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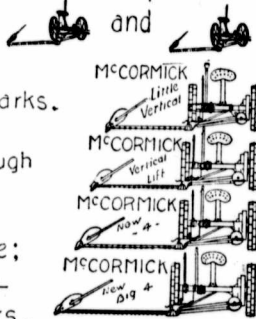
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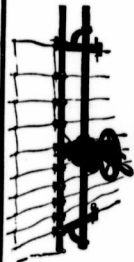
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The Farming World

For Farmers and Stockmen

Vol. XX.

APRIL 29th, 1902.

No 16.

The Advance in Beef

AS reported last week, the advance in the price of beef is by no means a local affair. There is an advance all along the line, not only in Canadian centres but in the large cities of the United States. In Great Britain the situation is the same. In fact it is because of the scarcity of beef in the old land and the marked advance in price there that prices have soared so high on this side. For the past few months everything in the shape of export cattle have been bought up readily and shipped across the water. For this trade numbers of the heavier and better classes of butchers' cattle weighing from 1,100 to 1,150 lbs. each have been taken thus lessening the supply for the local butcher and advancing the price for the poorer grades of cattle to an equality with the very best grades a few months back. It is this extra export demand that is primarily responsible for the local advances in beef prices during the past fortnight.

How long these high prices will continue cannot be foretold with certainty. From what is known of the situation here it is pretty safe to state that they will continue well on in the summer. Leading wholesale cattle dealers here favor this view. To the consumer three or four months of present high prices for meat will seem a long time, while to the producer it will seem only too short. The latter will hardly have time to adjust his affairs to these new conditions before a change comes. But, however, that may be, the farmer, who has been following the turn of events in the beef cattle market during the past year or two will have made some provision for this thing and be in a position to reap a good margin on the cattle he has to sell. As reported in our weekly market review, there has been a scarcity of really prime cattle not only in Canada but also in the United States for some time back, without any reasonable prospect of the supply being increased for some time to come.

But while this scarcity of prime cattle has been most noticeable, there has been on this market, at least, enough and to spare of the medium and inferior grades of all classes. One would judge from the trend of affairs at the present time in regard to price, that supplies on this market have been much less than they were a few years ago. But this is not so and the very opposite has been the case, supplies of cattle on Toronto market just

now being greater than they were a year ago at this time. During the first three weeks of April, 12,000 cattle were received at Toronto cattle market or 2,000 more than the number received for the same period of 1901. In this connection a glance at the receipts of cattle here during the past few years will be of interest. In 1896 the total receipts were 104,887; in 1897, 138,155; in 1898, 147,252; in 1899, 140,154; in 1900, 133,210 and in 1901, 174,869, or 41,650 over 1900 and nearly 70,000 over the receipts of 1896. In 1901, 141,227 sheep were received or nearly 23,000 more than in 1900. The only line in which there was a shrinkage was in hogs, the receipts of these being only 153,306 in 1901 or 43,000 less than in 1900. At some of the American cattle centres, notably Omaha, receipts have been larger than at this time a year ago. At Chicago, however, during the past few weeks supplies have been short and considerably less than a year ago.

The fact that supplies on this market have been large while prices have been advancing, should be a matter of satisfaction to producers. Very often when an article is very high in price, the farmer has not much to sell. This would not seem to be the case with cattle at the present time if we judge by the receipts here during the past few weeks. And though these large receipts may be due to the higher prices bringing out larger supplies it gives the advance a more permanent character and one likely to obtain for a longer period than if it were due to a local scarcity alone. But while this may be true it must not be taken for granted that because of this extra local supply beef cattle are plentiful in the country. Everything seems to point the other way. The large numbers of stockers that have gone from this province to the United States and to British Columbia during the past eight or nine months will have some effect in depleting the future supply of beef cattle. The cattle situation on the whole then is strong, and the outlook for good profitable prices for some time for prime beef cattle bright. Farmers cannot go astray in raising the best of beef cattle suitable for the export trade. Prices for these have reached the highest point in years, and still they are considerably below what the Chicago market will warrant. \$6.50 per cwt., is, as compared with the old days, a very high price for Canadian export cattle, but it is still over \$1.00 per cwt. less than what prime steers are selling for at Chicago to-day.

The Beef Trust.

American consumers are doing their best just now to break up the beef trust, which practically controls the wholesale prices for all meats in the United States. Whether they will succeed as not remains to be seen. They have secured the highest authority in the land for their side. Attorney-General Knox, by direction of the president, has taken proceedings to have the methods of the trust declared a violation of the federal laws, and orders have been sent to the district attorneys in the federal districts where the centres of the trust's operations are located to join in the movement against it.

The beef trust is operated on a most gigantic scale and controlled by the six largest packing concerns in the United States who control an annual trade amounting to \$600,000,000. Since the middle of February, through the influence of the trust, the wholesale cost of prime beef to the butcher in New York, has advanced from 9½¢ per lb. for the week beginning Feb. 21st to 12½¢ for the week beginning April 14th. The trust has a grip on the railways as well as on the retail trade. To dislodge this gigantic monopoly and bring freedom to the American consumer will be no small task, and there are grave doubts as to its being accomplished as the trust has matters arranged so as to afford as little room as possible for the law to reach it.

Nova Scotia Agriculture.

In our correspondence column this week, appears a letter from a Nova Scotian, who seems to take a somewhat pessimistic view in regard to the progress which agriculture is making in the province down by the sea. We spent a summer in Nova Scotia ten years ago and found the methods he speaks of, such as selling eight-inch hay, practised largely by farmers in the outlying districts. But we were under the impression that during the interim all this had passed away and that, although the average Nova Scotia farmer was not, perhaps, carrying on his farming operations in a way to produce the best results, he had gotten somewhat out of the old rut and was following better and more up-to-date methods. That this is not the case, as our correspondent's views would seem to indicate, is only another proof of how difficult it is to induce people, and especially farmers to change their ways and adopt new-

er and more profitable methods of conducting their farms. Nova Scotia, however, is not alone in this matter. There are other districts where progress is seemingly slow.

But to return to our correspondent's comments in regard to a Maritime Agricultural College and the work of Ontario Agricultural teachers in Nova Scotia, it strikes us that the best way to educate those farmers who do not know how to use an agricultural education is to place an agricultural college or some similar institution right in their midst. How otherwise are they to be educated up to the advantages of such an institution? It seems to us that the arguments our correspondent uses against an agricultural college are the strongest that could be devised to show the need of such an educational institution.

Usually it is the district that makes a request for teaching, such as those Ontario lecturers gave, that gets it. If the more benighted districts, our correspondent speaks of, could be induced to get up sufficient enthusiasm to make a request for similar teaching, we feel sure they would get it when the next series of lectures were arranged for. The people who make an effort to help themselves are the ones most anxious to profit by the example and teaching of others. But these benighted sections should be looked after. There is an excellent opportunity here for good missionary work on the part of someone. The gospel of higher agriculture should not be delayed in reaching every portion of the Dominion.

Some Big Losses

The co-operative pork factories at the close of the first year of operations, find the balance of their profit and loss accounts on the wrong side. According to the Palmerston Spectator the Harriston Pork Factory had a deficit of \$14,000 on last year's business and a further probable loss on bacon on hand will bring this up to \$40,000. To meet this deficit and provide necessary current capital \$40,000 more stock will be taken up. As an inducement to buyers it is proposed that 40 per cent. be written off the face value of stock already held and that new stock shall be sold at face value. On last year's business, as reported at the annual meeting of the Company a few weeks ago, The Farmers' Co-operative Pork Factory of Brantford lost \$27,000.

These are big deficits for concerns of this character to meet the very first year of their operations, and will likely put a damper on the building of many more cooperative pork packing establishments for some time to come. When these cooperative factories were being discussed and talked of for nearly every small town in the province, we endeavored, in our humble way, to point out some of the difficulties that were likely to interfere somewhat with the success of these en-

terprises. It would seem now as if our predictions had come true, a statement however that does not give us any satisfaction to make. We have the strongest sympathy for the farmers who, in the enthusiasm of the moment invested largely in these enterprises, and we trust that another year will show better results and put these concerns on a paying basis. They certainly struck a very bad year in which to begin operations. Prices for hogs were high and the farmer, the demand being so great, was quite independent and could get full value for his hogs from several sources. We don't know what branch of the business was responsible for the losses, but we presume they were incurred by the factories having to pay higher prices for hogs than they could realize on the finished product. These cooperative concerns were also at the disadvantage of not being able to utilize the by-products as well as the older and larger private establishments. We believe in securing as much competition as possible among buyers of the farmers' product and while the cooperative concern helped to a large extent to increase the prices of hogs, it was done at perhaps too great a sacrifice to those who put their money into the business.

Some of our Exports per Capita.

That little country called Denmark seems to set the pace for all other countries in the matter of food exports per head of the population. The value of the egg exports of Denmark is equal to 2.25 for every man, woman and child in that country. The value of her bacon exports is 5.25 and of her butter exports \$18 per capita. Compare this with Canada and it will be found that we are a long way behind our competitor in this matter. Canada's egg exports are estimated at 35 cents, our bacon at 2.25 and our cheese and butter combined at 5.40 per head of our population. There is therefore a lot of room for expansion before we have reached the standard Denmark has set in regard to exports per capita.

Your Experience is Valuable.

We are quite well aware that at this season of the year farmers are busy and think they have not the time to write or even jot down a line or two in regard to their work. And yet with pen, ink and paper ready how little time it would take to state in a few words just what plan you have followed in preparing your land for the spring grain, how much seed you have sown per acre and of what variety. You may think perhaps that such material would not be of interest to others; but in this you are mistaken. Your experience and your methods of carrying on the seeding operations may be of the greatest value to some fellow who has not been as successful as you have been. Then to jot down your experience and

have it published will be of value to yourself. After you have finished sowing the oat, wheat or any other crop, jot down on paper just how you did it; mail this paper to us and we will place your experience on record in the columns of The Farming World. All items of news regarding crop conditions, live stock, etc., will also be of value. Send them along.

Argentine Ports Open

The opening of the Argentine ports to pedigreed stock from Great Britain and America has greatly stimulated the spring sales of live stock in the old land. The first ship sailing from Liverpool to Buenos Ayres took out a number of bulls and several hundred breeding sheep. The opening of these ports brings into prominence again the question of endeavoring to establish a market in the Argentine for some of Canada's fine stock. While the home demand just now is good for nearly all kinds of pure bred stock it may not always be so and a little provision for the future is always in order.

Kansas Hard Wheat

Kansas is perhaps the only State in the Union that grows the now famous hard red wheat in large quantities. The seed of this wheat was brought into the State nearly thirty-years ago by Mennonite immigrants from Southern Russia. For years following its introduction it was disparaged by American millers as being too hard to grind because of its flinty character. The farmers of the State, however, persisted in sowing and the production steadily increased, though they were compelled to accept from ten to fifteen cents per bushel below what millers paid for the softer and better known varieties which yielded fewer bushels per acre. But the farmers' persistence in growing compelled millers to devise ways and means for more successfully converting this hard wheat into flour. Finally devices and processes were brought into use for softening the grain by steaming and moistening before grinding. These are now in use and are considered indispensable wherever the hard wheats are floured.

During 1901, 15,000 bushels of choice seed of this hard wheat were brought into Kansas from Russia with which it is hoped to greatly increase not only the yield but also the quality of this now popular milling wheat.

Mr. Wm. Hutchison, of Ottawa, Canadian Commissioner to the Pan-American last summer will represent Canada in the same capacity at St. Louis in 1903. In Mr. Hutchison, Canadians will have an officer who will look well after their interests. It is likely the Canadian exhibit at St. Louis will be one representing the whole Dominion. A concentration of the provincial exhibits into one of a Dominion character it is thought will be more satisfactory.



A Familiar Figure on Toronto Roads. C. S. Jones and his Favorite Trotter, "Pete."

Our Western Letter

Seeding Late—British Duty on Wheat—More Elevators Being Built—Americans Still Coming—Irrigation Methods.

Winnipeg, April 21st, 1902.

A year ago this 21st April, seeding was general in all parts of this province and in 1900 the work was well under way a fortnight earlier than that date. The record of the past ten years shows that on the 20th of April, or before that date, farmers in all parts of the province were busily engaged in seeding operations. In comparison with previous years the present season is therefore extremely backward. Seeding was begun a week or ten days ago, but the hard frosts each night during the past week have greatly retarded this work. Indeed it may be safely said that in very few localities has any considerable area been sown. Altogether the prospects point to a late spring and therefore a decreased area in crop this year, since, as pointed out in a previous letter, only a very early spring could have enabled farmers to maintain the high-water mark of 1901.

Many of the incoming settlers from the East, who are daily arriving in trainloads, are young and middle-aged men who first visited Manitoba on the labor excursions of 1901. Asked whether there will be any chance of securing help from Ontario next harvest one of these was very emphatic in his assurance that there would be no difficulty in doing so. He and his friends had come up among the 20,000 who visited the province last fall, and after being disappointed at Western Manitoba points, owing to the great majority of the passengers going through to those places were successful in securing work within twenty miles of Winnipeg. "It was discouraging at first," he said, "to find hundreds like ourselves at Brandon looking for work, but the trip we got around by Souris and Deloraine to Winnipeg, was an eye-opener to all of us, and when we

got work the troubles were soon forgotten." If the thousands who went home from the West with money in their pockets had been as loud voiced as the few who paraded supposed grievances so loudly these latter would have been utterly unheard and unheeded. It is to be hoped that never again will it be necessary to bring in so many men for the harvest but should they be required we have every confidence they will be readily obtainable.

The probable effect of the British trade has been the subject of considerable discussion in local trade circles. For the present the question has been answered by the increase in price of flour and bread to the consumer. These have, however, been so decidedly disproportionate to the amount of the tax that it looks like an excuse on the part of the dealers and bakers for squeezing a longer profit out of the buyers rather than a legitimate result of the tax; and they may endeavor in like manner to squeeze the producers. We believe, however, that the consumer will pay the tax and that in addition to the two or three million pounds he will pay into the treasury, two or three times that amount will go in added profits to the protected wheat growers of Britain and to the dealers in flour and flour products.

Never has there been a better opportunity to observe the effects of protection. A careful record of prices during the past, present, and future months will be valuable material for the stump orator. We cannot believe that it is the intention of the British Government to maintain this tax which is an added burden for the poor of the country, more probably it is intended as a lever for opening the colonial markets to preferential

treatment of British goods. In exchange for better treatment of British products, the Colonial premiers in conference will be offered free entry for their food products in the British markets. Mr. Chamberlin is an avowed Imperialist, and though he has never actually declared himself in favor of a Zollverein we can detect a certain leaning in that direction in his political moves.

There is every indication for a substantial increase of the storage capacity of the province during the coming season. Upwards of 130 elevator sites have been applied for along the lines of the C.P.R. and these alone will add probably 4,000,000 bushels to the elevator capacity. Then there will be extensive building at Fort William and Port Arthur—just how much it is impossible to say at present. Along the lines of the C. N. R. numerous elevators are projected and it will not be surprising if from one-fourth to one-third is added to our storage, during the present summer. The elevators are now shipping, and as fast as the lake elevators can ship, the farmers will be relieved of the grain with which they have been encumbered for the past four or five months. Boats are now entering the lake harbors and up to the time of writing there have been shipments of nearly half a million bushels from Fort William or Port Arthur elevators.

The American Invasion continues and we are politely informed that the people to the south of us are going to just quietly take possession of the Canadian West in the same matter of fact way that they have progressively filled up one state after another in their own country. The present influx, we are told, is merely the vanguard, and that next year will see the number of settlers from the U. S. several times multiplied. Eastern Canadians who want land in the West had better hurry up or they won't be "in it." The emigration from Ontario to Manitoba can have no ill effects upon the older province. It may keep the prices of farm lands down or rather prevent exorbitant increases in value, but this will operate against others than the farmer. Indeed each farmer who leaves Ontario for the West makes the old home just so much more profitable for those who remain.

The report of the Minister of Public Works for the Territories is a somewhat lengthy document, but full of interesting matter. Among others indicative of the progress of the country is the following on irrigation. Number of canals and ditches constructed to Dec. 31st, 1901—169; length of same, 469 miles; number of water rights recorded for uncompleted canals, 14—number of acres capable of irrigation from constructed canals 614,684. Irrigated lands, the world over, are productive almost beyond

belief. Irrigation in the Territories is only in its first stage of development, and we may look for the transformation of much of the arid lands of the Territories into the best and most desirable section of the country.

A Canadian Cattle Ranch.

In last week's Chicago Live Stock Report, F. J. C. gives a very interesting description of a large cattle ranch near Calgary, Alberta. He describes the district as most suitable for ranching, and refers to the fact that the rancher in order to have sufficient run for his stock has had to buy and fence land which he could formerly lease at a nominal price. Speaking of the ranch itself, the writer says:

"Settling here some seven years ago Mr. J. A. W. Fraser, a Scotchman, as his name implies, began with a small bunch of breeding stock of graded Shorthorn cows, which by judicious breeding and purchase has now grown to some 500 head and will give him, taking other years as an average, a branding this spring of not less than 300 calves. The bulls now in use are pedigreed Shorthorns of the best type, but in former years one or two Angus bulls have been used to very good purpose, and Mr. Fraser is yet deliberating as to whether the cross should not be continued; so far as beef is concerned there is no doubt, of course, but the heifers going back into the breeding bunch seem likely to mix it too much. The calves are weaned in November and are fed in open sheds hay only all their first winter and after that get no more care. A few old or weak cows occasionally require bringing home and feeding before winter is over, but such generally get quickly eliminated from the bunch next summer before they lose their flesh. The hay fed is the prairie bunch grass, cut and made in the end of July and August, varied at times with a feed of oats-hay, which every rancher grows here on the few acres, more or less, of cultivated ground found near most ranches. Stock bulls get the same treatment and have a good pasture to themselves in spring till July when they go to the cows. The beef bunch of three and four-year old steers number about 150 and goes annually in September or October straight off the range; they average from 650 to 750 pounds when traveled and dressed, most of them going through Winnipeg to the English markets either on the hoof, or dressed from the cold storage in Calgary. As to price, there is, of course, the old story of the producer and the middleman; the rancher in this case does not think he gets enough for his beef, \$40 or \$45 being the best price given, and that only for the tops, delivered at the shipping point. Mr. Fraser and some of his neighbors are considering seriously the idea of combining and sending a carload or two of steers to Chica-

go next fall, a sample of their bunches, as an experiment. Personally, we shall gladly welcome such an enterprise.

"There is also on the ranch a small bunch of mares from which the owner breeds his cattle, horses, drivers and draft horses for haying and general work. This bunch requires no attention all the year round and the breeding of the mares and handling and breaking of the colts is all the expense attached to this department. Mr. Fraser has lately imported from England the pure-bred Suffolk Punch stallion, "Nelson," the first Suffolk Punch seen so far west, and we believe this side of Winnipeg. If there is anything certain about breeding to these western mares a judicious crossing with this horse should certainly not only prove a profitable investment but produce a good useful stamp of horse not yet seen in these parts."

Australian Wool Trade.

The issue of the Pastoralist's Review of March 15th, just received contains a carefully prepared review of the Australian wool trade for 1901. The two most salient features of the year have been the enormous increase of wool sold in Australasia and the continued and wide disparity between the values of merino and the lower grades of cross-bred qualities. The number of bales disposed of at the colonial sales in Australasia was 948,839, an increase of 289,401 bales compared with 1900 and 108,516 more than in 1899. These colonial sales have grown in favor and wool growers are more ready to sell in the colonial sale room at current values.

As to prices the sales of merino wools have been fairly satisfactory, with a gradually improving tendency. As regards cross-breds, and particularly the lower grades prices have been very unsatisfactory. Prices for these pursued a downward course and reached a level never before witnessed by the trade. This enormous slump in cross-breds is attributed to its over-production and the trend of fashions favoring the finer materials. For some time past the supply has been far greater than the demand.

In regard to the future the Review says: "The past year has been one of slow recovery in the various manufacturing centres, and we think it may be claimed that confidence, has, to a great extent, been restored and although the margin of profit earned during 1901 is small compared to the loss of 1900, yet trade has been steady throughout and the outlook is certainly encouraging."

"With a probable early settlement of the South African war, the strong statistical position of merino wool should make itself felt, with an enhancement in prices, particularly bearing in mind that a very large portion of the merino-

growing parts of Australasia is still we regret, in the throes of unprecedented drought."

"As regards cross-bred, we can only hope that its very cheapness will bring it more in use, and raise it to a value more acceptable to growers."

Government's Dairy Instructors

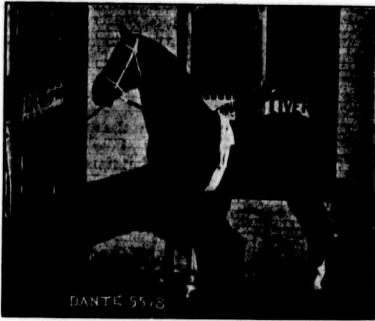
In our dairy number we gave a pretty full outline of the nature and scope of the experimental works to be undertaken by the Ontario Department of Agriculture towards improving the quality of our dairy products. The men chosen for this work have now been selected and the dairy districts in which they will work chosen. They are: J. W. Hart, Supt. Kingston Dairy School; Arch. Smith, Supt. Strathroy Dairy School; G. H. Barr, Instructor in cheese-making, Guelph Dairy School and G. G. Publow, Instructor in cheese-making at Kingston. Mr. Hart will look after the creameries east of Toronto and Mr. Smith those west of Toronto. The important experimental work will perhaps be that conducted by Messrs. Barr and Publow. The former will take charge of a number of cheese factories in Lambton County and the latter a number in Leeds and Lanark Counties; each instructor having about twenty factories to look after. They will visit the factories frequently giving instruction to makers and holding meetings of the patrons of each factory every month. The object of this work is to bring about more uniform methods and a better quality of product. Should it prove successful this season, the work will be extended another season.

Appointed Superintendent of Fairs.

At the annual meeting of the Canadian Fairs Association last February, a strong recommendation was made to the Minister of Agriculture asking for the appointment of Mr. G. C. Creelman as Superintendent of Agricultural Societies for Ontario. The Minister has been pleased to act upon this recommendation and last week appointed Mr. Creelman to his new position.

As previously stated Mr. Creelman's first important work will be to establish circuits of fairs throughout the province for the purpose of expert judging and the introduction of educational features, such as have been so beneficial in building up the Provincial Winter Fair at Guelph. Mr. Creelman will continue to act as Supt. of Farmers' Institutes.

The Hon. I. J. Ferris, Commissioner of Agriculture for New Brunswick, and the Hon. G. F. Hill, are in Ontario looking up high class breeding horses to take down to that province. They consulted with the Minister of Agriculture and the Secretary of the Live Stock Associations as to where suitable animals could be procured.



DANTE 5578. Second Prize Hackney Stallion, Horse Show, 1902. Owned by A. Campbell, Berlin, Ontario.

Supplementary Food for Summer Feeding

In our Dairy Number of April 8th last, we urged upon farmers the necessity of providing succulent food for their cows and other stock during the dry months of July and August. Since then some practical information on this subject has been sent out in a press bulletin from Ottawa, from which we take the following, and which may be found helpful in estimating the acreage of forage crops to sow:

The following estimate has been made of the land required to produce sufficient green feed for a cow for one day. Of lucerne, or other clover, $\frac{1}{4}$ of a square rod per day; of barley, oats and peas, rye, wheat or millet, $\frac{1}{2}$ a square rod per day; of corn or sorghum $\frac{1}{4}$ of a square rod per day. The above is a fair estimate for a day's feeding on land in a good state of cultivation, and with no allowance for pasture. No cow can possibly consume $\frac{1}{2}$ a square rod of rye, barley, oats and peas or millet in a day's feeding, where there is a good strong growth. But allowing that the above estimate is approximately correct, we find that one acre of these crops is sufficient to feed a cow for 320 days.

For general feeding, rye, clover, rape, peas and oats, vetches, millet, sorghum and corn, will be found most satisfactory, and the list named will cover practically the whole season, if sown at suitable intervals. Clover, where it will grow well, will furnish an abundance of good feed during the latter half of June. Lucerne or alfalfa, where the soil and climate are favorable to its growth, should be given first place on the list of soiling crops. It can be cut almost as early in the spring as rye, and furnished at least three crops per season of highly nitrogenous food. It is greatly relished by all kinds of stock, but is apt to cause bloating if carelessly pastured. Rape may be sown about the first of May on rich, well-prepared soil for early feeding, and additional sowings may be made at intervals as

desired. It is advisable to sow rape in drills two feet apart, and cultivate as for turnips. From one to two pounds of seed of the Dwarf Essex variety should be sown to the acre, if drilled in, or double the amount if sown broadcast. Rape produces large quantities of green feed and is one of the best foods for keeping animals, including pigs, sheep and calves, in good condition. It is not satisfactory for milk cows, owing to its tendency to injure the flavor of the milk.

Oats and peas make one of the very best soiling crops for general growth, particularly for feeding dairy cows. They should be sown as early in the spring as the ground will permit, and at intervals thereafter, at the rate of about three bushels per acre, (equal parts, or two bushels oats to one of peas).

Vetches, or tares, are now grown in Canada to a considerable extent, especially by dairymen. They are likely to prove of value, not only in Ontario and Quebec, but in the Maritime Provinces and British Columbia, and the West as well.

Millet is another plant that is particularly good as a catch crop. It can sometimes be sown after a forage crop of peas and oats has been taken off the ground, and if there is sufficient moisture to start it, it will yield a fair crop. If sown early in June, at the rate of about thirty pounds per acre, it will furnish a large crop of good fodder by the middle of August. The Japanese Barnyard in moist soil, and Japanese Panic are the best varieties.

Corn (when it grows well), is the great standby for fall feeding. Another very valuable fall fodder plant for the southern part of Canada is sorghum. The early amber is the most suitable for our latitude. It should not be sown until the weather has become settled and warm, on land that has been prepared in the same way as for corn. If sown in drills like

corn, three pecks of seed will be ample for an acre, but if broadcast, more will be required.

Soja, or soy beans, have been rather extensively grown for fodder in the Southern States for some years, and are gaining popularity in the North as well. They produce a great amount of rich forage, growing to the height of from two and one-half to four feet, branching freely and producing numerous woolly pods containing two or three round yellow beans. Sow about the same as for corn, on a fine, deep, firm and moist seed bed, in rows about thirty inches apart, and on the level, from two to four pecks of seed to the acre. They are likely to do well in Southern Ontario, and in similar latitudes, although they have not as yet been largely tried. On account of their richness in protein, and their nitrogen-gathering ability, they are worthy of attention and trial. The yellow soy bean has been the most satisfactory of all varieties tested in Canada.

British Bull Sales.

Breeders in England and Scotland are looking forward to a big trade in pure bred stock this season. At the spring bull sales held some weeks ago, a large number of animals were sold at good average prices. The sales were more especially satisfactory for high-class well-bred animals. At all of the sales, as has been the case at the recent public sales in Canada, quite a number of inferior animals were offered that should have been utilized for other than breeding purposes. Quite a few bulls were bought for the Argentine, but it is expected that a very much bigger trade will be done with that country during the summer. It is reported that several breeders have orders to secure a number of superior animals for American and Canadian breeders. Mr. Taylor, Pitlivi, Carnoustie, Scotland, who bred the high-priced heifer at the Flatt sale last fall, has an order to supply 50 Shorthorn cows and heifers for an American breeder. It is also expected that a big lot of Galloways will also be sent to America this season.

The most notable feature of the British bull sales this spring has been the outstanding success of the get of the Aberdeen-Angus bull Eblito, head of the Ballendaloch herd, and the Shorthorn bull, Royal Star, the chief stock bull of Lord Lovat's herd. The sire of Eblito was the champion bull, Prince Ito, that sold in February last at Chicago for \$9,100. On his dam's side Eblito is descended from the famous Ericas. Royal Star was bought five years ago at one of the Collynie autumn sales, and for the past three years his stock have commanded high prices at the spring bull sales. One of them—Alastair—was bought last year by Mr. Duthie for 400 guineas. On the sire's side Royal

Star combines the blood of the famous Norseman and Athabasca, and on the dam's side that of the great Uppermill bulls, William of Orange and Heir of Englishman, the last named bull being the ani-

mal that first brought the Uppermill herd into the front ranks of British Shorthorn herds. The great majority of the stock got by Royal Star has been bought for exportation to the Argentine.

Some Pointers for Cheese Makers

The cheese-making season will be in full force this week and most of the factories will have begun to receive milk. The outlook for prices is very good, and if every effort is made to keep up the quality the season should end favorably for the producer. The maker plays an important part in the management of a co-operative cheese factory, and he should aim to carry on this part of the business in the very best way. Mr. J. A. Ruddick, Chief of the Dairy Division, Ottawa, has been contributing a series of practical articles on several phases of modern dairying to the *New York Produce Review*. The latest to appear is No. VI., dealing with some of the later stages of cheese-making and which we reproduce herewith as follows:

After the curd has been stirred sufficiently dry it should be allowed to pack in a mass which will be about six inches deep, when it is fit for cutting and turning. The writer is not much in favor of piling the pieces of curd in a heap, except to a limited extent. Such handling has a tendency to cause some curds to become "greasy," and lose too much fat both before and after being put under pressure. In watching the maturing of mellowing of the curd makers are very often deceived by the softness and flakiness of a curd, which is due to a little extra moisture or slightly higher temperature than usual, mistaking it for a sign of proper maturity. The manner of handling the curd also has a marked effect on the appearance of this flaky condition. If the pieces are piled high one above another with a chance to spread and flatten out, the flakiness is much more pronounced than if the same curd is handled without piling. It is not a safe rule, therefore, to judge of the maturity of a curd by the flakiness alone. The hot iron test should be continued up to the time of salting, but the maker must learn by experience how much the curd should "draw" on the hot iron before the salt is applied.

THE CURD MILL AND MILLING.

There are various styles of curd mills in use at the present time. Use any mill which makes a clean cut with a sharp knife. The mere shape of the pieces after cutting is immaterial. There is considerable diversity of practice amongst the best cheesemakers regarding the particular stage at which the curd is milled, which would go to show that it may be varied a good deal without affecting the quality of the cheese. This view is borne out by some experiments conduct-

ed by the writer several years ago. If the curd contains too much moisture it is best to "mill" a little early, but if there are "pin holes" or gas holes in the curd it is better to delay "milling" until these holes begin to flatten out, thus showing that no more gas is being evolved. In any case the curd should lie an hour after milling before the salt is added.

SALT AND SALTING.

The salt used in cheesemaking should be considerably coarser in the grain than what is suitable for buttermaking. Very fine salt dissolves so quickly that a great deal of it drains off before it is absorbed by the curd. On the other hand, very coarse salt dissolves more slowly, and more of it is absorbed by the curd. Another consideration is the solubility of the salt. As some salts dissolve more slowly than others of similar grain, this quality should not be overlooked when deciding the rate to be used. The quantity of salt required is usually determined by the weight of milk and as the yield of cheese varies from different milks, the rate of salt must be varied accordingly to give uniform results. The percentage of fat in the milk is a good guide in this respect. In general terms it may be said that beginning with milk testing 3.0 per cent. of fat about one and three-quarters pounds of salt per 1,000 pounds of milk may be used, increasing to about 3 pounds per 1,000 as the percentage of the fat reaches 4.0 per cent. It is more accurate to measure the salt than it is to weigh it, because its weight varies according as it absorbs or loses moisture. A set of wooden measures, which hold a given weight of salt in normal condition answers the purpose admirably.

The salt should not be added until the curd has reached such a stage of mellowness that it would mellow readily into close solid form. An immature curd is more or less elastic in character, resists the pressure in the hoop and thus makes an open cheese. Weak, open cheese are the result of salting and putting to press too early. Contrary to a very common belief, the longer the curd is matured the quicker does the cheese ripen, other things being equal. The peptonizing or digestive process proceeds more rapidly before pressing than it does afterwards. Proper maturity gives a solidity and closeness to the cheese which is very desirable. A cheese can be made "meaty" and still have a firmness and solidity, but "meati-

ness" is very largely a question of moisture.

If a soft, quick-ripening cheese is desired, plenty of moisture should be retained, and the curd well matured. The maturing process is checked somewhat, but not stopped by the addition of the salt. When curds show signs of excessive loss of fat it is a good plan to add the salt early, and allow the curd to stand before pressing. The salt hardens the surface of the curd particles, which tends to prevent the fat from exuding.

If the whey is removed when the curd draws one-eighth to one-quarter of an inch on the hot iron it takes from four to five hours to properly mature a curd.

The temperature of the curd should be kept at between 90 and 95 degrees F. for the first hour or so, and then gradually allowed to cool so that it may be put to press below 80 if possible. A low temperature is more favorable to making a close, solid cheese than a high one is.

PRESSING THE CHEESE

A great many cheese have a loose open body, because they have not been sufficiently pressed. Some curds will not make a close cheese under any amount of pressure, yet no cheese is ever as close and solid as it should be, unless heavy pressure is gradually and persistently applied. After the cheese are sufficiently moulded to stand the handling, the hoops should be removed and the bandage trimmed neatly on both ends. Many cheese show very slovenly work at this stage. The carrying out of this important detail is too frequently left to some junior assistant whose whole aim is to rush through the work and get away from the factory. The cheese should be left under pressure as long as possible.

THE RIPENING OF THE CHEESE.

It has often been said that cheese are only half made when they are put on the shelves of the curing room. That being so, there is a good deal yet to be said on the subject of cheese-making. I shall, however, not attempt to deal with the question of cheese ripening at any length. Our ideas on this phase of cheese-making are undergoing considerable change, thanks to the researches of Babcock, Russell, VanSlyke and others, and to the data available, from the practical tests conducted both in Canada and the United States. It has not yet been clearly demonstrated what is the very best temperature at which to cure cheese. Probably that point will never be definitely settled, because I think it will be found that different temperatures will be required according to the percentage of moisture, etc.

There are two sides to this question of lower temperatures for curing cheese. In the first place there is the scientific side, by which it will be determined, as near as possible, what is the best

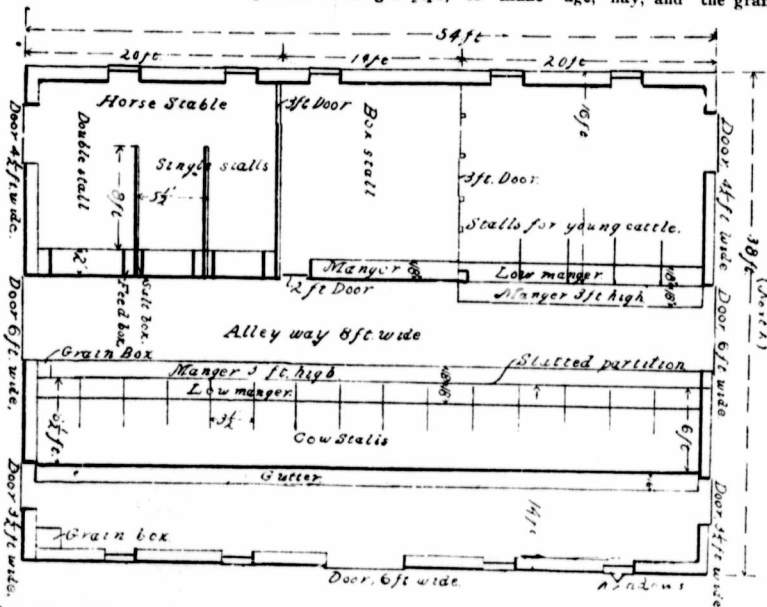
temperature regardless of time or cost. Then there is the commercial side of the question, which must decide how far it will pay to reduce the temperature. There is abundant evidence to show that it will pay handsomely to control the temperature so that it does not go over 60 degrees F., the saving in shrinkage alone being more than sufficient to meet all expenses. The experiments show that there is a very marked improvement in the texture and flavor of cheese cured at 60 degrees F., as compared with those cured at higher temperatures. Just how much lower it will pay to reduce the temperature yet remains to be seen.

it would be better only 3 or 4 feet apart. We made the wall 1 foot thick and 7 feet 3 inches high above the floors, which are about level with the top of the ground. We also put in the door sills and window sills of cement, and concrete floors will be completed throughout next summer. For the wall we used 5 parts gravel to 1 part cement, mixing up dry with shovels and then wetting until it is just nicely wet through, but not too soft. We pounded it down with a tamper made of a piece of 1 1/2 inch iron about 2 feet long and broadened to 3/4 inches wide at lower end, welded on to a piece of three-quarter inch gas pipe, to make

compared with the ewes in the other lots. We further find that the lambs by the ewes fed these feeds were smaller in size and a larger proportion of weak and dead ones at birth than in the other lots.

2. Corn stover and corn silage with 1/2 pound per ewe daily of bran and oats was found to be a most satisfactory ration in every respect for breeding ewes bearing lambs. The ewes were healthy, a good supply of milk in their udders at lambing time, and the lambs were of good size, strong and vigorous at birth.

3. A ration composed of corn silage, hay, and the grain mixture



Cement Stables Under Barns.

The use of cement for building purposes is coming more into use every year. When properly built a cement wall is just as durable and as strong as a stone wall and can be built with far less labor. We give elsewhere the plan of stables under a barn built of cement. A correspondent in the Michigan Farmer describes his method of building this stable as follows:

"To build the wall we dug into the ground 2 feet a trench 2 feet wide, and filled this by putting about 2 inches of gravel and cement mortar (5 parts of gravel to 1 part cement), on the top of this we put stones as large as would go into the trench, filling between them with cement and gravel mortar, also packing as many small stones in as we could; then we made this level and set up studding all the way around on top of it to hold the boards into which to pack the concrete. On part of it we used the boards intended for sheating and part of the way we used 2-inch plank, the plank being the best, as they do not spring so much. We put the studding 6 feet apart, but

long enough to use handily. In the wall we put stones, but keeping them at least an inch and one-half from the outside of wall, and tamping mortar and stones down good with tamper.

"For the floors we put about 1 1/2 inches of mortar mixed the same as for wall, and on top of this we put one-inch of mortar mixed 3 parts gravel to 1 part cement.

"Our wall is now as hard as a stone and I don't see why it should not be better than a stone wall laid up with lime mortar."

Ration for Breeding Ewes.

The Wisconsin Experiment Station has been experimenting with rations for breeding ewes, and announces the following summary of results.

1. From this experiment it would seem that corn fodder, corn stover and 1/2 pound of equal parts bran and oats per ewe per day for 12 weeks before lambing was a satisfactory food so far as the physical condition of the ewes was concerned until lambing period arrived, when there was a marked deficiency in the milk secretion as

was equally as satisfactory in every way as the ration composed of corn stover and corn silage.

4. A ration of roots and hay with the grain mixture was not as satisfactory as the rations containing corn silage, but gave better results than the ration of corn stover and corn silage. Many of the ewes did not have a satisfactory milk supply at lambing time and a number of the lambs were weak and goitered.

5. With conditions as given in this experiment we find the rations of corn fodder, corn stover, and corn silage to be cheapest and the ration containing roots and hay the most expensive ration fed. Where the roots and hay were combined in the same ration the cost was approximately double that where the ewes were fed on silage and corn fodder or corn stover and corn fodder.

6. From this experiment and the one reported last year we conclude that corn silage is one of the cheapest and most satisfactory feeds for breeding ewes in winter, and that a ration the roughage of which is composed entirely of corn fodder is not so satisfactory.

Soil for Rhubarb.

Rhubarb needs a deep and very fertile soil, and it is useless to expect to grow it in a thin, dry soil, unless under irrigation. Not that it needs wet ground by any means, but a soil retentive of moisture and

rather inclined to clay; though good rhubarb can be grown in quite a sandy soil if it be well manured. No amount of fertilizer will take the place of stable manure with this plant. The organic matter in the manure making the soil more retentive of moisture, makes it in-

dispensable when large and succulent stalks are desired.

School Board Inspector—Who is it that sits idly by doing nothing while everybody else is working?
Bobby—The teacher.

"Canada's Greatest Seed House"



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ANY growers of Field Roots seldom succeed in having a good crop. Why is it? They may not carefully consider that seed differs in quality and value just the same as any other article they purchase. All varieties of seed are valued in proportion to the care with which they are grown. Good seed is the first requisite for a good crop, and the quality governs the price. Next to the seed is the careful selection and preparation of the ground for the crop. Care in selecting seed together with intelligent cultivation are the absolute requirements to win success—successful growers know it and prove it.

Steele, Briggs' Celebrated Turnip Seeds

Are produced by growers of the highest standing in Europe, they are all the product from carefully selected and improved strains. The following varieties are the finest bred stocks in existence and have grown the most abundant crops that it is possible to obtain. You can improve your crop by using them:—

Steele, Briggs' Selected Purple Top Swede

Has stood first upon the list for many years, for being a clean grower, an excellent cropper and a good keeper. (Sealed packages only.) Price (post-paid) per lb. 30c.; $\frac{1}{2}$ lb. 15c.

Steele, Briggs' "Jumbo" Swede

A handsome tankard-shaped root with small neck and top; color purplish crimson above ground, yellow beneath; flesh yellow, firm and of finest quality. A superior strain to any offered of like color. Steele, Briggs' true "Jumbo" is supplied only in sealed packages. Avoid substitutes under the name "Jumbo." Price (post-paid) per lb. 30c.; $\frac{1}{2}$ lb. 15c.

Steele, Briggs' "Select Westbury" Swede

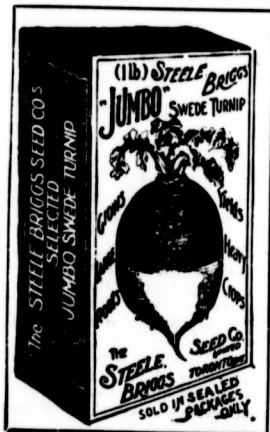
A favorite purple top variety in many sections, roots large, round and clean. It is largely grown for shipping purposes. Price (post-paid) per lb. 28c.; $\frac{1}{2}$ lb. 15c.

Steele, Briggs' "Perfection" Purple Top Swede

A new and improved variety of value and merit. Roots round, very uniform in size, small neck, short top root, a heavy cropper and easily gathered. Free from coarse prongy roots. Price (post-paid) per lb. 28c.; $\frac{1}{2}$ lb. 15c.

Hartley's Bronze Top Swede

A variety which should be more generally grown by those who desire an excellent crop. It is very hardy and one of the very best for winter storing. Color bronzy green above ground, yellow beneath. A coming favorite. Price (post-paid) per lb. 30c.; $\frac{1}{2}$ lb. 15c.



For complete list of STEELE, BRIGGS' Field Root Seeds see descriptive Catalogue. Send for copy if you have not received it.

NOTE—Buy your Seeds from dealers who sell STEELE, BRIGGS' FIELD and GARDEN SEEDS, and insist upon having them if you want them good. If you cannot get them from a local merchant send your order direct.

The Steele, Briggs Seed Co.

TORONTO, ONT.

LIMITED

Correspondence

Nova Scotia Agriculture: A Somewhat Pessimistic View.

Editor THE FARMING WORLD:

The high price of grain will have the good effect of waking up the Maritime farmer to the possibilities of this province for grain. Thousands of dollars worth of Canadian grain and feed stuffs are bought by farmers with plenty of good land, who, if they had any grit in them, would grow their own feed and not be dependent on the other provinces as they have been for many years.

The Executive of the Provincial Government, in the opening speech, pointed out that nothing has been done or is going to be done immediately to establish the combined Agricultural and Horticultural College for the province. The Government (although I do not favor them politically) appears to hold the opinion of a great many others (the agitators for this college excepted), that with the present state of Nova Scotia agriculture, and the fact that only 6,000 out of our 60,000 farmers, or only one in ten, belong to an agricultural society, and many of them are ignorant of what use an agricultural education would be good for. Then I say, that until the ordinary farmer becomes educated up to the advantages of such an institution, it will not receive the support of the working farmer in this province.

The Ontario agricultural lecturer who gains much of his impression of the agriculture of the province by looking out of the car window, does not trouble himself with those who are in isolated sections, away from the railroad.

Instead of being encouraged, the residents in those sections are slighted, and the lecturers spend their time in the rich and influential districts, where they are not in so much need of such help. After a good time travelling round they come to the conclusion that agriculture is progressing in this province! Now these same gentlemen, if they saw the antiquated methods and tools in vogue throughout the greater part of the country would be greatly disappointed.

By the last Canadian census, the number of young Nova Scotians, who went to the States to make a living has decreased the last ten years. No doubt, the commercial activity of the small towns, such as Sydney and Yarmouth, have made openings for many young people who would, otherwise, have left their province.

The tendency of rushing to Uncle Sam's domain is not falling off because of agricultural prosperity, but business activity is the thing that has reduced the tendency which appears to be born into our young people considerably.

I believe the improvements in farming methods in some localities is not so much the result of the

Experimental Farm or Government lecturers' influence upon the farmers. It is the young man who left home dissatisfied, but who goes into farming work in the States and is influenced by the improved methods and ways of doing things, and when he returns home to the old farm and puts the new ideas gained into practice, the results obtained are far reaching. But the country boys who go away to work at farming are very few. The great cities and the rush of business and factory life are the great attractions to the average country-bred young man.

The farmers in this province are not troubled much about a market, the truth is that, except in a few rich districts, they do not raise enough of certain things for their own use, much less to sell. Many of these so-called farmers would rather haul cordwood or work out than attempt to make any money at farming. Not because there is any more money in it, but they dislike tilling the soil, and accordingly, farming doesn't pay. It never did to them, and it never will unless they mend their ways. Carloads of poultry, butter, eggs and early stuff from Ontario are brought into the city of Halifax, while there are hundreds of farms producing nothing but a little red-top hay, which in the hands of enterprising men, would produce the most of what is now imported. This may seem very pessimistic, but I believe the truth should be told of the province at large and not of a few rich and influential sections. If the farmers grew more corn and roots and less eight-inch hay, they would be more contented and prosperous, and more interest would be taken in farming work instead of cutting a little thin hay and raising a few "taters," being their sole ambition as in the past.

E. M.

Halifax County, N. S.

Plant Food. Excess of Phosphoric Acid.

Editor THE FARMING WORLD

In your issue of 1st inst., under the title "Plant Food," there appears the following:—"An excess of phosphoric acid has the effect of stimulating maturity to an unusual degree, causing a ripening of the crops long before a full growth has been reached." This statement is calculated to mislead, no doubt unintentionally, but it has probably been read by many. Phosphoric acid is a food, and not a stimulant, and produces no such dire effects as prognosticated. There is practically no such thing as an excess of phosphoric acid. Plants feed upon, or assimilate only such quantities of this element as they require; and the amount so absorbed is regulated by the quantities of nitrogen and potash, which they can obtain during their growth.

Moreover, according to the re-

cently published exhaustive researches of Dr. Bernard Dyer, "on Phosphoric Acid and Potash of the Wheat soils," at Rothamsted, Eng., he proves that "potash salts" are far more "migratory" than phosphoric acid, that is to say, more easily lost by drainage.

By all means let us help our farmers to get at the actual truth.

G. Campbell Arnott.
Toronto, April 25th, 1902.

Apple Canker.

In his report of the Nova Scotia School of Horticulture for 1900-1901. Prof. F. C. Sears in dealing with the subject of apple canker says: "It attacks trees of all ages, but certain varieties seem to be very much more susceptible to it than others. The Nonpareil is more affected than any other sort, and in Annapolis County some orchards have been almost ruined by the ravages of this disease. It is caused by a fungus growing in the tissues of the tree just as the black spot fungus grows on the surface of the fruit, and at certain seasons of the year in the diseased areas may be found little brown pimples in which are contained the spores or seeds through the agency of which the disease is spread. Just at what season or seasons these spores are scattered we have not yet determined, but they seem particularly prevalent in the early spring. The disease attacks the tree oftenest at a fork in the branches, causing an ugly grown wound, and often eventually causing the branch to break at this point. Not only this, but trees so attacked, even though they may not break, lose their vitality and become less and less profitable. Until we can determine accurately just when the spores are spread, we shall lack an important item in our knowledge of how to combat this disease, but pending that discovery I would suggest removing as far as possible the affected branches, and careful and thorough spraying of the branches with Bordeaux mixture at the time the usual sprayings are made for black spot. I find this disease much more prevalent in Annapolis County than in Kings, and apparently very much on the increase there."

Cover Crops for Orchards.

BY F. C. SEARS, DIRECTOR SCHOOL OF HORTICULTURE, N. S.

Among the most important questions that confront the orchardist to-day is the problem of how to manage the lands in orchard so as to secure the best results. In olden times it was customary to allow the orchard to remain in sod unmoled from year to year. But as this did not give very satisfactory returns, when fruit growing assumed more importance and new methods were introduced, it became customary among most growers to cultivate the land during a part or all of the growing season. The result of this change was larger and more regular crops of larger and

finer fruit. But along with these desirable changes have come other changes which are not so desirable. The fruit grown in cultivated orchards seems to be more susceptible to the attacks of fungus diseases, and it is unquestionably losing its keeping qualities, so much so that there is much talk among growers of going back to the sod method of handling their orchard land. Without doubt some change in method is desirable, but whether it shall be in the nature of a modification of the present method of cultivation, or in adopting a modified form of the old sod method, is the question which remains to be solved, and to which the authorities of the School of Horticulture propose to devote a large share of their attention. My own observation has been that the orchards in which there seems to be the smallest amount of objectionable effects from cultivation are those in which a cover crop is grown. The method followed is to plow the orchard in the spring as early as the soil is in condition to work well, and then to cultivate the land thoroughly every week or ten days up to July. If properly done, the land during this time is kept like a garden.

At some date in July, usually from the 15th to the 30th, cultivation ceases, and the land is sown to some cover crop. The most common crops used are either crimson clover or mammoth red clover, sowing ten pounds of either per acre. Field peas, tares and buckwheat are also used. In any case the crop is allowed to remain on the land until the following autumn or spring, when it is plowed under and the cultivation begun again. The object of the cover-crops is to check the growth of the trees after it is sown, thereby causing them

to ripen up their wood in better shape in the autumn. And when the cover-crop is plowed in it adds both humus and nitrogen to the soil.

As I have said, orchards managed in this way show the least deleterious effects from cultivation in the matter of the keeping of the fruit, and the question is whether by sowing the cover-crop earlier in the season, or by using different crops, it might not be possible to entirely offset the injurious effects of cultivation while retaining its benefits. In the experimental plot last year we grew all of the cover-crops mentioned above, with the exception of buckwheat, and we shall continue this plan and note the effect of each. The coming season we shall also endeavor to interest some of our growers in the subject, and get them to sow cover-crops in sections of their orchards at different dates, continuing the practice for several years and noting the effect.

Apples in Demand in Britain.

Mr. Turner, Agent-General in London for British Columbia, in a recent letter to J. R. Anderson, Deputy Minister of Agriculture for that province, in regard to fruit in Britain, says:

"The poorest things I have seen here are the apples. It is remarkable that the best looking ones are Californian—these you see in the swell shops. They are perfect in appearance and sell from 2d. to 4d. each. They are to my taste very poor and tasteless, but owing to perfect packing look so beautiful that they sell well. The Canadian apples are really better, but look miserable beside the Californian, being bruised and dull looking, owing to bad packing. The only kind I see in any quantity are russet and

Newton pippins. There is a great demand for apples of any kind."

The Hen Leads.

While the hen is the smallest and most insignificant of all the live stock kept on the farm she looms up in a pretty big way when the returns at the end of the year are compiled. Some items from the last United States census show this pretty clearly. Of the 5,739,657 farms in the United States, 5,096,252 reported poultry. The total number of fowls three months old and over reported were as follows:

Chickens, including guinea fowls, 233,598,085; turkeys, 6,599,367; geese, 5,676,863; ducks, 4,807,358. The numbers of nearly all of these classes of poultry are smaller as reported in 1900 than in 1890, owing to the fact that in 1890 they reported all fowls of whatever age, while in 1900 only those 3 months old and over were reported.

The eggs produced in 1899 were 1,293,319,186 dozen, against 819,722,916 dozen in 1889. An increase in the number of eggs produced, rather than an increase in the number of different kinds of fowls, marks the progress of this branch of the industry. The value of poultry on hand June 1, 1900, was \$85,794,996; the value of poultry raised in 1899 was \$136,891,877, and the value of eggs produced in 1899 was \$144,286,158. The total income derived by the farmers from their poultry industry in 1899, representing the total value of the eggs produced, as well as the poultry raised, was, \$281,178,035. This total makes the poultry business one of the largest connected with agriculture in the United States.

The Holstein-Friesians at Buffalo

The following table and comments thereon have been sent us for publication by the secretary of the American Holstein-Friesian

Association. Naturally, therefore, in the analysis below the table the good points of the record favorable to the Holstein-Friesians are made

prominent. It is nevertheless a good showing for this breed, all the cows of which were supplied by Canada:

Final Report of the Ten Breeds of Cows Represented in Six Months' Test at Pan-American, Showing Yields and Profits in the Four Points on which Prizes were Given.

BREED.	Lbs. milk.	Per cent. fat.	Lbs. fat.	Estimated but-ter lbs.	Value butter.	Cheddar but-ter lbs.	Value.	Per cent. total solids.	Lbs. total solids.	Value total solids.	Gain in live weight lbs.	Cost feed.	Profit on esti-mated butter.	Profit on cheddar butter.	Profits on total solids.	Per cent. total solids plus gain in live weight.
Holstein.....	39260.2	3.25	1275.8	1501.0	375.25	1430.3	357.57	12.	4742.6	426.80	391.164	66.211	192.88	262.64	274.37	
Ayrshire.....	32998.2	3.69	1210.4	1434.7	356.67	1415.6	353.90	12.6	4185.3	376.68	220.140	98.217	212.92	235.70	242.30	
Shorthorn.....	31885.6	3.57	1138.8	1339.6	334.90	1307.5	346.89	12.8	4086.6	367.79	80.162	112.172	81.164	196.79	226.85	
Brown Swiss.....	30892.6	3.63	1123.1	1321.25	330.34	1299.4	324.10	12.7	3943.8	354.93	198.147	26.183	68.176	84.207	67.213	61
Red Polled.....	28694.9	3.98	1141.81	1343.35	335.85	1319.45	329.86	13.1	3773.7	339.54	349.138	03	197.82	191.83	201.61	212.68
Guernsey.....	27127.6	4.60	1248.1	1468.3	367.10	1429.4	357.36	13.9	3775.0	339.75	195.136	59	230.11	220.37	202.80	207.65
Jersey.....	26987.1	4.58	1234.9	1453.0	363.25	1409.1	352.28	13.6	3770.1	339.30	189.137	74	225.54	214.54	201.60	207.73
French Canadian.....	24664.7	3.99	984.1	1157.7	289.45	1179.6	294.91	13.3	3287.3	295.85	288.113	10	176.35	181.81	182.75	191.59
Dutch Belted.....	24393.8	3.4	847.5	997.0	249.25	977.1	244.27	12.3	3666.4	275.97	376.132	32	116.89	111.91	143.61	154.89
Polled Jersey.....	20328.8	4.66	948.31	1115.6	278.90	1080.25	270.06	13.9	2831.7	254.84	275.109	47	169.61	160.50	145.43	153.68

The Holstein-Friesian cows made 6,262 lbs. more milk than their nearest competitors.

The Holstein-Friesian cows made 33 lbs. more of butter and \$8.15 worth more than their nearest competitors.

The Holstein-Friesian cows made \$54.97 more profit on total solids than their nearest competitors.

The Holstein-Friesian cows made a greater gain in live weight than any of their competitors within the dairy breeds, and were exceeded only by Shorthorns.

The Holstein-Friesians made \$32.07 worth more profit on total solids, plus gain in weight, than their nearest competitors.

These results were gained at an expenditure of \$2.57 more for feed than the next largest consumer.

Does this demonstrate anything but the truth of what the late Col. H. C. Hoffman said 25 years ago: "The Holsteins will make more milk per cow, more milk and beef, more milk and butter per cow and more of each for the worth of the feed than any breed or mixture of breeds known to America."

Successful Egg Production

Eggs are starting out well this season, and it looks as if good profitable prices would be maintained throughout the season. Several new buyers are reported in the field, and at the moment it looks as if there would be keen competition for the Canadian egg product this summer. But any material advance in price will avail little to the producer unless attention is given to securing as large an egg product as possible. A great many who keep poultry—and farmers especially—have an idea that it requires little skill to feed poultry. While poultry can perhaps be fed in a hap-hazard way better than any other stock and with better results, still the highest point of profit cannot be reached unless knowledge and skill are shown in the feeding, and especially for egg production. A writer in an English exchange gives the following on this point, and it strikes us as being good:

The science of egg production is one that needs to be carefully studied. An egg is a surplus product; that is to say, it is produced from such food as is over and above what the bird requires for the maintenance of its bodily powers and for the repairs of its bodily wastage. Nature has given to the domestic fowl the power of producing fully developed eggs at intervals of 24 hours, any deviation from this rule is dependent upon one or more of various circumstances. For instance, if a bird is not in a perfectly healthy condition—that is to say, if the feeding has not been upon absolutely correct lines—there may be an excess of those particular kinds of food which are not required to make up the composition of egg, and the body has got to get rid of that surplus, and in the process of getting rid of it the function of egg production is delayed. On the other hand, supposing there is an excess of nitrogenous food which is required for egg production over and above what is required for the bodily functions, and over and above what is required for the daily egg, we know of it by the appearance of an abnormally large egg, of a double-yolked egg, and so on. One secret then in successful egg production is to endeavor so to adjust the food of poultry that they shall have ample for their bodily requirements and a surplus for egg production, but there shall be neither excess nor lack of food. I have remarked in my experience that when fowls have complete liberty it is always safe to give them pretty well as much as they will eat; on the other hand, when fowls are kept in confined spaces they must be fed more carefully than when they are continually on the move. This is only one of the many points which are worthy of consideration. I cannot deal at

all fully with the subject in the present article, but it will suffice for me to point out to farmers that if they wish to make poultry pay they must make up their minds to study their poultry and to acquaint themselves with the why and wherefore of everything connected with them just as they study their cattle and their implements.

Setting the Hen.

To set a hen successfully it is necessary first to get the hen. If a hen, when she first appears to be broody, is removed from her nest to the place where it is desired to have her sit, she will probably break up and not sit at all. It is therefore advisable to leave her on the usual nest for several days before removing her to the one where she is expected to hatch. The hatching nest should be made with care, thoroughly shaped, slightly hollowing, and provided with lice expelling substances, such as tobacco leaves, sulphur or some of the prepared insecticides. If it is made hastily and carelessly the eggs are in danger of being broken and the desired hatch may never take place.

If late enough in the season to procure it, earth makes the best foundation for a nest, because it can be properly shaped and pressed firmly together. Over the earth a sprinkling of chaff or short fine hay should be placed, because this keeps the eggs clean and is more comfortable for the hen. A hen which is comfortable will sit better and produce more satisfactory results than one which must pursue her duties with discomfort.

Having properly prepared the nest, place in it as many china eggs as the hen is expected to cover and gently remove the hen at night to this nest. If she is thoroughly broody and has been removed carefully she will settle down upon the china eggs with a satisfied croon. She should then be left for the night and fed and watered the next morning. If she is on her eggs the next night, they should be removed and the real eggs be given to her. Many advise giving a setting hen only corn and water. But if the hen has been accustomed to a different diet she should have at the start the same kind of food as that to which she has been accustomed. Sudden change in diet is liable to upset the digestion and bring on diarrhoea. If one wishes to feed largely on corn, let him make the change gradually, adding a little larger proportion of corn each day. Should an undue looseness of the bowels occur, the addition of a little sulphate of iron to the drinking water will usually correct the difficulty.

It is a very good practice to thoroughly dust the hen with some insect powder about three times

Poultry and Eggs.

Advertisements under this head are sent a word each must accompany all orders under \$5.00. No display type or cuts allowed. Each initial and number counts as one word.

BROWN Leghorns, Prolific early layers; Strain won at Pan-American. Stock for sale—Minorcas, Barred Rocks, Choicest Strains, Eggs in season. JOHN B. PETTIT, Fruitland, Ont.

FOR SALE—25 hives of bees, honey tanks, extractor surplus, combs—everything complete for successful apairy. F. BETTSCHEN, Palmerston, Ont.

EGGS from high-class W. P. Rocks, winners at the big shows. Also Pekin Ducks. Also Belgian Hares F. BETTSCHEN, Palmerston, Ont.

EGGS for setting. Silver grey Dorkings from splendid stock. John Taylor, jr, Galt, Ont.

DINE HILL STOCK FARM can supply eggs from the following varieties, choicest of stock: H. Langshans, L. Brahmas, Barred and W. Rocks, G. S. L., and White Wyandottes, S. G. Dorkings, W. and Brown Leghorns, Buff Cochins and Golden Sealright Bantams, \$1.00 per 13 eggs; Pekin Duck eggs, \$1.00 per 11; M. Bronze Turkey eggs, \$2.00 per 9; Toulouse Geese eggs, 40c. each. D. A. GRAHAM & SON, Treadford, Ont.

BUFF ORPINGTONS, imported this season on from England, 8 birds costing \$125. Solid buff eggs \$3 per 12. Also breeder of Brown Leghorns, continuous layers, Barred Rocks, E. B. Thompson's White Wyandottes, Indian Games, true blue type for export. I won leading prizes and sweepstakes at the Ontario and Bradford shows. Incubator eggs \$2.50 per 100. J. W. CLARK, Importer and Breeder, Onandaga, Ont.

EGGS, \$1.00 per 15. Barred and White Rocks Silver and White Wyandottes. Black Spanish, Black Minorcas, White and Brown Leghorns. Our birds win at Ottawa, Guelph, and the leading shows. ALPAUGH BROS., Fergus, Ont.

EGGS FOR HATCHING reduced to \$1.00 per setting. High class Buff Leghorns, Barred and White Plymouth Rocks. Good hatch guaranteed.—L. T. MCGIVERN, GALT, ONT.

EGGS FOR HATCHING—Black Minorcas, B. P. Rocks; 15 eggs only 75 cts. Every bird from these pens score 92 to 96 points, and prize winners. N. H. SMITH, Lock Box A, Tibbury, Ont.

BARRED ROCKS and S.S. Hamburg Cocks to spare. R. RENNELSON, Galt, Ont.

LOOK, A SNAP—Barred Plymouth Rocks and Single Comb White Leghorns, not inbred but thoroughbred. Twelve years' experience with these two classes of fowls. 50c. for 13 eggs, \$1.00 for 30, or \$3.00 for 100. Pekin Ducks, \$1.00 for 13. David G. Houston, Box 39, Shannonville Poultry Farm, Ont.

50 CENTS PER SETTING for Latham Barred Rocks. Duston White Wyandottes, \$1.00. JOHN S. MARTIN, PORT DOVER.

during the period of her incubation, once when she begins her duties, once after a week or so, and the third time about the 19th day. This will keep her from vermin. A setting hen should be subjected to as little disturbance as possible, but it is necessary to notice whether the eggs are broken or fouled. In such cases the nest should be furnished with clean material and the unbroken eggs carefully washed in warm water. After washing they should be wiped dry and immediately replaced under the hen. If, however, the hen is a quiet fowl, and only such are fit for maternal duties, and the nest has been properly made and the hen properly fed and cared for, there are not many chances of having the eggs broken or the nest fouled.

—H. S. Babcock, Rhode Island

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

It should be the object of the beet grower to secure a ripe beet at the time of the harvest.

It is impossible to grow sugar beets with profit without judicious cultivation.

Intelligence is necessary in the cultivation of sugar beets.

You can hoe the sugar into the beets, every hoeing means additional sugar, and more money.

The sugar beet will pay for every hour spent upon them.

The beet sugar industry is an "infant industry," in this country, but a very healthy infant, over \$2,500,000 will be spent upon it this year.

The beet sugar industry is capable of vast development.

Purchase a few pounds of the real sugar beet seed from the factories, and experiment with it. You will learn some of the characteristics of the sugar beet.

Experimental Plats.

The government has definitely arranged to conduct experiments in the growing of sugar beets at St. Catharines, Guelph, Markham, Renfrew and Brussels this year. Other points are under consideration and it is likely that two or three plans more will be decided upon. The experiments this year will be under the supervision of Prof. Harcourt, of the Guelph Agricultural College.

Wiarton.

Mr. J. C. Siemon, of Wiarton, who has been in the city for a few days reports that over 100 men are at work on the construction of the sugar factory in that town. 15 cars of steel are on the way and expected to arrive at an early date, when the work of erecting it will be rushed. No difficulty is anticipated in getting the factory ready on time.

Beet Tops for Silage.

C. M. K., Sawtelle, California, asks:

"Would you consider beet tops good silage? Also what plan is best for preparing silage?"

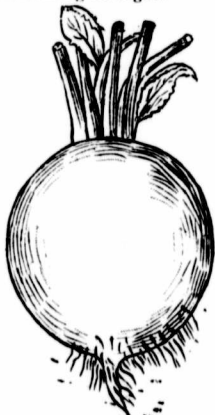
The inventor of the silo first commenced with beet tops and found them a success. The simple way of running them into the silo pit when fresh is as good a plan as any. Would suggest that care should be taken to have the supply of beet tops large enough each day, and the silo small enough so that rapid filling can be had each day. It is necessary that all green stuff for the silo should be filled in at a rate that will ensure a sufficient degree of heat to evolve enough carbon dioxide to effect the purposes of good curing.

Utilization of Fresh Residuum Sugar Beet Cossettes.

Notwithstanding the fact that most of the American farmers attach but a secondary importance to the feeding value of residuum beet cossettes from diffusion, in many agricultural centres of Europe the tiller resorts to sugar beet cultivation with the sole idea of obtaining from the sugar factory the residuum in question, and the profits derived from fattening beefs combined with the resulting manure, places the sugar beet at the head of the money-making crops. The cossettes may be fed fresh, siloed or dried. The residuum fresh from the pulp presses has a composition that depends upon the variety of beet from which they are obtained, the soil and fertilizer used has also an important influence upon the composition of the exhausted product. In some factories farmers are compelled to handle the residuum as emptied from the diffusion battery without submitting it to a preliminary pressing. Under these circumstances the bulk is considerable and it offers considerable difficulty for transportation to distant farms.

Is It Any Wonder

That the beet sugar industry did not flourish in Quebec is not at all strange. The Journal of Agriculture published in Montreal, the official organ of the Council of Agriculture for the province prints the following as an illustration of the sugar beet grown in that province for the manufacturing of sugar.



The illustration is enough to convince any one at all familiar with the industry as to the "Why and wherefore" of the failure, without any further arguments. How they

should look, and as we'll grow them in Ontario, is shown illustrated thus:



Do you see any difference?

Critical Times in Germany.

England and France are Playing a Game Against Us and Cuba Sees a Chance in the Proposed Reduced Production Condition.

Berlin, Germany, March 14, (Special)—These are critical times for Germany's beet sugar industry. Ever since the first beet was sliced last fall, our beet sugar manufacturers have been trying to dispose of their surplus product, some of which was still in stock from the previous campaign. All winter long they have striven to reduce the acreage devoted to sugar beets, in order to prevent more overproduction here next season, and now comes the Brussels conference and ruthlessly throws everything connected with beet sugar, into help-

SUGAR BEET SEED

Remit with order—15 cents a pound best German seed—any quantity. Agents wanted. Write London Sugar Refining Co., Limited, London, Ont.

less confusion. While the reports from Brussels indicate that the international representatives have at least come to Germany's requirements, in voting to do away with all direct and indirect bounties, still the effect of this sweeping change is difficult to foresee, and the markets are as a consequence very erratic and unreliable. As far as Germany is concerned, the time for ruthlessly changing existing internal and external sugar trade conditions, has been very poorly chosen. Europe's beet sugar producing countries had enough to contend with, without adding this monstrosity. Of course our large sugar holders foresee, that the adoption of this Brussels conference innovation means an inevitable advance in the price of sugar. Consequently they are in no hurry now to dispose of more of their surplus stock at present demoralized prices. But beyond this immediate and short lived improvement of our market conditions, we can see a future uncertain, gloomy and discouraging outlook for our agricultural interests, which are so vitally interested in this industry.

The more closely we inquire into the factors that brought about this result at Brussels, the more convinced are we that France and England have been working together to bring the reported agreement about. We doubt very much if Germany will still have a beet sugar industry to speak about, when these innovations go into effect. England means to play into the hands of the cane sugar producers of her western and eastern colonies. France depends upon her greater fertility to derive the greater benefit from cutting off all bounties. Even Cuba expects to profit by this sudden change of beet sugar producing conditions in Europe. Our beet sugar interests are awaiting with much anxiety the final word about this new international agreement. The change is so sudden and overwhelming, that they have not grasped the situation, but seem to be hoping for some hitch in the Brussels proceedings, with much the same desperation that a drowning man grasps at a straw. That there is still some hope of a disagreement is apparent in the price fluctuations of beet sugar on the principal markets. During the past week they have repeatedly risen and fallen 25 pig. England has been particularly active in closing sales, especially when reports indicated that the bounties would actually be cut off. In this connection it will be worthy of note to compare this year's conditions with the two preceding seasons. In 1900 there was on hand a visible supply at first hand of 205,104 tons of beet sugar, at 9.77 per Ctr., in 1901 there was on hand 319,000 tons at 9.30 per Ctr., and this year's visible supply is estimated at 327,200 tons at 6.79. There is a marked difference in the price, but not as great a difference as expected in the tonnage.

France, Austria, Holland and Belgium report the same market fluctuations noted here, and for the

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.

Now Building the Factory at Berlin.

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.

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Will Contract for complete Plants in any part of the world for Brewers, Distillers, Beet Sugar Factories, Refineries, Glucose Works, Etc., Etc.

THERE IS A DIFFERENCE




between the fruit sprayed with a common spray pump and one that is not. There is a still greater profit from fruit sprayed with the **SPRAMOTOR**. Why is it the entomologists get such bounteous returns while the average grower fails? Why do these experts who have used the **Spramotor** recommend it? Why does the **Spramotor** kill the San Jose Scale and let the tree live, while the ordinary spray pump kills the tree?

The SPRAMOTOR

will apply soap and oil, or bordeaux and oil and water, or any combination of them in the right proportion. The **Spramotor** will paint your barns and buildings with oil or **Spramotor** Water Paint. The **Spramotor** was winner of the Canadian Government Spraying Contest, and the Gold Medal at the Pan-American Exhibition. Send for 80-page Copyrighted Treatise, "A Gold Mine on Your Farm." It tells about the uses of fruit trees and their remedies. It's free.

SPRAMOTOR CO.,

Buffalo, N. Y. London, Can.




same reasons. Russia reports an unusually active beet sugar market, 335.750 pud have been disposed of at 5.50 R. for the refined product, and 4.65 R. for raw sugar. Meanwhile nothing positive can be learned at Brussels. It is understood here, that the arrangement is in the nature of a compromise between the extreme measures advocated by England and France, and those advanced by Germany and Austria. The new order of things is to go into effect Sept. 1, 1903, at which time all direct and indirect bounties are to be dropped, and the uniform import duty on beet sugar placed at 6 francs, or marks 4.80 per ton, exclusive of the consumers' tax. We hope this latter fact is not irrevocably true. We trust the radical change in import duties will come gradually, so that we may accustom ourselves by degrees to the changed conditions. If these changes are to take effect simultaneously, then Germany will have some hard sledding ahead.

Germany's agricultural interests will receive a set back which years will not improve. Sugar beet raising has been the most profitable and most successful industry of our farmers for many years. Much of our prosperity and stability as a nation has been due to this, our banner farm crop. Under the conditions imposed by the Brussels compromise, Germany's beet sugar would be driven from the world's sugar markets by cheap cane sugar from Cuba and the West Indies. Even the home market would be thrown open to the competition of the world, as the import duty allowed will not suffice to keep out the cheap product of American and Indian coon labor. The kartell which has kept out industry afloat through many storms will be disrupted, and our farmers would have to accept a cut of at least 30 pig. per Centur for their beets. Our government must be aware of these potent facts. We almost feel certain that there is something behind all this Brussels business. Perhaps Germany and Austria have only seemingly given into the inopportune coercions of England and France. Our representatives voted to have the radical changes take effect September 1, 1903. Rather than to see England adopt reprisal measures, our government wisely concluded to this compromise. Alter all it is not the Brussels conference, but the Reichstag, which acts on these sweeping tariff changes. And the matter can be so arranged that the Reichstag does not enter the discussion of this beet sugar business, until 1903 and by that time Germany expects to have found a way out of the dilemma. The present over stocking of our sugar market will have been relieved and conditions will be treated then as they exist. Moreover England will have to negotiate new commercial treaties with Germany and Austria in 1903, and much can be expected from that contingency. If these are the real inner facts of that Brussel edict, well and good. But if our government should ac-

tually try to force the adoption of these radical changes at the present session of the Reichstag, thus offering to sacrifice our best agricultural industry to the brazen demands of England and France then there are rocks ahead for all concerned. But it will readily be seen that everything now depends on the action of the legislative bodies of the several beet sugar producing countries of Europe, to ratify the action of their conference representatives. Austria already intimates that they cannot accept this ultimatum. France and Germany will have trouble to make their legislatures adopt such radical changes.

And so, after all, we do not believe that this latest Brussels conference will accomplish more than its predecessors. For a time it looked dubious enough. But as we look behind the scenes, we see the motive power for much of the action taken, and some where all will be nullified. At the close of the week we find most of our agricultural papers taking this happier view of the case, and as yet we need not despair. Word also comes from Brussels, that the French delegation is gradually changing front. At first they advocated all the most radical changes. Now they demand some special concessions for French beet sugar, on the ground that it labors under greater difficulties than Germany. That the other countries will never consent to this favoritism for the richest farming country of Europe goes without saying, and we would now not be at all surprised, if the Brussels conference should yet fail of accomplishing anything. Meanwhile everything possible is being done by the frightened farmers and beet sugar manufacturers both in France, Austria and Germany, to stay proceedings. The respective governments are being beseeched by those directly interested, not to sacrifice their favorite crop. Whether these pleadings will be in vain, even as the infant beet sugar industry of the United States, have apparently been vain, remains to be seen. We still hope for the best here. But at Washington the great party whip seems to be accomplishing the desires of the cane sugar trust. Those congressmen whose sympathies are with beet sugar, but who are not directly interested, are being gradually whipped into line, according to our reliable information, and at this writing it looks very much as though Cuba would get that 10 per cent. reduction. This only accentuates the crisis in the world's beet sugar industry.

Ressnag.

More and More.

The use of good mowers has become so general that the demand for these mowers is increasing more and more. The demand for more and more O. K. mowers is so great as to tax to the utmost the great mower producing facilities of the World-Centre works. Call on the nearest agent and inspect the McCormick line of grass cutters. It is the O. K. line.

Settlers' Low Rates West.

Chicago & North-Western R'y; every day during March and April. Colonist one-way second-class tickets at very low rates from Chicago to points in Colorado, Utah, Montana, Nevada, Idaho, Oregon, Washington, California, Victoria, Vancouver, New Westminster, Nelson, Rossland and other points in Kootenay District. Also special round-trip Homeseekers' tickets on first and third Tuesday, March, April and May. Full particulars from nearest ticket agent or B. H. Bennett, General Agent, 2 East King St., Toronto, Ont.

SHOEMAKER'S BOOK OF POULTRY



And Family Almanac for 1903. 160 pages 120 engravings, the finest work of its kind ever published. Gives recipes for making condiment powders; remedies for all diseases of fowls; plans and diagrams for building poultry houses; tells you how to raise chickens profitably; gives description with illustrations of the leading varieties of pure bred fowls; also

INCUBATORS AND BROODERS

and poultry supplies at lowest prices. It is an encyclopedia of chicken information, worth many times its cost to anyone interested in poultry. You positively cannot afford to be without it. Sent postpaid, on receipt of order. 25 cents. Address: G. C. Shoemaker, Box 83, Freeport, Ill.



Toronto Incubators



Absolutely self-regulating. Supply their own moisture. Will hatch every hatchable egg. Used by best breeders. Catalogue free.

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514 Dundas Street, Toronto

AGENTS WANTED.

Gentlemen or Ladies \$2 a day sure, not to canvass, but to employ agents. Position permanent. \$600 per year and expenses. Reliable firm with best references. Experience unnecessary. M. A. O'KEEFE, District Manager. Address care of "The Farming World," Toronto.

CANADIAN PACIFIC RY.

SETTLERS' One-Way EXCURSIONS

To Manitoba and Canadian North-West will leave Toronto every TUESDAY during MARCH and APRIL, 1902.

Passengers travelling without Live Stock should take the train leaving Toronto at 1.45 p.m.

Passengers travelling with Live Stock should take the train leaving Toronto at 9.00 p.m. Colonist Sleeper will be attached to each train.

For full particulars and copy of "Settlers' Guide" apply to your nearest Canadian Pacific Agent, or to

A. H. NOTMAN, Asst. Genl. Passr. Agent, 1 King Street East, Toronto.

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 non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College 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 Breeders' 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 in the third issue of each month. Members having stock for sale, in order that they may be included 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 required to give 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: age, 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.

Wanted a middle aged man with sober habits, or boy 15 or 17 years old, to work by year on 100 acre farm near London. Must be good hand with horses and good at milking. Willing to pay good wages to competent hand. No. 952. a.

Wanted two men for dairy farm near Ottawa. Must be of temperate habits. Old country agriculture hands preferred. Wages \$240 per year with board. No. 953. a.

Wanted. Applications have been received for young men to do general farm work on farms situated in different parts of Ontario. Fair wages offered. No. 954. a.

Wanted.—A young unmarried man to do general farm work on a farm in York County. Must be experienced and reliable. No. 949. b.

Wanted.—A good man, either married or single, to do general farm work on a small farm in Parry Sound District, conveniently situated. Good wages to competent man. If married garden and wood will be furnished. State wages expected. No. 950. b.

Wanted.—A single man to do general farm work on a farm near Oshawa. Good wages to suitable man. No. 951. b.

Situations Wanted.

Wanted a situation in British Columbia or the Northwest by a young man to do general farm work. No. 995. a.

Wanted a position by a young man on a farm, who has full knowledge of farming and is sober and industrious. Wages \$14 to \$16 a month or \$175 per year. No. 996. a.

Wanted situations for a number of young men on farms in Ontario or the Northwest. Some are not experienced and others are. No. 998. a.

Wanted.—A situation as a foreman on a farm by a man who has had twenty-three years' experience and can give good references. No. 994. b.

Situation wanted by a woman as house-keeper on a farm. Always lived on a farm. Good references. No. 995. b.

Domestic Help Wanted

Wanted a position on a farm by a woman and a 14 year old boy. The boy to go to school and to work for board. The woman accustomed to farm work. No. 997. a.

Wanted a girl or woman to do house work for small family near Georgetown. Must be experienced and willing to make herself generally useful. References required. No outside work. Good home provided for middle aged woman or widow wanting such. No. 948. b.

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

Farmers' Institutes.

Under the head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instructions 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 Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes

Green and Barnyard Manures and their Application.

By F. M. Lewis, Burford.

The question of manure is one that concerns every tiller of the soil. Every farmer realizes that he could raise abundant crops if he had plenty of manure to apply, but the farmer that gives any serious thought as to how to increase the quantity or improve the quality of his produce is the exception and not the rule.

We find that the practise of plowing down green crops for improving our soil conditions is as old as agriculture, every farmer has realized the value of doing so to some extent. As to what constituted the value has not been given much consideration.

SOIL HUMUS.

The most important question the farmer has to deal with to-day regarding the maintenance or restoring fertility of the soil, is "Soil Humus". At the annual meeting of the Experimental Union in 1900, Prof. J. P. Roberts, of Cornell University stated that the soils of our continent contained sufficient plant food for the production of from 300 to 500 crops, yet to-day we find our farms already becoming less productive simply because this fertility is in an unavailable or locked up condition and the successful farmer is the one that is finding the key for working the best combination. The time has been when most every farmer who prided himself on doing proper work, piled his manure in the yard at least once and often more. The more it heated the better work he thought he was doing, when in reality all the good he did was to kill the weed seeds and it was a wonderfully expensive method. Every day that his manure heap steamed he was losing the very best fertility it contained and that was only part of the loss, for it has been ascertained that the rotting of the vegetable matter in the soil is the great secret of unlocking the plant food and especially that which is the most difficult to unlock, "the mineral plant food", so he not only lost fertility by fermenting in the heap but also lost the power to unlock what is in the soil.

INCREASES MOISTURE.

This is not the only advantage of putting plenty of vegetable matter in our soils as it has a wonderful effect upon the water holding capacity of our soils. A piece of land, part of which had been cropped for years, until it was about exhausted of its humus content, was tested for moisture. Another part of the same soil which had only two crops taken from it, was sampled for moisture, the atmospheric conditions of each was the same, yet that which was rich in humus contained 1½ quarts of water per cubic foot more than the other. These

same soils when wet to the same extent and exposed to the sun for ten hours, the one rich in humus contained a quart more moisture per cubic foot. We see by this that the amount of humus in our soils plays a very important part as to its water holding capacity. When we remember that all plant food in the soil must become soluble in water and that such food is taken into the plant only through the moisture that is in the soil, we realize the importance of anything in our soils that will increase its water holding content.

PLOWING UNDER GREEN CROPS.

Any of our ordinary sandy or clay soils will be benefitted by the plowing under of green crops. The amount of benefit derived, will depend upon the crop, as some are of so much more value than others. Nitrogen is the most expensive element to buy in a commercial way, and as our clovers, peas, beans, vetches lupines, etc., have the power of taking free nitrogen from the soil they are of more value than any other class of plants for green manuring. An acre of alfalfa upon which there was 90 lbs. of nitrogen applied in three years, contained in the crop that was taken off 912 lbs. As to whether it is going to pay best to plow a crop under or gather it for feed returning the manure to the soil, will depend upon circumstances. If our soil is impoverished and much robbed of its humus, then it must have an abundance of vegetable matter before first-class results can be obtained from the application of fertilizers. This is not encouraging to the farmer who is cropping his farm and expecting some day to make it profitable by applying commercial fertilizers.

VALUE OF MANURE.

The value of our manures depends largely upon three things: The care which we take of it. The age of the animal consuming the food, and the kind of food we give it. The ideal condition for our manures is to keep it under a shed, tramped sufficiently to prevent heating and kept moist enough so if it should warm up a little it will not fire-fang. Fire-fanged manure is not very valuable. The following table will give the reader some idea of the value of keeping manure in the yard in a compact form rather than scattered. Bear in mind that manure loses only by fermentation and washing and not by drying.

Manure in heap in the open yard.

Total weight of manure.

Nov. 3rd, 2,000 lbs. Nitrogen	12.9
April 30 1,428 "	12.8
Aug. 23 1,405 "	9.3
Nov. 15 1,391 "	9.2

Manure spread in open yard.

Nov. 3 2,000 lbs. Nitrogen	12.9
Apr. 30 1,730 "	9.2
Aug. 23 1,226 "	5.0
Nov. 15 1,150 "	4.5

Many barnyards seem to be selected with the purpose of having them wash out all they can. The probability is that when manure remains in such yards over the summer that a great deal of the value is lost by washing out and entering the ground at some point where it does not do any good.

Young growing stock gives manure of less value than stock that has come to maturity. What food the latter consume more than is needed for support is given off in the dairy cow as milk and in the beef animal, stored as fat, and in our working animals is used up as energy replacing the tissue which are constantly wearing away. The young growing stock give off in solid and liquid excrement from 50 to 65 p.c. of the fertilizing value of food consumed. Dairy cows 75 p.c. and fat cattle or animals at rest 90 p.c. You will conclude then that if you are going to buy stock for feeding that you will buy mature animals as their manure is of so much more value. There is something else to consider. The lighter growing animals are the cheaper they will put on a pound of gain. Take for example hogs, this table gives the amount of meal necessary for an animal at various weights to produce one pound of gain.

From 54 to 82 lbs.	3.10 lbs. meal
" 82 " 115 "	3.75 "
" 115 " 148 "	4.38 "
" 146 " 170 "	4.55 "

Several experiments by private individuals as well as experiment stations bear out the correctness of this statement. This is not only true of hogs but other stock as well.

FERTILIZING VALUE OF FOODS

The next thing to consider is the fertilizing value of food consumed, and we should keep this in mind in purchasing food for our live stock.

All of our farm produce contains two elements or combination of elements known as proteins and carbohydrates. In foods rich in protein, we get the elements the animals require for building the bony and muscular structure and the material our dairy cow uses for milk production. The carbohydrates furnish the material to supply the animal with fat, heat and energy. Some of our foods are rich in one form and some in the other. Bear in mind when buying that foods rich in protein are the most expensive. We have not time here to consider this question of feeding

carefully, but the proper proportion in which to feed for the proper nourishment of the animal body is about one of protein to six of carbohydrates. This will be somewhat varied according to what we wish to accomplish by our feeding. By a careful study of the following table, we will be able by comparison to find out the feeding as well as the manurial value of some of our more common crops. Nature has dealt kindly with us for we find that those which are of most feeding value or most costly to buy yield us the most value as fertilizers.

	NUTRITIVE RATIO.	
	Protein to a res.	Fertilizing Value.
Wheat	1	9.9
Corn	1	12
Rye	1	11
Barley	1	9.3
Oats	1	5.8
Peas	1	2.8
Buckwheat	1	6.8
Soy and Soja Bean.	1	1.9
Cow Peas	1	3.1
Wheat Bran	1	3.8
Wheat Mid.	1	4.8
Buckwheat Mid.	1	2.1
Linsed Meal	1	1.6
Castor Seed Meal	1	1.3
Clover Hay	1	6.0
Alsike	1	5.5
Alfalfa	1	4.1
Timothy	1	16.2
Cow Peas	1	3.8
Soy Bean	1	3.9

	Nutritive Ratio.	Fertilizing Value.
Wheat Straw	1:65	2.02 per ton
Barley	1:61	5.46 "
Peas	1:8	5.84 "
Soy or Soja Bean	1:18	4.74 "
Corn Stover	1:17.4	4.13 "
Corn Ensilage	1:16.5	1.13 "

You will see by this that the less carbohydrates to one of protein the more it costs you in the market and the higher value it is as a manure. Let us as farmers seek to produce more of this class of crops and reap the double advantage. When buying we must take stock of what we already have, as to its feeding value, and then buy something to mix with it to get a balanced ration. Sometimes we might sell and buy something of more value to us.

At another point we have lost a great deal. How common it has been to find in our stables a row of holes in the floor behind our stock to let the liquid get away. We saved the solids and lost the liquids. Take notice of the following table and see where the money went.

Horses	Solid \$1.36	Liquid \$8.62
Cattle	".86	3.14
Sheep	" 1.59	" 11.31
Hogs	" 1.79	" 3.06

Cut straw, leaves, dried muck and sawdust in limited quantities should be used as an absorbent and not let one bit of liquid get away. Cement floors are of great value to us as farmers.

Clover is such an important crop that anything regarding its use to best advantage is of value to us.

MILK TICKETS

EVERY PATRON OF EVERY FACTOR!

Should insist on receiving a monthly statement of the milk delivered from his farm.
Our Ideal Milk Ticket is used by all the best factories. 25c. a hundred. \$2.00 a thousand.

Sample Card Free

Address

THE FARMING WORLD

Confederation Life Building,
Toronto

Fertilizing value for ploughing down of clover at different stages of development.

	Per Acre.
Plants 5 to 7 inches high	\$21.94
Plants 12 to 14 inches high	34.64
Plants blooming	37.06
Plants matured	43.96

All information the writer has been able to gather points to the correctness of the table. A man cut a field of clover for hay, one side of it was pastured by sheep the balance of the season, a second crop of hay was taken from the other side, the following season he noticed his grain crop was decidedly better on the part that had the two crops of hay taken off of it. The following season he cut a field for hay, from the first half of the field he took the second crop of hay off, the other side he let mature. He found that between the time of taking off the second crop of hay and the maturing of the other side that the root extent of clover had doubled on the growing crop and that the increase of nitrogen was as eight is to five. The most which the maturing crop of clover loses is the sap, which is only water, and it gains a great deal in root, which makes humus, and also gathers a large amount of nitrogen.

The greater part of our successful farmers are putting manure direct from the stables upon the land during the winter season and report better results than where drawn out and spread later in the season.

There is one class of men that object to this method and they are the men on heavy clay soils that are not underdrained, and no man can get the best results out of a clay farm until it is underdrained.

The roots which feed on this manure are near the surface, the deeper roots feeding more on the mineral elements and we want to make it as easy for our plants to feed as possible

DISCUSSION.

Q. Would you put manure out on hilly land in the winter? A. I have frequently met men on hilly farms who report having splendid results. It will depend largely upon the nature of the soil. Try it for your own satisfaction. You can afford to lose a little for the advantage gained in getting it out early.

Q. Would you not as soon plough down rape as clover? A. No; you can get everything in the clover the rape could possibly give, and the clover gathers nitrogen and seems to impart a tilth to the soil which few other crops give.

Q. Do you think ploughing clover under of more value than to feed it? A. It certainly does most good ploughed down, for then you get all there is in it.

Q. Is coarse manure the best for all soils? A. Short manures will probably do best on very light soils, and a very coarse manure is often best for underdrained clays, greatly improving the tilth.

Q. Why is barley straw of more value as manure than wheat? A. Barley straw is exceedingly rich in potash.

Q. Do you think clover hay better for working horses than timothy? A. Yes, the clover is rich in the material for repairing the muscular waste which the working horse necessarily incurs.

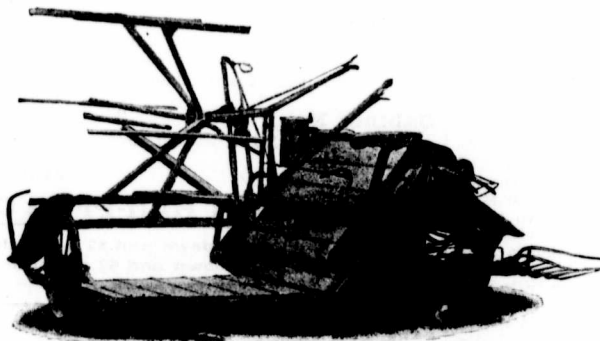
Q. I have rye, barley, oats, corn and some timothy hay. How can I feed them to get the best results? A. You cannot make a balanced ration out of this lot, but peas, bran, linseed meal, cottonseed meal and gluten meal, any of which would be of value to you to help balance up what you have. You might be able to sell something you have and purchase to advantage not forgetting to consider feeding value, fertilizing value and select something your particular class of stock will relish.

Q. Will it pay to feed my dairy cows concentrated feeds in winter? A. If you have good cows it certainly will. If they won't pay to feed, there is no profit to be got out of them.

Q. What crop per acre will give the largest amount of hog feed? A. Mangels or turnips. Eight pounds of roots are equal to one pound of grain and four pounds of grain will give one pound gain in live weight in hogs. Figuring upon this basis an acre of roots yielding 800 bushels will give 1,500 pounds

THE NOXON OPEN-BACK BINDER

Is acknowledged by all Practical Farmers to be the best.



Some Special Features :

Built of Steel Throughout
Open Back
Removable Dividers
Telescopic Packer Shaft

Three Packers
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The Lightest Made
A Pair of Ponies Can Handle It

Runs Without Noise
Always Reliable
No Neckweight
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Every Purchaser Gives a Testimonial

THE NOXON CO., Limited, INGERSOLL, ONT.

of live hog. An acre of barley yielding 42 bushels, 504 pounds of hog. The value of barley straw should be considered.

Q. What is that soy bean? A. It is a Japanese bean, which is as yet only in its experimental stage but promises well and is worth watching and some care in cultivation.

Q. What are cow peas? The cow peas are really a bean of great value where grown, but as yet are only experimental.

Unthreshed Wheat.

There is a farmer in Suffolk, England, says the Chicago Times-Herald, who has a stack of wheat still unthreshed that was reaped in the harvest of 1873. It is built on an iron stand about two feet from the ground, and the roof is kept in good repair. The rick altogether is in an excellent state of preservation. Some heads of wheat were pulled out of the rick a short time ago, and the grains were found to be quite bright, but of a reddish color from age. The rick is supposed to contain about 250 bushels, and the reason the wheat is unthreshed is that the owner, when stacking it, made a vow that he would never thresh it until it made 25 shillings a sack, a price that has not yet been offered.

In Favor of Sheep

It is sometimes asserted that cattle and sheep require the same amount of feed per thousand pounds of live weight. This statement seems not to be well founded. In some experiments at the Iowa station the cattle consumed 19.6 pounds of dry matter per thousand pounds of live weight, against an average of 29.07 by the sheep. Both cattle and sheep were on full feed. The sheep made a daily gain of 3.73 pounds per thousand pounds of live weight, and the cattle 2.14. In summing up this comparison we find that while the sheep ate 48 per cent. more than the cattle, they gained nearly 75 per cent. more.—Prof. C. F. Curtiss.

Care of Horses' Necks and Shoulders.

Horses' necks and shoulders do not need very much treatment if they have collars that fit them and they are worked right. It must be remembered that a collar which fits a horse that is fat will not fit the same horse when thin in flesh. A half sweeny, wool faced collar is the thing to begin with, if it is of the right size. It is a fact that different horses have different shaped necks, and the adjustment of the hames for one horse might not be the thing to do for another horse that takes the same collar, some horses have a shoulder for a collar to lodge against, while on other horses it is hard to tell where their shoulders begin and their necks leave off. We will suppose we are going to break a colt that weighs 1,000 or 1,100 pounds. An eighteen or nineteen inch collar would

be about right with the hames pressing the collar about the same from top down. Suppose we are not going to rein the colt very high the top of the head about four inches above the withers. If we rein him higher than this we must change the collar and hames. A horse that has not had the harness on all winter should not be worked hard the first few days, if the load is heavy he is liable to have a sore shoulder, even if the collar does fit. The same rule holds good in breaking a colt, and the only remedy in such a case is to lessen the load. It

will not do to change collars though they are the same size. Tom's collar is for Tom and Bill's collar for Bill. If the horses gradually get thinner in flesh as the season advances tighten up the top and bottom hame straps, and if something else is needed use a pad or another collar. I never use pads till I have to, as they are very hot. With a little attention at the start there is no use of a horse having sore shoulders. It is a great deal easier to keep them well than it is to cure them; as for the remedy I have none.—The Homestead.

The Cabinet Sewing Machine

Sold by The Farming World at HALF PRICE.
Wholesale Profits and Agents' Expenses Cut Off.
HIGH GRADE. GUARANTEED.



Strong Points

Light running.
Great durability.
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Self-threading Shuttle.
Full set attachments free.
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Handsome Oak finish.
Guaranteed for five years.
Money back if not as represented,

What It Will Do:

Hemming, Felling, Tucking
Binding, Ruffling,
Hemstitching,
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Under Braiding, etc., etc.

Cabinet No. 1

Handsome Oak Finish, with drop head and folding leaf. When the machine is not in use the head is out of sight and secure from dust. The stand forms a handy and ornamental table.

REGULAR PRICE, \$50.00

Cabinet No. 2

Same as No. 1, without drop head, but with neat protecting hood.

REGULAR PRICE, \$45.00

Special Half-Price Offer

No. 1—\$25, Payable \$5 down and \$2 a month for ten months.

No. 2—Payable \$4.50 down and \$2 a month for nine months.

A five-year Guarantee with every machine. Your money back if you want it.

THE FARMING WORLD

Confederation Life Building, Toronto.

I enclose \$.....for one Cabinet Sewing Machine, No.....

I will remit \$2.00 a month until \$.....has been paid.

Name.....

P.O.....

The Farm Home



A KITCHEN SCENE.
In a Japanese Household.

Willie's Going Barefoot.

There's mud upon the carpet, and
there's mud upon the stairs,
And there's mud inside the porch
and kitchen, too ;
There are streaks of muddy foot-
prints everywhere that Wil-
lie goes,
For he tracks mud in the house
the whole day through.

He keeps his mother busy cleaning
mud from every room,
And the hired girl kicks up an
awful row ;

Warm weather's here, and boyhood
days are brimming o'er with
fun,
For Willie's going barefoot now.

There are slivers every evening
that his mother has to find,
And stone bruises that she has to
doctor, too ;

There are toes that have collided
with a rock which she must
bind
And with arnica and linament
make new ;

There are scratches by the dozen
where the thorns and briars
took hold
When he scooted through the pas-
ture for the cow,
And there's music in the gloaming
when his mother pulls them
out
For little Willie's going barefoot
now.

A. E. Brininstool, in Rochester
Herald.

Milkman—I s'pose you notice I
am leaving warm milk every morn-
ing mum?

Housekeeper—Yes, and, consider-
ing the number of diseases flying
around, I think it's real thoughtful
of you to boil the water.

"Hanging Out"

Even in Canadian speech we dis-
cover many purely local terms. To
"hang out" is sometimes slangily
used to mean to live or to stop as
in the question "where do you han-
out now?" This meaning prob-
ably originated from the custom
of business men hanging out a
sign when "setting up" in a new
place. In this district we have a
meaning for the term which is not
known in some other parts and
may not be familiar to the major-
ity of the readers of The Farming
World and I am unable to discover
how this meaning was first used
in connection with this term. The
meaning cannot be better conveyed
than by repeating some words I
heard a mother recently use. They
are these—"If they wish I shall al-
low my daughters to skate, to
dance, to go to parties and to play
cards, but I shall not allow them
to "hang out." Any girl is too
good to sit up until all hours of
the night alone with a young man."

Of course we know that hanging
out in certain grades of society is
not practiced even though very late
hours are kept by all the members
of the family instead of only by the
daughter and a young man, caller
I was going to say, but perhaps
lodger would be more appropriate—
and even when engaged the young
couple do not think of spending two
or three hours alone together while
all the rest of the family have gone
to bed. The practice has one ad-
vantage for the young couple will
have plenty of time to be com-
pletely tired of each other's society
before instead of after marriage,
though when a pair are very deeply
in love it might be very difficult
to say "good night." A young

man aged in the neighborhood of
eighty years was courting a maid-
en of corresponding age and one of
her neighbors noticing a light burn-
ing at an unreasonable hour in the
morning, inquired next day of the
maiden if she were ill during the
night. She received the reply
"Oh no, Mr. ——— was here and
its hard for lovers to part. So
probably we should excuse lovers
who hang out later than the usual
bed time. If the young man could
only come once or twice a year one
might see how readily time would
pass in relating all the happenings
since the last meeting. But once
or twice a week is more than health
to say nothing of morals will bear
without risk of injury. It would
not be so inexcusable if the parties
were engaged but very often they
are simply good friends and some-
times simply acquaintances and
when a young man calls on the
daughter of the house he fully ex-
pects her parents will go to bed
about nine o'clock and if he is talk-
ing specially to one sister the re-
maining sisters and brothers will
also disappear. In fact I have
known young men to "hang out"
with one girl of a family one night
and on his next visit with the
other, etc., while he may have oc-
cupied his time with other girls
between.

He will probably say to his sister
next day "I hung out with
Miss B—— until three o'clock
this morning and might have been

Lifbuoy Soap—disinfectant—is strongly
recommended by the medical profession as
a safeguard against infectious diseases. 22

there yet but I heard the old gentleman moving." She may reply "It was only two when Mr. A— left last night but Mr. B— stayed until 4 Sunday night." Where the custom is established the young people do not seem to have less respect for one another than they have in other grades of society, where the entertaining is done by the whole family at a reasonable hour.

A stranger to this custom dropping in and noticing after a time that he is left alone with the daughter of the house, would probably not look on it in the same light as do the young men of the neighborhood. He would probably not realize the compliment the parents pay to his honor nor the absolute trust they have in the staidity of character of their daughter when she is thus allowed such freedom. It is not from the call of the comparative stranger there is most danger as the girl is then more on her guard, but it is the frequent familiar visits of intimate friends which may tend to less reserve of manner.

It is a foolish, senseless custom and as the girls grow older they will be more regretful that they permitted young men to stay later than the parents' bed time and yet it is the parents who must bear the blame as it is from purely selfish motives they shift the entertaining to the daughters. They are not especially interested in the visitor. They do not care to lose their sleep, for loss of sleep and hard work next day do not make a good combination and when sleepy time comes they unthinkingly retire.

Did they but consider the subject with sufficient seriousness they would endeavor in some way to stop the hanging out custom, it is demoralizing in its influence on young people of both sexes and we certainly agree with the mother who considers it preferable for young people to spend the hours of night in dancing or in card playing than to have a pair of them hanging out alone in a room for hours at a time with no means of entertainment but each other's company but perhaps Satan has become an unfashionable party and has ceased from "finding mischief still for idle hands to do." Would that all young men were like one who told me that if he were left alone with a girl during an evening call he never remained later than ten o'clock. M. E. Graham.

Just Retribution.

Mrs. Honk (in the midst of her perusal of the village newspaper)—Mercy sakes! Here is an item tellin' about a man, over beyond Allegha, who departed this life from the effects of bein' thrown from a horse, aged seventy-one years!

Farmer Honk—Served him right! A man that was mean enough to ride a horse as old as that ort to have been killed!

Hints by May Manton.

WOMAN'S FANCY WAIST, NO. 4095.

To be made with elbow or long Sleeves.

Fancy waists with deep yokes are in the height of style and will be found becoming to most figures. The smart model illustrated combines foulard in meteor blue and white, with Irish crochet lace over white and white chiffon, and makes part of a costume, but numberless materials are appropriate, and the design suits odd bodices as well as entire gowns. Veiling, satin sapho, peau de cygne, barege, challie and all the season's pliable materials might be suggested with lace of varying tints.

The lining is cut with under-arm gores, side-backs and double darts and is smoothly fitted. The back is faced to give the yoke effect then arranged over the lining and simply drawn down in gathers at the waist.

The front of the yoke is separate and with the full front is attached to the right side of the lining, hooked into the left, while the fronts proper are arranged over



4095 Fancy Waist. 32 to 40 Bust.

both. The upper sleeves are in one piece each and arrange over the lining to which the puffs are sewn. When full length is desired the linings are faced in place of being cut off below the elbows. The under-arm gores are smoothly covered with the material, a feature that renders the waist available for stout figures which require careful fitting.

To cut this waist in the medium size 2 3/4 yards of material 21 inches wide, 1 3/4 yards 27 inches wide, or 1 yard 44 inches wide will be required, with 3/8 yard of all-over lace for yoke and collar, 3/8 yard of chiffon for full front and under-sleeves, and 3 yards of applique to trim as illustrated, or 1 1/2 yards of all-over lace when long sleeves are desired.

The pattern 4095 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

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

A Little Prince of Walls.

BY EVA WILLIAMS MALONE.

He is his mother's only son,
And she a widow, too—
A most peculiar little prince,
I think, and so will you.
When he must go to bed at night,
His tears they fall by pails;
When he must rise they fall again,
Poor little Prince of Walls!

When he should stay at home he cries

To go, you may be sure;
When he should go to take the air,
The air he "can't endure!"
When he is called from play to dress,

To cry he never fails;
Ah! dire the bedlam he can make,
This little Prince of Walls.

Sometimes when he has wailed and wailed

Until our ears are sore,
We wish some ship would come along

From distant foreign shore—
Would carry him aboard, and then
Would swiftly hoist her sails,
And take him where we would not hear

This little Prince of Walls.

Kitchen Help.

Wash the inside of the tea-kettle frequently with hot suds. This dislodges a sediment which forms a coating over the inside of the kettle if allowed to remain.

If you have a greasy vessel to clean, warm it a little, and wipe it with a piece of old newspaper before washing. The paper can be burned, and the kettle will be very little trouble to wash. In fact, old newspapers are the house-keeper's friend. If you have a stove from which the ashes must be removed, take a small shovel, put a large paper down on the floor first, and any that are spilled can be taken up and emptied. Soft newspapers polish window glass better than anything else.

If you do not have plenty of good cistern water for washing, add enough borax to the well water to soften it, and it will make the washing easier, without injuring the clothes. Leave the silverware in a hot solution of borax and water a few minutes, then wipe dry, and you will not have to polish it so laboriously, or often. Water in

Two washings with Sunlight Soap wear the linen less than one wash with common soap.

SUNLIGHT
SOAP REDUCES
EXPENSE

Ask for the Octagon Bar 209

which borax has been dissolved is also good for cleaning table oil-cloth, removing finger marks and other soiled spots as if by magic.

The sink should be high enough to allow one to stand erect while washing dishes, and everything should be arranged conveniently and with a view to making the work as light as possible. Very much of the so-called drudgery of housework can be lightened, if not entirely avoided, by the application of common sense and good judgment to the performance of each task.

E. J. C.

Fortune-Telling With Dominoes.

For an evening's amusement fortune-telling has long been in favor. We have, however, grown tired of cards, tea leaves and palmistry, and with the approach of the social and "sociable" season, long for something along similar lines, yet possessing the charm of novelty. Dominoes will, this winter, supply the proper medium for fortune telling, but they must never be consulted on either Monday or Friday.

The room in which the future is to be tested should be of inky darkness, with a half-dozen or more white lights set in the form of double-three dominos; and gown of black and white "polka-dot" forms an appropriate costume for the "revealer of destinies."

The dominos should rest face down on a smooth table of white marble or oil-cloth. When the future is to be consulted, the inquirer seats himself at the table, shuffles the dominos, and from them draws five dominos. From these the seer must concoct a "revelation" of sufficient detail and length. As an aid the following rule is given:

Double-six denotes receipt of money, will be very rich.

Six-five denotes amusement and success.

Six-four denotes early marriage and much happiness.

Six-three denotes constancy and affection.

Six-two denotes orderly, economical and industrious.

Six-one denotes will marry twice rich in old age.

Six-blank denotes will learn of the death of a dear friend.

Double-five denotes will be very lucky in everything.

Five-four denotes will marry poor.

Five-three denotes ample means and eventual wealth.

Five-two denotes unfortunate love affair.

Five-one denotes an invitation to an enjoyable affair.

Five-blank denotes avoid gambling and games of chance.

Double-four denotes lucky to lovers, farmers and laborers.

Four-three denotes neither riches nor poverty.

Four-two denotes a change in your circumstances.

Four-one denotes you will be childless but rich.

Four-blank denotes quarrels and separations, never marry.

Double-three denotes immense riches.

Three-two denotes fortunate in love, marriage and business.

Three-one denotes not favorable.

Three-blank denotes your sweetheart is deceitful.

Double-two denotes thrifty and successful, moderately rich.

Two-one denotes a life of luxury, but never marry.

Two-blank denotes poverty and bad luck.

Double-ace denotes constancy in love and marriage.

Ace-blank denotes travel in great luxury.

Double-blank denotes selfish, miserly and heartless.—What To Eat.

How Some of Our Readers Can Make Money.

Having read of the success of some of your readers selling Dish-washers, I have tried the work with wonderful success. I have not made less than \$9.00 any day for the last six months. The Mould City Dish-washer gives good satisfaction and every family wants one. A lady can wash and dry the dishes without removing her gloves and can do the work in two minutes. I got my sample machine from the Mould City Dish-Washer Co., St. Louis, Mo. I used it to take orders and sold 12 Dish-washers the first day. The Mould City Dish-Washer Co. will start you. Write them for particulars. Ladies can do as well as men.

JOHN F. M.

We Can Cure any Case of Piles

either chronic or recent, external or internal, blind or bleeding. Our prescription is not new, nor is it untried. No-Chi-Mo-Win (Cree word, "the healing breath") Salve has been known to one family of Indian Medicine Men for probably hundreds of years, and like many of their herbal preparations, has wonderful curative properties. No-Chi-Mo-Win Salve gives instant relief to the worst case of piles. It will cure them more quickly than any other salve or exterior application. No mere external remedy, however, will ever effect a permanent cure. Piles are a disease of the blood, and it is necessary to root out the trouble, or it will occur again. No-Chi-Mo-Win Resolvent will do this. It is a tablet, and is taken internally in conjunction with the external treatment, and the combination is guaranteed to cure. No-Chi-Mo-Win Resolvent strengthens the stomach, stimulates the liver, purifies the blood, causes it to flow rich and strong through the veins, brings back health, dispels morbid

PILES CURED

affections. We positively guarantee that No-Chi-Mo-Win Salve and Resolvent, in conjunction, will cure you, and will refund your money if you are not satisfied with it.

No-Chi-Mo-Win is not sold by druggists; We offer it direct to the public. The Salve is 50c. per box; Resolvent, 50c. Complete No-Chi-Mo-Win treatment—Salve and Resolvent—sent postpaid by mail, securely sealed, on receipt of \$1.00.

Chimo Chemical Works, Wlarton, Ont.

The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

D. T. McAINSH, — — — — — PUBLISHER.
J. W. WHEATON, — — — — — EDITOR.

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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TORONTO.

QUESTIONS AND ANSWERS

Horses Stabled with Cows

W. A. W., Strathcona, Ont., writes: "I would like to know through your paper or some other way, whether it is injurious in any way to horses to have their stable in immediate connection with the cow stable. I have had two horses go completely blind during the past two years. The blindness always comes upon them at this time of the year."

The stabling of cows with horses need not necessarily have any injurious effect upon the latter other than might be caused by having too many animals in a small space. All stables should be well ventilated and sufficiently large to accommodate the animals of the farm, whether cows or horses, without injury to their health. A small, badly ventilated stable, where too many animals are kept quickly becomes filled with bad odors and ammonia from the manure that are bad for the health of the animal, though not likely to cause blindness. Ammonia gas in excess is very irritating but as far as this goes more ammonia is given off from horse manure than from cow manure. It would be better to stable each class of animals by themselves.

In regard to the blindness it is hard to say from the description given what is the cause. It is probably a case of ophthalmia, and if it be periodic or specific ophthalmia as would seem probable from the fact of its recurring, it will lead to permanent blindness. Periodic ophthalmia may be known by the swelling of the whole eye, including all the internal parts of the eye and the

cornea being inelastic, the pressure and pain are intense. The eye is closed or nearly so from the light, tears run down the cheek and the mucus membrane becomes red, and as a result of the inflammation pus is formed and may be seen as a whitish substance. After a few days, the inflammation subsides and leaves the eye nearly as bright as the natural eye and still the disease will be there to return again at some later period. This disease is hereditary and a horse having it should not be used for breeding purposes. There is no known treatment that will absolutely cure it, though with good attention the final termination may be warded off for a time.

Subscriber should send fuller description of the blindness. If any readers has had injurious effects from stabling horses and cows together we would be glad to hear from him.

Give Canada Her Due.

A few weeks ago we published an item from the Montreal Trade Bulletin, giving some figures taken from the English Board of Trade returns, which showed that the export bacon from Canada decreased almost one-half during the past year. As the English trade returns credit the port of shipment with the goods imported, Canada especially, during the winter, when our goods are shipped largely by American ports, does not get full credit for her exports. This should be remedied in some way. If shippers would designate plainly on the goods their source of origin, it would help matters. But this is frequently not done, and consequently Canada's export returns suffer. It would pay the Government, or some other responsible body to look into this question and devise a remedy.

To Prevent Potato Scab

The value of many potatoes grown in this country is frequently lessened by the growth of potato scab. To prevent the growth care should be taken, says the Agriculturalist, not to plant potatoes in soil where scab has been prevalent in previous years. Before potatoes are planted they should be treated by soaking them in a solution of corrosive sublimate made by dissolving 1 ounce of corrosive sublimate in 7 gallons of water in which the potatoes should be soaked about 1½ hours. The solution is poisonous and should be handled with care. Potatoes treated with it should not be eaten, but used only for planting. Put the potatoes in an old sack and hang in the solution. Take them out, drain and thoroughly dry them before they are cut and planted.

A New Cheese Box

W. A. Simister, Ingersoll, Canada, has invented an improved cheese-box which is constructed to

Poor Soils

are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of



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applied to pastures where the content of PHOSPHORIC ACID has been reduced by constant grazing causes a much finer growth of herbage, and enables TWICE AS MANY CATTLE to be FATTENED as when not so manured.

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We have many designs to select from, including Trimmings and Ornaments, and send free estimates and catalogue upon request. We can also supply Metal Roofing, Ceilings, etc.

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prevent ripping or splitting of the box. It is so arranged that both heads can be removed to allow of readily placing the cheese in the box. The heads are so locked in place that they can be conveniently removed, to allow inspection from either end, without destroying the box or injuring the cheese.

Farrowing Time

A great many young pigs are lost through carelessness and improper treatment at farrowing time. The sow as well as the young pigs should receive the greatest attention. We cannot do better in this connection than give the advice of the manager of one of the largest and most successful swine breeding establishments in the United States. He says:

The sow should have been placed by herself at least a week previous to farrowing time, and the ration changed to a slight increase of bran, and when the pigs are farrowed you should be present in person, or some one in whom you have implicit confidence, and the sow should be treated with the greatest kindness and consideration. While sows alone, have farrowed and taken care of large litters without the aid or intervention of man, yet there are frequently pigs born, which without some one being present, would be lost. The best general rule that I know of is to have a light bedding of timothy hay or soft oat straw, and when the sow begins to farrow, make up your mind to stay there. Sit right by her and as each pig is farrowed, take it gently and remove the membrane from around the nose, and sometimes you will find the tongue turned back; straighten this out, avoid breaking the navel cord for a few minutes, if possible, and with a coarse towel or preferably with a gunny sack which is clean, wipe the little fellows perfectly dry; and place them in a box which has good soft short bedding in it, and lined with sacks. After the sow becomes more quiet or after she has finished the pigs can be placed one by one on the teat, and each will select his own and will thereafter fight for his rights. In the case of heavy and large sows where there is danger of overlying or mashing the little fellows, a fender placed around the stall, six inches from the bottom and six inches wide, will furnish an excellent barrier underneath, which, when the sow lies down, will be found ample space for the pigs' protection. No one should be allowed to visit the sow at this time, unless it be one with whom she is personally acquainted. Keep her as quiet as possible, do not allow her to be disturbed under any circumstances, and if she wishes to lie still for a few hours, do not make her get up, but when she does, have a drink of water ready for her, from which the chill has been taken, and in which there has been sprinkled a little bran or shorts—say quarter pound to the gallon.

BUG DEATH



**Kills the Bugs.
Increases the Yield.
Improves the quality of the Crop.**

Send for free Booklet, telling how to use Bug Death. What the results are.

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Scales

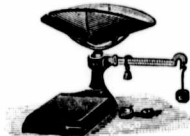
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The Live Stock Scales have a capacity of from one pound up to 4,000 pounds. When rack is off may be used for grain.

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Confederation Life Building, TORONTO.

Please send me particulars, price, terms, etc., for a Scale which will weigh about..... lbs., and suitable for weighing.....

NAME.....

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It is understood that this is not an order.

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and
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SALT**

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valley of the Lower Fraser River is the garden of the
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about it and containing a descriptive list of farms for
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always mention **THE FARM-
ING WORLD.**

Power on the Farm.

Mr. W. W. Stevens of Salem, In-
diana, writing to an American ex-
change in regard to power on the
farm, says:

In the discussion of this topic in
a recent number of your journal, we
notice that the writer gives the
steam engine preference. It might
be preferable in a dairy where both
power and hot water are needed,
but for general use on the farm, we
would place the gasoline engine
first. We have used on the farm
most all kinds of power, from the
sweep, tread, steam, to the gaso-
line engine. For running a small
straw cutter or corn sheller, the
old overhead sweep power is a good
one. A tread power is economical
also when the capacity of farm ma-
chinery does not require more than
two-horse power to operate them.

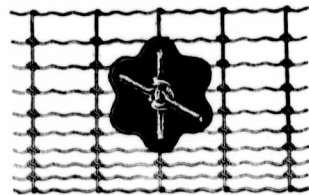
But all things considered the
gasoline engine is the cheapest and
most satisfactory power we have
ever had anything to do with. Six
years ago we purchased a six-horse
gasoline engine, to run our fodder
husker and shredder, a bone grinder,
feed mill and cutting box. It has
given perfect satisfaction in
every way. In the first place it
is not so dangerous as the steam
engine. There is no liability of ex-
plosion or fire. With the steam
engine it was always considerable
trouble to move it out of the barn,
and in place to be operated, and
then we were always in fear when
there was any wind that a spark
might set the barn on fire. Then
water had to be hauled and the
boiler filled, and in winter time it
all had to be emptied out to keep
boiler and pipes from bursting.
Wood had to be prepared or coal
bought, and while in operation it
required one man, and he some-
what of an expert, to operate the
same.

With the gasoline engine no ex-
pert, or even a hand, is required to
run it. It may and we do keep
ours in the barn all the while and
there is no danger whatever of fire.
The gasoline is cheaper fuel than
wood or coal necessary to operate
a steam engine. No preparations
are necessary to start up your ma-
chinery. At any time you can have
your engine running at full speed
two or three minutes after you en-
ter the barn. When you stop you
are at no trouble or expense.

The greatest advantage in having
a gasoline engine is that it enables
the farmer to do his husking and
grinding without having to hire any
other than the regular farm hands.
If we are husking and shredding
fodder we send two hands to the
field to load a couple of waggons,
these are brought to the barn, the
engine is started, and these loads
are run through. Then we shut
down while the waggons are being
loaded again, and all this stopping
and starting does not incur any ad-
ditional expense. The gasoline en-
gine is a serviceable machine as
well. In operating ours now for
six years, it has never cost us a
cent for repairs. The battery needs
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A heavy one-piece stay that will not buckle
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will last.

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Many Witnesses.



Thomas Graham,
Reese, of SCOTCH,
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Post-Hole Digger I
bought of you is the
best that I have seen.
I dug twenty post-
holes, three feet
deep, in less than one
hour. I would re-
commend it to any
person requiring
one."

Hon. John Dry-
den, Minister of
Agriculture of On-
tario, Canada, says:
"I never purchased
an implement which
gave such complete
satisfaction. A post-
hole may be dug
under the most ad-
verse circumstances
in about one-third
the time and with no
greater expenditure
of labor."

Milo H. Davis
Detroit, Mich., says:
"It is the best tool
of the kind I have ever
seen. I think would
work anywhere."

"This is to certify that we have used your Patent
Post-Hole Digger, and can safely say it is the king of
all post-hole diggers; and we firmly believe that one
man can dig as many holes in any kind of soil as any
three men can dig with any other kind of digger or
auger in the market. We heartily recommend it to
the public at large who have use for it. We would
not be without it for double the cost.

Signed, FRANCIS H. ELLIOTT,
TED ARMSTRONG,
DAVID DUNCAN."

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tones rival those of the finest ma-
gazines, and the letter-press of the
whole edition is as perfect as that
of any publication ever issued, pic-
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onto.

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 best suited to our advertising columns.

Horses

A correspondent at Wallaceburg, Ont., who recently visited the stables of Messrs. J. B. Hogate & Son, of Sarnia, Ont., sends us the following account of his trip which we gladly give space in this department:

Being in Sarnia the other day and being a lover of good horses I took a stroll over to the Messrs. Hogate & Son's stables to see their last importation of heavier horses and must say that they have the finest and evenest lot of horses I ever saw imported in one lot. They are all good colored horses and of the blocky type and of the right kind, good heavy looking horses and in looking over their pedigrees I see that they are of the very best breeding that can be got in Scotland. Most every horse has the blood of Prince of Wales on the one side and that of Darnley on the other, and as every good horseman knows that is the best blood in Scotland, and horses with this kind of breeding are sure to prove the best of stock horses and will improve the stock in this country wherever located. The Messrs. Hogate has one horse in their importation got by the renowned Sir Everard (5353). He is a very weighty thick blockey horse with the best of feet and legs and bred as he is from the best sire in Scotland to-day he is sure to be a great stock. In passing through a crowd like there is at Messrs. Hogate's when horses are on exhibition, one will hear different remarks. One will say, "Oh they are not the best horses in Scotland." Now I don't think that the Messrs. Hogate claim to have the best there is in Scotland. The man that made such a remark has not the faintest idea what one of those best horses cost. Why Sir, they sell from \$10,000, to \$15,000.

Now where is there an importer that can handle a horse at those figures in Canada, but when an importer does the next best thing, as the Messrs. Hogate have, that is, to buy stock got by these best horses and import them to this country they deserve credit.

"Now, Mr. Editor, if 10 or 12 of our best farmers would club together and buy one of those good heavy stallions, don't you think they would improve the farm horses of this section, for I don't know of any place in Canada where an imported draft stallion is wanted more than right around Wallaceburg. Every winter I notice that there are horse buyers in Dresden and Florence, but they never come to Wallaceburg. Surely farmers

must see that they have not got the right kind of horses or those buyers would visit Wallaceburg once in a while. Not being a Shire man I forgot that Messrs. Hogate have two Shire stallions and good ones. They are great big fine lookers and for style and action they are the best I ever saw, and are sure to make their mark wherever located. Now any one in dealing with Messrs. Hogate & Son will find them perfect gentlemen and straight in a business deal and perfectly reliable."

Cattle.

The Michigan Agricultural College Record referring to some purchases of Shorthorn recently made for the College herd from W. C. Edwards & Co., Rockland, Ont., says:

"We had recently landed at the College from the herd of W. C. Edwards of Rockland, Ont., a very fine mature Shorthorn bull, Gwentallen. This bull was bred by E. B. Mitchell & Son of Danvers, Ill., and purchased by Mr. Edwards at Chicago a year ago. He has in his pedigree such names as Imported Cup Bearer, Imp. Gwendoline, Pride of the Isles, and Fairfax Royal. His pedigree is a remarkably good one but better still is the superior individual quality. During our visit inspecting a number of the best herds in Canada, we saw only two or three bulls that were his equal. Mr. Edwards has the best herd of Shorthorns in America, among them Imp. Missie, 1531F, the six-thousand-dollar heifer sold at auction in Chicago last December, and Marquis of Zenda which Mr. W. S. Marr says is without doubt the best Shorthorn bull in the world."

Locomotion by Wind

The following story from a Kansas local paper seems worth repeating: "A Lindsborg man is figuring on a novel invention. He proposes to take an ordinary spring wagon and erect a wind mill on it to furnish propelling power. The wind mill is to be a twelve-foot wheel on a ten-foot tower, which will be firmly fastened to the wagon bed. The inventor claims for it a speed of forty miles an hour in the ordinary Kansas wind, when going with the wind, while going against the wind a much greater speed is attainable, as both the speed of the wagon and the velocity of the wind combine to furnish increased power, thereby making it possible to attain a speed of 113 miles per hour."

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Choice Young Bulls and Ram Lambs for sale. Write for prices.

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has a few choice young Holstein bulls for sale, also some Improved Yorkshire pigs at reasonable prices.

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Scotch and Scotch-topped choice young cows and heifers for sale at moderate prices.

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Queenston, Ont.

W. R. BOWMAN

Mt. Forest, Ontario

Is offering 2 sively-bred Shorthorn Bulls at \$80; one Polled Angus Bull \$85; Plymouth-Rock eggs 5 settings for \$2; Yorkshires always on hand.

Market Review and Forecast

Office of the Farming World, Confederation Life Building.

Toronto, April 28th, 1902.

Trade in wholesale lines has been fairly busy during the week with large shipments of goods to Manitoba and the Territories. The business outlook for the Dominion is favorable. Money is in good request and rates of interest and discounts are steady. Call loans remain at 5 per cent. and discounts at 6 to 7 per cent. as to name and nature of the account.

The wheat markets have been on the up grade the last week or two, due largely to the speculative element advancing prices because of unfavorable crop reports. Crop reports have varied considerably and reports of serious damage have changed later to fairly good condition. On the whole crop reports are favorable. A great deal will depend upon the weather for the next few weeks. If it is warm and conducive to grow the prices will ease off and if on the other hand unfavorable weather should result prices will start upward. In regard to the statistical position the world's supply of wheat in sight decreased 1,000,000 bushels during the week and is now 92,241,000 bushels against 94,340,000 bushels a year ago. The supply is therefore very little below that of last year and quite sufficient for the world's needs till the new crop arrives.

As to prices there is a firmer feeling all round. Cables are stronger with stocks light. There has been a marked advance in Manitoba wheat, No. 1 Northern was quoted at Fort William at 75c to 75½c, or an advance of nearly 6c per bushel during the past few weeks. Here prices have ruled steady, though at the end of the week there was an easier feeling in sympathy with prices in the West on report of rains in the wheat belt. Red and white are quoted here at 74c middle freights for home millers, goose at 66c and spring at 73c to 73½c east. On Toronto farmers' market, red and white bring 70c to 77½c, goose 67½c and spring five 67c per bushel.

Oats and Barley.

The oat market is firmer and higher at 41c to 42c at outside points. On the farmers' market oats bring 46c to 47c per bushel.

Barley is dull here and prices are nominal at 48c to 53c at outside points. On Toronto farmers' market malt barley brings 54c to 60½c and feed barley 53c to 54c per bushel.

Peas and Corn

There is little or no change in the pea market. On the farmers' market here peas bring 84c per bushel.

There has been considerable speculation in corn during the week at

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issued bearing interest at

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Payable half-yearly.

The Canada Permanent and Western Canada Mortgage Corporation, TORONTO ST., TORONTO

President George Gooderham
1st Vice-President and Managing Director . . . J. Herbert Mason
2nd Vice-President W. H. Beatty

Canada's Premier Company

Chicago and prices there have fluctuated. On the whole the market is firmer and higher than a week ago. Canadian is quoted at Montreal at 71c to 72c for car lots, and here at 57c to 58½c west.

Bran and Shorts

Ontario bran sells at Montreal at \$18.25 to \$18.50 and shorts at \$21.50 to \$22.00 per ton in car lots. City mills here sell bran at \$19.50 and shorts at \$21.00 in car lots l.o.b. Toronto.

Potatoes and Beans.

Potatoes sold at \$1.00 per bushel at Chicago last week. Prices on this side rule strong. Here the demand is good and car lots sell readily at 70c to 75c on track. On Toronto farmers' market potatoes bring 65c to 80c per bag.

The demand for beans is slow. At Montreal car lots of primes are quoted at \$1.10 to \$1.15 per bushel, and jobbing lots at \$1.20 to \$1.25.

Hay and Straw

Though orders of hay for South Africa have been discontinued for a time, the English market continues to take large quantities of Canadian hay. The American market is also taking some. So long as this demand continues the trade will not feel any bad effects from the loss of the South African trade. Otherwise prices will weaken as there is a large amount of hay east yet to be disposed off. An easier feeling is already reported at Montreal and considerable baled hay has been sold at country points east at \$7.00 per ton as compared with \$7.50 a week ago. The demand here is moderate and the market is

steady at about \$10.00 for car lots No. 1 timothy on track. On Toronto farmers' market timothy brings \$12.50 to \$13.00 and clover \$8.00 to \$9.00 and sheaf straw \$8.00 to \$9.00 per ton.

Eggs and Poultry

The egg situation rules strong with prospects of good prices being maintained. Meetings of egg shippers and dealers have been held during the week for the purpose of agreeing upon a definite line of action in order to do away with reckless competition. Should they decide to put down prices the entry of some independent concerns into the Canadian trade, will be acceptable to the producer. The market just now, however, is firm, case lots being quoted at Montreal at 12½c to 12¾c per dozen. Though offerings are large here there is a strong demand and case lots sell readily at 12¾c. On Toronto farmers' market new laid bring 11c to 13c per doz.

On Toronto farmers' market, chickens live and dressed bring 80c to \$1.10 and ducks \$1.00 to \$1.25 per pair and geese 8c to 9c and turkeys 14c to 16c per lb.

The Canadian Produce Co., Ltd., 36 and 38 Esplanade St. East, Toronto, will pay until further notice for live chickens, 8c, for ducks and turkeys 11c, for geese 6c per lb. All must be young birds. For hens 5c per lb. Dressed poultry, dry picked (except hens), ½c lb. higher. These prices are for weight on arrival. Crates for live poultry supplied free, and express paid up to 50c per 100 lbs. of chickens. No thin birds will be taken.



Trees! Trees!! Trees!!!

We have a full line of Fruit and Ornamental Trees for Spring, 1902, at lowest possible prices. Headquarters for packing dealers' orders.

Farmers wishing to buy first-class stock absolutely first hand and without paying commission to agents, should write to us at once for a Catalogue and Price list.

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Head Office—Retail Dept.

Correspondence invited. 24 Queen St. West
TORONTO

Seeds.

The demand for seeds has slackened off though there is still a big demand for Canadian red clover in England. At Montreal alsike sells at \$14.00 to \$17.00, red clover \$9 to \$10.50, and timothy \$8.00 to \$9.00 per cwt. On the farmers' market here alsike brings \$12.50 to \$16.50, red clover \$6.50 to \$9.25 and timothy \$7.80 to \$8.25 per 100 lbs.

Cheese

The cheese market rules strong especially for old goods which are getting very scarce. These are quoted at Montreal at from 11c to 11½c with some holders asking more money. A year ago at this time old cheese sold at 8½c to 9½c per lb. or about 2c per lb. less. This increase will be worth \$1.50 to \$1.60 per box more to the farmer than a year ago and will tend to largely increase the supply of milk at the factories. The supply of new goods is increasing. These are quoted at Montreal at from 10½c to 10¾c. A year ago new cheese sold at 8½c to 8¾c per lb. Cable advices are firm and the outlook for high prices is good.

Butter

The butter market shows a decline with receipts increasing. The demand for the United States is off. The Trade Bulletin has this to say of last week's trade:

"The receipts of creamery butter during the past week have shown an increase of nearly 100 per cent. and prices have declined fully 1c per lb. since our last report, and 2c from the highest point reached a few weeks ago. Factorymen are evidently getting a little anxious, as the proprietor of several Western creameries offered to contract the balance of his April make and first half of May at 2c delivered here. Probably he had been looking up old records and found that at this time last year factorymen were offering choice, fresh made creamery at 17c l.o.b. at country points. In this market sales were reported to us to-day of between 300 and 400 pkgs of choice Eastern Townships creamery at 21c, one lot of fancy mild bringing 21½c, but 21c is a top

This will remind you that the pain of strains, bruises and sprains, common incidents of active outdoor life is drawn from itching bodies by Perry Davis' Painkiller, as a magnet draws bits of iron from sand.

Caustic Balm Cure: Sweeney

Newark, Cal., Sept. 20, 1901.
The Lawrence-Williams Co., Cleveland, O.:
Please send me descriptive circular. Used GOMBAULT'S CAUSTIC BALSAM on a sweeney on fore shoulder of horse, that was so bad that a man's hand laid on it did not near fill it up even, and can't tell the horse ever had a sweeney now. Will the eminent cure a sweeney of several years' standing in old horse? (Yes. L. W. Co.)
FRANK M. WARNER.

quotation, with still lower prices looked for. A lot of choice Western dairy sold yesterday at 18c. A few English orders have been received for choice creamery, but they are very chary on the other side about buying fodder goods; but as soon as grass butter comes along it is thought that buyers on the other side will patronize it pretty freely provided prices are not too high."

The market here has seemingly not felt the full effects of the decline elsewhere as prices still maintain their high level. Choice dairy and creamery is becoming more plentiful and lower values may be expected. Creamery is quoted at 22c to 23c for points and 21c to 22c for tubs and dairy at 17c to 18c for large and small rolls and 10c to 12½c for medium and low grades. On Toronto farmers' market lb. rolls bring 18c to 22c and crocks 15c to 17c per lb.

Cattle.

The cattle trade continues to maintain its firm position especially so for all well finished cattle. Cables rule steady and the outlook for these firm values being maintained is good. On Toronto cattle market on Friday, the run of stock was not large comprising 884 cattle, 1,400 hogs, 261 sheep and lambs, and 87 calves. The quality with the exception of a few lots was not as good as earlier in the week. Too many half finished rough cattle are being offered for which drovers are asking too high prices. Dealers will not pay extra high prices for unfinished cattle and consequently Friday's market was somewhat drabby. All well-finished exporters and butchers' cattle, however, sold at as high prices as have been paid this season. The best load of shippers sold at \$6.50 and one lot of fine choice exporters brought \$6.60 per cwt. Butchers' cattle of choice quality sold at high prices, 5 loads weighing 735 to 1,100 lbs. each sold at \$5.65 to \$5.75 per cwt. Feeders and stockers of good quality are in keen demand but off colors and ill-bred stuff sold at lower figures. A few good milch cows were offered with prices about the same.

Export Cattle.—Choice loads of heavy shippers are worth from \$6.00 to \$6.50 per cwt., medium exporters \$5.40 to \$5.75. Heavy export bulls sold at \$4.50 to \$5.00 and light ones at \$4.25 to \$4.35 per cwt., choice export cows sold at \$4.40 to \$4.85 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1,100 to 1,150 lbs. each, sold at \$5.10 to \$5.75 per cwt. Choice picked lots of butchers' heifers and steers, 925 to 1,025 lbs. each sold at \$5.15 to \$5.40, good cattle at \$4.85 to \$5.35, medium at \$4.75 to \$5.00 and inferior to common at \$4.25 to \$4.75 per cwt.

Feeders.—Light steers, 900 to 1,000 lbs. each sold at \$4.25 to \$5.00 per cwt.

Stockers.—Well bred young steers weighing 400 to 800 lbs. each sold at \$3.30 to \$4.00, and off colors

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Dick's Blood Purifier

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11 to 14 months, well-bred growthy fellows. Prices Right.

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Yearling rams and lambs. Ewes all ages. First class stock. All registered. Extra type and style. Prices to suit the times. Burford Station
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and those of inferior quality at \$2.75 to \$3.00 per cwt.

Calves.—These are lower at Buffalo. Good to choice veals bring \$6.00 to \$6.50 per cwt. At Toronto market good to choice calves bring \$4.00 to \$6.00 per cwt. and \$2.00 to \$10.00 each.

Milch Cows.—These sold at from \$30 to \$50 each.

Sheep and Lambs.

Good sheep are wanted and prices are firm at quotations. Few grain fed lambs are being offered and prices are firm at \$6.50 per cwt. and something very choice would be worth a little more. Yearling lambs sold at \$5.50 to \$6.50 per cwt. sheep at \$3.75 to \$4.50 for ewes and \$3.50 to \$4.00 per cwt. for bucks. Spring lambs are worth from \$2.50 to \$5.00 each.

Hogs

Hogs continue firm at the advance reported last week with a prospect of still further advances this week. The supply keeps up. Choice select bacon hogs 160 to 200 lbs. each sold at \$6.50 and lights and fats at \$6.25 per cwt.

For the week ending May 3rd, the Wm. Davies Co., Toronto, will pay \$6.75 per cwt. for select bacon hogs, \$6.50 for lights, and \$6.50 for fats.

The Trade Bulletin's London cable of April 24th, re Canadian bacon reads thus:

"The market is quieter for Canadian bacon, due to more liberal supplies of Danish."

Horses

A fair amount of trading is reported at Montreal the chief demand being for heavy draft horses. Carriage horses are quoted at \$175 to \$350, heavy drafts \$140 to \$250, roadsters, drivers and saddles at \$100 to \$250 and common \$50 to \$80 each. The two thoroughbred stallions "Dracula" and "Rothervale" were sold by Teller & Clinie. "Dracula" was bought by the New Brunswick Government for, it is said about \$2,000 and "Rothervale" by Kidd Bros., of Listowel, at a value ranging from \$1,000 to \$1,500. The sales were private.

Nearly 100 horses were sold at Grand's last week, mostly drivers and general purpose horses. Prices were firm but no higher than for the week previous. A few special sales of extra good and well trained carriage horses at from \$400 to \$550 per pair. Dealers complain that prices are higher in the country than they can profitably do business at. Really first-class horses are hard to get.

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5. Wire Pliers
6. Alligator Wrench
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SPECIAL care is taken to make the knife sufficiently strong for use for Mechanics, Machinists, Farmers, Teamsters, Electricians, Sportsmen, etc. all rivets being countersunk. The temper is drawn in Screw Driver, and Point of Awl to prevent either from breaking. It is no more clumsy or awkward to carry in the pocket than an ordinary three-blade knife. The blades are made of the best 85 carbon cutlers' steel, and tempered to withstand hard usage.

The Pliers and Wire Cutters are Drop-Forged TOOL STEEL (not steel castings), and tempered especially to do the work required of them, and give entire satisfaction in handling and cutting fence wire, baling and binding wire, harness rivets, etc.

The Leather Punch will be found indispensable for making various sized holes in leather for buckles, rivets, belt lacing, etc.

The Leather Punch acts as a wedging awl or marlin spike WHEN TURNED TO THE LEFT, especially adapted for use in LACING BELTS, untying knots, etc. Besides being a perfect leather punch and swedging awl, this tool is a perfect screw bit, making a tapering hole in wood for various sized screws WHEN TURNED TO THE RIGHT.

The Screw Bit and Screw Driver features of the knife are perfect in their operation.

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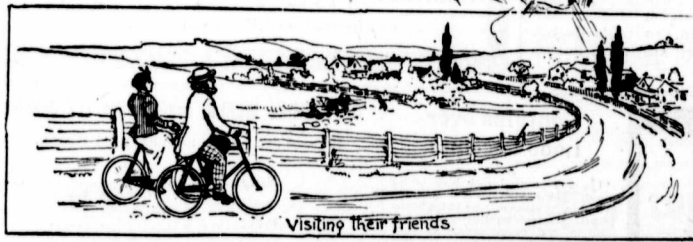
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