133.3	22.25	58.89	14.72	.93	.85	3.73	5.51	9.21
Dutch Belted....	1080.8	16.75	43.11	10.78	1.25	.82	3.70	5.77	5.01
Red Polls.....	1191.2	19.35	54.20	13.54	1.30	.95	3.03	5.28	8.26
Brown Swiss.....	1293.1	17.84	54.07	13.51	1.25	.88	3.28	5.41	8.10

The Farm Home

Putter's First Speculation.

By Charles Day Leonard, in Saturday Evening Post.

Putter was born in a small country town not many miles from Augusta, Maine. His father, Hiram, or, as he was generally called, "Hi" Putter, had spent the greater part of his life in a hard, uphill struggle with a small rocky farm, the net result being that the annual crop of rocks had slightly diminished and the annual crop of vegetables had slightly increased. Hi Putter kept a couple of horses, two or three cows, a pig or two, and some ten or twelve hens.

There are two village groceries there now, but then there was only one, kept by a curious old character named Hart Johnson.

Hart Johnson posed as the local oracle, and it was at his store that the farmers from miles around would meet during the early evening to exchange views regarding the weather, the progress of the potato crop, the number of tons of hay which some meadow might be expected to yield, and kindred topics of agricultural interest. Hart Johnson made it a practice to go to Boston once a year to keep up his stock of groceries, and, as he expressed it, "spruce up a bit," relying during the balance of the year upon the mails and upon the occasional drummer who wandered into that part of the country.

Upon returning from one of these annual pilgrimages he brought with him what proved to be thrice a nine day's wonder, in the shape of a glittering diamond shirt stud, which he wore ostentatiously in the bosom of one of the few white shirts in the town. To spend forty dollars upon a mere personal decoration seemed, in the eyes of his neighbors, to be the height of extravagance and folly; but this fact was self-evident.

One rainy morning in the month of March, the one month in the year when the Maine farmer has a surplus of leisure time on his hands, a number of farmers had congregated at Johnson's store, holding down his cracker barrels and sampling his cheese and dried apples in an offhand manner to which he never dreamed of objecting.

Henry Putter was sitting in a back room, in rather close proximity to the molasses barrel, reducing an old shingle to a pile of shavings, when his father, "Hi," entered the store and, after exchanging greetings with those present, asked for some cracked corn for his hens.

"Don't you calculate its ruther 'sensitive feedin' chickens on corn?" asked one of those present. "I 'low my chickens kin hustle round 'n' find 'bout all they needs themselves."

"Wal, yes, I s'pose 'tis," admitted Hi, "but I reckon they lay 'nough better to pay for't in the end."

"I'm pretty nigh 'bout o' cracked corn, Hi," interjected the storekeeper, "there ain't mor'n a few handfuls left in the bottom of the bar'l; but if that's any use to you, you kin hev it an' welcome."

"I'm much obleeged to ye, Hart. I'll give the chickens one feed, and I'll hev to go until ye get some more."

As Hart Johnson leaned over the edge of the barrel to scrape up the little corn remaining, the diamond stud caught on the edge of the barrel and the stone slipped from its setting and disappeared in a crack in the floor unperceived save by the sharp eyes of Henry Putter in the back room.

Henry diplomatically said nothing, but waited the outcome and the possible reward to be offered for the recovery of the stone, and his father took the cracked corn and departed.

The storekeeper busied himself for some time in a dark corner of the store before returning to his post of honor by the side of the stove, so that it was a number of minutes before the loss of the diamond was discovered. It was not long, however, after his return before the absence of the stone was noticed and a vigorous but unavailing search was instituted. Every improbable corner was explored but the stone was not brought to light. Henry remained in his retreat without aiding in the search. At last the hunt was given temporarily, and a council of war was held.

"Beats all tarnation where the durned thing went to," exclaimed Johnson. "Reckin it must hev fallen into the hen feed of Hi Putter's. Won't one of ye tend store half an hour till I go up an' see him?"

This was accepted by all as a probable solution of the mystery, but all present evinced a decided disinclination to "tend store," as all wished to accompany the unfortunate storekeeper on his quest.

The matter was finally decided by locking up the store, and the whole party set out by the rather circuitous road for the farmhouse of Hi Putter.

In the meantime Henry had seen what he judged to be the opportunity of his life and was already running as fast as his heels could carry him across lots toward his father's house. He reached the road just in time to obtain a ride with an Augusta provision dealer, who made semi-weekly trips through the country districts selling fresh meat and buying eggs, poultry and other supplies from the farmers.

It was pure chance that threw this man in Henry's way, but young Putter lost no time in taking advantage of the opportunity and was soon chattering for the sale of a dozen dressed fowls, to be delivered at the next visit of the provision dealer. Henry did not know it, but, for the first time in his life, he was selling the market short.

The deal was consummated just as the team reached his father's house, and, without wasting any time, Henry set about the next step in his little scheme. He found his father behind the barn surrounded by a flock of eleven scrubby hens and one old, lean Shanghai rooster, which were just devouring the last particle of the cracked corn which had aroused so much interest at the little country grocery. Henry lost no time in getting down to business.

"Say, dad," he said, "what'll ye take for them hens?"

"Why, Henry, what on airth do you want of them chickens? You ain't got no-use for 'em, and if ye had ye ain't got no money to pay for 'em."

"That's all right, dad. I'm in a hurry and I want them hens. I'll pay ye for 'em to-morrow, and you'll know why I wanted 'em in just about ten minutes. You just leave all this to me. Now, what'll ye take for 'em?"

"Wal, Henry, I don't know what on airth you be driving at. Them hens ain't wuth much, but if you're calculating to dress 'em an' sell 'em for poultry, I don't know that I want to make much out'n you. If you'll give me a half a dollar apiece for 'em to-morrow you kin hev 'em."

The bargain had hardly been sealed when the delegation from the corner store appeared upon the scene, somewhat the worse for the mud upon the country road. After a few desultory remarks, Hart Johnson broached the subject of the visit.

"I wanted to speak to ye about the cracked corn ye just got, Hi," he said.

"What's the matter with it?" inquired the elder Putter, somewhat anxiously. "Wan't no salt ner nothing in it, was there? 'Cause if there was them pesky hens hev just et the last of it."

Here was complication in the situation which Mr. Johnson had not bargained for, but he inquired somewhat dubiously: "Say, Hi, what'll ye take fer them hens just as they be?"

"Sorry I can't oblige ye, Mr. Johnson, but the fact of the matter is thet they ain't my hens no longer. I've just sold 'em to Henry here."

Mr. Johnson turned his batteries in a new direction. He had not noticed Henry in the back room of the store during the hunt for the diamond and supposed that he had walked home with his father.

"Wal, Henry," he said, "what'll you take for 'em? I've calculated for some time that I needed a few more hens, an' these of your'n kinder take my eye."

"Wal, the fact of the matter is, Mr. Johnson, that I kinder tho't thet I'd go into the hen-raisin' business myself. These is mighty good hens and I don't b'leve I care to sell 'em, anyway. If I do sell 'em what'll ye give me for 'em?"

"Wal, Henry, I dunno but its more'n they're wuth, but seein' it's you I'll give ye half a dollar apiece for 'em."

"An' I'll give ye fifty-five cents apiece!" "An' I sixty!" interjected two of the farmers.

Henry looked at them in well-feigned amazement. "Seems ter me," he said, "that you people want these hens mighty bad all of a sudden. I dunno why you all want 'em, but if ye do, I'll tell ye what I'll do; I'll hev a vendoo right here an' now an' sell 'em off one on a time, only these is purty tollable fair hens an' I ain't a-goin' to sell none on 'em for less 'an seventy-five cents."

This proposal was received with great but disguised satisfaction by all excepting Johnson, but the sacred

rights of the minority remained unrecognized, and the auction began.

Henry started in chase of one of the hens while each of the farmers made a mental calculation. There were twelve fowls. That made one chance in twelve of each bird having a diamond in her crop. The diamond was supposed to be worth about forty dollars, therefore each chance was worth slightly over three dollars, with a little thrown in for luck.

After a short chase Henry returned in triumph with his captive cackling and flapping her wings; and, with Henry acting as auctioneer, the sale began. The hen was a miserable, stunted little bird of some unknown mixture of breeds, but Mr. Johnson started the bidding at seventy-five cents. From this point it quickly went to one dollar, to a dollar and a quarter; a half, and then more slowly until it reached three dollars and twenty cents, at which price it was secured by Hart Johnson. All this was to the open and undisguised astonishment of Putter, Sr., and to the apparent astonishment of Putter, Jr.

Henry was about to catch another hen and proceed with the sale when he was stopped by Mr. Johnson. Mr. Johnson said that if Henry was willing to wait a minute he would take the hen into the barn and find a meal sack to take her home in. A number of those present volunteered to help him, and the entire company, with the exception of Henry and his father, entered the barn and closed the door. A loud cackling was heard from the interior of the building, and, shortly after, the delegation returned, the faces of all, excepting that of Mr. Johnson, being much elated while his was correspondingly much depressed. There were rather evident blood stains upon Mr. Johnson's hands.

Another bird was put up, another mental calculation gone through with, with a slightly different result, and after one of the farmers had bought the bird for a little less than three and a half dollars, another trip was made to the barn with a like result.

This process was repeated until only one hen and the rooster remained. Theoretically, on a forty-dollar valuation those two birds were worth twenty dollars apiece, but the none too well lined purses of the farmers were becoming badly depleted, and Mr. Johnson secured the hen for a little over seven dollars—but still no diamond.

"Come to think on it," said Henry, "I don't b'lieve I'll sell that rooster. He ain't good fer much and he eats more'n three hens put together, but I was always kinder sot on him and I guess I'll keep him."

Shanghai preferred appreciated several points.

"Tain't right, Henry," interjected Johnson; "you 'greed ter vendoo the hull lot on 'em right here and it ain't right ter back out now. Is it?" he added, turning pathetically to the coterie from the store. The opinion of the farmers that it was not right was so evidently and so forcibly expressed that Henry proceeded to capture the rooster and the sale of the last of the dozen birds was soon in process.

It is probable that Henry and his

father were the only two persons in the crowd who were not morally certain that there was a diamond, supposed to be worth forty dollars in the crop of that Shanghai, and more than one farmer was inwardly cursing his luck that he had not saved the money which he had spent on the headless bird which he held in his hand and had been able to apply it to the purchase of the bird which was at present being auctioned off.

Shanghai preferred appeared to be changing from a speculative gamble to a gilt-edged investment security.

Johnson allowed the farmers to out-bid each other for some time, and it was not until a bid of nine dollars and seventy-five cents had been made, and it was a certainty that no farmer had more than that in his possession, that he raised the amount to ten dollars. This was the last cent of money which he had left after paying for his former purchases, but he diplomatically put on a bold front, as if his offer were backed by unlimited capital.

"Ten dollars is offered; do I hear 'leven? Ten an' a half? Ten an' a quarter? Gentlemen, please observe the merits of this beautiful Shanghai rooster; an' goin' so cheap"—the bird was not worth, intrinsically, thirty cents. "Only ten an' a quarter. Goin' to Mr. Johnson at ten dollars. Goin', goin', an'—oh, say, by the way, gentlemen, why don't a few of ye get together and form a little pool—put yer money together and buy this little bird? Then ye can all get together and have a nice pot roast of chicken!" The antiquated bird could not have fed a hungry cat.

The suggestion was eagerly seized upon and several of the farmers contributed their quota toward the amount necessary to cover Johnson's ten dollar bid. The spokesman of the pool offered ten dollars and a quarter and Henry looked inquiringly in the direction of Johnson.

"Say, Henry," said the latter, "if you want to trust me for half a dollar I'll—"

"Sorry, but I can't do it, Mister Johnson. Ye know I said I'd make a cash transaction out o' this. Goin', goin', and gone to Mr. Willis and friends. Ten dollars an' a half please gentlemen, before I give ye the bird."

For the last time the door of the barn opened. The last of the fowls was successfully guillotined, the last crop was examined, and—no diamond.

Johnson lost his temper. "Ye durned little rascal!" he cried, grasping Henry by the collar. "What ye done with my diamond?"

"Your diamond!" he exclaimed; then as a light appeared to break on his perplexed brain: "Oh, yes! come to think on it, I saw it roll into a crack pretty nigh your box o' 'taters down to the store. Meant to hev told ye about it, but I forgot it."

For a few moments Henry was in danger of being brought before Judge Lynch, but the humor of the situation began to spread over the gathering, especially over those who had not purchased any hens, and Henry escaped.

"Wal, I'm hanged ef I know what ter do with this bird now I've got it," said one of the farmers; "reckin yer don't want ter buy it back ag'in, do ye Henry?"

"Wal, I don't know as I've got much use for it dead," said Henry, "but seen' it's you I'll give yer forty cents if yer want it."

The upshot of the matter was that Henry succeeded in buying back the entire lot of hens at a uniform price of forty cents, and afterward disposed of them to the Augusta dealer for sixty cents.

Hints by May Manton

Stocks and Belts No. 3861.

No woman ever possessed a sufficient number of stocks, ties, and belts. No matter how large her collection, there is always room, and even need, for the additional one that is novel and takes her fancy. The very complete assortment, here given, includes the soft box, four-in-hand, and butter-fly ties, plain, draped, and boogie belts, and will enable any deft needle-woman to make half a dozen for the cost of one ready-made. The materials for the originals are dotted silk, louisine silk, white mull and white pique, but al-



3861 Stocks and Belts,
Medium Size.

most anything and everything is used and there is ample opportunity offered for individuality in the choice both of materials and color.

The foundation for all the stocks is the same. The plain one in the centre is shown with the butter-fly tie that appears separately just below. The four-in-hand model is trimmed with stitched bands and has the tie joined to the back edges, where it crosses and passes round to the front. The bow includes turn-over portions, but is the same familiar friend. The belts are well fitted and curve to the figure to give a graceful outline. The plain and the draped ones are eminently simple, but are stylish and fashionable as well. The faced boogie is cut in sections and fits to a nicety and can be closed at back or front as preferred, made pointed or cutaway as illustrated.

To cut the stocks with ties in the different styles, 1 yard of material 32 inches wide will be required. To cut the belts, 1 yard 21 inches wide will be required.

The pattern 3861 is cut in one size (medium) only.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World," Confederation Life Building, Toronto, giving size wanted.

The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

Publisher, D. T. McAINSH.
Editor, J. W. WHEATON, B.A.

The Farming World is a paper for farmers and stockmen, published weekly, with illustrations. The subscription price is one dollar a year, payable in advance.

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How to Remit—Remittances should be sent by cheque, draft, express order, postal note, or money order, payable to order of THE FARMING WORLD. Cash should be sent in registered letter.

Advertising Rates on application.
Letters should be addressed:
THE FARMING WORLD,
CONFEDERATION LIFE BUILDING,
TORONTO.

A Dangerous Cattle Disease

A dangerous cattle disease, which is diagnosed as splenic fever, has broken out in Osnabrock Township, Stormont County, about 45 miles southeast of Ottawa. The local veterinary and Government surgeons seem powerless to check its ravages. Within the last couple of weeks 21 head of cattle have died. More cattle are sick and will likely die. Horses are now becoming infected by the disease.

Four horses have died and the people in the locality are becoming very much alarmed, as it is reported that the human family may take the infection.

The New Apple Barrel.

The New Apple Barrel authorized by the Dominion for use in 1902 is smaller than that adopted by the American apple shippers. Their's has a head diameter of 17½ inches, staves 28½ inches long, and a bilge 96 inches outside measurement. Our barrel 26½ inches between heads, a head diameter of 17 inches, and a middle diameter of 18½ inches, and is intended for apples, pears and quinces.

Hackneys at Buffalo.

Mr. E. B. Elderkin, Supt. of Canadian Live Stock, Pan-American Exposition, sends us the following classification and prizes at Buffalo, which takes the place of section seven, page thirty-four of the Pan-American prize list: Revised Classification for Hackney Horses, announcing cash offerings as received from the American Hackney Horse Society.

(A. H. Godfrey, Secretary.)

REVISED PRIZE LIST

As proposed 1st 2d 3d 4th 5th
\$1,095.
Stallion, 5 yrs.
(4) not exceed-

ing 4 yrs old.	\$100	\$75	\$50	\$25	\$15
Stallion, 3 yrs., old, or over, 15 h. or over	75	35	30	15	10
Stallion, 2 yrs., old.	50	30	20	15	10
Stallion, 1 yr old	40	25	20	15	10
Mare, 3 yrs old or over	50	30	20	15	10
Filly, 2 yrs. old.	35	25	20	15	10
Filly, 1 yr. old.	30	20	15	13	8

Brood mare with two of her produce under four years old. Mare must be certified to be with foal or to have produced a foal within a year. 30 30 20 15 10
Four produce are considered ample to demonstrate character, etc. Stallion three years old or over should be at least 15 hands, if the Hackney as a sire or carriage horse is to be presented.

Oh, it takes a lot o' people foh to make dis worl' go roun'.
An' dar ain' much use complainin' 'bout de task dat you has foun'.
Some folks in orter-mo-beels kin go ridin' when its fair.
An' some mus' haul de rocks an' keep de roadway in repair.
—Washington Star.

ST. LAWRENCE COFFEE HOUSE
78 and 80 King St. East
"RESTAURANT" TORONTO
Dinner for 20c.
6 Dinner Tickets \$1 Served from 11.30 to 3 and from 6 to 8
Farmers and their wives visiting Toronto will find this to their taste.



ROCK SALT for horses and cattle, in ton and car lots. Toronto Salt Works, Toronto

For Best **PORTLAND CEMENT**
Address—
The Rathbun Company
310 Front St. West, Toronto



OAK LODGE YORKSHIRES

are acknowledged to be the best type of bacon hog to produce the ideal carcass for the best English trade. **CHAMPIONSHIP HERD AT TORONTO INDUSTRIAL EXHIBITION FOR NINE YEARS** also sweepstakes on Dressed Carcass at Provincial Winter Show. We have on hand now a large herd of different ages. Our prices are reasonable and the quality is guaranteed to be choice. Write

BRETHOUR & SAUNDERS,
Burford, Ontario

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

"The genuine without the signature of Dr. Saurancey, Williams & Co."
Sole Importers for the Province of the U.S.A. & CANADA: J. CLEVELAND O.

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, SUPPRESSES ALL CAUTERY or FIRING. Impossible to produce scurf or blemish. Every bottle 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 free descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

Stock

IMPERIAL HOLSTEIN-FRIESIAN STOCK FARM

10 Young Bulls from one month to four months, bred from Winnie R's De Kol.

W. H. SIMMONS,
New Durham, Ont.

The Up-to-date Herd Tamworths

Bred from sweepstakes herd.
Young stock of both sexes for sale.

W. H. McCUTCHEON, BRUSSELS, ONT

RETTIE BROS. HOLSTEIN-FRIESIAN BREEDERS

A few choice young animals for sale. **RETTIE NORWICH, ONT.**

GLEN CRESCENT SHORTHORNS AND OXFORDS.

A few shearing rams by imported "Royal Windsor 5th" and one two-year-old bull for sale.

J. W. WIDDIFIELD, Uxbridge, Ont.

MAPLE LODGE STOCK FARM.

Shorthorns For Sale.

A few choice young bulls, and some excellent heifers and young cows. Our cows were awarded first prize at Prov. Dairy Test, 1899 and 1900. Imp. Knuckle Duster, and Imported Sir Wilfrid, at head of herd. Leicester sheep, imported and home bred. The best. **A. W. SMITH,** Maple Lodge P. O., Ont.

OXFORDS AT FARNHAM FARM

50 Superior Yearling and Two Year Rams.
2 Extra Fine Imported Lambs.
100 Ram Lambs.
And a number of good Yearling Ewes and Ewe Lambs.
—PRICE REASONABLE.

HENRY ARKELL, Arkell, Ont.

Market Review and Forecast

Office of The Farming World,
Confederation Life Bldg.
Toronto, July 22, 1901.

The extreme heat of the past week has affected business adversely in the large centres of trade. Remittances are complained of as being slow. The outlook for the fall trade, however, is encouraging. The money market keeps steady at about 5 per cent. on call, and discounts at last week's quotations.

Wheat.

The Wheat market has revived somewhat, and during the week there has been an advance due to further adverse reports regarding the European crop and also in sympathy with the condition of the corn crop in the South Western States which suffered considerably because of drought speculations, reasoning that if there was a shortage in corn it would increase the demand for wheat. But rain has come in the west and corn is improving so that this excuse for exciting the wheat market falls to the ground. Local markets are quiet and the recent advance in Chicago was not followed here. Quotations here are 61c to 62c. for red and white with holders asking 63c. Spring is quoted at 62c to 63c east and goose at 60c to 61c. On Toronto farmers market red and white bring 67c., goose 61½c and spring 67c per bushel.

Oats and Barley.

There is a stronger tone in oats and prices have advanced about ½ cent per bushel. Oats are quoted here at 33c No. 1 white east, and 32½c for No. 2. On the farmers market here oats bring 36½c to 37c per bushel.

Prices for barley are nominal. It is quoted on Toronto farmers market at 43c to 44½c per bushel.

Peas and Corn

Peas are firmer and prices have advanced 1 cent during the week. Quotations here are 70c middle freights.

There is a general advance of about 2 cents for American corn. Quotations here for Canadian are 45c for yellow and 44c for mixed west.

Bran and Shorts.

The bran market is firm. Ontario bran is quoted at Montreal at \$13.50 to \$14 and shorts at \$15 to \$15.50 per ton in car lots. City mills here sell bran at \$14 and shorts at \$16.00 in car lots f.o.b. Toronto.

Hay and Straw

As a rule the big hay crop has been gathered in in good condition. The deliveries of old hay have fallen off somewhat though many farmers have been compelled to market the old to make room for the new. Montreal quotations for baled hay in car lots are No. 1, \$11, No. 2 \$9.50 to \$10, and clover \$9 per ton. The market here is quiet with a fair demand at \$9.50 to \$10 per ton for car lots on track. On Toronto farmers market, old hay brings \$12.50 to \$13, new \$8 to \$9 and sheaf straw \$9 to \$10 per ton.

Potatoes.

New potatoes are selling at Montreal at \$1.10 per bag and 70c to 80c per bushel. Old are selling here at 25c to 30c per bag for car lots on track. Jobbers are paying \$1.10 per bag for new potatoes, and on the farmers market new bring \$1.00 to \$1.15 per bushel.

Eggs and Poultry.

The egg market shows little change though an easier feeling in some centers without any drop in prices which are 10½c to 11c for straight lots and 11½c to 12c for No. 1 candled stock in a jobbing way. Selects are firm here and scarce at 12½c in case lots. Fresh gathered are steady at 11c to 11½c. On Toronto farmers market, new-laid bring 12c to 15c per dozen.

On the farmers market here dressed chickens bring 60c to 80c; spring chickens 50c to \$1.00 and spring ducks 70c to \$1.20 per pair and turkeys 10c to 12c per lb.

For the week ending July 25th, the Canadian Produce Co., of Toronto, will pay 9c per lb. for spring chickens, and 4c per lb. for old hens live weight.

Fruit

The warm weather has increased the local demand for fruit. At Montreal raspberries bring 10c to 12c per box and cherries \$1.00 to \$1.50 per basket in good sized lots. Raspberries have been active here and sell at from 8c to 10c per box for red and 6c to 8c for black. Cherries are easier at 80c to \$1.00 per basket and huckleberries at \$1 to \$1.10.

Cheese.

The shipments of cheese still continue to fall behind those of last year. Up to the week ending July 17th, exports from Canada showed a decrease of about 225,000 boxes less than for the same period last year. And from the United States for the same period 112,000 boxes less, making a total decrease of about 337,000 boxes. From this on the make will begin to fall off a little so there is little chance of any of this deficit being made up. At the country boards buyers and sellers have been apart as factory men refuse to accept prices offered. Sales made at Ontario points ranged from 9 3-6c to 9½c or a fraction better than a week ago. At Montreal finest westerns are quoted at 9½c to 9¾c; eastern 9½c to 9¾c, and undergrades 8c to 8½c per lb.

Butter.

The Trade Bulletin has this to say regarding last week's butter market:

"This market is a very uneven one and rather difficult to quote, owing to the poor condition in which many lots are received, as we know of actual sales within the past week of heated and off-flavored creamery at 16½c and 17c, and a fair range of prices for seconds is from 17c to 18½c, as to condition. Some very fine lots of Eastern Townships creamery have sold at 19½c to 19¾c, while fancy makes for special purposes have

brought 19¾c and 20c. The great bulk of the business, however, has been done at 19c to 19½c, some thousands of packages having changed hands at that range. In dairy butter there has been an easier feeling, Western being quoted at 16c to 16½c, but is difficult to get the outside figure. Some Manitoba dairy is said to be offering on this market, one lot of old bringing 13c, and two other lots at 13½c to 13¾c respectively."

Creamery keeps firm here at 20c to 21c for prints and boxes. Dairy pound rolls are in keen demand at 17c to 17½c, and best tubs and boxes at 16c to 16½c per lb. in a jobbing way. On Toronto farmers' market lb rolls bring 14c to 18c each, and crocks, 14c to 16c per lb.

Wool.

The market is still dull with very little buying. Sales are reported at some Western Ontario towns at 13c to 14c for washed fleece. Prices here are the same as given last week or 8c for unwashed and 13c for washed fleece per lb.

Cattle.

The cattle situation continues strong, especially for best grades. Trade has ruled fairly good on Toronto Cattle Market with choice, well-finished exporters in active demand. The bulk of the export cattle have been selling at \$1.80 to \$5.10 per cwt. The best lots of butchers cattle are quickly picked up while the common or inferior stuff is hard to dispose of. Very few feeders or stockers are offering, Milch cows are not selling as well as a few weeks ago, prices ruling at \$25 to \$45 each for the bulk. Good veal calves of choice quality sell well, while inferior stuff is hard to dispose of. Quite a lot of unfinished cattle continue to be marketed, and of course have to be sold at a sacrifice. It will pay farmers to finish their animals better.

Export cattle—Choice loads of these are worth from \$5.00 to \$5.25 per cwt. and light ones \$4.60 to \$4.80 per cwt. Heavy export bulls sold at \$4.00 to \$4.25 and light ones at \$3.60 to \$3.75 per cwt.

Butchers' Cattle.—Choice picked lots of these in quality to the best exporters, weighing 980 to 1,125 lbs. each, sold at \$4.50 to \$4.70 per cwt., good cattle at \$4.12 to \$4.30, medium, at \$3.80 to \$4.00, and inferior to common at \$3.00 to \$3.25 per cwt.

Feeders.—Heavy, well-bred steers from 1,100 to 1,200 lbs each, sold at from \$4.10 to \$4.25 and other quality at \$3.90 to \$4.00 per cwt. Light steers 900 to 1,000 lbs each, sold at \$3.25 to \$3.50 per cwt.

Stockers.—Yearling steers 500 to 800 lbs each, sold at \$3 to \$3.25, off colors and inferior quality at \$2.50 per cwt.

Calves.—These are in good demand, at Buffalo, veals bringing \$6.25 to 6.60 per cwt. At Toronto market ordinary calves bring \$2 to \$8 each.

Sheep and Lambs.

Sheep and lambs are in better demand, that is those of good quality. Price for sheep keep steady at \$3.50 to \$3.75 per cwt. for ewes, and \$2.50 to \$3 for bucks. Spring lambs are firm at \$2.50 to \$4.50 each.

Hogs.

Hogs do not come forward in large numbers and prices are firm. It is reported in some sections where competition is keen among drovers that farmers are getting Toronto prices. Select bacon hogs sell here at \$7.25 per cwt. and lights and fats at \$6.75. Unculled car lots bring about \$7 per cwt.

For the week ending July 27th, the Wm. Davies' Co., Toronto, will pay \$7.00 to \$7.50 per cwt. for select bacon hogs, with a very uncertain market.

The Trade Bulletin's London cable of July 18th re Canadian bacon reads thus:

"The market has improved during the week and holders of Canadian bacon have been enabled to establish an advance of 1s. per cwt. under lighter offerings. No. 1 Canadian has sold at 56s to 60s, with fancy sides bringing more money."

The Cure of the Skin in Summer.

What with our hot sun, our mosquitoes and black flies, and our extremes of heat, the skin has its own troubles during our Canadian Summer and if it is to fulfil its duties properly it must be kept in good order.

Every one knows that the pores of the skin act as a wonderful drainage system for the body. "Through their minute openings they carry off all impurities, and to allow them to do this, which by the way is one of the most important of a good complexion, the skin must be kept soft and clean.

Nothing will help nature so much in this as a combination of good water, good soap and good friction with the towel.

So far as soap goes we have in Canada a toilet soap which is really unexcelled for keeping the skin in good order. It is comparatively inexpensive and easy to get as all dealers sell it. We refer to Baby's Own Soap made by the Albert Toilet Soap Co., Montreal.

Made from vegetable fats only, no animal grease whatever, this soap cleanses and softens, and its exquisite aroma is most delicate and pleasing.

The waterworks will supply the other requisite and with good smart friction after the bath it is surprising how free the skin will be from painful sunburns, eruptions, and how fresh and clean the complexion will become.

Try it, it is cheaper and better than any cosmetic.

—Communicated.

No Home should be without it. Pain-Killer, the best all-round medicine ever made. Used as a liniment for bruises and swellings. Internally for cramps and diarrhoea. Avoid substitutes, there is but one Pain-Killer. Perry Davis'. 25c. and 50c.

FITS Liebig's Fit cure for Epilepsy and kindred affections is the only successful remedy, and is now used by the best physicians and hospitals in Europe and America. It is constitutionally recommended to the afflicted. If you suffer from
EPILEPSY, FITS, ST. VITUS' DANCE, or have children or relatives that do so, or know a friend that is afflicted, then send for a free trial bottle and try it. It will be sent by mail prepaid. If it has cured whomsoever, it will cure you. When writing mention this paper, and give full address to
THE LIEBIG CO., 179 King street west, Toronto.

PURE-BRED STOCK**NOTES AND NEWS FROM THE BREEDERS**

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Cattle.

Mr. S. Howie, Supt. of Advanced Registry American Holstein-Friesian Ass'n., reports official records from June 20th to July 6th last as follows:

Reports of thirty-three cows have been received during this period, one of which was reported with four records of seven days each, and inclusive of these a record for thirty days. In the full-age class ten cows averaged: Age 6 years, 2 months, 12 days, tested forty days after calving; milk 410.8 lbs.; butter fat, 14,390 lbs.; equivalent butter 80 per cent. fat, 17 lbs. 15.8 oz., or 16 lbs. 12.6 oz., 85.7 per cent. fat. The largest record in this class was 555.7 lbs. milk, 18,607 lbs. butter fat, equivalent to 23 lbs. 4.4 oz., butter 80 per cent. fat, or 21 lbs. 11.3 oz. 85.7 per cent. fat.

In the four-year class nine were reported that averaged: Age 4 years, 3 months, 25 days, tested thirty days after calving; Milk 419.9 lbs.; butter fat, 12,754 lbs.; equivalent butter 80 per cent. fat, 15 lbs. 15.1 oz., or 14 lbs. 11.1 oz. 85.7 per cent. fat. The largest record in this class was made by a cow 4 years, 1 month 20 days old. She produced 474 lbs. milk, 15,611 lbs. butter fat, equivalent to 19 lbs. 8.2 oz. butter 80 per cent. fat or 18 lbs. 3.4 oz. butter 85.7 per cent. fat. She made a thirty-days' record of 1988.5 lbs. milk, 62,958 lbs. butter fat, equivalent to 78 lbs. 11.2 oz. butter 80 per cent. fat, or 73 lbs. 7.2 oz. 85.7 per cent. fat. The average of two heifers in the three-year class was 14 lbs. 5.7 oz. equivalent butter 80 per cent. fat, or 13 lbs. 6.4 oz. 85.7 per cent. fat.

The most remarkable showing was in the two-year class. Twelve heifers in this class averaging in age only 2 years and 20 days, produced an average of 304.5 lbs. milk, 9,598 lbs. butter fat, equivalent to 12 lbs. butter 80 per cent. fat, or 11 lbs. 3.2 oz. 85.7 per cent. fat. The highest record in this class was of a heifer 2

years and 13 days old at date of calving. She produced an equivalent of 14 lbs. 3.6 oz. butter 80 per cent. fat, or 13 lbs. 4.4 oz. 85.7 per cent. fat. Six heifers in this class averaged an equivalent of 13 lbs. 5.9 oz. butter 80 per cent. fat, 12 lbs. 7.6 oz. 85.7 per cent. fat.

Sheep

We learn that Mr. F. Miller, the well-known importer sold in the market at Buenos Ayres thirty-one imported Lincoln rams at an average of \$375 each, the top price being \$675 and the bottom price \$60 per head. At the same market, in the month of February, Messrs. Bullrich & Co., disposed of 321 Argentine-bred Lincolns at an average of \$45. This looks as if there is money in sheep yet.

Mr. Herbert Farthing, one of England's noted Dorset breeders, has passed away. He was a constant exhibitor at all the leading shows, and for twenty years in succession was a prize-winner at Smithfield. He had also officiated as a judge at the Royal, Bath, and West, Smithfield, and other shows, his last appearance in that capacity being at the Royal at Cork last year. He had on several occasions supplied stock to Queen Victoria.—Wool Markets and Sheep.

Spoooner's "PHENYLE"
Powder
"Phenyle"
GERMICIDE
DISINFECTANT....

KILLS CHICKEN LICE

and Lice on Horses and Cattle, and Ticks on Sheep. Keeps them Healthy, Easily applied; no dip required.

60lb. boxes, 1lb. packages,.....25c. lb.
70lb. pails,.....15c. lb.
400lb. barrels,.....10c. lb.

If your Druggist does not sell it, send direct to

ALONZO W. SPOONER,
Laboratory, PORT HOPE, Ont.
Will cure and prevent hog cholera.

Deafness**and HEAD NOISES**

Relieved, the progress of Deafness stopped and sensitive ears protected by

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Call or write for pamphlet and testimonials showing benefit in cases of Catarrhal Deafness, Roaring and Hissing Sounds, Discharge from Ears, Relaxed, Sunken or Thickened Drums.

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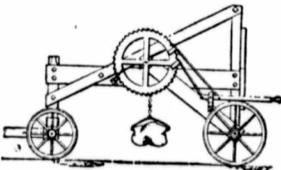


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Made to fit any axle.

Send your address on a post-card for a catalogue, and learn the advantages of a Low Handy Wagon. You can do your farm work in just half the time, which is money in your pocket.

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The Monthly Statement Card shown here is exact size of front. It is made of stout Manilla, and can either be delivered by the milk-hauler or sent to the patron in an ordinary envelope. On back of card rules are given for "The Care of Milk."

The Cards are now ready; order early.

PRICE:

25c. for 100; or a package of 1000 for \$2.00 Post-Paid.

A factory of 100 patrons will require from 800 to 1,000 tickets during the season.

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Confederation Life Building, Toronto.

Monthly Statement

Of Milk delivered at the _____

Factory during the month of _____

By _____

PUBLISHED BY THE FARMING WORLD, TORONTO

1900	1ST WEEK	2ND WEEK	3RD WEEK	4TH WEEK	5TH WEEK
	LES.	LES.	LES.	LES.	LES.
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Weekly Totals
Per cent. of butter fat in milk

Total milk supplied for the month.....lbs.

Total butter-fat supplied for the month.....lbs.

On the dates underlined the milk was sour or badly tainted.

The butter-fat test covers the milk supplied for the week or weeks intervening between the last test and the one indicated by the per cent. of fat in above table.

Mistakes or complaints, if reported to the maker or the secretary, in writing, will be promptly attended to.

Read carefully and observe the rules, governing the care of milk, on the back of this card.

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Day T J

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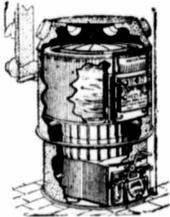
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The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

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