

THE FARMING WORLD

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"THE FARMING WORLD"

FOR FARMERS and STOCKMEN

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TORONTO

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| (2) Bell Organ, high back, 5 octaves, 11 stops, 4 sets of reeds, treble and bass couplers, two knee swells. Regular price \$125, our price \$47. Terms, \$5 cash and \$4 a month. | (7) Berlin Organ, walnut piano case, 6 octaves, 11 stops, 4 sets of reeds, Grand Organ knee swell, bass and treble couplers. Regular price \$125, our price \$62.50. Terms, \$5 cash and \$4 a month. |
| (3) Bell Organ, beautiful walnut case, large high top, 12 stops, 5 sets of reeds and sub-bass octave coupler, Grand organ and knee swell, exceptionally fine organ. Regular price \$150, our price \$57. Terms, \$5 cash and \$4 a month. | (8) Dominion Organ, medium high back, French burl panels, 5 octaves, 8 stops, 4 sets of reeds, octave coupler, two knee swells, cylinder fall. Regular price \$125, our price \$45. Terms, \$5 cash and \$4 a month. |
| (4) Bell Organ, piano case, rail top, 6 octaves, 4 sets of reeds, Grand organ and knee swell, bass and treble coupler. Regular price \$125, our price \$65. Terms \$5 cash and \$4 a month. | (9) Karn Organ, high back, 11 stops, 4 sets of reeds, treble and bass couplers, Grand organ and knee swell. Regular price \$115, our price \$42.50. Terms, \$5 cash and \$3 a month. |
| (5) Uxbridge Organ, medium high back, 5 octaves, 3 sets of reeds, Grand organ and knee swell. Regular price \$90, our price \$29. Terms, \$4 cash and \$3 a month. | (10) Bell Organ, high back, 5 octaves, 11 stops, 4 sets of reeds, two knee swells. Regular price \$115, our price \$45. Terms, \$5 cash and \$3 a month. |
| (6) Bell Organ, high back, marquetry transfer panels, 11 stops, 5 octaves, 4 sets of reeds, bass and treble octave couplers, | (11) Dominion Organ, high back, burl panels, 10 stops, 4 sets of reeds, treble and bass coupler, Grand organ and knee swell. Regular price \$125, our price \$51. Terms, \$5 cash and \$5 a month. |

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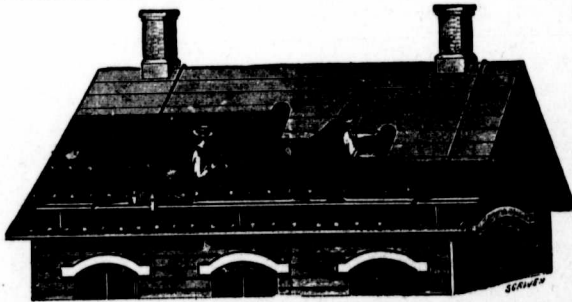


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The Farming World

For Farmers and Stockmen

Vol. XX.

MAY 20th, 1902

No. 19

The Farmer's Opportunities

THE average farmer, who plods along steadily, day after day, performing the duties that come to hand as the work of the farm progresses, is inclined to the view that opportunities for money making and advancement come only to the people of the city. From his somewhat isolated position he sees or hears of a few individuals becoming wealthy in speculation or in some line of business and manufacture and concludes that it is in the city where all the opportunities are. But if he will consider for a moment he will find that these eminently successful ones form only a very small proportion of those who live in cities, the majority of whom no more than make a living. Generally speaking the average farmer has more opportunities for money-making or advancement than the average citizen of any of our larger cities. While there are no doubt, especially when business is brisk, good opportunities for making money in the city, there are as many if not more opportunities for losing it. We only hear of the successful ones in any speculative venture, while there may be hundreds who have lost heavily of whom we never hear.

The first question that will naturally be asked in this connection is what the farmer's opportunities are? We don't propose to enumerate them other than to say that they are mostly grouped in and about the farm and are of such a character as to be under the farmer's direct control. Look for a moment at the opportunities of the soil. Are these being taken advantage of by the Canadian farmer as they should be? Are the cultivated lands of the Dominion as productive as they might be made to be if every advantage in the way of better tillage and better cultivation were made use of? Are the average yields of grains on our farms as large as they might be if the advantages of seed selection and a thorough knowledge of plant growth were made use of?

Then live stock offers a large number of opportunities for money making which have not been taken advantage of by the average farmer. In producing the highest types of horses, cattle, sheep and swine, there are opportunities which comparatively few of our farmers have taken advantage of to the fullest extent. Then follow the dairy and poultry, not to speak of fruit culture and other lines of agriculture offering excellent opportunities for advancement to the

farmer who will put intelligence and skill into the business. On all sides it would seem that the farmer is surrounded by opportunities for exercising his best skill and judgment to his own advantage that the average citizen of any of our large centres would not have in one hundred years. Surely at the present time, the farmer's position is an enviable one and if he will only take the trouble to do a little thinking over the matter he will find that he is surrounded by opportunities for advancement both materially and in other ways that come to but few of the people of this country—opportunities for profit, opportunities for pleasure, opportunities for self culture and mental training.

The Battle With Weeds

Like the poor, weeds are always with us. If the farmer has not thoroughly cultivated his land before seeding and made every effort, by surface cultivation, etc., to keep them in check, he will find weeds more or less plentiful in the growing crops. Wherever weeds appear in the growing crop they take nourishment that should go to the useful plant. No soil in this country is so rich in plant food that it can afford to give up any portion of it for the propagation of weeds. Every bit of nourishment in the soil is needed for the growth and ripening of the crop. To allow it to be diverted to any other purpose is only to lessen the final yield of grain and bring the profit on the investment down to a pretty low level. It is perhaps no exaggeration to say that the weeds grown in this country are produced at a loss of hundreds of thousands of dollars annually. But why dwell on this phase. Every farmer is familiar with the ravages of weed pests, and what concerns him most is how to get rid of these enemies of all big crops. There are, speaking generally, two classes of weeds, annuals and perennials. While to a large extent the same treatment, such as thorough cultivation and careful preparation of the land before seeding, will apply to both, yet in some respects they require different treatment. The annuals only reproduce themselves from seed and if by cultivation and other means the annual can be prevented from seeding it is killed outright. Crops such as corn, roots, etc., that can be cultivated during the growing season, furnish an excellent opportunity for killing out annuals. Pastures are often the fruitful source for the seeding

of annuals if not properly looked after. It is a mistake to put too much stock on a pasture so that the grass is eaten down very close while weeds are given every opportunity to grow. If fewer animals were turned on the pasture the natural growth of the grass would tend to keep the weeds in check. The mower should be used frequently before the weeds form seed. A carefully planned campaign against annuals if successfully carried on for one season will rid a farm almost completely from this class of weeds.

In some respects perennials are more obnoxious than annuals, as they are capable of reproducing themselves from roots and are in no wise dependent upon their seed. They have one weak point, however, which should be taken advantage of in their destruction. They cannot under any circumstances live unless their leaves reach the atmosphere. Therefore the natural treatment would be to cut frequently below the surface. Some form of surface cultivator will, of course do the work well before the grain is sown, after which it might be necessary to use some hand instrument to cut straggling plants. A field badly overrun with weeds can most profitably be treated under a root or corn crop, by a thorough cultivation of the land during the growing season. The summer fallow is good for this purpose but is somewhat costly as the land is idle for a year. But whatever method is adopted some attention must be given to the destruction of weeds if the farmer desires to reap the greatest profit from his land.

Information About Canada Appreciated

Our Scottish correspondent, whose letter appeared in *The Farming World* some weeks ago asking for information in regard to the cost, etc., of operating a Canadian farm, writes us of date May 3rd, as follows: "This is to thank you for inserting my letter in *The Farming World*, I would also like to thank those who have so kindly replied to it although the replies given did not contain all the information I desired, such as cost of farm machinery, etc., etc. But they have shown me what to expect and what not to expect. I will be glad to communicate with one or more of the correspondents whose addresses you have furnished, but later on, as it will be next spring before I get to Canada."

Crops and Live Stock in Ontario

The first report on crops and live stock, under date of May 1st, was issued last week by the Ontario Bureau of Industries. In regard to fall wheat the report says: "The November bulletin stated that there was a considerable decrease in the area sown to fall wheat, owing to the ravages of the Hessian fly. It is satisfactory, however, to note that the injury to the crop by the fly, so far, has been much less than was feared. While a year ago complaints of losses by Hessian fly were common in nearly all the counties south of a line drawn from Huron to Wentworth—very extensive damage having been done to the growing fall wheat in the counties bordering upon Lake Erie—only a few of the correspondents now reporting speak in a positive manner of actual injury traceable to the fly, and these reports are confined to odd sections of Lambton and the Lake Erie counties. A considerable amount of fall wheat was sown late to avoid the fly, and this has not done as well as that got in earlier. Several correspondents remark that having sown fall wheat on oat stubble it has done poorly. The greatest injury to the crop so far appears to have been sustained from severe frosts and cold winds just after the snow left the ground, the exposed fields suffering considerably in some quarters. Taking the crop as a whole, however, the prospect is better than was hoped for six months ago. The loss from Hessian fly, wire-worm and other insect pests has so far been comparatively small. There are some patchy places owing to trying spring weather and to local causes, and here and there portions of the crop have been plowed up, or resown to barley; but, notwithstanding these drawbacks, there are many fields reported in excellent condition, and in a number of sections a large yield per acre is looked for."

Reports concerning clover are generally favorable. On May 1st, the prospects for hay were never better, both old and new meadows promising well. The spring crops were got in earlier than usual. In most cases the seed-bed was in excellent condition and the "catch" the best in years. In regard to vegetation the majority of correspondents reported the season as a very backward one.

In regard to live stock, the report says:

"All classes of live stock have come through the winter in good condition. A few comparatively light forms of distemper among horses are reported in several localities, and in the county of Lanark some cases of strangles occurred, but the majority of correspondents speak of horses as being in an unusual good condition for the time of the year, and spring work has had only a good effect

upon them. Their chief drawback appears to have been a rather lighter ration of oats than ordinarily, owing to the scarcity of that grain. Cattle, as a rule, are also in excellent form. Some report them as being rather thin, but none dispute their general good health. Ring-worm appeared among several herds in some of the Parry Sound townships, and odd cases of lumpy jaw occurred elsewhere, but with these exceptions there is a remarkably clean bill of health to be shown for cattle. Sheep have done exceedingly well, a large number of lambs having been dropped, which have turned out healthy and vigorous. The dog is inveighed against by several correspondents as being a nuisance. Swine have also done well as a class. Cases of disease and death among young litters have been reported in several parts of the Province, but these appear to have resulted from purely local conditions, and in no section have losses been general. In fact, references to the steady way in which bacon hogs have been fitted for the market is a feature of the reports. Fodder generally has been sufficient, although straw has been rather scarce, and the high prices prevailing for coarse grains and mill feed tempted many raisers of live stock to feed closer than usual. Several correspondents refer to the silo as having been an excellent aid in carrying cattle and other animals through the winter."

In regard to the farm supplies, while there is not as much hay or grain in farmers' hands as usual at this time of the year, other feeding stuffs, such as ensilage, stover, etc., would enable them to put a fair amount of wheat on the market, should high prices ensue. Fat cattle are scarce in nearly every section and while there is a scarcity of store cattle in many places, some claim a number on hand especially in the East Midland and Northern districts.

Reports from the leading fruit districts are very optimistic in tone. There is promise of abundant blossom for nearly every variety of fruit and a record year for fruit generally looked for. While attention is directed to probable injury from the tent caterpillar and the borer, little, if any, reference is made to the San Jose scale. Small fruits came through the winter in good condition. These reports, of course, were written before the heavy frost of May 10th.

United States Crops

The 1st of May crop report of the Department of Agriculture at Washington, shows the area under winter wheat in cultivation on that date to have been about 27,103,000 acres. This is 4,868,000 acres, or 15.2 per cent. less than the area sown last fall of the Department's estimate of which no modification,

except for acreage abandoned, is considered necessary.

For the area of winter wheat remaining under cultivation the average condition on May 1 was 76.4, against 94.1 on May 1, 1901, 88.9 at the corresponding date in 1900, and 83.2, the mean of the May averages of the last ten years. The present condition is the lowest May condition, with the exception of the years 1899, 1893, and 1888, since 1885.

The average condition of meadow-mowing lands on May 1, was 86.6, against 92.8 on May 1, 1901, 90.8 at the corresponding date in 1900, and 90.6, the mean of the May averages of the last ten years. The present condition of mowing lands is the lowest May condition since 1888, with the exception of 1899, when it was 84.9.

The average condition of spring pastures on May 1 was 84.9, against 91.5 on May 1, 1900, 91.3 at the corresponding date in 1900, and 90.1, the mean of the May averages of the last ten years. The present condition is, with the exception of that reported on May 1, 1899, the lowest May condition since 1888.

In the spring wheat States, the preparation of the ground for seeding has been seriously delayed by unfavorable weather, North Dakota, in particular, reporting so late a season as to make a reduction in its spring wheat acreage highly probable.

The report also gives extracts from European crop reports. These including Prussia, Belgium, Russia and France, show crops to be in good acreage condition at this season.

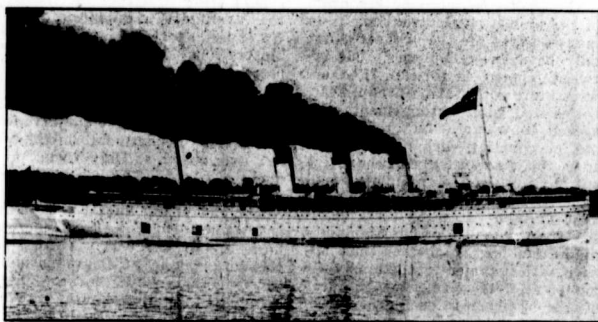
The Farmer's National Congress

The annual gathering of the Farmers' National Congress, of the United States will be held at Macon, Georgia, on October 7th to 10th, next. An elaborate program is being prepared and a most profitable gathering is expected. The officers of the Congress are: Hon. Geo. L. Flanders, Albany, N. Y., president and John M. Stahl, 4328 Langley Ave., Chicago, secretary.

Mr. W. B. Scarth Dead.

Mr. W. B. Scarth, Deputy Minister of Agriculture, died at Ottawa last week. He had been ill for a couple of years but held his position until his death. Mr. Scarth was appointed Deputy Minister in 1895 and came from Winnipeg to take the position. Previous to that date he had been prominent in Western development and progress.

Husband—For whom are you knitting those stockings? Wife—For a benevolent society. Husband—Do you know you might send them my address. Perhaps they would send me a pair.



S. S. Northwest going into Lake Huron from the St. Clair River.

Our Western Letter

Binder Twine Competition.—Manitoba Live Stock Notes.—
Dairy Outlook.—Seeding Operations.

Winnipeg, May 12, 1902.

The golden rule is now recognized as being inapplicable to business, politics or any public matter; it is restricted in its application to private, personal, and moral affairs. Between nations the rule is to do your worst, before the other fellow has a chance, and in business the same policy now largely obtains. Even the farmer, a stickler for fair treatment by others, sometimes so far forgets himself as to be willing to take a commercial cinch on his fellow agriculturists. "The Brandon Farmers' Binder Twine Company" fairly illustrates this fact. This company was organized for the purpose of securing cheaper twine for Western farmers, and the farmers who largely compose the company have of course the expectation of profits on their investment. This is only fair and just. We have heard recently a very great deal of noise about a certain advantage of $\frac{1}{2}$ cent per pound that the U. S. manufacturer of twine will enjoy through the fact that the Philippines are part of his country and hemp now a home product. We have heard also that eastern Canadian manufacturers are agitating for a duty on binder twine to offset this bounty of $\frac{1}{2}$ of a cent. But the latest and most curious thing we have heard is the following from the manager of the Brandon Farmers' Binder Twine Co.: "Failing to have the discrimination of the U. S. Government removed by the Imperial authorities, "then," he says, "it should be, in my judgment, the duty of the Canadian Government to place a bounty of $\frac{1}{2}$ of a cent per pound on all manilla hemp used in Canada or a tariff of $\frac{1}{2}$ cent per pound on all the twine which comes from the United States." One can imagine a pure bred manufacturer asking for bounties and protection, but when farmers endeavor to levy tribute from farmers on binder twine, they so completely stultify themselves that words fail to express our surprise.

In some points Manitoba must

plead guilty to being behind the times. We should like to think that we lead the procession, but sometimes we have to admit that we are getting other people's dust. The programme of the Territorial Breeder's Convention, Auction and Exhibition of the 14th, 15th, 16th and 17th is an excellent illustration of the way Manitoba is being distanced in some matters. The Territorial stockmen are showing Manitobans a clean pair of heels, and the sooner we realize this the better. The Manitoba breeders need a closer organization and to secure this they need a leader. Their forces are scattered, their efforts spasmodic. They require an executive official to focus these scattered energies and give continuity to their organization. This need they recognize, and perhaps it is not entirely their fault that it has not been met. The present organizations have done good work. Indeed the members have reason to congratulate themselves on the results obtained for \$1.00 each per year, which is the present annual subscription. Everyone has read the tramp's catalogue of what can be got for a nickel, which ends with the remark, "If all this goes at a nickel, what couldn't you get for a dime." Let the Manitoba breeders meditate on the saying. Their dollar has brought them reduced railway rates on live stock, improved shipping regulations, etc. If they were to go a little deeper into their pockets what might they not get for their expenditure. In this way also they might indicate the sincerity of their belief in their demands on the government. At the same time we must express the hope that in the near future there will be more active co-operation between the government and the breeders of Manitoba. This branch of agriculture has always been recognized as particularly worthy of government aid and encouragement.

Dairy Superintendent, C. A. Murray, reports things looking well in

the cheese and butter business. Cheese factories have been working since the beginning of the present month and the end of this week will see most of the creameries in operation. There will be five new factories in operation this year, which, though apparently a trivial increase, means an addition of about 12½ per cent. There will be two new creameries, but as four old ones have closed, (two having been burned down during the winter) the number will be less than last year. This does not by any means represent or presage a decreased output, as one of the new creameries will manufacture more than all the four defunct ones. The dairy business in Manitoba is now on a more satisfactory footing than ever before. The manufacturers know the markets, know their products, and know the trade. They have been gaining experience during the past few years, and this experience is shown in the greater confidence expressed by everyone, patrons, makers, owners and dealers, in the future of dairying in Manitoba.

Seeding operations progress slowly owing to the unsettled state of the weather. Probably three-fourths of the wheat has been sown, and the end of the present week (May 17) should see that crop finished. Oats and barley will be sown up to the 1st June. A great deal is being written about flax just now. Eastern Canadian papers are advising western Canadian farmers to grow more flax. Some of the arguments used are amusing, such for instance as the statement that the straw makes excellent fodder!

Britain's Butter Imports.

Of all the articles of food imported by Great Britain, none show such a steady increase as butter. During the past decade the annual imports have risen from 108,119 tons to 185,140 tons, showing an average increase of about 7,300 tons every year over the preceding one. This article therefore has kept pace with Britain's growing population. From statistics compiled by Dowall Brothers, Manchester, in their annual butter review, we find that the butter imported into the United Kingdom in 1901 showed the extraordinary increase of 16,314 tons of which Russia claims half. The total value of the butter imported in 1901 was £19,297,005, making it fourth on the list of imports. Of this large import foreign countries send 84 per cent. and the colonies but 16 per cent.. Australasia sends to the value of about two millions sterling and Canada about one million sterling. Besides, these total figures do not include the eight millions sterling which Ireland sends to England every year. There is therefore a big field in which the colonies may compete. But it would seem as if they were not making any extra effort to occupy the field as we find that during the past three years the countries that

have increased their exports are Russia, Denmark, Holland and New Zealand.

While the population of Great Britain has been increasing its supply of home butter has been practically at a stand still. The extra consumption must therefore be supplied from outside sources. It is estimated that the consumption of imported butter and home supplies amounts to 5,000 tons weekly with margarine added. Great Britain will soon require 1,000 tons daily of edible fat for consumption. The country making the biggest effort at the present time to get a big share of the British market is Russia. The Russian government is encouraging the production and export of butter in every possible way. Steamers sail from Riga every week to London and Hull, and special butter trains will be run in connection with them in order to facilitate transit and develop direct trade with England. In 1892 Russia sent to England only 1,000 tons of butter. In 1901 it had increased to 18,922 tons, or nineteen fold more.

Prices during 1901 have ruled high and especially during the past winter. The average price of Danish has ruled one krone higher than in 1900. While a large amount of Canadian butter sent forward received a price well up in the lists, the average price, for Canadian during 1901 which was 93s 6d made it third from the foot of the list, the United States being 91s. 9d. and Russia last at 87s. 8d. Denmark leads at 112s. 9d. In so far therefore, as average prices are concerned, Canadian butter is a long way behind Danish in point of quality. There is lots of room evidently for advancement, both in the quality and quantity of Canadian butter sent forward on the part of our dairymen.

The Farm Separator.

Another phase of the farm separator system was brought to our notice last week by Mr. Angus Rose, of Woodstock, Ont. Mr. Rose is a large dealer in eggs and frequently visits village and "corner" stores, in the interest of his business. In doing so he is frequently and persistently asked if he cannot handle butter as well as eggs. That this question should be asked in a country where creameries and cheese factories are often too close together is rather surprising. When Mr. Rose asked why the farmers do not send their milk to the creameries he was met with the reply: "They never knew when they were going to be waited upon; there were too many teams; a good deal of friction as to who would get in first and often a three to three and a half hours wait for the milk hauler." As one farmer put it: "The thing is unbearable and we just make our own butter and do the best we can with it." Mr. Rose thinks the farm separator would be a good remedy for this kind of thing.

The above is only another proof of the foolish rivalry that exists in many parts of the country, not only between creameries, but between cheese factories. If there were more cooperation between factories and some arrangement were agreed to whereby factories would not be covering each other's territory the reasons given above for not patronizing the creamery would have no force. We know, however, that in many sections there is often good reason for the complaints made and farmers rather than bother with it prefer to make up their butter at home. One baneful effect of this cutting into each other's territory on the part of factories is that the quality of the milk cannot be controlled. If a patron's milk is rejected at one factory he can get it taken in elsewhere without any difficulty and therefore there is no incentive to him to improve the quality of his product. No better work could be done for the dairy industry of this country than by extending the cooperative spirit beyond the individual factory to a number of factories.

At Dentonia Park Farm.

A brief visit to Dentonia Park last week brought us again in direct touch with the progress and advancement that is being made on this up-to-date and well managed dairy farm. After several years of hard work and the expenditure of a large amount of time and money, the buildings and equipment and the farm itself have reached a stage of perfection excelled by very few similar establishments on this continent. And still more building is going on and more work is being done in order if possible to make every department of the farm as perfect in its equipment as it can be made.

The chief interest in Dentonia Park Farm lies in the dairy and the magnificent herd of dairy cattle to be seen there. If everyone who keeps cows in Canada could spend a day at Dentonia inspecting its clean and well ventilated stables and its isolated dairy, where that enemy of good milk, the bad flavored germ, is not allowed to enter, or if it should by chance gain entrance, is given no opportunity to propagate its evil tendencies on the milk product, we should soon see an improvement in the milk supply of the whole country. Not that the average farmer or dairyman would for a moment be expected to go to the expense incurred at Dentonia in erecting and equipping buildings, but that he would learn a lesson of cleanliness and attention to details in the management of a dairy herd that could not but have a wholesome effect in inducing better methods in the management of his own dairy.

What seems to us to be a model cow barn on the most up-to-date plan has recently been erected at Dentonia. Besides these advantages it has the advantage of such simplicity of construction that

should bring it within the reach of the average Canadian dairyman. We expect shortly to publish some illustrations of this stable when more details regarding its construction will be given.

While the dairy at Dentonia is, perhaps, of the first importance, the poultry department should not be overlooked. Only hens and ducks are kept. The brooder house just now is fairly alive with young chicks and young ducks, and in the incubator department hundreds more are on the way. At present the ducks alone at Dentonia number over 900, while chickens may be counted by the thousand. Add to these the fishery with its millions of fish at different stages of development, and we have in these three alone enough features of interest to more than repay a visit.

Feeding Steers Loose or Tied.

The experiments in feeding steers loose as contrasted with those fed tied at the Experimental Farm, Ottawa, may be summarized as follows, it being understood that the number of steers in the different lots were equal, viz., 9 in each:

| Results, 1900. | | |
|------------------|-------------|---------------------|
| | Daily Gain. | Cost 100 lbs. gain. |
| Steers fed loose | 1.30 lbs. | \$6.50 |
| Steers fed tied | 1.49 lbs. | 6.20 |

| Results 1901. | | |
|------------------|-------------|---------------------|
| | Daily Gain. | Cost 100 lbs. gain. |
| Steers fed loose | 1.78 lbs. | \$6.55 |
| Steers fed tied | 1.70 lbs. | 6.80 |

Average of the two years.

| | Daily Gain. | Cost 100 lbs. gain. |
|------------------|-------------|---------------------|
| Steers fed loose | 1.54 lbs. | \$6.52½ |
| Steers fed tied | 1.60 lbs. | 6.40 |

A study has also been made of the advisability of feeding a large or small number of steers loose together and with this end in view lots of 9, 6 and 3 were fed. The results are as follows:

Steers fed loose, 9 in each lot:

Average at start, 1,175 lbs.; average daily gain, 1.78 lbs.; average cost to produce 100 lbs. live weight \$6.55.

Steers fed loose, 6 in each lot:

Average at start, 1,099 lbs.; average daily gain, 1.70 lbs.; average cost to produce 100 lbs. live weight, \$6.25.

Steers fed loose, 3 in each lot:

Average at start, 1,143 lbs.; average daily gain, 1.70 lbs.; average cost to produce 100 lbs. live weight, \$6.76.

The artist was of the impressionist school. He had just given the last touches to a purple and blue canvas when his wife came into his studio.

"My dear," said he, "this is the landscape that I wanted you to suggest a title for."

"Why not call it 'Home?' she said, after a long look.

"Home? Why?"

"Because there's no place like it," she replied meekly, as becomes a wife who is entirely without imagination.

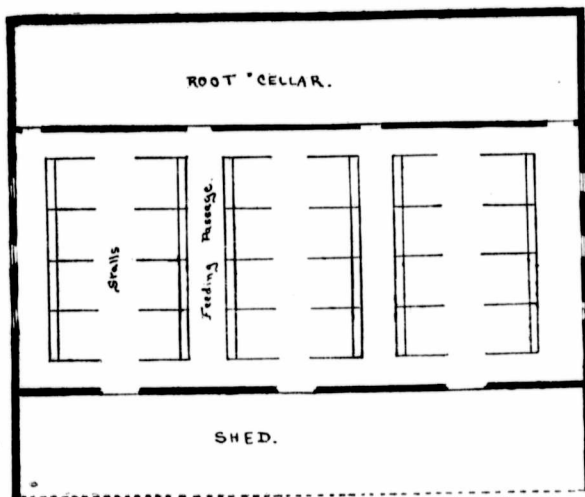


Fig. 2.—Showing the great defect in many fine stables. A limited amount of light and ventilation.

The Ventilation of Farm Stables

On no subject is information more needed throughout the country than on the ventilation of farm buildings. In the majority of buildings, both barns and houses, built even during recent years, very little attention from a scientific and rational point of view at least, is paid to the question of ventilation and yet how important a matter it is that all buildings, whether for man or beast, should be built so as to contribute as much as possible to the health of the occupant. A most timely and valuable bulletin compiled by Prof. J. B. Reynolds, of the Ontario Agricultural College, has just been issued by the Department of Agriculture, Toronto, on this subject, from which the following extracts and illustrations on the ventilation of farm stables will be found valuable:

The second instance of an ill-ventilated stable is represented in Fig. 2, showing the plan of a stable. This building is known locally as the Model Barn, on account of its up-to-date arrangements and fixtures. From the illustration, it can be readily seen that in the construction of the building, two most important items were almost entirely ignored,—light and fresh air. The stable, as the plan shows, is about 36x80, with a root cellar at one side along its whole length. Only the faintest of borrowed light and still less air can penetrate to the stable from this side. Along the other side is an open shed, with which the stable communicates by means of doors. When these doors are open, the stable gains a certain amount of borrowed light and air; when they are shut, the only media for conveying light and air are small fan-lights above the doors, covered, of course, with dirt and cobwebs, and apparently

not intended to be opened. At each end of this long stable are three windows, which struggle bravely to light the interior. How they succeed in the gloomy days of midwinter may be conjectured, when it is stated that on a bright afternoon in May, the writer could not see to read or take measurements at the middle of the stable, and was compelled to move to the end near the windows in order to record observations. So much for light, and ventilation was no better. Not the smallest contrivance for taking away foul-air, moisture, and other harmful products so abundant in a crowded stable.

These instances illustrate the

prevailing indifference to these matters that exists among builders. It is not a sufficient answer to say that the cattle in such a stable seem to get along well enough without fresh air and light, and that there is no need for going to trouble and expense to secure these conditions. It is true that impure air is very slow and insidious in its effects, and generally leaves no specific mark as a sign of its harmfulness. But it is none the less harmful to health and vitality.

Dimensions of Pipes, Shafts, etc.—It is very difficult to give any sort of rule that will suit even the majority of cases as regards the dimensions of ventilating arrangements. If we assume that an opening 6 inches in diameter will deliver, under ordinary pressure, enough air for one animal, then an inlet pipe 20 inches in diameter will furnish enough air for 12 animals. It would be proper to allow 25 to 30 square inches of inlet pipe for each animal. So that a box 3 feet wide and 1 foot deep, having a cross-area of 432 square inches, would provide air for about 16 animals.

As to outlet pipes, the more of them the more perfect is the ventilation. Practically, however, it would scarcely ever be necessary to provide more than two or three of these outlets in the ceiling or at the floor. The total area of the foul-air shafts should be from one-fifth to one-tenth greater than the area of inlet pipes, since the warm air leaving the stable occupies greater space than cool air entering. For instance, if a box 3 feet by 1 foot is used to bring in the fresh air, then two ventilators 2 feet by 10 inches would be sufficient to draw off the foul air. And it would be inadvisable to make the outlet much larger comparatively than this. When the ceiling venti-

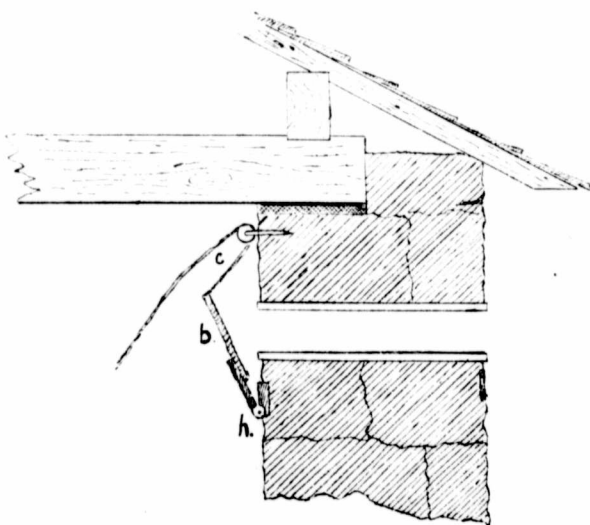


Fig. 4.—System of ventilation by means of tile built in the wall.

lators are too large, there is often a down draft which interferes with the working of the system.

The first plan of ventilation to be described is that in use in the stable of Mr. W. D. Cargill, of Cargill, Ont. The description of the plan has been kindly furnished by the proprietor, and is here given: "Our barns all have a stone foundation 11 feet high, and around this, as close to the top as possible we built in 5 or 6 inch tile about 6 feet apart, running through the wall. These are put in all around the building, and we find the plan gives all the ventilation necessary. If weather is extremely cold, some of the tile may be stopped up with a wisp of hay."

"We also have windows in foundation stand up as in a house, (most barns have them opposite) and top half of the window lowers if extra ventilation is required."

Fig. 4 is a vertical section of the tile plan of ventilation, showing a section through the wall near the roof. Attention is

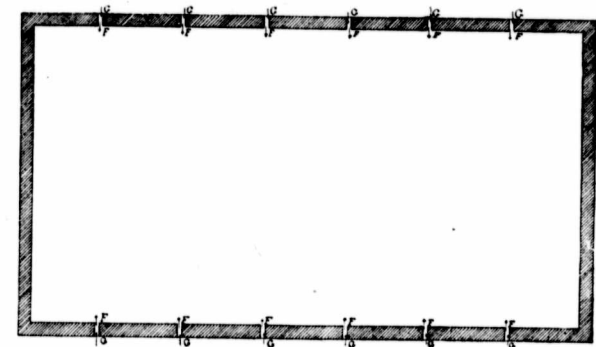


Fig. 5.—Plan devised by Prof. King, Wisconsin. Horizontal projection shows fresh air valves.

called to the statement of Mr. Gargill as to the occasional necessity of stopping up the tile with a wisp of hay. The writer suggests another plan for this, the same contrivance serving another useful

purpose. Fig. 4 is a vertical section of the wall through one of the tile. The suggestion is a 12 inch board, marked B in the plan, be hinged at H, and raised or lowered by a cord C passing over a pulley. By drawing the board close to the wall and holding with a hook or button, the pipes are practically closed. By tipping the board more or less on a slant, as in the figure, the incoming air is deflected upward and the danger of drafts may be avoided.

Fig. 5 shows the system of ventilation originated by Prof. King for use in stables, and with his kind permission, the plan and his description of it, are inserted here.

A single ventilating flue D. E. rises above the roof of the main barn, and is divided below the roof into two arms A B D, one at each side, which terminate near the level of the floor at A. These openings are provided with ordinary registers, with valves, to be opened and closed when desired. Two other ventilators, one at each side, are placed at B, to be used when the stable is too warm, but are provided with valves to be closed at other times. C is a direct 12 inch ventilator leading into the main shaft, and opening from the ceiling, so as to admit a current of warm air at all times to the main shaft to help force the draft. This ventilating shaft is made of galvanized iron, the upper portion being 3 feet in diameter.

Next is, represented in Fig. 8, the plan of ventilation in use at the stables of Dr. J. G. Rutherford, Dominion Veterinarian, Portage la Prairie. With his kind permission, the description given by himself in his paper on Stable Hygiene is subjoined:

"I got my first start from a very intelligent English farmer who was on a visit to this Province some eight or nine years ago. He recommended placing U pipes under the wall tile behind the horses, and drain tile through the wall over their heads, but was forced to admit on cross examination that when the wind blew in through the latter his ventilation went on strike until the wind changed. I adopted the U pipe part of the

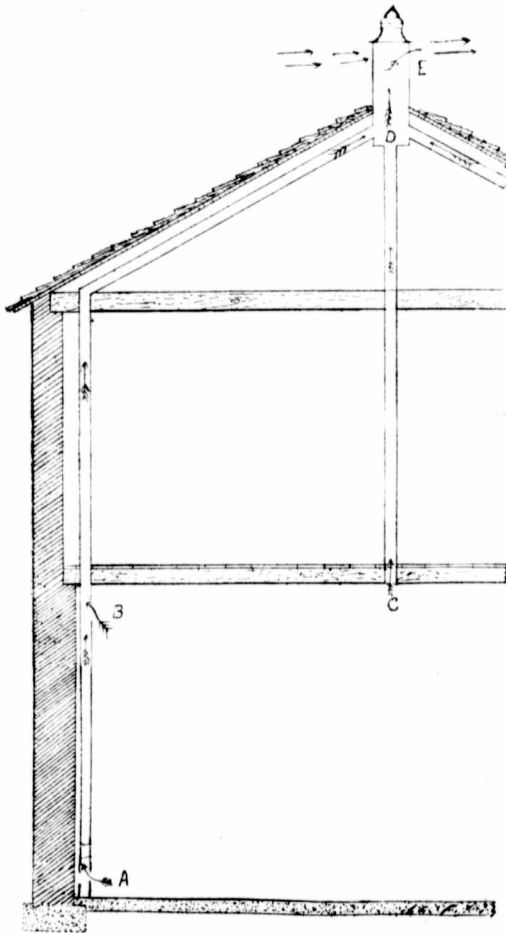


Fig. 6—Showing Prof. King's system of outlets

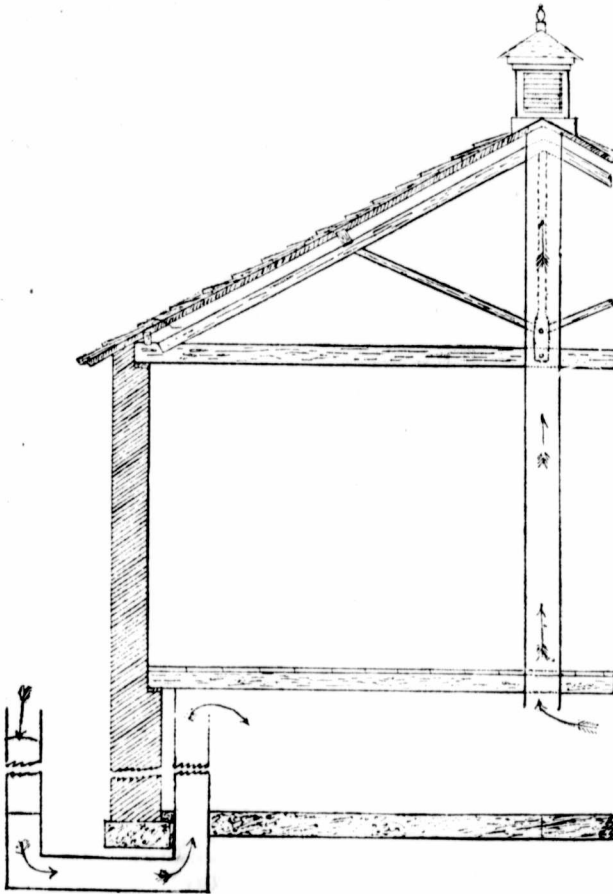


Fig. 8.—Dr. Rutherford's plan of ventilation.

plan, using, however, wooden boxes, but substituted for the drain tiles adjustable side louvres at the top of a large shaft running to the roof. These, however, were not a success, for the wind was sometimes in the opposite direction in the morning from that in which it had been at night, and on such occasions the stable smelt to heaven.

"I finally closed up the louvres altogether, putting in, instead, a galvanized iron pipe or chimney of considerable dimensions, furnished with an ordinary rain cap, and a large damper manipulated with cords from the stable floor. When the damper is open, the foul air, being warm, rapidly rises, passes out through the chimney and is steadily replaced by fresh air sucked in through the U pipes or boxes. By closing the damper, the inrush of air through the lower pipes is at once checked, while a partial closure has a corresponding partial effect on the action of these inlets. In this way, the whole system is under easy control, and can be adjusted to suit the weather or the number of animals in the stable. . . . This plan has stood a fair trial, having been in opera-

tion for upwards of seven years. I may say that I would not exchange it for any system of winter ventilation I have ever seen. . . . By this plan a stable can be kept free from odors, and at a temperature during the coldest weather of from 35 to 40 degrees Fahrenheit, which is quite warm enough for healthy animals of any kind."

By way of further note on this plan of ventilation, it may be added that the outer arm of the U pipe may be of any length that seems advisable, while the inner arm should terminate near the ceiling, or may rise to the ceiling and extend horizontally for some length. Of course, it is understood that this system is not confined to one inlet pipe. The number of U pipes put in will depend upon the number of animals in the stable.

Figure 9 represents an inexpensive system of ventilation that is in operation at Dentonia Park Farm, of the late Mr. W. E. Massey, of East Toronto. The cowl, which revolves so as always to face the wind, is made of galvanized iron, and stands immediately above the peak of the barn so as to catch the full force of the wind.

The wooden box (or iron pipe, as in the figure), which is the continuation of the cowl inlet, extends down through the floor of the barn to the stable beneath. The joints of the box or pipe should be practically air-tight. At the floor, the inlet shaft may be of wood, but land tile cemented at the joints will make a better and more lasting job. The outlet shafts, of which there should be two at least, in opposite parts of the stable, should extend up into the barn well above the hay and straw, if not quite through the roof. An excellent plan for the outer terminal of the outlet shaft is to provide a cowl that points away from the wind, thus increasing the driving power of the wind by giving it an aspirating effect at the mouth of the cowl. These outlet shafts might be used also as feed shafts for carrying hay or meal from the barn floor to the stable below.

By way of comment, there is given below a report of the working of the system, kindly furnished by Mr. J. B. Ketchum, superintendent of the Dentonia Park Farm. The report was written March 17th, 1900:

Temperature.—"I should think we had our supply shut off half a dozen times probably during the last winter. We rarely shut the outlet, and by careful watching the temperature can be regulated. In both the outlet and intake shafts there are revolving doors that can be shut by an attached string."

Efficiency.—"It is quite satisfactory. A horse stable is the most difficult part to ventilate properly, but in our stables I will guarantee that you could work all day, and your clothes would not have the smell of stables on them."

Fig. 10 shows a system on the same principle as that of Fig. 9, except the air is distributed at the side-wall, instead of at the floor. This plan is suitable for old stables in which the pipes cannot be laid along or under the floor.

Fig. 11 shows the system or ventilation in Mr. Tillson's stables at Tillsonburg. It differs from that shown in Fig. 9 in the following particulars:

1. The inlet pipe, instead of being placed immediately above the roof, stands by itself at some distance from the barn, and the horizontal pipe lies eight feet below the ground until it enters the stable, when it passes just below the floor of the passage. In this way, the air, before entering the stable is warmed in winter and cooled in summer. At 8 feet below the ground, the earth temperature varies but slightly through the year, and the sub-earth duct brings the air nearly to a constant temperature.

2. The air is distributed by lateral pipes 9 inches in diameter and 8 feet apart, alternately on opposite sides of the main, and opening out at the floor level just in front of the mangers.

3. The foul-air shafts at the ceiling are supplemented by flues built

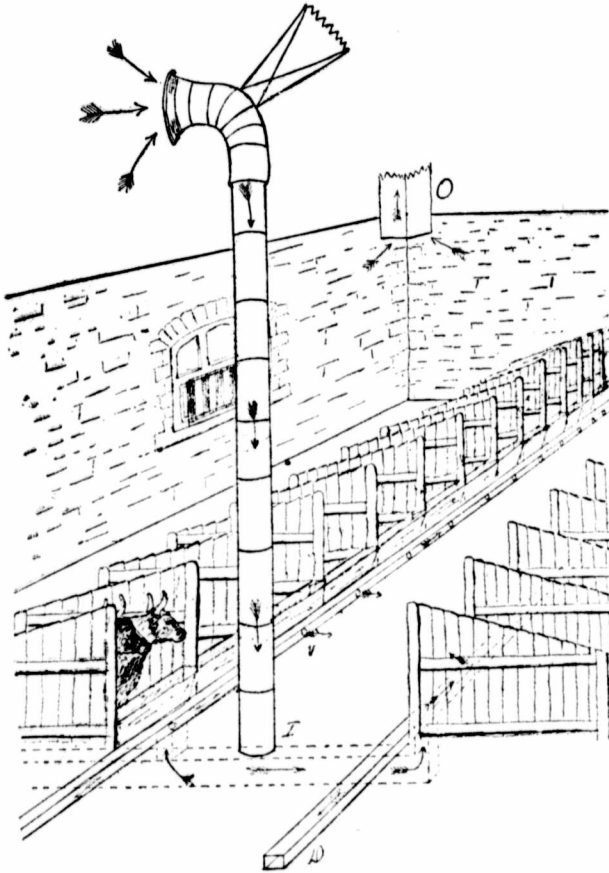


Fig. 9.—The late Mr. Massey's plan of ventilation.

into the wall about 20 feet apart. Each flue has a square or oblong opening near the floor, and a similar opening near the ceiling. This addition, while it increases the cost, increases the efficiency of the ventilation.

Size of Pipes, Shafts, Etc.—The inlet pipe is 24 inches in diameter, and is made to do duty for 40 cattle—an area of 11 square inches for each animal. This is less than half the area that has been mentioned as desirable. In this particular case, the amount of air might be doubled with but slight additional expense, by erecting a cowl at each end of the horizontal pipe, and sealing the latter at the middle, so as to virtually make two inlet pipes.

The laterals are 9 inches in diameter, and supply air to four animals, which is equivalent to a 4½ inch pipe for each. Such a provision is ample on a cold day, but not so on a calm, mild day. It is best to supply sufficient space for the lowest rate of supply, since on a windy day, when the rate of supply is greater, the area can be diminished by shut-offs.

The ceiling outlets represented in Fig. 11 are in the original 4 feet

square,—much larger than is necessary for ventilation, but convenient for the secondary use to which they are put, namely, to serve for feed-chutes. Mr. Tillson informed us that on account of the large size of these ventilators, a down draft was sometimes felt coming from them. In order to prevent this, and at the same time allow of their use as feed-chutes, it would be a good plan to build them the size required for the second purpose, to a sufficient height, and then reduce them to about 18 inches or 2 feet square.

The flues are built in the wall and extend like chimneys, well above the eaves. They are not essential to stable ventilation, but undoubtedly improve it, especially in large crowded stables. The openings near the floor provide a way of escape for disagreeable odors from gutters, at points from ceiling shafts. Also any heavy gases that have settled to the floor are best got rid of by this means.

The sub-earth duct is to be recommended for winter stabling, but is less desirable in summer. In summer the outside air passing through the underground duct rises in relative humidity, and be-

comes somewhat damp. Where summer stabling is practised, the sub-earth duct may be an undesirable feature.

Recent Sheep Feeding Experiments.

Bulletin 63 of the Iowa Experiment Station gives the result of finishing western wethers on grass and grain for early summer market and of finishing western wethers for early winter market. The data obtained in regard to the former indicates the following:

1. That sheep will make practically as large gains on grass alone as on grain and grass.
2. That in economy of gain grass alone gave the best results.
3. That corn at thirty-three cents per bushel is a more economical grain to feed sheep on grass than oats at twenty-three cents or barley at forty cents.
4. That mutton can be produced much more economically during the summer months on grass alone or grain and grass than it can be produced by feeding grain and hay during the fall and winter months.
5. That the feeder can oftentimes purchase half fat lambs during the latter part of April or the first part of May, and by grazing them for from forty to sixty days realize a good profit, due to the advance in market prices during the latter part of June and the first of July over those ruling in April and the first part of May.

In regard to finishing for the early winter market the conclusions are:

1. That when corn is worth forty cents per bushel, emmer is worth twenty-six and one-half cents per bushel of thirty-five pounds for sheep feeding purposes.
2. That when corn is worth forty cents per bushel, soy beans, when they compose the sole grain ration, are worth but forty-five cents per bushel for sheep feeding purposes.
3. That corn alone when fed in conjunction with clover hay produced larger and more economical gains than the ration of corn, two parts; gluten feed, one part, and clover hay.
4. That sheep can be fattened more economically on grass and corn or on grass alone than on emmer and clover hay, soy beans and clover hay, corn two parts, gluten feed one part and clover hay, or corn and clover hay.
5. That soy beans on account of their high protein content should not form the sole grain ration in conjunction with clover hay for sheep feeding purposes.
6. That pound for pound corn is more valuable than emmer for sheep feeding purposes.
7. That mutton can be produced economically on grass alone during the summer months.

Many a deluded man who thinks he is marrying a woman discovers later on that the woman married him.

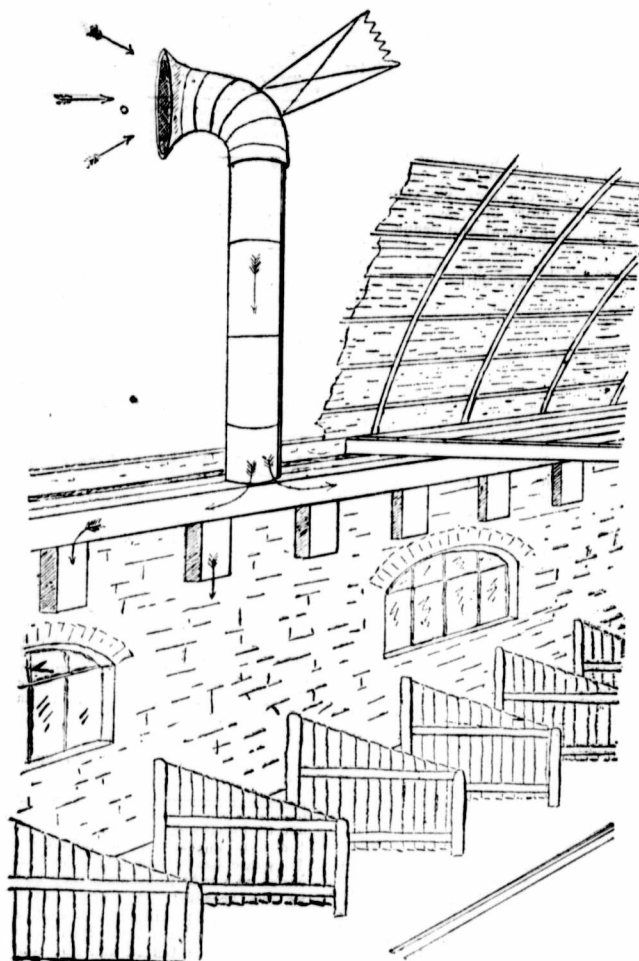


Fig. 10. — Ventilation for stables already built.

Differences in Plant Food Needs of Crops.

Manure is generally simply manure to the farmer, and little heed is given to the fact that manure really is just so many pounds of nitrogen, potash and phosphoric acid, that is, manure as plant food. Fertilizers are looked upon in the same light. They are simply "Fertilizers," or in some locations "phosphates," with no attention paid to the plant food they actually contain. It is a great deal if we succeed in attracting farmers' attention to the real nature of plant food, but there are other problems of fully equal importance. In the first place, farmers should accustom themselves to think of manures and fertilizers as certain quantities of the elements of plant food; nitrogen, potash and phosphoric acid. When this lesson is once thoroughly mastered, we will move on to the proportioning or balancing of fertilizer elements for various crops. There is some work in studying out

these things, but there is work in studying out anything of value to the practical farmer.

The plant food needs of crops always vary, but certain classes vary widely. For example, the grains are much alike in plant food needs, as are general garden crops, and also fruits. The clovers are in a class by themselves, while timothy red top, and the hay grasses all have similar fertilizer needs. For grain crops, a rotation is universally approved, which means that in periods of from one to four years a clover is grown on the soil for the purpose of supplying in part at least the fertilizer nitrogen needed. For such crops, nitrogen should be used in quantity about half that of the potash, and the potash about half that of the phosphoric acid. In simple fertilizer terms, the average grain fertilizer should have a formula about as follows: Nitrogen 2 p.c.; available phosphoric acid 8 p.c.; potash 4 p.c. Of this fertilizer we should use from 400 to 600 pounds per acre, or more if the soil

is light, and the crops continue light.

General garden crops are quite different. In this case a rotation using clover would not pay, hence the nitrogen must be applied. For such crops, the fertilizer formula is practically the same for all three of the elements, and as the cropping per acre is very heavy, the applications must also be heavy. From 1,000 to 3,000 pounds per acre are not unusual with those who have been very successful. Fruits are in a different class, with a fertilizer formula as follows: Nitrogen 4 p.c.; available phosphoric acid 6 p.c.; and potash 6 p.c. The applications for fruits must also be heavy, especially for small fruits. The clovers do not need any nitrogen fertilizer at all, and about twice as much potash as phosphoric acid. Hay grasses, when not grown after clover, require a fertilizer formula about as follows: Nitrogen 2 p.c.; available phosphoric acid 4 p.c.; and potash 6 p.c.

Of course, all these figures are very general, and show about what is needed as a general average. So long as crops fall off either in quantity or quality, it is nature's method of saying that plant food is needed, and in heeding this command we should pay as much attention to the nature of the plant food needed as to the fact that any is needed at all.

M. J. Shelton.

St. Louis Exposition Postponed till 1904.

Numerous reports have appeared of late to the effect that the St. Louis Exposition will be postponed till 1904, but none of them have appeared from an authoritative source. However, according to the Iowa Homestead, President Frances, of the Exposition Association has given out a definite statement that the fair would be postponed until 1904. The reasons for postponement are chiefly that the great majority of exhibitors throughout the world will have more time to get ready. The national government at Washington is also interested in the postponement as it will give more time to its special exhibits. While there may be many who have their exhibits ready who will be disappointed, the great mass of prospective exhibitors will likely be pleased.

Galt Horse Show.

There is held every year in the town of Galt a horse show that, with the exception of the Toronto Horse Show, is the equal of anything of its kind in the province. It will be held this year on June 6th and 7th. Last year there was a large prize list with numerous entries and this year's show promises to excel it in many respects.

In a case of emergency it is sometimes advisable to reward the man who helped you to emerge.

Cost of Feeding Poultry

A writer in an American exchange says: We always keep an account of the feed the hens consume during November, December, January and February. If we have a fair margin of profit for those four months we conclude that poultry pays. As all feeding stuff was very high last fall we concluded to adopt the theory, so freely advocated by many, to feed less corn and more nitrogenous food.

We wintered 50 old hens and 30 pullets. The following is the total amount of food consumed during these four months: 260 pounds middlings and bran, 50 pounds oil meal, 50 pounds navy beans, 100 pounds animal meal, 5½ bushels of wheat, 8 bushels corn. The above feed cost \$16, or 20 cents per hen.

In 1897 and 1898 we also fed 80 hens during the above period. They ate 60 pounds oil meal, 250 pounds bran, 15 bushels corn, 8 bushels oats, ½ bushel wheat. This amount of feed cost them \$8, or 10 cents per hen. In the winter of 1897-98 for every dollar of feed we got

\$3.60 of eggs. The present winter for every dollar's worth of feed we received \$1.40 of eggs.

Comparing the two amounts of feed for the two periods we observe that last winter we fed only half as much corn as usual. Since corn was very high we concluded to feed more of richer articles—wheat, meat meal and beans. This rich food did not produce as many eggs per hen as we received five or six years ago when we fed more corn. The eggs we received the present winter were larger than common. Also since the snow is gone and the hens are outdoors and receive less feed the eggs are beginning to get considerably smaller. The hens were very healthy during the past winter. Only one became suddenly sick and died. Never had we a flock of hens that had such a ravenous appetite. They actually began to eat scalded clover leaves. They eagerly ate soft cabbage, leaving nothing but the solid stalk.

Some may surmise that the hens are in poor condition because they

Poultry and Eggs

Advertisements under this head one cent a word. Cash must accompany all orders under \$2.00. 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. Barred Plymouth Rock and Mammoth Pekin duck eggs, 1 dollar for 13, also one extra choice pair of ducks, not abin, price 3 dollars. T. C. TREVERTON & SON, Belleville, Ont.

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

BUFF ORPINGTONS, imported this season from England, 4 birds costing \$125. Solid buff eggs \$3 per 13. Also breeder of Brown Leghorns, continuous layers—Barred Rocks, E. B. Thompson's White Wyandottes, Indian Games, true blocky type for export. I won leading prizes and sweepstakes at the Ontario and Branford shows. Incubator eggs \$2.50 per 100. J. W. CLARK, Importer and Breeder, Onandaga, Ont.

DOES IT PAY TO ADVERTISE?

Onandaga, May 12, 1902.

Farming World Publisher,

Toronto, Ont.

Dear Sir,—Enclosed please find \$3.00, being amount of poultry advertising—March and April—in Farming World. I have had grand results from advertising with you—more orders than I was able to fill. Nearly every enterprising farmer must be taking your paper, from the amount of correspondence I get through Farming World. It is certainly very cheap advertising, and will well repay anyone who has stock or eggs to sell to put an ad in your paper.

Wishing you success, I remain,

Yours truly,

J. W. CLARK.

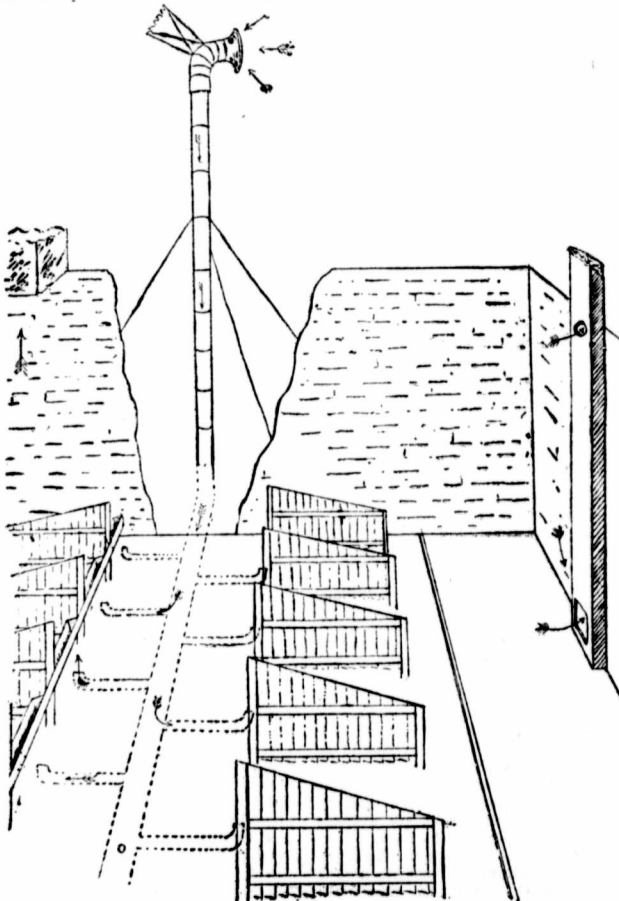
Ononaga.

are so hungry and did not produce the number of eggs as formerly. They are heavy and fat. The real cause no doubt is because they had no free access to ear corn. Let a hen have the privilege to pick off a grain of corn now and then and she will be contented and not consume nearly as much other food as she will if corn is only given her in the evening. If the feed had been the same price as five years ago, last winter's ration would have cost \$2 more than the ration 5 years ago.

The comparison seems to indicate that it is not practical economy to feed too much nitrogenous food. Poor policy to feed protein to produce fat and heat. Corn at 75 cents per bushel has its place in economical feeding. Perhaps it would have been economy for us to have fed less wheat and bought some oats at 50c. per bushel. There is no doubt that many a flock of hens was kept at a loss last winter. The high price of eggs saved us.

Canadian Poultry at British Shows.

Mr. F. C. Hare, chief of the Poultry Division, Ottawa, states that an exhibit of Canadian dressed poultry will be made at the exhibitions at Wolverhampton and Cork this summer.



, sub-earth duct, and flue in wall for foul air.

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.

Have you started your beet bed properly?

If you have, follow it up carefully. Do not let the weeds get ahead of you.

Follow the instructions given for the cultivation, remember that the other fellow knows just a little more about this particular crop than you do.

When it is time to weed do not neglect that very important work for anything else.

When bunching time comes, and it is time to thin the plants, look after that part carefully.

Then cultivate, cultivate, cultivate.

You can hoe the sugar into the beets.

And the oftener you tickle the earth with the hoe, the better the beet crop will be.

No crop pays the farmer so well if properly looked after.

If you are growing an experimental plot this year, remember the prospects of getting a factory established in your vicinity, may rest upon the results of your particular piece.

Do your best, and do not let your neighbor surpass you.

Possibly, the choice of the selection of a site for factory will be decided by individual results.

A great factor in the location of a factory is the willingness of the farmer to follow instructions.

Mostly any good soil will grow beets, but a poor farmer can spoil the effects of nature.

Wiarton.

Work is going on with a rush at this point, and Wiarton will have a sugar factory for the shareholders to be proud of. The corner stone is to be laid on June 5th, with Masonic honors, and excursions will be run in connection with the event; excursion rates having been made by the railways for the occasion. The season is a little backward for seeding, but the work done so far is satisfactory. Material for the buildings is constantly arriving, by rail and boat.

Dresden.

Dresden is feeling the results of the establishment of the sugar factory; business is booming as never before; real estate has advanced in price, and there is not a vacant farm to be leased at any price. One year's successful operation will make the town the best in the country. The contractors are ahead of the time scheduled and will have the factory ready before the beets are ready to work.

The seeding is all done, and

though very little growth is yet shown, the agriculturist expresses himself satisfied with the outlook, and is very hopeful of the results.

Whitby.

Negotiations are going on with capitalists for the erection of a sugar factory, and it is thought terms satisfactory to all parties will be made. Experiments in the growing of sugar beets will be carried on again this year, and an organized effort to induce the farmers to sign acreage contracts will be made. As soon as the elections are over, the work will be taken up systematically and thoroughly.

Barrie.

The visit of a couple of parties, familiar with the beet sugar industry, to this town last week, has set the business men and Board of trade thinking, and if not too late, an effort to induce the farmers to experiment with the growing of sugar beets, will be made.

Barrie is an ideal spot for the industry and the establishment of a factory. Water of the purest kind is there in abundance, limestone good drainage, railway facilities, suitable land, the right class of farmers, are all to be found there, and it only needs some one familiar with the business to talk up the matter and induce the farmers to grow the beets. Very little is known about the profits to the farmer in growing the crop and it is only a question of educating them, to the advantages, to get them into growing them on a large scale.

Berlin.

The Ontario Sugar Company's factory begins to make a showing, the foundations are all in for the main building. The machine shop is ready for the roof and work upon the other buildings and beet sheds is progressing rapidly, the contractors and the directors are both satisfied with the progress made.

The Grand Trunk Railway has a large force of men at work upon the sidings, and will finish their work this week. One hundred and forty cars of material will be rushed in at once, a large number of these cars have been loaded for some time, and awaiting the completion of the road, to be unloaded.

Acreage under the supervision of Dr. A. E. Shuttleworth, is most satisfactory, the seeding is all done and in many places the plants are above ground. Within a week weeding will commence, over 300 hands having been engaged for that special work.

The weeders will be lodged and fed by the company, tents having been purchased and pitched for that purpose and supplies, such as stoves, dishes, etc., are ready for the arrival of the workers.

Over 85,000 pounds of seed have been supplied to the farmers, as well as seeders, cultivators and beet pullers. The interests of the farmers are well looked after by the company, and everything possible is being done to make the agricultural end a success.

Not a vacant house is to be had in the town of Berlin, but it is expected a number will be built in the vicinity of the factory, in fact some of the farms adjoining are being laid out in building lots, and will no doubt be built upon before the factory is ready for operation.

Berlin, Waterloo and Bridgeport electric railway will be extended to the factory.

The sugar factory is a bonanza for the farmers of Waterloo.

Beet Pulp.

The Ontario Sugar Co., have been offered a very large price for their entire beet pulp, for the season, the parties offering, wish to have it dried and shipped for stock feeding.

The offer is a very tempting one, but so far it has been refused, the company preferring to have it used up in the immediate vicinity and to get the farmer initiated into the value of it for feeding purposes. A feeding station will be established at the works and a large number of cattle, sheep and hogs, will be fed during the season, to demonstrate the value of the pulp.

From Michigan.

The Michigan Sugar Beet says: "Many sugar beet growers in different parts of the state believe that beet seed can be successfully grown in America, and are considering the idea of engaging in that enterprise on a large scale. At the present time the seed is received mainly from Germany. * * * Grave fears are already entertained that a shortage is liable to occur at any time. The price is liable to increase as it has in the past, and any undertaking that will lower the expense of cultivation and enable the farmers to secure the product at reasonable figures will be appreciated." I consider that the average person discussing the beet seed issue in this country overlooks the time that would be necessary for the creating of a special variety and race suited to the environment in which it is to be used. Certainly all efforts in this direction under three years' constant study and observation would be failures. I

am informed that the Michigan Chemical Company is now working its distillery by some new mode; what this can be no one yet seems to know. As regards this matter, it is important that one fact should not be overlooked. In the art of obtaining superior alcohol there is but one superior mode, and to put it into practice demands the special appliance combined with experience. In Europe there are hundreds of molasses distilleries, and if some new invention is to be brought to light it would be a profitable undertaking for the originator of the process. It is to be regretted that the secret should be confined to one plant of the United States. It is claimed that the awarding of a contract for many thousand gallons of alcohol to this company by the United States government settles a controversy raised by the grain distillers regarding the purity of alcohol made from beet-sugar refuse. The grain distillers were after that contract, and claimed that the beet alcohol could not be made to answer the purposes for which grain alcohol is used. The government conducted extensive tests of the alcohol made here, however, and found it identical in quality to the product of the grain distilleries. The alcohol is used by the government in the manufacture of smokeless powder for the navy department, and about 600,000 gallons are consumed annually for this purpose.

Experiments in the Culture of the Sugar Beet in Nebraska

The sugar beet experiments reported in Bulletin No. 73 were conducted during the season of 1901, upon the farm of the Standard Cattle Company, at Ames, Dodge County, Nebraska. These experiments included tests of varieties, tests of fertilizers, distance of planting, time of planting, methods of cultivation, and the treatment of sugar beet diseases.

A test of 37 varieties under similar conditions showed a wide variation in the total amount of sugar produced per acre, the Original Klein Wanzlebener occupying first place.

A comparison of light and heavy soils for sugar beet production showed a considerably higher sugar content in the beets grown upon the heavy soil.

Slight increases in the yield, sugar content, and purity of beets were produced by the use of commercial fertilizers, but their use did not seem to be profitable upon the land where the tests were made. Of the different classes of fertilizers used the phosphate gave the best results.

A comparison of different depths of cultivating sugar beets was in favor of about four to five inches as compared with six-inch or two to three-inch cultivation.

The most satisfactory distance of planting was found to be 18 inches between rows and 8 inches between plants in the rows.

A comparison of the sugar con-

tent of beets grown among weeds and on clean ground showed that the presence of weeds may very materially affect the quality of the beets.

The fresh growth of the beets induced by the wet weather during September was found to result in a rapid reduction of the percentage sugar content of the beets, but the results of extensive determinations indicate that unless the fresh growth is accompanied by buds upon the crowns there seems to be no real loss of sugar—the beets seem to increase in size and weight while the sugar remains at a standstill.

Surface applications of lime were effectively used in checking the Rhizoctonia rot of beets. Repeated spraying with "Bordeaux mixture" seemed to be of some value as a preventive of "leaf spot" but did not show any curative value upon diseased leaves.

The season's experience showed to a remarkable extent the drought-resistant qualities of sugar beets, in which respect they were found to be superior to any crop upon the farm except alfalfa.

A. T. Wiancko,
Nebraska Experiment Station.

Note.—Mr. Wiancko is a Canadian and a former contributor to this journal.—Editor.

Cultivating the Sugar Beet.

(Digest of the record by T. J. Jones for the prize in Class I of the American Agriculturist sugar beet growers' contest for 1901. This report won the first prize of \$250.)

The first thing to be noted is that this manual sets forth all the details of beet culture more clearly and perfectly, without undue verbiage, than any of the other reports submitted. Yet the crop from the contest acre, while a good one of nearly 22 tons, contains less sugar and of a poorer quality than many of the other crops reported. The poor quality of the crop was due to late planting, late irrigation and heavy fogs at ripening time, which kept the beets growing instead of ripening, thus preventing the formation of the largest amount of sugar.

CHARACTER OF SOIL.

Mr. Jones' field was near Anaheim, Orange County, Cal., on land worth \$100 per acre. The soil is a clay loam, about 2 feet deep, with sandy subsoil. It is typical of the prairie or valley lands of that section. The contest acre was part of the larger area of 17 acres of sugar beets. The land was almost level, with a fall from northeast to southwest of about 10 feet to the mile. It is known as a semi-moist soil when rains are normal, say 15 inches rainfall from November to April. "In southern California we never expect rain during other months, though we have occasional showers in October and May. We had a dry spring and season last year, having only 12½ inches of rain, following three very dry years."

Prior to 1880 this acre, with other thousands, was a range for wild horses. Since then it was used for sheep pasture, barley and corn, being in barley exclusively for ten years prior to '95. In '98, it was planted to sugar beets, but owing to the dry year and absence of irrigation, there was no crop. On the other hand, in the comparatively wet year of 1894, part of this tract yielded renters as high as 22 tons of beets per acre without irrigation. In '99, this particular lot was in barley, but the crop was light, as there was only 5 inches of rain. The dry period continuing, the land was not plowed in 1900. Some mustard and wild sunflowers grew, but not luxuriantly, and there was no sod. No manure or fertilizer of any kind was ever used on this field.

PREPARATION OF LAND.

This land should have been fall plowed and planted in January to get the best results, as that method would have cost less than the latter planting, would perhaps have saved irrigation once or twice, and would have produced more. As it was, the soil was plowed 8 inches deep March 7, 1901, with a Solid Comfort sulky plow drawn by four good horses. It took about five hours to plow this acre in connection with the rest of the lot, the plowing being done by contract at \$2 per acre. The field was not sub-soiled, but was harrowed the day after it was plowed with a twin harrow and two horses, at 25 cents per acre. "Unfortunately the fertilization of the beet field in this section is almost unknown, yet we must come to it. Two of my neighbors grew sugar beets for four consecutive years on the same field without manure, reducing the annual yield from 15 tons per acre at the start, to six tons the fourth year. Yet a dressing of ordinary one-year-old stable manure during the fifth and sixth years brought the crop back to its original yield of 15 tons per acre, showing how readily the beet answers to fair treatment."

The land should be plowed in October or November, provided it does not break up in large dry clods. Land plowed thus early, when broken in good condition, has the benefit of December and January rains, and is then generally well settled and ready to be prepared for planting. Before plowing the land should be clear of all rubbish, as it is sure to get to the surface, clog the cultivator and tear the young beet plants from the ground.

IRRIGATING.

I waited for rain until April 10, but none coming before putting in the seed, proceeded to irrigate the land, which was necessary to get an even germination. The land was first blocked in squares, eight steps wide, and ditches made at even points to carry water when needed, these two operations costing 75 cents per acre. The land was then flooded with water until

it was soaked to a depth of 2 feet. When it dried so that the surface could be worked, the water-line showed high and low spots, which were first leveled for after-irrigation. The blocks were broken up by leveling the ridges that ran east and west, and repairing those that ran north and south, that they might hold the water in place later. The ridges were then harrowed lengthwise, also the whole surface, with a twin-tooth harrow, the teeth standing straight and running deeply. The field was then rolled across the ridges and over the whole surface, then harrowed again, thus thoroughly pulverizing the soil and making a perfect seed bed, in which the drill would readily cover the seed. The cost of this first irrigation and preparation was \$7.25 per acre, while the hoeing and rolling cost 71 cents.

PLANTING.

The planting was done May 9th, with a Moline seeder, drawn by two horses (at a cost of 40 cents per acre), using 12 pounds of A.H.K. No. 1 seed per acre. No replanting or transplanting was necessary as there was a perfect stand one week after planting. The shoes of the drill must be prepared and evenly sharpened, so that all four rows will be planted the same depth, and the gauge such that each box will sow the same amount of seed. We aim to cover the seed from one-half to one inch deep, in drill rows 18 inches apart, but with earlier planting half an inch deep is enough. The best way to regulate the depth of sowing is to have a shield attached to the drill's shoes to prevent its going beyond a certain depth.

In a large field, the best plan is to have two harrows, one to follow the other, and the roller to follow immediately before the loosened soil is cloddy or has lost its moisture. Unless this is done, many clods will become hard and keep the soil too loose to properly retain the moisture. Especially where the plowing is done late, as in this case, there is great danger of leaving the soil too loose. The only safe way to avoid it is to harrow each day to the finish, with the harrow teeth standing straight so as to run as deeply as possible and well sharpened. To best retain the moisture, harrow not once or twice, but until the ground is so solid that as you walk over it you have a firm foundation.

CULTIVATION.

Before the plants were up, the field was lightly harrowed crosswise. The soil being so firm after the heavy irrigation, some seed was not covered by the seeder, and was better covered by the harrow without being displaced.

The plants were fairly visible the full length of the rows on May 16, over the whole field of 17 acres. The weather was warm and clear, average maximum temperature 65 with 55 as the minimum. In May, or often in April, the plants will begin

to show in four days, if not planted too deep, but in this case, seven days were required.

By June 3, the beets being ready to thin, they were first rolled with a light roller, covering four rows at a time, or the width of the drill. This was done to break down the ridges on each side of the beet row, so that the cultivator would not push the dirt onto the young plants. The next day after rolling, when the plants were standing erect the acre was cultivated as closely as possible to the plants, the cultivator working four rows at once. This makes thinning easier, and the thinners pulled out every weed in the beet row as carefully as they took out the surplus beets, thus saving much time and expense in hoeing afterward. The acre was thinned June 7, leaving a good plant every 8 inches—no closer than 8 inches or wider than 9 inches apart. The field was then carefully hoed, three men each working three days hoeing 17 acres at a cost of 80 cents per acre. Great care was taken that no beet was covered by the hoe or cultivator, as lost plants will insure a light yield.

The field was irrigated a second time on July 6, the water costing \$3.63 per acre, and a man to care for the water five hours \$1. As soon as the water had dried off suf-

ficiently, the beets were again cultivated to a depth of 3 inches, leaving a nice mulch 2 or 3 inches deep. The lot was irrigated again on August 7, after which a man went over the beets carefully, pulling weeds in the row and hoeing between the rows. A light irrigation was given September 16.

STATEMENT OF COST.

| | |
|--|--------|
| March 7, plowing..... | \$2.00 |
| March 8, hoeing..... | 25 |
| April 10, blocked for irrigating | 75 |
| April 19, water from pumping plant, \$3.57, man for irrigat- ing, \$1..... | 4.57 |
| May 6, leveled and ridged land..... | 1.93 |
| May 7, rolled and harrowed... | .71 |
| May 9, planting..... | .40 |
| May 9, 12 pounds seed ... | 1.44 |
| May 10, hoeing crosswise..... | .25 |
| June 3, rolling..... | .20 |
| June 4, cultivated with four roll cultivator..... | 1.25 |
| June 7, thinning..... | 4.00 |
| July 5, hoe weeds, preparatory for irrigation..... | .80 |
| June 6, irrigated..... | 4.62 |
| July 10, cultivated twice..... | .40 |
| Aug. 7, irrigated..... | 4.77 |
| Aug. 12, hoeing and pulling weeds..... | .28 |
| Sept. 16, irrigated fourth | |

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BUILDERS OF

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CLEVELAND, OHIO

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

Now Building the Factory at Berlin.

time..... 1.61
 Total cost up to harvest...\$29.23
 Oct. 25, plowing with pike
 plow..... 1.50
 Oct. 25, topping and loading at
 62½¢ ton..... 13.52
 Oct. 28, hauled to station 21.6
 tons at 50¢..... 10.80
 Interest on value of land for
 e year..... 6.00

Total expense, including ir-
 rigation.....\$61.05
 Received for crop..... 92.01

Net profit for acre.....\$30.96
 HARVESTING THE BEETS.

The beets as harvested, weighed from ½ to ¾ lbs. each, were smooth and about a foot long, their average weight being about 1.13 lbs. The rows of beets were first plowed out with a Pike patent beet plow. It took five hours to plow them out, and the same time to top them by eight toppers, four of whom were children. The rows running parallel with the contest acre were harvested first, then the acre was measured off, plowed out, pulled, topped and hauled to the receiving station in six four-horse wagon loads.

For pulling, we used Pike's patent puller. It is like a plow, except that the standard is bent a little to one side, so as to avoid striking the beet row, at the foot of the standard is attached a steel point about 3 inches wide, that runs directly under the beet row, cutting the top root and raising the beet a little, loosening it enough for the topper to easily lift it from the ground. The topper, crawling on his knees, and carrying a long butcher knife, catches hold of the leaves, lifts the beet with the same hand that holds the knife catches the root with the other hand, and then instantly cuts off the tops just under the last leaf. Eight rows are thrown together, a place for the piles being first raked off clean with a garden rake. When the hauler gets to the field for his load, he drives between two rows of topped beets, and the toppers generally throw the beets on the wagon with beet forks.

The beets were hauled to the cars, weighed by the American beet sugar company's weighman, and shipped to the factory at Chino, 60 miles away. A sample was taken from each load by the sample-catcher, as the beets were dumped into the car. After being weighed, the loaded wagon is driven upon the dump and in from three to five minutes the beets are safely delivered into the railroad car.

The crop from this contest acre weighed out 43,290 pounds net. The average analysis was 11.65 p.c. sugar, with a purity of 74. This was a very low purity, owing to the unfavorable weather described above. All work done on this acre up to harvesting was the same as on the other 16 acres of the lot. Plowing, thinning and harvesting were done by contract; the water, irrigation and other work being paid for by the hour.

The American Construction & Supply Co.

Main Offices: 71 Broadway, New York, N.Y. Western Department: 401 Atwood Bldg., Chicago, Ill.

Specialties:—BUILDING OF BEET SUGAR FACTORIES;
 AND BEET SUGAR FACTORY SUPPLIES.

We have the record of building modern equipped and economical running factories. More than 20 years' experience in this special business. Correspondence solicited.

We are also sole representatives of BUETTNER & MEYER, Urdingen, Germany, manufacturers of the best pulp drier in the world. This drier received the prize of 20,000 marks offered by the "Centralverein für die Rubenzucker-industrie" in Germany.

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FOUNDERS AND MACHINISTS

Corner Lake and Kirtland Streets, Cleveland, Ohio New York Office: 220 Broadway.

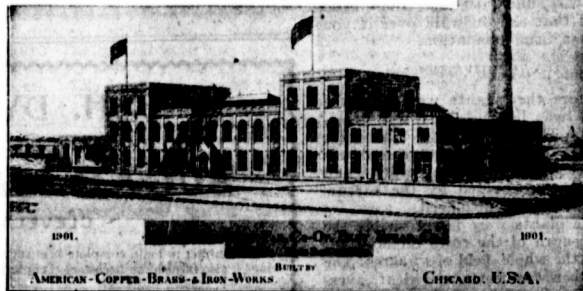
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The Agricultural Gazette

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.

Tamworths.

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1; Swine Breeders', 60c.
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 profitable 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 will be published 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.

List of Stock for Sale.

DOMINION CATTLE BREEDERS' ASSOCIATION.

Shorthorns.

Birdsall & Son, F., Birdsall.—Heifer 1 year.

Corley, R., Belgrave.—2 bulls, 10 months; heifers, 2 years; heifer calves.

Douglas, Jas., Caledonia.—7 bulls, 9 to 15 months; young cows and heifers.

Fitzgerald Bros., Mount St. Louis.—8 bulls, 11 to 17 months.

Jeffs & Son, E., Bond Head.—2 yearling bulls; 4 bull calves; young cows; heifers and heifer calves.

Morton, F. G., Allandale.—1 yearling bull.

Ross Bros., Nairn.—2 bulls, fit for service.

Snowden, Samuel, Bowmanville.—1 bull, 15 months; 1 heifer, 11 months.

Smith, A. W., Maple Lodge.—5 young bulls, 12 heifers and cows.

Trestain & Son, John, Strathburn.—12 cows with calf at foot, 10 cows and heifers with calf; 8 yearling and heifer calves, 8 bulls, 1 to 22 months.

Aberdeen Angus

Bowman, Jas., Guelph.—Females.

Burt, J. W., Washington.—1 bull, 18 months; 1 bull, 10 months.

Phillips, F. W., Oakville.—Yearling bull.

Jerseys

Birdsall & Son, F., Birdsall.—1 bull, 9 months.

Ayrshires.

Dyment, N., Clappison.—Bull calf 2 months fit for service.

Taylor, F. W., Wellman's Corners.—1 bull, 2 years; 1 yearling bull; spring calves both sexes.

Wells & Son, A. C., Sardis, B. C.—1 bull, 7 years; 1 bull, 2 years; 1 calf.

Yuill & Sons, J., Carleton Place.—4 bull calves, under 8 months; females all ages.

Devons.

Harper, Samuel, Cobourg.—2 yearling bulls; heifers and cows.

Holsteins.

Smith, S. E., Dundas.—1 bull, 14

months; 2 heifer calves, 3 to 4 months.

DOMINION SHEEP BREEDERS' ASSOCIATION.

Leicesters.

Armstrong, G. B., Teeswater.—Rams and ewes, various ages.

Douglas, Jas., Caledonia.—Shearling ewes and rams.

Jeffs & Son, E., Bond Head.—Both sexes, all ages.

Smith, A. W., Maple Lodge.—20 young rams; 30 shearling ewes,

Suffolks

Bowman, Jas., Guelph.—Ewes and rams.

Dorsets.

Phillips, F. W., Oakville.—Lambs, both sexes; shearling rams.

Shropshires.

Yuill & Sons, J., Carleton Place.—1 ram, 3 shears; 2 rams, 2 shears 4 shearling rams; 10 ram lambs; ewes all ages.

DOMINION SWINE BREEDERS' ASSOCIATION.

Chester Whites.

Birdsall & Son, F., Birdsall.—Both sexes, 8 weeks.

McCabe, Anson, Mt. Wolfe.—70 pigs from 6 weeks to 6 months.

McPherson, Alex., Rutherford.—Pigs both sexes, 6 weeks; boar, 2 years.

Yorkshires

Hurley & Son, J. M., Belleville.—12 boars, 6 to 10 weeks; 9 sows, 8 weeks.

Phillips, F. W., Oakville.—Pigs all ages.

Rogers, L., Weston.—10 sows, 6 months; 32 young pigs, both sexes.

Berkshires.

Jeffs & Son, E., Bond Head.—1 yearling boars; 5 sows, 8 months; pigs 2 months.

Snowden, Samuel, Bowmanville.—5 boars, 5 months; 1 boar, 15 months; 3 sows, 8 weeks; 1 sow, 5 months.

Wells & Son, A. C., Sardis, B. C.—Boars and sows.

Yuill & Sons, J., Carleton Place.—1 boar, 13 months; 1 boar, 8 months; 6 boars, 6 weeks; sows all ages.

McDonald, Wm. R., Ridgetown.—1 boar fit for service; 20 young pigs, both sexes.

FARM HELP EXCHANGE.

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

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

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

Help Wanted.

Wanted a young man with some experience to work on a farm in Simcoe county. No. 962. a.

Wanted.—A trustworthy and reliable man and his wife to work on a 100 acre farm in the United States. The man must be capable of taking care of a valuable pair of horses and must be willing to follow the instructions of the foreman. The woman must be neat and thrifty and willing to do as she is taught. Comfortable home. Wages \$30.00 a month each. No. 963. a.

Wanted.—Right away a reliable man with no bad habits, one who can milk and do general farm work. \$18 per month for 7 months or \$165 per year. No. 964. a.

Wanted.—A good man to do all kinds of farm work, plough and be kind to horses. Will engage six months or a year. Good wages to satisfactory man. No. 956. b.

Wanted.—A young man or strong boy to work on a 150 acre farm near Cookstown. Good wages. No. 957. b.

Wanted.—A foreman on a ranch in the Northwest Territories. Must be capable and thoroughly reliable, have a general knowledge of stock and the putting up of buildings and corrals. References wanted. Salary \$420 a year and board. No. 958. b.

Domestic Help Wanted.

Wanted.—A girl or woman to do house work on a farm. Small family. Good home. Must be respectable, experienced and willing to make herself useful. No. 959. b.

Wanted.—A girl or woman to do house work on a farm. Wages \$7 a month. Farm near Thornton Station. No. 960. b.

Situations Wanted.

Wanted.—A position on a farm in Manitoba by a man who has had

years of experience in taking care of stock and general farm work and is competent of taking full charge of a large farm. No. 999. a.

Wanted.—A position on a farm by a young Englishman who has had no experience but is very anxious to learn farm work. No. 1000. a.

Wanted.—A position as farm manager on an up-to-date farm by a man who has full knowledge of farm work. No. 1001. a.

Wanted.—A position on a farm by a young man who has had no experience in farm work but who is very anxious to learn farming in all its branches. He is sober, industrious, and willing to learn. No. 1002. a.

Farm for Sale.

For sale, 90 acre farm $\frac{1}{2}$ mile from Petrolia. Good buildings; well watered; good fences; also 100 quart milk route, bottles, etc. Good dairy farm. No. 961. 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 his head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to the superintendent he will be put in direct communication with the institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes

Annual Meetings.

The following schedule was not arranged in time for last week's issue.

Delegate.—Miss Blanche Maddock, Guelph.

Subjects.—"Domestic Science", "Dairying", "Bread Making", "Bacteria", "Women's Institutes", "Mission of Flowers and how to grow them."

Meetings.

Chatham, E. Kent..... June 16
Wheatley, W. Kent..... June 17
Strathroy, W. Middlesex... June 18
Aylmer, E. Elgin..... June 19
Waterford, N. Norfolk..... June 20

Women's Institutes.

In last week's issue of the Gazette, the following errors occurred, in giving the dates of meetings:

SECTION I

Durham, S. Grey, June 6th, should be June 5th.

SECTION II

Omamee, Victoria E., June 4th, should be June 6th; Agincourt, York E., June 6th, should be June 7th.

In alphabetical list of meetings of Farmers' Institutes, Clifford, Union Institute, reads June 14; should be June 4th.

The following were received too late for insertion last week.

Addington, Centreville..... June 14
Amherst Island, Stella..... June 7

Leeds Institute will hold their annual meeting at Delta, June 3rd, instead of at Newboro, as advertised last week.

Centre Grey Farmers' Institute will hold their annual meeting at Markdale, June 6th, instead of at Vandeleur, as advertised last week.

Notes from the Secretaries.

Mr. Frank Metcalf, secretary of the Lake Huron Fruit Growers' Association reports that their association is attracting considerable attention among the farmers. On Monday May 12th, an orchard demonstration meeting was held in the orchard of Mr. A. W. Sloan. Mr. Alex McNeill, of Walkerville, Dominion Fruit Inspector and Mr. A. E. Sherrington, of the Experimental Fruit Station, of Walkerton, gave practical demonstrations in spraying, and talks on general orchard management.

Mr. R. Cullis, Secretary West Durham Farmers' Institute writes us of a successful orchard demonstration meeting held on the 8th inst., at Camborne, in the orchard of Mr. Wm. Parsons. Messrs. E. Lick, of Oshawa and T. J. Carey, of Cobourg, Dominion Fruit Inspectors were the speakers. As a result of the meeting a local Fruit Growers' Association was organized to be known as the Township of Hamilton Local Fruit Growers' Association. The following officers were elected:—

Pres.—Mr. Thos. Davidson, Camborne.

Vice-Pres.—Wm. S. Carr, Cobourg.

Sec. Tres.—R. Cullis, Camborne. Nearly every one present joined the association. An adjourned meeting of the society will be held in Cobourg on June 10th at 2.30 p. m.

Potato Culture.

BY R. A. FOWLER, EMERALD, ONT.

By the outset, I wish it to be understood that in preparing this little paper on potato culture, I do not lay claim to much originality, a good many of the ideas contained in it being taken from the writings of other men in the Agricultural papers, more particularly those of T. B. Terry, of Hudson, Ohio, who has made potatoes his specialty for twenty-five years and produces thousands of bushels of them every season.

When we consider that potatoes contain almost all the properties that are necessary to sustain life, that they are used once, or perhaps twice a day, in every household in town and country, and that from the nature of their growth every year's demand must be filled by that same year's supply, it be-

ing impossible to have any accumulation of old stocks, the importance of having a good crop each and every year becomes at once apparent. To do this the first thing to be done is to select the best soil for the purpose, which for potato culture is without doubt sandy loam, but unfortunately right here in our vicinity there is very little of that class of land. Heavy is out of the question for several reasons. If the early part of the season should be wet and cold, the seed is liable to perish, the land will probably become so hard that the tubers will not attain a proper growth and are almost sure to be more or less "scabby" or wormy. In the face of these difficulties I would suggest each of us selecting a piece of land that we think from experience best suited to the purpose, where the drainage is good and where we have about three

SICKNESS OF LITTLE PIGS

LITTLE pigs often sicken and die from no apparent cause. Their hair will become harsh and dry, their eyes will have a glassy look and they will appear uncomfortable and stupid. All this may be in spite of good care and a comfortable, dry pen. The trouble is with the mother. She is getting food which she cannot properly assimilate, and therefore the milk she furnishes the little pigs with is, to them, indigestible. All this difficulty may be avoided by feeding Herbageum to the mother. But in cases where the little pigs are already sick, and immediate action is required, a little Herbageum put in their mouths will very often effect a cure. But if the mother is fed Herbageum from the beginning there will be no trouble of this kind with the young ones, and of course there will then be no cure required. Many farmers testify to the merits of Herbageum when fed to pigs, but we will give a letter here from the Inger oil Pork Packing Co., of Ingersoll, Ont. They are well known, responsible people, and their opinion is valuable:

"Ingersoll, Ont., Nov. 30, 1900.
"The Beaver Mtg. Co., Galt, Ont.

Dear Sirs.—We have much pleasure in stating that we have used quite a little of your Herbageum, and we have found that it quickly puts unhealthy hogs in a thriving condition. It seems to cleanse them from worms and strengthens their backs and legs, and we have found them to fatten much quicker by its use. It pays, we believe, to feed it to little pigs regularly, as well as when you are preparing them for market. We also believe it a good thing to feed to sows while suckling their pigs. Wishing you much success, as we believe it is a great benefit to the country, we are, yours truly,
THE INGERSOLL PACKING CO.
"per C. C. L. Wilson."

times the area that we wish to plant with potatoes each year. In this way we may have a regular rotation, potatoes first, then barley and seed with red clover, and after cutting the clover one season, break again for potatoes.

I have chosen barley to seed with as I consider that of all the cereals it is the least exhausting to the soil.

Manure should be applied liberally, but never the same season that potatoes are grown, as the land will be more likely to dry out and very likely scab will be produced on the tubers. It is generally conceded that manure should be applied after digging and plowed under in the fall. But all this does not insure our having a good crop every year, there is something else still wanted, and that no doubt is tile drainage. Of this I have had no experience but from what I hear and read I feel satisfied that it would make us about sure of a good crop of potatoes every time. Of course with the most of us this is impossible to any great extent, but as the area required for this crop is comparatively small, I think underdraining could be done by degrees at a very small cost, a cost which would probably be returned in a single season of extreme wet.

The ground having been selected and prepared and sufficient fertility arranged for, the next question is when shall we plant. I think most of us make the mistake of planting our potatoes when we are ready instead of when the land is ready. Land should not be touched until it is so dry that it requires very little labour after the plow. The tramping of horses after plowing being just what we should avoid as much as possible, and the sooner the seed is put in after plowing the better.

I think the most of us make the mistake of putting in too much seed. I find that I can get the best results by using small potatoes (not very small ones) for seed. Let them be sound and well formed, then cut the potato in two, putting one of those sets and no more in a hill.

Many friends assure me that it makes a great difference at what stage of the moon potatoes are planted, it is easy to see how one may be led to think so. Very slight causes will change the yield of potatoes, a shower and a few cool nights at just the right time may put fifty bushels or more on an acre, and how easy it would be to attribute the result to a wrong cause. For my part I believe I know quite as much about raising potatoes as the man in the moon.

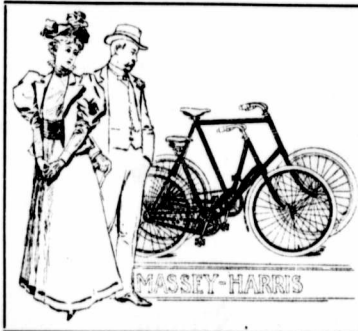
With regard to the distance apart that potatoes should be planted Mr. Terry speaks thus: "With wheat the richer the land the less seed should be sown, because it will stool out more on rich land than on poor, but with potatoes the reverse seems to be the case, the richer the land the nearer together we may plant. The idea is this, there is only a certain amount of plant food available for the

crop, therefore vary the distance apart as nearly as you can so that there will be just about enough potatoes set to use up all this food in growing to a good nice size. Now with these matters in mind try to come as near as you can."

For the medium early sorts generally grown here, drills thirty-six inches apart and a piece of seed

about every sixteen inches in the drills seem to be about right. A great deal has been said and written about drill versus hill culture. After testing both pretty thoroughly I have quite decided that with proper management, drill culture, rather deep planting and very slight hilling promise the best results at the least expense.

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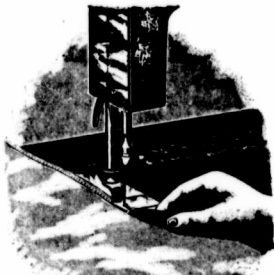
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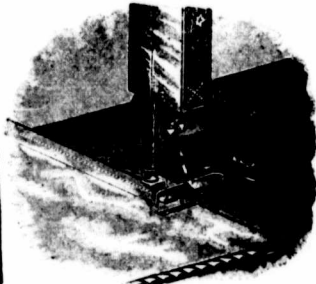
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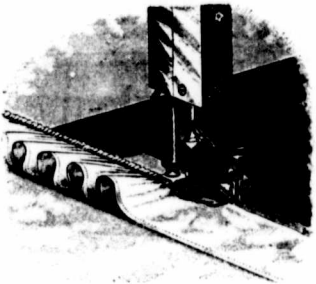
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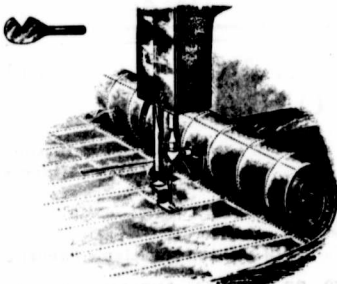
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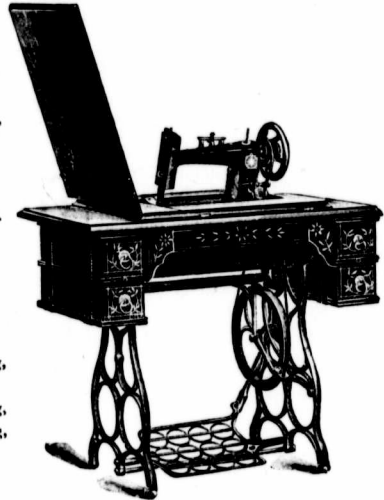
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The Farm Home

Fagged Out.

I want to let go,
To drop the whole thing,
The worries, the frets,
The sorrows, the sins,
Just to let myself down
On the bed or the ground—
Anywhere, so it's down—
And let myself go.

And the folks? I don't care.
And my business? The same.
Hell and Heavens? Too tired.

I want to forget,
And I don't want to say
What I want to forget,
And I don't want to think,
Just to let down my nerves,
Just to smooth out my brain
Just to sleep. And that's all.

Please let me alone
With your pillows and things;
'Tisn't that that I want,
Nor a doctor, nor folks.
I just want to let go.
Oh, I want to let go.

—Amos R. Wells, in Lippincott's Magazine.

The War Cry of the Dairy Conference.

TAKE UP ARMS AGAINST THE FOE—
UNCLEANLINESS.

Dairy experts and instructors from many parts of the Dominion met in conference in Ottawa last week, and discussed the dairy situation in Canada in all its varied phases.

It is said that in numbers there is strength, but the chosen few in this case did more real good work, than a large convention could accomplish.

I listened attentively to all that was said and the note that was the most frequently struck, was that the lack of cleanliness was the curse of the dairy business. To think that in this 20th century after years of instruction along these lines, that still thousands of dollars are yearly lost through lack of care, is a reflection on the intelligence and thrift of our people. And the blame does not rest on one particular spot. True the larger share was shifted unto the shoulders of the man who produced the milk.

So far as making cheese, the maker's hands are tied, if he has nothing but tainted or dirty milk to handle. As a Frenchman there said, "no clean cows, no good milk, no good milk, no good cheese."

Then again the cheese maker should be able to detect bad milk and should have full control to refuse all milk which he suspects in anyway. Just so long as dirty milk will be taken in at the factories just so long will farmers be neglectful of its care. Having clean milk pails, milking with dry hands in a pure atmosphere, wiping off the udder and flanks of the cow before milking, immediately straining

and cooling the milk in a proper place were points considered necessary to the securing of pure milk.

A reform that must speedily come is the improvement of our factories and creameries. It was stated that not many more than half of the buildings were fit to manufacture food products in.

No care had been taken in the selection of the sites; poor drainage, poor water, cheaply and badly built buildings in the first place, now old and with leaky floors, how could a first class article be expected to come from such places.

Instead of having no pigs within 75 yards of a factory, in some instances they were found rooting and sleeping under the curing room. Factories should be spots of neatness and cleanliness, but how often they are an offense to both the eye and nose. The instructor said that at one factory the smell was so bad his horse would shy and he could not get it near the building.

In his talk a gentleman from Quebec remarked that from appearances in some cases, one might be led to suppose that water was as scarce as in one hotel in South Africa where on a card over the washstand was written this request. "Please do not use soap when washing as the water is needed for making tea."

These no doubt are the extreme cases. Shakespeare says, "Diseases desperate grown, by desperate means must be relieved, or not at all."

It is just these conditions which are lowering the high standard of our Canadian cheese and keeping us from obtaining the highest market price. **What is needed is impress the farmer with the fact that good, clean milk means more money to him;** that the factories and creameries should be well equipped and come up to the necessary sanitary requirements, and that every butter and cheese maker should be especially educated and trained for his work, and only competent, qualified men be allowed to have charge of a factory or creamery.

There was another thing brought to my notice in a forcible way and I hesitate to repeat it, for every day I am realizing more and more, that if much learning doth not make one mad it at least makes one decidedly uncomfortable, and in very many cases ignorance is certainly bliss. I have always looked on flies as a nuisance, they buzz around, soil things and prove most provoking if one wants to sleep. But when one hears how flies are loaded down with all sorts of bacteria and that one minute they may be crawling over the slime in the factory gutter and the next sailing around in the milk in a cheese vat, the thought is not an agreeable one. So now it is urged that factories and creameries from a sanitary standpoint be provided with screens.

The conference was a success in every respect and much good to the dairy industry must result from such a meeting.

Laura Rose.

Guelph, April 8th, 1902.

Useful Garden Hints.

CAULIFLOWER.

It seems to be the general impression that cauliflowers are hard to raise. I do not think you will find any trouble with them. You should start your plants in the way I have directed for cabbage, but they need thorough cultivation and a rich soil. Set them in rows just the same as cabbage and cultivate them well; if it is dry, water them a little, and you will raise some excellent cauliflowers.

CELERY.

This vegetable requires some care. As you already know, you must transplant celery plants several times before they are set in the rows where they are to grow, and finally the celery is banked up to bleach it. This is done by drawing the earth gradually around the plants. The most desirable kind is the Boston Market, which has been a standard for years. Should you not wish to grow your own plants from seed, you can purchase them from your seedsman, and they should be set out by the first of July. They should not be set out earlier than this for the best results.

SWEET CORN.

No garden would be complete without sweet corn. Probably it is the one vegetable that without exception everybody likes. In arranging your supply, you want to be sure and use early, medium and late varieties in such proportion that you will have good supply of this most delicious vegetable from very early in the season until frost comes. There is nothing better for the early corn than the early Crosby; in fact, if you plant this variety at intervals of two weeks, from the first of May until the fourth of July, you will have a supply throughout the season. The best medium season variety is Potter's Excelsior, and the best late sort is Stowell's Evergreen. A good way is to make a planting of the early Crosby corn about the fifteenth of May in this latitude and then after waiting about two weeks make another planting, and so on, using the medium and late varieties as your judgment will dictate. Of course, in order to have the very best sweet corn, you know that it should be picked just as near the time it is to be boiled as possible.

Monkey Brand Soap removes all stains, rust, dirt or tarnish—but won't wash clothes.

CUCUMBERS.

Almost every one likes cucumbers. You want some for the table and some for pickles. If you only have space for a few, one variety will suffice for both the table and pickling, and probably the kind that will give the best results is the Improved White Spine. There are many varieties for pickles as well as for the table, but I do not know of any that will give better satisfaction than the White Spine for the table and the Boston Pickling for pickles. Make hills and sow from six to ten seeds in a hill, and when well up thin out to three plants in a hill. Allow them to make their fourth leaf before thinning out, and you will then be sure that the bugs will not destroy them, as when this size they will grow away from the bugs.—American Kitchen Magazine.

Killing Cabbage Worms.

A subscriber asks: Please give a remedy for cabbage worms?

Owing to the great danger when poison is used to destroy cabbage worms it is necessarily a most difficult task to destroy them. The larvae of certain moths bore into the head of the cabbage where they are beyond the reach of treatment of any kind. The best treatment, necessarily, therefore, must be done while the plants are still young. Kerosene emulsion is recommended for their destruction. This emulsion is made by boiling one pound of laundry soap in a gallon of soft water. When hot remove this mixture from the fire and add two gallons of coal oil which has been previously warmed by standing in the sun. Stir freely for a period of ten minutes afterwards and dilute ten times before spraying.

Smothering Black Knot.

JOE A. BURTON, INDIANA.

Last spring my wife was assisting in removing the paper sacks from crop-pollinated apples. Passing an Abundance plum tree, we discovered black knot near the base of a limb well loaded with plums. We decided not to remove the limb until the plums ripened, but my wife, afraid the knot might spread to other limbs or trees, carefully bound it with the paper sacks and tied them carefully above and below the knot.

Going to the tree a few days ago to remove and burn the knot, I found it dead and the wound it had made healed over. I was astonished. I resolved to tie paper around more knots and see if they would die. Then I began to think about it. How could paper wrapped tightly about black knot kill it? Why, of course it would kill it. Smother it out, just as a straw pile would smother out briars, Canada thistles or anything else. Black knot is a plant as much as a briar or a thistle. Simply shut off its breath and it is bound to die.

I have some corroborative evi-

dence along this line. Last winter, by the direction of our state entomologist, Prof. J. Troop, I warned the people in Orleans to destroy all the black knot on their plum trees. One man wrapped the knots on his trees and then bound them with rags. I have examined these knots and find them mostly dead and the wounds healed. The rags were not so air tight as the paper; hence the incompleteness of the work.

AN INSINUATION.

Mrs. Uppton—My daughter both plays and paints, professor.

Prof. Blunt—I have never heard her play, but I am aware she possesses remarkable talent as an artist.

Mrs. Uppton—So you have seen specimens of her work?

Prof. Blunt—Well, er—I have met the young lady, you know.

Unfelt Troubles.

A gentleman given to habits of extravagance found himself at last in the bankrupt court, and was severely questioned by the presiding official.

"At what precise date did you first find yourself in trouble?" asked the judge.

"I beg your pardon. I do not understand," said the gentleman with a puzzled air.

"The question is a very simple one." (Sharply.) "Please answer it. At what precise time did your troubles begin?"

With an air of the utmost perplexity the gentleman gazed around the court until his eyes rested upon the anxious countenances of his creditors; then, with a genial wave of his hand in their direction, he said pleasantly:

"Oh, you must mean these gentlemen's troubles. I can't say I've had any myself."

And, on thinking the matter over the judge agreed with the bankrupt's opinion.—London Telegraph.

In the Dairy

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\$5,000 Reward will be paid by Lever Brothers Limited, Toronto, to any person who can prove that this soap contains any form of adulteration whatsoever, or contains any injurious chemicals.

Ask for the Octagon Bar. 215

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FREE SAMPLE OF LIEBIG'S FIT CURE.

If you suffer from Epilepsy, Fits, Falling Sickness, St. Vitus Dance, or have children or relatives that do so, or know a friend that is afflicted, then send for a free trial bottle with valuable Treatise, and try it. The sample bottle will be sent by mail, prepaid, to your nearest Post Office address. It has cured where everything else has failed. When writing, mention this paper and give name, age and full address to THE LIEBIG CO., 179 KING ST. WEST, TORONTO, CANADA.

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A first application on boil or ulcer, sore or pimple, soothes the burn, stops the throbbing, allays the itch; in a short time the poison causing the sore is also dead, the blood builds up new tissue, and the boil, or pimple, or sore disappears.

It will not return if NO-CHI-MO-WIN Resolvent is used in connection with the salve. No-Chi-Mo-Win Resolvent is a tablet for internal use. It is the best of tonics; it strengthens the stomach, activates the liver, sends fine, strong, pure blood coursing through the veins, revives youth, and is the best known permanent cure and preventative for disfiguring sores and pimples, and painful boils and ulcers.

No-Chi-Mo-Win Salve and Resolvent together form a positive guaranteed cure for all skin troubles and any purchaser can have his money refunded if they do not prove as represented. Neither are sold at drug stores.

No-Chi-Mo-Win Salve costs 50 cents per box; No-Chi-Mo-Win Resolvent, 50 cents per box. The complete treatment is sent postpaid, securely sealed, on receipt of \$1.00.

Chimo Chemical Works, Wlarton, Ont.

N.B.—This treatment is a positive cure for piles.

Hints by May Manton.

WOMAN'S SHIRRED WAIST, 4128.

Simple shirred waists are always becoming to slender figures and are revived among the latest of the season's styles. This pretty model is shown in pale pink mousseline with collar and cuffs of cream lace and is charming, but all pliable fabrics are appropriate in silk, wool and cotton.

The foundation lining fits smoothly and snugly. On it is arranged the waist proper which is cut in



**4128 Shirred Waist,
32 to 36 bust.**

one piece; shirred to yoke depth, and stitched to it on the lines of the shirrings. The sleeves are shirred in harmony and give the snug effect above with soft full portion below that is suggestive of the Hungarian style. At the wrists are cuffs that are formed in points over the hands, and at the neck is a regulation stock, which last closes with the waist at the centre back. By using thin material, the same as the outside, for the lining and cutting of at the last line of shirring in waist and sleeves a transparent effect can be obtained while at the same time the shirrings are held in place.

To cut this waist for a woman of medium size 5 yards of material 21 inches wide 4 1/4 yards 27 inches wide, 3 1/4 yards 32 inches wide or 3 yards 44 inches wide will be required with 1/2 yard of all-over lace for collar and cuffs.

The pattern 4128 is cut in size for 32, 34 and 36 in. 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.

Words of Wisdom for the People.

If you would know what a dollar is worth, try to borrow one.

When the dog is down, every one is ready to bite him.

Gold is an idol worshipped in all climates without a single temple,

and by all classes without a single hypocrite.

A good fame is better than a good face.

When fools go to market, peddlers make money.

When industry goes out of the door, poverty comes in at the window.

He who serves well need not be afraid to ask his wages.

He who has four and spends five, has no need of a purse.

He who buys wants a hundred eyes and he who sells need have but one.

A young man idle, an old man needy.

A good paymaster never wants workmen.

Who undertakes many things at once, seldom does anything well.

A good wife and health are a man's best wealth.

A man can never thrive who has a wasteful wife.

A man of words and not of deeds, is like a garden full of weeds.

It is no use hiding from a friend what is known to an enemy.

A lass that has many woovers oft fares the worst.

A wealthy man who obtains his wealth honestly and uses it rightly is a great blessing to the community.

One plows, another sows—who will reap no one knows.

Before you marry, be sure of a house wherein to tarry.

Hear one man before you answer; hear several before you decide.

A bridle for the tongue is a necessary piece of furniture.

Where you can not climb over you must creep under.

Spending your money with many a guest, empties the kitchen, the cellar, and chest.

A handful of common sense is worth a bushel of learning.

Soft words, warm friends; bitter words, lasting enemies.

The two best books to a child are a good mother's face and life.

Another man's trade costs money.

Seek not to please the world, but your own conscience.

Truth—the open, bold, honest truth—is always the safest, for any one, in any and all circumstances.

He that will not be connected can not be helped.

What children hear at home soon flies abroad.

As every thread of gold is valuable, so is every minute of time.

Resented the Question

Representative Williams of Mississippi has a new negro story.

"Are you the defendant?" asked a man in the court room, speaking to an old negro.

"No, boss," was the reply. "I ain't done nothing to be called names like that. I see got a lawyer here who does the defending."

"Then who are you?"

"I see the gentleman what stole the chickens."

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AND WALL FINISH
IN METAL. . . .**

There is nothing to equal them—cost and utility being considered. Fire proof, everlasting, sanitary and highly ornamental.

Can be applied without disturbing the plaster, and cost is not large. We have many patterns - to - select - from.

Send accurate size of room for free estimate and catalogue.

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IMPROVED**

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WASHER.

Will wash more clothes in less time, do it better and easier, with less wear and tear, than any other machine.

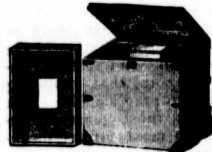


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The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

D. T. McARNSH, PUBLISHER
J. W. WHITSON, B. A., EDITOR.

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Receipts are only sent upon request. The date opposite the name on the address label indicates the time up to which the subscription is paid, and the change of date is sufficient acknowledgment of payment. When this change is not made promptly notify us.

Discontinuance.—Following the general desire of our readers, to subscribe a copy of THE FARMING WORLD is discontinued until notice to that effect is given. All arrears must be paid.

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Advertising Rates on application.

Letters should be addressed:

THE FARMING WORLD,
CONFEDERATION LIFE BUILDING,
TORONTO.

QUESTIONS AND ANSWERS

Definition of Pure-bred, Thoroughbred, and Standard bred.

T. E. M., Bridgeburg, Ont., writes: "Will you kindly answer the following question in the next issue of your valuable paper: What is the distinction in the terms, pure-bred, thoroughbred and standard-bred?"

There has been a difference of opinion and considerable discussion at times, among the breeders as to the exact meaning of the first two of these terms. One authority defines a purebred animal as one of unmixed lineage whose characteristics are well defined and which breeds true to the type in every essential particular including form, color, temper and power to transmit the same. This authority quotes the Devons as coming nearer to filling all these requirements than any other cattle. The same authority defines a thoroughbred as the descendant of animals originally of mixed lineage, but which have been interbred for so long a time, without further mixture, that they come essentially true to the type desired. As examples of thoroughbred this authority gives Short-horns and Herefords among cattle, and racing horses.

While these definitions may be correct as defining the origin of the terms "purebred" and "thoroughbred" they are somewhat confusing when applied to practical live stock matters. The most generally accepted and the most correct meaning of these terms as we understand them and as defined by their use at the present time among breeders and others interested is that a

"purebred" animal is one eligible to register in a recognized herd book of the breed to which it belongs, while a "thoroughbred" is the name of a particular breed of horses.

A standard-bred" is a trotting horse that comes up to the standard adopted by the National Association of trotting-horse breeders of the United States.

Destroying Wild Mustard

Mr. M. W. Doherty, Associate Professor of Biology, at the Agricultural College is arranging for a series of experiments throughout the western portion of the province for the purpose of destroying wild mustard. Last summer he conducted a series of experiments in Eastern Ontario with marked success, and the same line of work will be continued this summer in the west. Last week Mr. Doherty was in the Woodstock and Ingersoll districts. The plan is to destroy the mustard by spraying the crop with a solution of bluestone (sulphate of copper) and water. This is sprinkled on the crop when the mustard plants are in bloom, and though it is not injurious to the grain it practically puts all the mustard plants with which it comes in contact out of existence. The cost to the farmer is but 75c per acre for the chemicals. This method of destroying mustard has been tried in Great Britain with great success.

Montreal Horse Show

The third annual Montreal Horse Show, held on May 6th to the 10th, was a success though the exhibitors were nearly all from the city of Montreal. Among the outside exhibitors were Mr. and Mrs. Adam Beck, London, Geo. Pepper, Toronto, and Robt. Ness and Dr. John Watson, Howick, Que. The number of exhibitors totalled 200. Mr. Robt. Ness was the chief exhibitor and winner in the heavy draft classes. His exhibit comprised only Clydesdales, of which he had some very fine horses in the ring, including his imported Baron Lang, and his home bred Laurentian. There was a fair display of draft teams.

A Profitable Canadian Farm.

People in Ontario may sometimes feel that this province alone contains the most profitable farms. But it would seem that not all the good things in agriculture are to be found in the banner province as the following item from a New Brunswick exchange shows:

"The recent sale is reported of a 125 acre farm near Caribou, Aroostook Co., for \$6,000. Thirteen acres of this farm are in pasture and woodland, and the balance of 90 acres was under cultivation last year. The crops harvested are enumerated as follows:
20 acres potatoes, 2,575



Small crops, unsalable vegetables, result from want of

Potash.

Vegetables are especially fond of Potash. Write for our free pamphlets.

GERMAN KALI WORKS,
93 Nassau St., New York.

25 to 30 per Cent. More Oats

grown by the use of Thomas Phosphate than by BONE MEAL and SUPER-PHOSPHATE, at the PROVINCIAL FARM, TRURO, N.S., vide Annual Report of the Secretary for Agriculture, N.S.

Thomas - Phosphate Flour

("Leads Basic Phosphate.")

One Quality The Highest
One Price The Cheapest

For particulars address

G. Campbell Arnott,
AGRICULTURAL CHEMIST,
12 Richmond Street East, - TORONTO.
Agent General in Canada of the Manufacturers.

| | |
|--|------------|
| barrels, sold for | \$4,675.00 |
| 3 1/2 acres wheat, 854 bush- els, sold for | 735.20 |
| 13 acres oats, 618 1/2 bush- els, sold for | 247.50 |
| 3 1/2 acres hay, 50 tons, sold for | 400.00 |
| 1/2 acre orchard, 45 barrels, sold for | 75.00 |

\$6,132.70

According to these figures the yield per acre was as stated below:

- Potatoes, 128 1/2 barrels.
- Wheat, 27 bushels (about.)
- Oats, 37 bushels, (about.)
- Hay, 1 1/2 tons, (about.)
- Orchard, 90 barrels.

"The owner claims to have kept an accurate account of expenses which he places at \$2,127, leaving a net profit of \$4,005.70 on his season's operations. This farmer's yield of potatoes was larger than is often realized by our farmers and he got better prices for them than our farmers often do, but his crops of wheat, oats and hay were inferior to those of our better class of farmers and he sold them for less than the average prices in this province."

From this it will be seen that the gross cash receipts in 1901 were more than enough to purchase the farm. The net returns show a profit of 65 per cent. on the investment. In what other business could a better investment be had. If that farm were purchased on the basis of an ordinary investment in some manufacturing, mercantile or financial concern it should have sold for somewhere in the neighborhood of \$60,000. Are Canadian farms valued at what they are really worth?

\$50 Round Trip to California.

Chicago & North-Western R'y from Chicago, May 27-June 8. The New Overland Limited, the luxurious every day train, leaves Chicago 8.00 p. m. Only three days en route. Unrivaled scenery. Variable routes. New Drawing Room Sleeping Cars and Compartment Cars, Observation Cars (with telephone). All meals in Dining Cars. Buffet Library Cars (with barber). Electric lighted throughout. Two other fast trains 10.00 a. m. and 11.30 p.m. daily. The best of everything. Daily and personally conducted tourist car excursion to California, Oregon and Washington. Apply to your nearest ticket agent or address. B. H. Bennett, Gen'l. Agent, 2 East King Street, Toronto, Ont.

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MESH
AT
BOTTOM

Page Acme Poultry Netting
is close meshed at bottom and does not require rail or board support at edges, having strong straight wire (No. 12 gauge) at top, bottom and in center, cannot sag and is easy to erect. The "Page Acme" netting is of neat appearance, very durable and cheap. We also make farm and ornamental fences, gates, nails and staples. The name of Page is your guarantee of quality.
The Page Wire Fence Co., Limited, Walkerville, Ont.

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Four Reasons Why

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Will Pay for Itself Every Year.



First.—You can get all the cream out of the milk; which is not the case with other systems.

Second.—Separator cream sells for more than hand-skimmed cream, and butter from separator cream sells for more than from hand-skimmed.

Third.—The skim-milk, while fresh, warm and sweet, is worth three or four times as much to feed to your calves and pigs.

Fourth.—Time and labor is saved by not having to wash so many milk pans; which makes it much easier for the women of the house.

The U.S. SEPARATOR saves in actual cash results \$10.00 or more per cow per year, and makes dairy work a source of profit and satisfaction, instead of unending drudgery.

270 VT. FARM MACHINE COMPANY, Bellows Falls, Vt.

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Pine Grove Shorthorns and Shropshires

150 | Our herd comprises over 150 females, including our last importation of thirty head. | **150**

The following celebrated families are represented:
Missies, Nonpareils, Brawith Buds, Orange Blossoms, Butterflies, Lancasters, Secrets, Clippers, Amaranths, Mayflower, Roan Lady, Minas,
 Headed by the famous Marquis of Zinda 157854, own brother to the \$6,000 Marr imported Missie 153, assisted by Sittytton Champion 1660076, Lord of the Manor 160069, and Village Champion (by Scottish Champion). Our new Catalogue will be sent to all applicants.
 Our flock of Shropshires is a large one, and choicely bred. We have on hand and for sale a grand lot of rams, also a few ewes, all bred from imported stock.
 For further information address--

Manager, **JOS. W. BARNETT.** W. C. EDWARDS & Co.,
Rockland, Ont.


AYRSHIRES AND YORKSHIRES

FOR SALE

I have a number of choice cows and heifers, 2-year old heifers in calf, and bull and veifer calves sired by "Blair Athol of St. Annes." Breeders will find this a rare opportunity to get choice Ayrshires at low prices. I have three choice litters of Yorkshire pigs, six weeks old, ready to ship. Quick buyers will get bargains.

JOHN H. DOUGLAS, Warkworth, Ont.

OAK LODGE YORKSHIRES



Years of CAREFUL BREEDING have made the OAK LODGE YORKSHIRES the Standard of Quality for IDEAL BACON HOGS.

The championship against all breeds has been won by this herd for 4 years at the Provincial Winter Fair, on foot and in dressed carcass competition.

Prices are reasonable.
J. E. BRETHER, Burford, Ont

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EVERY PATRON OF EVERY FACTORY

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. 25¢ a hundred. \$2.00 a thousand.

Sample Card Free

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- \$ 15.00** To Denver, Colorado Springs, and Pueblo, C. Co., June 22 to 24, inclusive, July 1 to 13, inclusive.
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- \$25.00** To Salt Lake City and Ogden, Utah, August 1 to 14, inclusive.
- \$25 00** To Glenwood Springs, Colo., June 22 to 24, inclusive, July 1 to 13, inclusive.
- \$30.00** To Salt Lake City and Ogden, Utah, June 22 to 24, inclusive, July 1 to 13, inclusive.
- \$ 31.00** To Glenwood Springs, Colo., June 1 to 21, inclusive, June 25 to 30, inclusive.
- \$32.00** To Salt Lake City and Ogden, Utah, June 1 to 21, inclusive, June 25 to 30, inclusive, July 14 to 31, inclusive.
- \$45.00** To San Francisco or Los Angeles, Cal., May 27 to June 8, inclusive, August 2 to 10, inclusive.
- \$45.00** To Portland, Ore., Tacoma and Seattle, Wash., May 27 to June 8, inclusive, July 11 to 21, inclusive.

Full information cheerfully furnished on application to

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BRITISH COLUMBIA FARMS

If you are thinking of going out to the Pacific coast, try British Columbia. A delightful climate, no extremes of temperature, fertile land, ample rainfall, heavy crops, rapid growth, and splendid market for everything you raise at good prices. The celebrated valley of the Lower Fraser River is the garden of the province. Write for farm pamphlet telling you all about it and containing a descriptive list of farms for sale. **The Settlers' Association of B.C.**
Box 540, Vancouver, B.C.

**WOOD ENGRAVING,
PHOTO ENGRAVING,
HALF TONES
168 BAY ST.
J.L. JONES ENG. CO.
TORONTO**

Supt. of P.E.I. Institutes.

Mr. E. J. McMillan, a graduate of the Ontario Agricultural College has been appointed superintendent of Farmers' Institutes for Prince Edward Island. He will also manage the government farm and lecture on agriculture in the Prince of Wales College.

The Weight of Fowls.

Farmers' Bulletin No. 141 United States Dept. of Agriculture, gives the following as the standard weights, in pounds, of males and females of different breeds of fowls:

| | | |
|----------------|------------------|-------|
| Plymouth Rocks | ... 9 1/2 | 7 1/2 |
| Wyandottes | ... 8 1/2 | 6 1/2 |
| Light Brahmas | ... 12 | 9 1/2 |
| Dark Brahmas | ... 11 | 8 1/2 |
| Cochins | ... 10 1/2 to 11 | 8 1/2 |
| Langshans | ... 10 | 7 |
| Minorcas | ... 8 | 6 1/2 |
| Spanish | ... 8 | 6 1/2 |

The Leghorns are smaller than the Minorcas and Spanish and have not been classed in standard weights. The Rhode Island Red is a promising general-purpose breed, resembling in size and form the Plymouth Rock. It has been developed by crossing and selection, but has not yet been admitted as a standard breed.

Milking at Uneven Intervals.

A number of experiments have been conducted at the Central Experimental Farm during the past year to determine, if possible, the effect of milking at unequal intervals upon the quality and quantity of the milk produced.

The hours of the experiments have been (1st) 6 a.m. and 6 p.m.; (2nd) 6 a.m. and 4.30 p.m.; (3rd) 5 a.m. and 1 p.m. So far as the experiments have gone there appears to be no difference in the net returns nor in the average quality of the milk, but the experiments have shown clearly that the milk produced after a long interval is of a larger quantity but of poorer quality than the milk produced after short intervals between milkings which, while small in quantity, is of very good quality. The difference between the per cent. of butter fat after a short period and after a long period has been as much as two per cent.

A Correction.

In our last issue the address of Hall & Son, proprietors of the Beaver Digger was made to read "30 Bay St.," instead of "50 Bay street, Toronto".

Little Tommy Whackem was taken by his mother to choose a pair of knickerbockers, and his choice fell on a pair to which a card was attached, stating, "These can't be beaten."

Husband—After all civilization has its drawbacks. People in the savage state seldom get ill.

Wife (sweetly)—I wonder if that is the reason you are so healthy?

Universal Favorites of the Harvest Field.

For Seventy-one years the farmers of the world have been familiar with the name McCormick which has always been identified with the world's best harvesting machines, the universal favorites of the harvest field. The preference given McCormick machines is nothing more or less than the deserved recognition of their double excellence. They are doubly superior, and give the best satisfaction wherever they are sold. They last much longer than ordinary machines. They will do 50 per cent. more work and do the work 50 per cent. better. These machines are fully illustrated and described in the World-Centre and King Corn books which will be mailed free upon application to the nearest McCormick agent or to the company's home office at Chicago.

Ideal Woven Wire Fencing Complete in the Roll

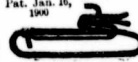
A heavy one-piece stay that will not buckle up and cannot slip. Note the lock. No. 9 hard spring wire throughout. A fence that will last.

McGREGOR, BANWELL FENCE CO., Limited

Windsor, Ont

Coiled spring and other fence wires.

Pat. Jan. 15, 1900



Agents are making as selling the

STANDARD SHOCK and FODDER TIE.

Sells at eight. Write at once for terms and secure choice of territory. Samples free. THE STANDARD FODDER TIE COMPANY, Wauseon, Ohio



ROCK SALT for horses and cattle, in ton and car lots. **TORONTO SALT WORKS, Toronto**



FLEMING'S LUMP JAW CURE
LUMP JAW
Easily and thoroughly cured. No operation, no method, not expensive. No cure no pay. **FREE.** A practical, illustrated treatise on the absolute cure of Lump Jaw, free if you ask for Pamphlet No. 51 Fleming Bros., Chemists, 25 Front St., West, Toronto, Ont.

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Horses

The New Brunswick Government has recently purchased two very fine Clydesdale stallions from Robert Nyes, of Howick, Que., and a Hackney from Graham Bros., Claremont, Ont. In addition, a couple of coach stallions have been secured and the Hon. Mr. Farris, Commissioner, is on the lookout for a suitable thoroughbred stallion. These horses will likely be sold by auction shortly at Fredericton and distributed throughout the Province for the purpose of improving the horses of the country.

Cattle

Lt.-Col. McCrae, of Guelph, recently made a sale of two bulls, one an Aberdeen Angus and the other a Galloway to Mr. C. L. Walker, of Walker's Wood, Jamaica. These are good specimens of the breeds and will maintain Canada's reputation for good stock in the West Indies.

Mr. S. Hoxie, Superintendent of Advanced Registry for the American Holstein-Friesian Association, sends us the following report of official records from April 15th to May 3rd, 1902:

During this period seventy records for seven days each, one for thirty days, one for twenty-one days, two for twenty days each and three for fourteen days each have been received and approved.

The records for seven days average as follows:

Twenty-two full age cows; age 6 years, 8 months; days after calving 25; milk 411.3 lbs.; butter fat 14.152 lbs.; equivalent butter 80 per cent. fat, 17 lbs. 11 ozs., or 16 lbs. 8 ozs. 85.7 per cent. fat; quality of milk 3.44 per cent. fat.

Eight four-year-olds; age 4 years, 5 months, 1 day; days after calving 24; milk 395.3 lbs.; butter fat 12.982 lbs.; equivalent butter 80 per cent. fat, 16 lbs. 3.7 ozs., or 15 lbs. 2.3 ozs. 85.7 per cent. fat; quality of milk 3.28 per cent. fat.

Thirteen three-year-olds; age 3

years, 5 months; days after calving 18; milk 384.6 lbs.; butter fat 13.458 lbs.; equivalent butter 80 per cent. fat, 16 lbs. 13.4 ozs., or 15 lbs. 11.3 ozs. 85.7 per cent. fat; quality of milk 3.50 per cent. fat.

Twenty-five two-year-olds; age 2 years, 5 months, 12 days; days after calving 18; milk 323 lbs.; butter fat 11.183 lbs.; equivalent butter 50 per cent. fat, 13 lbs. 15.7 ozs., or 13 lbs. 0.7 ozs. 85.7 per cent. fat; quality of milk 3.46 per cent. fat.

Joseph Yvill & Sons, Carleton Place, Ont., report the following recent sales:

Ayrshires.—Bull calf, Charmer Meadowside, 13714, sold to Walter Wilson, Sersfield, Ont. He took 3rd prize at Ottawa in 1901, for bull calf over six months, 13 competing. Bull calf, Luxy Meadowside, 13718, sold to Augustin Daoust, Sturgeon Falls, Ont. This calf took first at Ottawa last fall for bull calf under six months.

Bull calf Iroquois Meadowside sold to Pembira A. Macintosh, Dundela, Ont. Cow, Lady Hay, 1998, sold to Samuel Duncan, Johnson's Corners. This cow took 2nd prize at the World's Fair, Chicago, in 1893, as 2 year old heifer. Bull calf, Dewey Meadowside, 13916, sold to T. H. McMahon, Rugby, Ont. This calf took 1st at Ottawa and the same in Almonte in 1901, as bull calf over 6 months. Mary Meadowside 11905, to Miss Laura Bell, Qu'Appelle, Assa. Bull calf, Carrie Meadowside, 14536, sold to W. J. Steele, Newington, Ont. Heifer calf, Teenie Meadowside, 14322, W. J. Steele. Heifer calf, Milkmaid Meadowside, 14631, W. J. Steele. Heifer calf, Cobden Meadowside, 14634, P. A. Graham, Cobden, Ont. Bull calf, Rennie Meadowside, John T. Sutherland, Eganville, Ont. Cow, Helena Meadowside, 11288, to D. McPherson, Carleton Place, Ont. Cow, Hattie Meadowside, to D. McPherson. Birkshire boar, to Ben. Hilliard, Carleton Place. Berkshire

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S

CAUSTIC BALSAM.

None genuine without the signature of
Dr. Lawrence Williams Co.
 Sole Agents for the Province of Ontario
 U. S. & CANADA'S. CLEVELAND, O.

The Safest, Best, **HISTERIC** ever used. Takes the place of all liniments for mild or severe action. Remove all Bunches or Blemishes from Horses and Cattle, **SUPERSPICES ALL CAUTERY or FIRING**, impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.00 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for use. Send for free descriptive circulars. **THE LAWRENCE WILLIAMS CO., Toronto, Ont.**

ALVA FARM GURNSEYS

The Typical
 Dairy Breed

Good
 Animals of
 Both Sexes
 for Sale



SYDNEY FISHER, Knowlton, Que.

JOHN DRYDEN

BROOKLIN, ONTARIO

BREEDER OF

CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP

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

QUEENSTON HEIGHTS SHORTHORNS.

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

HUDSON USHER,

Queenston, Ont.

DAVID McCRAE, Jansfeld, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

Rapids Farm Ayrshires

Reinforced by a recent importation of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at Toronto, London and Ottawa.

Come and See, or
 Write for Prices

Young Bulls and Heifers for sale, bred from high-class imported stock.

ROBERT HUNTER,

Manager for W. W. Ogilvie Co.,

Lachine Rapids, Quebec

OXFORD SNEEP

Sheep all ages. Shearing Rams for Stock Headers and Raising Purposes. Yorkshire pigs all ages. Plymouth Rocks.

John Cousins & Sons,
 Harrison, Ont.



Now

that it has become a well known fact that San Jose Scale, all sucking, and biting insects, and fungus diseases may be exterminated by spraying. It only remains to select a spraying machine best suited to all requirements.

Buffalo, N. Y., April 1, 1902.
 The Spramotor Co.
 Gentlemen:—We take great pleasure in recommending your sprayer machine for applying both cold water and lead and oil paints. We have experimented with several other sprayers and consider yours to be the best of anything we have seen and come to our notice.
 Yours very truly,
 J. B. KING & CO.

CORNELL UNIVERSITY,
 COLLEGE OF AGRICULTURE.

Ithaca, N. Y., May 9, 1902.

Spramotor Co.

Gentlemen:—We have been using your pump in our orchard and demonstration work. Our men speak of it in the highest terms. There is an abundance of power and it works easier than any other pump we have.
 Yours sincerely,
 JOHN CRAIG.

OHIO AGRICULTURAL EXPERIMENT STATION,
 Wooster, O., September 8, 1902.

Gentlemen:—I have used the Spramotor in experimental work. It has given me better satisfaction than anything else I have ever used for spraying ornamental gardens. The machine works easily.
 Yours truly,
 F. M. WEBSTER, Entomologist.

If the Spramotor satisfied these, don't you think it will satisfy YOU?
SPRAMOTOR CO., BUFFALO, N. Y. and LONDON, CAN.



boar, Howard M. Pool, Merrickville, Ont. Berkshire boar to W. J. Cochran, Muldoon, Ont. Berkshire sow, Duncan McNeil, Avenmore, Ont.

Mr. J. B. Ketchum, Manager of Dentonia Park Farm, reports a big demand for Guernseys, especially in the United States, due to some extent to the high stand taken by the Guernseys at the Pan-American Model Dairy. The Dentonia Park importation of 22 head of Guernseys from the Isle of Wight last spring have done exceedingly well. Already 7 cows alone have returned over \$600 in calves sold since coming to Dentonia. Mr. Ketchum also reports an increased demand for Guernseys in Canada, he having sold several fine calves to Ontario purchasers recently. Three of the cows imported last spring have recently calved and are giving over 40 lbs. of milk each per day. The Jerseys and Ayrshires at Dentonia are also looking well and in splendid condition for giving a good account of themselves at the milk pail. At present there are over 80 cows being milked, the entire product of which goes to supply the Farm's high class dairy trade in the city. The supply of calves this year are all of very good quality. There are at present in the stables some as fine Guernsey and Jersey calves we have ever seen. Mr. Ketchum who has been at the farm for several years states that they are the best lot they have ever had.

Dr. Hopkins' Address.

Since the announcement made last week in regard to the appointment of Dr. A. G. Hopkins to represent the veterinary branch of the Dominion Department of Agriculture, we have learned that his address until the close of navigation on the St. Lawrence, will be 52 St. Enoch Square, Glasgow, Scotland. Dr. Hopkins, while still a young man, has had a wide experience, not only as a practical veterinarian, but also in the varied duties of lecturer, author and editor. He graduated from Toronto Veterinary College in 1891 with the degree of V.S. In 1897 he obtained his diploma in Agriculture at the Ontario Agricultural College, Guelph. He has also the degree of B. Agr. from Iowa Agricultural College, of D.V.M. from the Veterinary Department of the Iowa State College, and of M.D.V., (post grad.) from McKillop College, Chicago.

A good balanced ration for feeding cattle, recommended by the United States department of agriculture, is composed of ten pounds shelled corn, five pounds wheat bran, two pounds linseed meal and ten pounds corn stover for steers or cows of 1000 pounds live weight.

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.

**BUG DEATH CHEMICAL CO. LIMITED
ST. STEPHEN, N.B.**

Provan's Patent
REVERSIBLE

Carriers, Fork and Slings

For Round Iron, Wood, or Angle Steel Tracks



Have now become a standard of excellence with the farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only medal and Diploma given on Hay Carriers, Forks and Slings, was awarded to us on these implements. Following is a copy of the Judges' AWARD: "For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop block, which enables perfect control of carriage; no springs required for locking car which has motion in all directions; compact form of fork which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity and usefulness, excellence of material, and construction. Manufactured by

James W. Provan, Oshawa, Ont., Canada
Special Discount for Cash. Correspondence Solicited.

HIGHEST QUALITY LOWEST COST
HIGHEST SPEED
EASIEST OPERATION and ADJUSTMENT
are the Strong Points in the

London Fence Machine

and Fence Woven with it.



No higher quality nor lower cost can be had than with the London. It is beyond comparison ahead of all others for speed, quality of work, and easy adjustment. If you have not yet considered it, write for our catalog and estimates of cost, or wire in 12 styles of fence.

LONDON FENCE MACHINE CO.
London, Canada Limited.

**FOR POWER ON THE FARM THERE IS NOTHING
SO CONVENIENT AS A GASOLINE ENGINE.**

The Goldie & McCulloch Co. Limited

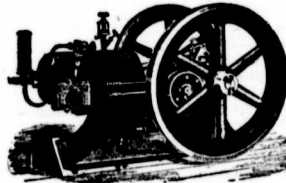
GALT, ONT.

DEAR SIRS,—

Please send me a catalogue describing your

GASOLINE ENGINES

for farm use, also prices of same.



Name

P.O.

This is not an order.

Province

Cut this out and mail to above address.

Market Review and Forecast

Office of The Farming World, Confederation Life Bldg.

Toronto, May 19th, 1902.

General trade continues about the same and the outlook bright. At this season there is always a little falling off in some wholesale lines but the volume of business so far is ahead of last year.

Wheat.

Generally speaking the wheat situation is stronger than a week ago. The United States crop bulletin of May 1st, particulars of which are given elsewhere in this issue is to some extent responsible for this stronger feeling. Besides reports in the spring wheat area indicate a less acreage sown owing to bad weather for seeding than last year. In addition the shrinkage of supplies at primary points has been another factor in favor of the bulls which element seems to have control of the speculative market at the present time. Cable reports show a higher market in England so that on the whole the market is stronger and higher than a week ago. But should the condition of the growing crop continue to improve a reaction may be looked for. There is reported to be from 15,000,000 to 18,000,000 bushels of Manitoba wheat yet to export. No. 1 Manitoba hard is quoted at 77½¢ afloat at Fort William. No business is doing in Ontario wheat for export as millers are paying higher than the export basis. The market here is very firm at from 78¢ to 80¢ for red and white west. Goose is quiet at 68¢ and spring firm at 77¢ for No. 2 East. On Toronto farmers' market red and white bring 73¢ to 83½¢, goose 68¢ to 68½¢ and spring fife 73¢ per bushel.

Oats and Barley.

The oat market continues firm with No. 2 white quoted at 45¢ east and middle freights. On the farmers' market here oats bring 46¢ to 48¢ a bushel.

Barley is a little quieter at from 50¢ to 53¢ at outside points. On Toronto farmers' market malt barley brings 54¢ to 60½¢, and feed barley 53¢ to 54¢ per bushel.

Peas and Corn

The pea market is not quite so strong as a week ago though at this season there is very little doing. Quotations here are 79¢ middle freights and on the farmers' market 84¢ per bushel.

The corn market is steady. Car lots of Canadian are quoted at Montreal at 72¢ to 72½¢ per bushel. Here prices are 61¢ for Canada No. 2 mixed and 62¢ for No. 2 yellow west.

Bran and Shorts

Car lots of Ontario bran are quoted at Montreal at \$19.00 to \$19.50 and shorts at \$22.00 to \$23 per ton. City mills here sell bran at \$19.50 and shorts at \$21.00 in car lots f.o.b. Toronto.

SEEKING AN INVESTMENT?

If you have money you wish to invest safely we should like you to consider our

FOUR PER CENT. BONDS

They are much in demand by prudent investors who prefer unquestionable securities for their capital. We shall be pleased to send a Specimen Bond and all information on receipt of address.

Head Office:

TORONTO ST.,
TORONTO

The Canada Permanent and Western
Canada Mortgage Corporation.

Potatoes.

Though the export demand for the States has fallen off the potato market continues strong. Montreal quotations are 85¢ to 90¢ a bag in car lots. Here offerings are none too plentiful and car lots are quoted at 85¢ a bag. On Toronto farmers' market potatoes sell at 90¢ to \$1.00 a bag.

Hay and Straw.

At Montreal the hay market rules steady under a good local and export demand. Prices at country points have ranged from \$7.00 to \$7.50 f.o.b. for good to choice No. 2 and \$6.50 to \$7.00 f.o.b. for good to choice clover. There is a fair demand here for baled hay and cars of No. 1 timothy are steady at \$10.25 on track. Baled straw is quoted at \$5.00 on track. On Toronto farmers' market timothy brings \$12.00 to \$13.00, clover \$8 to \$10.00 and sheaf straw \$8.00 per ton.

Eggs and Poultry.

Though English egg buyers in Canada have claimed that prices here were too high for export yet some trading is reported at 7s. 6d. to 7s. 8d. per long hundred for fall shipment. It is estimated by well posted men that the production of eggs in Canada is about 25 per cent. less than a year ago. At Montreal the market is firm at 13½¢ to 14¢ in case lots. The market rules steady here with a good demand under large offerings at 13½¢ per dozen in case lots. On Toronto farmers' market new-laid eggs bring 12¢ to 13¢ a dozen.

The dressed poultry trade is dull. On Toronto farmers' market chickens bring 65¢ to 80¢ and ducks 90¢

to \$1.00 per pair and turkeys 8¢ to 12¢ a lb.

The Canadian Produce Co., Ltd., 36 and 38 Esplanade St. East, Toronto, will pay until further notice for live chickens, 8¢, for ducks and turkeys 11¢, for geese 6¢ per lb. All must be young birds. For hens 4¢ per lb. Dressed poultry, dry picked (except hens), ½¢ lb. higher. Broilers (under two pounds in weight 20 cents per pound.) These prices are for weight on arrival. Crates for live poultry supplied free, and express paid up to 50¢ per 100 lbs. of chickens. No thin birds will be taken.

Cheese

The cheese market maintains its strong position and the outlook just now is very bright for higher values throughout the season than last year. Prices for new cheese are now from \$2.00 to \$2.10 per box higher than they were a year ago at this time. It is not expected that present prices of 11¢ to 11½¢ will be maintained when the flush of the season is on, but they have room to drop a cent or two per lb. and still make cheese-making profitable. The English season is somewhat late and the cold weather here has prevented the supply of milk from increasing very rapidly. At Montreal May cheese has sold at 11½¢ to 11¾¢. At the local markets during the week prices have ranged from 10½¢ in the west as at Woodstock on Wednesday, to 11½¢ and 11¾¢ at Brockville on Thursday. These prices are about 1¢ per lb. higher than early cheese sold for a month ago. Cable reports are strong. New white is

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.

Don't wait until the last minute, as you will be disappointed. Place orders early and secure the varieties you want. Correspondence solicited.

WINONA NURSERY CO., Winona, Ont.



WANTED—BUTTER, POULTRY, EGGS

We have a large outlet, having Twenty-one Retail Stores in Toronto and suburbs.
Payments weekly. Established 1854.

The WM. DAVIES CO., Limited

Head Office—Retail Dept.

Correspondence invited. 24 Queen St. West
TORONTO

quoted at Liverpool at 54s and new colored at 56s.

Butter

The creamery butter market has assumed a steadier tone. Some fine Canadian creamery sold in England last week at 100s. Quotations at London range from 98s. to 103s.

The Trade Bulletin summary of last week's business is as follows:

"The market continues steadily for choice May creamery, sales of which have just been reported to us at 19½c for export and at 19¼c to 20c for the local jobbing trade; but of course the latter cannot begin to absorb the increased receipts, and as 19½c is said to be the highest shippers will pay, that is a fair top rate for surplus stocks. The receipts are now showing good grass flavour; but owing to the cool nights the cows have to be stabled and of course partially fed on hay. Next week however, full grass goods may be expected, and they are what the Britishers are looking after. Quite a lot of business has been put through in the country at about the same figures as those ruling here. Second grades of creamery and dairy. Creamery 19c and fresh dairy at 17½c to 18c."

The market here has taken a drop and prices are on a level with what they are at other centres. At the lower levels, however, the market is strong for choice grades of creamery and dairy. Creamery prints are quoted at 19c to 21c and solids 19c to 20c. Dairy lb. rolls sell at 15c to 16c and large rolls at 14c to 15c in a jobbing way. On Toronto farmers' market lb. rolls bring 18c to 20c and crocks 15c to 17c per lb.

Cattle.

The cattle markets continue to maintain their strong position though at Toronto during the week there was a weakening in values owing to the extra large run. But at Chicago and other large American markets, prices have ruled strong for prime quality with light receipts in most places. At Chicago on Friday, good to prime steers sold at \$7.00 to \$7.50, and poor to medium at \$5.00 to \$6.50 per cwt. At Toronto cattle market on Friday, the run of stock comprised 1,094 cattle, 1,685 hogs, 206 sheep and lambs and 75 calves. The quality of the cattle was generally fair with a few extra well finished lots. Considering the very heavy deliveries during the week trade was fairly good. Prices for the best cattle ruled steady while the common-

Please Mr. Druggist give me what I ask for—the one Painkiller, Perry Davis, I know it is the best thing on earth for summer complaints. So do you. Thank you! There is your money.

er stuff was easier. A load of prime three-year-old cattle from Centralia, weighing 1,440 lbs. each sold at \$6.40 per cwt. They were equal in quality to the best American and had they been sold two or three weeks ago when the boom in cattle was at its best would have brought \$6.75 to \$7.00 per cwt.

Export Cattle.—Choice loads or heavy shippers are worth from \$6.00 to \$6.25 per cwt., medium exporters \$5.60 to \$5.85. 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 \$4.65 to \$5.00 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 \$5.40 to \$5.65 per cwt. Choice picked lots of butchers' heifers and steers, 925 to 1,025 lbs. each sold at \$5.00 to \$5.40, good cattle at \$5.25 to \$5.40, medium at \$4.85 to \$5.25 and inferior to common at \$4.10 to \$4.75 per cwt. Loads of butchers and exporters mixed sold at \$5.25 to \$5.50 per cwt.

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

Stickers.—Well bred young steers weighing 400 to 800 lbs. each sold at \$3.30 to \$4.00, and off colors and those of inferior quality at \$2.75 to \$3.00 per cwt.

Calves.—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 \$30 to \$50 each.

Sheep and Lambs.

Sheep sold at \$4.25 to \$4.50 per cwt. for ewes and \$3.00 to \$3.75 for bucks and yearling lambs at \$5.00 to \$5.50 per cwt. Spring lambs are worth from \$2.00 to \$5.00 each. At Buffalo lambs are reported active and strong, tops selling at \$7.25 to \$7.35, and fair to good at \$6.75 to \$7.00 per cwt.

Hogs

Hogs advanced another step during the week as intimated. They sold at \$7.25 for select bacon hogs and \$7.00 per cwt. for lights and fats.

For the week ending May 24th the Wm. Davies Co., Toronto, will pay \$7.25 per cwt. for select bacon hogs, \$7.00 for lights, and \$7.00 for fats.

The Trade Bulletin's London cable of May 15th, re Canadian bacon, reads thus:

"Owing to more liberal supplies from Denmark the market for Canadian is unsettled, and holders have been inclined to shade prices."

Horses

A fairly good trade was done at Grand's last week. Prices on the whole were a little lower than the week previous in some classes. About 75 horses were sold in the regular trade. Among the important sales of the week was a specially selected lot of 12 Percherons bought to fill a special order and

Blood will tell

When an animal is all run down, has a rough coat and a tight hide, anyone knows that his blood is out of order. To keep an animal economically he must be in good health.

DICK'S BLOOD PURIFIER

is a necessity where the best results from feeding would be obtained. It tones up the system, rids the stomach of bots, worms and other parasites that suck the life blood away.

Nothing like Dick's powder for a run down horse.

50 cents a package.

Leeming, Miles & Co., Agents,
MONTREAL.

Write for Book on Cattle and Horses free.

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 9.10 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. Pass. Agent,
1 King Street East, Toronto.

WILSON'S HIGH-CLASS SCALES

SPECIAL PRICES THIS MONTH

On 2,000 lb.

Diamond Steel Bearing
SCALES

Write To-day.

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60 Esplanade St. E., TORONTO, ONT.

EARN A BICYCLE

distributing 1000 catalogues for you in your town. Write can make money fast on our wonderful 1902 offers.

1902 Models, \$9 to \$15

1900 & '01 Models, high grade, \$7 to \$11

500 Second-hand Wheels

all makes and models, good as new,

\$5 to \$8. First Factory Leaving Sale

at half factory cost.

Write for APPROVAL and

10 DAYS TRIAL to anyone in U.S.

or Canada without a cent in advance.

Write at once for set prices and special

offer to agents. Tires, equipments and

accessories, all kinds, half regular prices.

MEAD CYCLE CO. CHICAGO, ILL.

sold privately at \$212.50 each. They averaged about 1,500 lbs. each in weight and were bought for heavy dray work in Toronto. They were in very fine condition and broken to drive interchangeably.

Treatment of Oyster Shell Scare

BY PROF. I. R. TAIT, MICHIGAN.

This insect seldom does much harm when the orchards are cultivated and well supplied with plant food, but in neglected orchards the growth of the trees is checked and fruitfulness is prevented, owing to the loss of sap which is sucked up by the insects.

During early June, before the shell has formed, this insect is readily killed by spraying the trees either with kerosene emulsion made with soap, or a mechanical emulsion of kerosene. In either case the application should contain about 8 per cent. kerosene.

The "St. Joseph" (San Jose) scale is quite unlike the oyster shell scale, being considerably smaller and nearly circular in form. Most of the undeveloped scales are black in color, and have a minute nipple in the center surrounded by a circular canal. They multiply much more rapidly than the common scale insects and are more injurious, often destroying a young tree in two or three years.

The One That Chose to Pay.

Three men had been out on a spree, and on the way home late at night they made a wager that the one who did not do as his wife told him should pay for a champagne supper the following night.

The first one returned home, and his wife greeted him thus:

"Hello, you beauty! That's right, knock all the ornaments off the mantel-piece!"

He knocked them all off.

The second returned, and on going into his house fell against the piano, whereupon his wife said:

"Go on, get the ax and smash it up!"

He did so.

The third returned, and on going upstairs, his wife said:

"You miserable scamp fall downstairs and break your neck!"

Needless to say, he paid for the supper.

The "NATIONAL" Cream Separator



The "National" is a purely Canadian made machine throughout, which cannot be said of some others. Intending purchasers are invited to call at our factory in Guelph, where they may see the machine and all its parts in course of construction.

Superiority of the "National"

It possesses all the strong points found in other Cream Separators, while it is free from objectionable points that make other machines hard to run, and a source of trouble to those who operate and clean them.

The National is simple in construction, handsome in design, and finely finished; easy to operate, and few parts to clean; a perfect skimmer with a larger capacity than any other separator at the same price. Every machine guaranteed to do good work.

Capacity of No. 1.—330 to 350 lbs. per hour.

Capacity of No. 1 A—450 to 500 lbs. per hour.

Give the "National" a Trial.

GENERAL AGENCIES

Creamery Supply Co., Guelph, for South-western Ontario.
T. C. Rogers Co., Guelph, for Ontario North and East.
Jos. A. Merrick, Winnipeg, for Manitoba and N. W. T.

MANUFACTURED BY

The Raymond Mfg. Co. of Guelph, - Limited
GUELPH, ONTARIO.

"EAGLE" in 100's and 200's. "VICTORIA"
E. B. EDDY'S PARLOR MATCHES

Are put up in neat sliding boxes convenient to handle. No sulphur. No disagreeable fumes. Every stick a match. Every match a lighter.

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THE WONDER OF THE AGE

ALL EYES ARE ON THIS INVENTION

HARVESTING PEAS

Patented 1895-96 and 1901



The Genuine Tolton Pea Harvester With New Patent Buncher at Work

1. Harvesting in the most complete manner from eight to ten acres per day.
 2. Harvesters to suit all kinds of mowers.
- Every Machine Warranted. Our Motto: "Not how Cheap, but how Good."
No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send them direct to

TOLTON BROS., Guelph, Ont.

YOU CAN BUY THE
BEAVER POSTHOLE DIGGER

As cheaply as your dealer can. Shipped direct from manufacturer to user. Order by post. Money refunded if not as represented. Address,

HALL & SON,
50 Bay Street, Toronto.

If you want a harvesting machine that is reliable—one that will work successfully in all conditions of grain—buy the McCormick.

Free to Weak Men

Day T J - FOR IT TO-DAY.
1 Jan 01

To the man who wants to regain his youth, who wants to feel like he did when he was budding into vitality, I offer a book which will show him the road to happiness—a book which is brimful of the things he likes to read, which will give him courage and enlighten him as to the causes and cure of his troubles. It will point out the pitfalls, and guide him safely to a future of strength and vitality. It is beautifully illustrated. It tells what other men have suffered and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will send this ad. If you are not the man you ought to be send for it to-day.



DR. McLAUGHLIN'S ELECTRIC BELT.

Builds up broken-down men, restores youth and vitality and makes men look and feel strong. It will cure every case of Rheumatism, Nervous Debility, Weak Stomach, Kidney and Liver Troubles, Lame Back, Sciatica, Varicocele, Loss of Power and every evidence of weakness in men and women. It will not fail; it cannot fail, as it infuses in the weakened parts the force of life and strength.

I am not giving Belts away. I am offering to cure first and be paid after you are cured. I have an Electric Belt which DOES CURE. I know there is no better way to prove my confidence in the wonderful curative power of my Belt than to cure you before you pay for it. This offer is open to anyone who will secure me. All I ask is that you give me evidence of your honesty and good faith by offering reasonable security. I will then take your case on the conditions of

NO CURE, NO PAY.

Put it on when you retire; you get up in the morning refreshed and vigorous, with courage in your heart and a clear head, full of ambition for your daily work.

SEE WHAT IT DOES.

DR. McLAUGHLIN, Dear Sir—During the past seven years I have been a constant sufferer from rheumatism, and during that time I had spent five times the cost of the Belt trying to find relief in drugging my system until I nearly ruined my stomach. I was in the condition that life was not worth living, and I cannot thank you too much for what the Belt has done for me. It has completely cured me, so that to-day I feel like a new man and life is worth living. I cannot recommend your Belt too highly, and trust that you will continue to relieve suffering humanity, and thanking you very kindly, I am, yours very truly, WM. ALDONS, 214 Christie Street, Toronto, January 11, 1902.

DR. McLAUGHLIN, Dear Sir—I had been troubled with kidney trouble for eighteen years, and had tried all kinds of drugs and plasters without relief. When I placed myself under your care I was doubtful of being cured, but after wearing your Belt and following your directions and advice for two months, it gives me great pleasure to tell you that I am completely cured. I never felt so well as I do now. My neighbor, who has lately begun your treatment, is much pleased with the results. I will continue to say a good word for your Belt whenever I can, for I know that my friends and others will be grateful to you for curing them, and grateful to me for calling their attention to such a valuable remedy. Yours very truly, FRANK MAJOR, Monte Bello, Que., April 10, 1902.

I have sold electric belts for twenty years and keep pace with the times in making improvements. The Belt I offer you to-day is recently patented, and is a grand one. No burning, no blistering current, a fine regulator and cushion electrodes, a current that feels like glowing warmth all over your body. There is a free electric suspensory with each Belt. It is nice to wear and quick to cure. If you have another kind that does not satisfy I will take it in trade.

It is curing your neighbors. Don't you think you ought to give it a trial? Saves doctor bills.

FREE TEST—Any man who will call at my office may test my Belt free and satisfy himself of its great power to cure. I offer free consultation and advice and my book to every one. Call to-day. To-morrow you may not be well enough.

Dr. B. A. McLAUGHLIN, 130 Yonge St., Toronto, Ont. Office Hours 9 a.m. to 8.30 p.m.

POULTRY, BUTTER AND EGGS

We will be pleased to receive shipments of Poultry (dressed or alive), Butter and Eggs in any quantity, and will forward, upon application, empty crates and egg cases. Payments weekly by Express Order.

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