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Farming

A Paper for
Farmers and Stockmen

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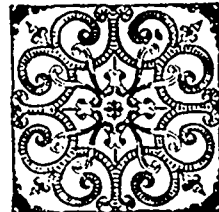
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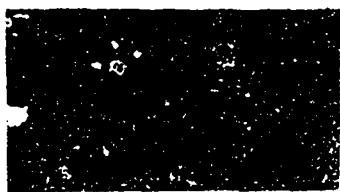
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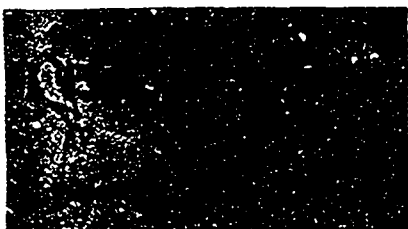
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FARMING

VOL. XVI.

JULY 25th, 1899

No. 47

The Farmer and Strikes

Up to the present time the farmer and his calling have been entirely free from the effects of unionism and more particularly that feature of it that manifests itself in "strikes." But after this season this cannot be said to be true. For the past few years good farm help has been getting scarce, and this season many farmers have had considerable difficulty in securing sufficient help to take off the harvest. But this difficulty seems to have reached a climax in the township of Westminster, Middlesex county, where it is reported that the farm laborers on a certain concession line went on a strike, putting their former employers to their wits' end for help. This is the first instance we know of where farm laborers have gone on a strike to better their condition, and doubtless farmers generally trust that it will be the last. The incident, however, indicates the tendency of this age, and points to a difficulty which farmers may have to grapple with sooner or later.

Whether the laborers who went on strike were justified in doing so we are not prepared to state, for the simple reason that we do not know what their grievances were. We will say, however, that generally speaking we do not think the average farm laborer has much cause for going on strike in so far as wages are concerned. The farmer to-day is paying for his hired help as much as he can afford, taking into account the prices for farm products.

In other respects the farm laborer may have some grievances which if removed would be better for both the farmer and his help. One of these is the long and somewhat irregular hours of work on the farm. From daylight till dark, day in and day out, takes all the novelty out of work on the farm and makes it a kind of drudgery and life a wearisome round of toil.

If farmers, except during haying and harvesting, would arrange for the farm work to begin sharp at 7 a.m. and close at 6 p.m. we believe more and better work would be done and everybody would be better satisfied than under the system generally followed, that of working from early morn till late at night. In the harvest season, when so much depends upon getting the crops housed in good condition, no farm help should object to working for a longer time each day.

If some understanding of this kind were reached as much work would be accomplished, the help would be better satisfied and there would be a little more time for reading and recreation. Is it any wonder the hired man is inclined to loaf a bit in the field when he has to work twelve or fourteen hours a day in season and out of season?

Canadian Threshermen Organize

Several weeks ago a meeting of threshermen was held at Brigden, Ontario, for the purpose of organizing an association for the purpose of furthering the interests of those engaged in this line of business. The meeting must be considered a success, as it has resulted in the formation of what is to be known as the Canadian Threshermen's Association. From what we can learn, one of the objects of this association will be to keep up prices and, if possible, increase the prices which farmers are paying at the present time for getting their threshing done. It is claimed that

there has been too much price-cutting among those operating threshing machines in the past, and an effort will be made to bring all such under the banner of this new organization and secure their co-operation in maintaining prices at a profitable basis.

While such an organization will, no doubt, be of direct benefit to threshmen and, perhaps, indirectly to farmers if an effort is made to improve the quality of the work done, still we are inclined to the belief that so far as prices for threshing are concerned it is costing the farmer as much now as he can afford to pay. It is not, however, the price per bushel or per day which the farmer pays that is the biggest item of expense, but the large outlay of time and money which he has to undergo in returning work or engaging extra help under the present system of getting his threshing done. If the amount per bushel or per day which the farmer has to pay the owner of the machine for his part of the work were the only item of expense there should be no ground for complaint; but when the farmer has, in addition, to spend three weeks or a month in the busy early fall in helping his neighbors who helped him to thresh we are inclined to think that he is paying too dearly for the work done.

The more we look into this whole question the more convinced are we that it will pay the average farmer to adopt some system whereby he can get his threshing done within his own help or with a slight extra outlay. This can be done by the farmer having a machine of his own to do the work. This need not be a large machine such as we see travelling through the country at the present time, but a small, compact thresher adapted for farmers' use and which can be run by a tread or sweep power or by a small gasoline engine. Some imagine that this is a retrograde step. But it is not. The small machines of to-day are completely modern in their make-up and especially adapted to the farmer of to-day who wishes to do his threshing economically and with the least trouble to himself. In this province, where farmers are going more into stock raising and require to feed the bulk of the grain on the farm a system by which they could thresh when they needed the grain or straw for feed would enable them to get the most value out of it.

Make the Fall Fair a Success

Elsewhere will be found an article on "Closed Township Fairs," read before the Canadian Fairs Association last spring, and sent us for publication. It opens up a wide field for profitable discussion. Many things, no doubt, can be said for or against the open or closed township show. Perhaps, if the small township fair is to remain it would be better to confine its premium list strictly to those living within its limits. There certainly is room for a difference of opinion, and we would be glad to hear from persons interested in such fairs as to the advisability of doing so.

Some weeks ago the Bowmanville *Statesman*, in an editorial directed specially to the management of the local agricultural society in that town, gave some advice of value to every local fair directorate in the country, from which we take the following:

"Our county agricultural fairs are, or should be, educators, institutions of learning, and we should be as ready to consider new ideas and advanced methods as are other institutions of learning; in fact, to keep abreast of the times and be recognized and accepted

as factors in promoting education and science, our fairs must not stand still. The fair of ten or twenty years ago will not answer the purpose of to day any more than the hundreds of other things in vogue a decade ago fill the purpose now. The fair of this year cannot fill the requirements for next year, and hence managers must be on the lookout for new things and ready to consider new methods that appeal for recognition and that seem likely to contribute to the general interests; nor should we wait for appeals; rather it is our province to seek out the things that should be represented from year to year, for the consideration of the public, and to study up new methods of simplifying and imparting the information and knowledge than come within the scope of the fair."

The writer follows this up with a strong endorsement of live stock sales at agricultural fairs, and points out that the time is ripe for their introduction. This, we think, is something that local fairs might profitably take up. It would certainly put the holding of the fair to a practical use and should encourage a large and better exhibit of live stock. The difficulty of making fairs pay is referred to. The income and outgo must always, in proper fair management, be as studiously observed as in any successful mercantile enterprise of magnitude.

A well-ordered system should govern all the details of the fair. Where a fair can afford to pay an energetic individual to manage these details he should be secured, otherwise there should be such a division and sub division of the work of the various departments that every detail will be thoroughly looked after. The attractiveness of a show depends largely upon the way the exhibits are arranged. Great taste and care should be exercised in this line. Then, every fair should have a special woman's department that should be given all the prominence possible.

On the score of special attractions, the *Statesman* says: "Some critics deplore the prominence given to these, holding that the fair proper suffers in consequence. This may, in some instances, be true, but it does not necessarily follow. The fair of to-day cannot be the fair of a quarter or half century ago. Our people and people's tastes have changed wonderfully during all these vanished years. The "attractions" have come to stay. It does not follow that standard features of the fair must in consequence be slighted in the smallest degree. Probably no clientage is more diversified and difficult to please than that of a fair. Is it not the part of wisdom, then, to cater to as many tastes as possible?"

The advertising of the fair is an important affair, and a fair management is lucky if it can secure a secretary or manager who is an adept in this line. No matter how good the fair may be, unless it is properly advertised success cannot be looked for. It pays to advertise. On this point the writer says:

"Use the local papers generously. Have your advertisements well written, and do not be niggardly in the amount of space used. Use display "ads," local reading notices and illustrations, i. you can get a few good ones. Do extensive bill posting everywhere within the territory from which you expect to draw your patronage. Use plenty of plain date sheets, so that "he who runs may read." Use large size letters on type posters; do not attempt to get too much detail on them; leave that for newspaper advertising."

In addition to this we might state that there can be no better medium for advertising the larger fairs than by using the agricultural press. The purely agricultural paper is read carefully by every breeder in the country, and a fair notice in its columns is sure to be noticed by him.

Closed Township Fairs

By James Kirkwood, Ospringe, Ont.

In getting up a paper on this subject I find it a hard matter to draw the line between what you would call a limited and an unlimited show, for we see around us that,

where two or more municipalities join together and hold a show, it is an advantage to all concerned. I will, however, give you some reasons why I think a limited show is preferable to an unlimited one.

Limited societies stand in the same relation, as an educator, as the public school does to the high school, and the public school is necessary to train the young mind, to fit it for attending the high school. The advantage of a closed show is that it encourages parties to become exhibitors who would be hard to persuade to become members if an unlimited or large show were held.

By becoming members of a limited society they become interested and bring their neighbors together to compete for prizes, while it would take a great deal of persuasion to get them to become members of an unlimited show. Shows that are confined exclusively to the rural inhabitants, farmers and others in the township being the only competitors for prizes, have a tendency to become more social in their character.

A farmer desirous of obtaining a prize over his neighbor will pay more attention to his stock, grain, roots, or whatever article he intends to exhibit than he otherwise would, had he not intended to show, and he is the means of stirring up his neighbor to do the same thing, and by so doing brings the articles to the show in as good a shape as he can with the means at his disposal. If it is an animal it is in a more matured shape than it otherwise would have been. The same thing will apply to mechanics. They will use the very best material that can be got, and by skill and workmanship will get the article up in the very latest style, be it waggon, buggy, sleigh, or cutter, or any other article that they may choose to manufacture. It is the boundary being limited that gives encouragement to a beginner.

Then, again, when the boundary is limited, it means that the resources to pay prizes are also limited. This makes it necessary to do away with all other attractions and to make it a purely agricultural show.

One advantage that a limited show has over an unlimited one is that in almost any settlement the settlers are more equal and there are fewer professionals. Another advantage is that the board of management is divided more equally over the territory which it takes in, and because of this the territory is better canvassed, and the show is better talked up, and the people are more in touch with each other than they would be if the society was an unlimited one, and where the directorate is chosen in or around a city, town, or village where the show is held. For it is necessary for the board of managers to meet and discuss with each other, and make arrangements for the best way of conducting the show.

San Jose Scale Commission

(Specially Reported for "Farming")

The San Jose Scale Commissioners held a series of meetings at various points in the south-western counties of Ontario during the first two weeks of this month.

At Chatham they heard the evidence of Mr. John Van Horn, into whose orchard the scale had been introduced on nursery stock from Parry Bros., New Jersey, in 1892 or 1893. The Parry Bros. subsequently warned him to examine these trees for scale; he found it, but not before it had spread into an adjoining orchard. He treated some trees with a lime and sulphur solution and with whale oil soap; one of them was entirely cured. He has faith in this treatment, but he was not allowed to continue it on his slightly affected trees. His orchard was inspected in 1898; he was required to burn 110 trees, for which he received \$38.75.

Mr. Frank Wilson contended that the dissatisfaction had arisen on account of the lack of tact on the part of the officials and the low compensation.

The majority of the witnesses at Chatham, St. Thomas and Leamington thought it the duty of the Government to go on and try to stamp the insect out if possible, but to allow the sufferers higher compensation. At Kingsville,

Amherstburg and Windsor there seemed more doubt of the possibility of exterminating it, and a correspondingly increased demand for remedial treatment.

In the Township of Harwich around Guilds P.O., where there is a large infestation of eight to twelve square miles, the opposition to stamping it out by burning the orchards is very violent. It had reached the verge of armed resistance, when the order for temporary suspension was issued. The leading men there strongly declare it a physical impossibility to stamp it out. Second inspections find it where first inspections had failed. They contend that after many individual owners have sustained irreparable injury and the country has expended large sums in fruitless searching for the insect we shall have to come at last to remedial treatment, as has already been done in the case of the potato-bug, horn-fly, etc. They give the government credit for the best of intentions, but claim the act was passed on insufficient knowledge.

There is great unanimity among the witnesses on two points: First, that greatly increased compensation should be given to fruit-growers whose orchards are destroyed for the public good. Instead of one quarter for exposed trees upon which no scale can be found and an eighth for affected trees the witnesses advise two-thirds to three-fourths for suspected, and one-half for slightly affected, trees; second, that an owner should have something to say in respect to the valuation of his orchard.

Witnesses who have had most experience with the scale in their orchards are the strongest advocates of remedial treatment. Some of them would have every fruit-grower take care of himself; others would have the government assist in discovering the insect and advise or provide means of controlling it.

The commissioners concluded their investigations by studying the results of remedial treatment on Catawba Island in the northern part of the state of Ohio in company with Prof. F. M. Webster, the state entomologist. Their report will be looked for with anxious interest by the fruit-growers of the province.

NOTE.—In the report of the commission in July 11th issue the second sentence should have read: "At three points—Niagara-on-the-Lake, St. Catharines, Kingsville and Guilds, west of Blenheim, etc." In the same report at the top of page 863 Putnam's scales should have been inserted instead of Forbes' scales.—EDITOR.

The Winnipeg Fair

A Short Summary of What Took Place at Manitoba's Big Fair

The eighth annual fair of the Winnipeg Industrial Association was formally opened on July 12th by Lieutenant-Governor Patterson. As usual the exhibition has in many ways been a great success. The attendance was large, and the exhibits of such a character as would tend to show the vast possibilities of the great Canadian West. The display of manufactured goods is always an important feature of the show, as is that of agricultural implements. Coming as the show does just before the harvest, manufacturers of harvesting machinery are always out in full force, as it gives them an opportunity to reach the farmers of the country, and to supply their wants in the way of new and improved machinery.

As a means of displaying to the world the great possibilities of the west in regard to vegetable and cereal products, the Winnipeg Fair cannot be considered a success, for the simple reason that it comes on before the harvest is off, and before roots, fruits, etc., are far enough advanced to make a display from them. Still it would have surprised some eastern people if they had seen, even at this early date, the display of ripe tomatoes, full-grown cabbages, cauliflowers, new potatoes, green peas, etc., and given many of them a different opinion regarding the soil, climate, and conditions of growth on the western prairie.

The centre of attraction from an agricultural point of view was the live stock and dairy exhibits. The live stock department of the show is growing in importance every year and ranks among the most important of its kind in the Dominion. While the number of breeders who entered representatives of their herds was not so large as in former years, the number of cattle on exhibition was larger. This would indicate an increase in the size of the herds in the country. There were exhibits of stock from longer distances, a considerable number coming from the Territories and not a few from Ontario. The display of draft horses was the smallest that has been seen on the grounds. Clydesdales and Shires were the only horses of this class shown, and several fair animals faced the judges.

In the beef cattle classes the Herefords made a good display, there being several exhibitors, one showing fourteen animals, with very strong competition before the judges. Mr. J. E. Marples, of Deleau; John Wallace, Cartwright; John Cram, Pilot Mound; and Wm. Shannon, Souris, Man., were the principal exhibitors. The chief interest centred around the Shorthorn exhibit, which was a very large and fine one, some excellent animals facing the judges, among them being some recent importations. The display would indicate that Shorthorns are having a "boom" in the West. J. G. Barron, Carberry; Mr. Lester, Middlemarch; Fraser & Sons, Emerson; G. W. Brown, Portage la Prairie; D. Allison, Roland; Andrew Graham, Pomery; and Geo. Allison, Burbank, were among the chief exhibitors in this class. The championship in the bull class went to Lapsman, owned by G. W. Barron, and was champion in 1897. The champion female was Jubilee Queen, shown by D. Allison, Roland, and bred by Joseph Lawrence, sire, Indian Warrior. A few Polled-Angus cattle were shown, all of very good quality.

Mr. R. S. Fulton, Brownsville, Ont., had on exhibition a carload of purebred stock direct from Ontario. The exhibit consisted of three thoroughbred stallions of good reputation in the east as foal-getters and performers, and seven head of Shorthorn cattle, which attracted considerable attention. The cattle were all registered, and include several prize-winners at Ontario shows. Another special attraction in this line was the exhibit of Premier Greenway, consisting of thirty-one Shorthorns and five Ayrshires, the majority of them being bred at the Prairie Home stock farm. Though this herd did not compete for prizes, yet several animals purchased from Mr. Greenway were prominent winners.

In the dairy classes the display, though not so large as in the beef classes, was a very creditable one. The Holsteins were out in the largest numbers, and James Glennie came off with the largest numbers of awards. Oughton Bros. won several valuable prizes, among them being the gold medal for the best Holstein bull. The Jerseys and Guernseys made a nice display, and though not quite as large as last year, the exhibitors represented a wider area. The Munroe Creamery Co. won many prizes for females and the first for herd. J. Waltham had the diploma bull. In Ayrshires there was also a good showing, Steele Bros., Glenboro'; E. L. Peter, Souris, and W. M. Smith, Fairfield Plains, were the chief exhibitors. W. M. Smith showed his Ayrshire bull, Commodore, familiar to visitors at Toronto and other Eastern Fairs.

The display of sheep was nothing very striking at any point, though when all got together made a better show than was expected. The different breeds were fairly well represented.

The display of hogs was fair, Berkshires and Yorkshires being most largely represented.

There was a very good display of dairy products, which were judged by Professor Haecker, of the Minnesota Experiment Station. There were 180 cheeses shown, the largest display that has ever been seen there in this line. The butter exhibit, though showing up well in quality, was not as large as last year. There was a large display of dairy appliances and machinery, the whole making a very attractive and interesting exhibit.

Crop Conditions In Manitoba and the Northwest

The following communication has been received from the Central Experimental Farm, Ottawa:

The information received during the past few days by the Director of Experimental Farms, regarding the condition of the crops in Manitoba and the Northwest Territories, is very encouraging.

Mr. S. A. Bedford, Superintendent of Experimental Farm, Brandon, Manitoba, says that the crops at present look remarkably well, and that grass everywhere is unusually good. Mr. Bedford had just returned from attending a series of meetings in different parts of Manitoba when this was written.

Dr. Fletcher, who has spent the past fortnight in addressing meetings of farmers in some of the best grain growing sections of Manitoba and the Territories, says that the crops everywhere are magnificent. Some of those best able to judge say that there has never been better promise of an abundant harvest.

Mr. A. Mackay, Superintendent of the Experimental Farm at Indian Head, N.W.T., writes, under date of July 14th, as follows: "The weather continues warm and favorable for the crops. For the past week it has been 80 to 83° in the shade, with no storms or winds. Nearly all the six-rowed barley is in head, and about a dozen varieties of wheat. Red Fife is just starting to come out. We began cutting Brome grass yesterday. This is a good crop. The grass cut yesterday will give about three tons to the acre."

More About the Crops

The Outlook in the United States and European Countries

The crop circular for July issued by the United States Department of Agriculture on the whole does not show as favorable a condition of the growing crop as that for June, a summary of which was given in *FARMING* for June 27th. The average condition of the corn crop is 4 points below the condition on July 1st, 1898, and 4.6 points below the mean of the July averages for the last ten years. The present average is, with the exception of those of 1892 and 1897, the lowest July average in the last fourteen years.

The condition of the winter wheat is 1.7 points below what it was on June 1st, 20.1 points below July, 1898, and 16.8 below the mean of the July averages of the last ten years. The average condition of spring wheat is 91.7, which is 0.3 point higher than last month, 3.3 lower than on July 1st, 1898, and 3 points higher than the mean of the July averages of the past ten years. The average condition of spring and winter wheat combined is 13.2 points below the condition on July 1st, 1898. The proportion of the 1898 wheat crop reported as still in the hands of the farmers on July 1st, 1899, is 9.49 per cent., or a little over 61,000,000 bushels.

The average condition of oats is 1.3 points higher than last month, 2.8 points lower than on July 1st, 1898, and 2.3 points above the mean of the July averages for the last ten years. Barley is a little higher than the last month and 3.7 points above the mean of the averages for the past ten years. The present condition of barley is the highest July condition for the past fourteen years. Both winter and spring rye are below last month and several points below the mean of the July averages for the past ten years.

There is an increase of 1 per cent. in the acreage of potatoes planted. The average condition is 1.7 points below that of July, 1898. There are very few States in which the condition of clover had not declined during the month of June. Except in the North Central States the condition of timothy is below the ten-year average. In the North Central group of States pastures are generally in fine condition. The reports from the entire Pacific Slope are above the average, but in the North and South Atlantic groups the condition is more or less unfavorable.

The outlook for fruit is very unfavorable, and in many places the peach crop will be all but a failure. There has been a general decline in the condition of apples during June and there are few important apple States in which the condition is not considerably below the average of the past fifteen years. The department has no previous record of so general a failure of the peach crop as the condition on July 1st foreshadows. There is not a State that is likely to have an average crop, while in many States the indications point to a total failure. New York will have about half a crop, and California less than three-fourths. The condition of other fruits is so extremely unfavorable that correspondents seem to have taken peculiar satisfaction in emphasizing the promising outlook for grapes. Careful comparison with the average for the past fifteen years, however, shows of the eight States having the largest acreage in bearing vines New York alone reports an average condition.

Some information is given regarding crops in other countries. Crop news from Russia is on the whole decidedly unfavorable. Taking Russia as a whole the deficiency in the wheat crop has been estimated at from 85,000,000 to 120,000,000 bushels as compared with last year; and a point of special importance is that the deficiency is serious in the very region which is most favorably situated for exportation. The German wheat crop is in fair condition. The outlook in Austria is on the whole good, but in Hungary the crop shows a little falling off. The French wheat crop is reported as presenting a satisfactory appearance, though it is generally agreed that the crop will be considerably smaller than that of 1898. The British crops are reported as fair, in spite of bad weather recently. Some definite information has been received of the wheat crop in India, harvested a few months ago. The acreage in 1899 was 23,200,627 as compared with 22,771,219 acres in 1898, and the yield for 1899 is estimated at 231,806,177 bushels of 60 lbs. each, as compared with 248,464,571 bushels in 1898.

The Poultry Department Ontario Agricultural College

A Short Description of the Buildings and the Plan of Work Under the New Management

Herewith we produce some engravings illustrating the poultry department of the Ontario Agricultural College. As we announced in *FARMING* of April 25th a change has taken place in the management of this department, which is now under the direction of W. R. Graham, B.S.A., and whose previous training eminently fits him for carrying on advanced work in poultry culture. Mr. Graham was brought up on a farm near Belleville, Ont., and was a lover



Poultry House No. 1, Ontario Agricultural College, showing small Summer House in the foreground.



Poultry House No. 2, Ontario Agricultural College, showing Yards and Fencing.

of poultry from his earliest recollection. His first experience was with common stock; but after a time he imported some purebred birds from New York State and commenced work on a larger scale, selecting his stock especially with reference to such utility points as egg production, early maturity, etc., and laying less stress on fancy points. Mr. Graham entered the Ontario Agricultural College in 1890 and completed his course in 1894, receiving the degree of B.S.A., when he engaged with Mr. James Rankin, of South Easton, Mass., one of the largest and most successful poultrymen in America. At the end of one year he returned to Belleville, where he commenced raising chickens and ducks for the Montreal market. In this venture he was very successful, as also in the production of eggs during the winter months.

From this short description it will be readily seen that Mr. Graham has brought to his new field of work a wide and varied experience in practical poultry culture. In a letter recently received he sends us the following data regarding the buildings shown in the illustrations:

"The small houses in the foreground of house No. 1 are for housing the young stock in summer. They are fitted with flat perches about three inches wide, and are constructed so as to be as cool as possible, but without draughts. The siding consists of a single boarding of dressed lumber and is battened. Two small windows face the northwest. These houses are ten feet wide and fourteen feet long, four feet six inches high at the south and nine feet at the north.

House No. 1 is 140 x 15 feet and is seven feet high at the eaves. It is built of double boards, the front and back being sided upon the inside studding with tar paper inside the sheeting, making a complete dead air space. The roof is enclosed by a ceiling on the collar beams. The house is fitted with double doors and windows. House No. 2 is 108 x 15 feet and is six feet six inches high to the eaves. In both houses the walks at the rear are three feet six inches wide and extend the full length of the buildings. The pens are 11 x 14 feet in size and are divided in halves; one half is floored and contains the roost, nests, etc., the other half has a gravel floor and is for exercise. The yards are 120 x 14 feet. The fencing is three feet wide, one-inch mesh at the base, topped with four feet wide two-inch mesh. The one-inch mesh has been found sufficient to stop the cocks from fighting through."

Mr. Graham, who has his work mapped out ahead, writes us regarding the way he intends conducting this department as follows:

"While in my charge the poultry department will be conducted strictly on practical lines, I do not intend discarding the fancy altogether, but will make the practical the main object in view. Some experiments will be conducted such as are of real practical value to the farmer and poultryman. It may be necessary to dispose of some of

the small varieties of fowls in order to make room for more of the general purpose breeds.

"The production of eggs, especially in winter, and the raising of young chicks and ducks for market purposes will be among our main objects. Some work will also be done along the line of individual records of each hen in certain breeds, the object being to establish a strain that will lay a large number of eggs; also to cull out all those which lay a very small number of eggs.

"Two experiments will be conducted this summer to ascertain the exact cost of growing a duck for the market, and also the growing and the fattening of chickens for the English market. The cost of the fowls will include the eggs, oil for the incubator and feed while growing. Several different rations will be tested with the ducks. We want to get a ration that will grow them rapidly and yet at a minimum cost.

"We will endeavor to show about how much money can be made from a hen in a year. The labor of taking care of the hen will not be taken into consideration. The profit will simply represent the wages of taking care of the hen. We shall endeavor to show a profit after the department has secured a few more equipments in the way of a brooder house, a cramming machine, etc."

In an experiment being conducted at the present time with the object of showing the relative value of cooked food, and food wet with skim-milk for feeding ducks, Mr. Graham reports that the latter food had the advantage in growth for the first month by $\frac{3}{4}$ of a pound each. Their weights were $2\frac{1}{2}$ pounds each at one month. But this is only an experiment, and results as yet must be considered as such.

Destroying Wild Mustard

An Experiment Conducted at the Ontario Agricultural College with Copper Sulphate

Mr. M. W. Doherty, M.A., assistant Professor of Biology at the O.A.C., Guelph, has recently been conducting some interesting experiments in the destruction of wild mustard. This plant flourishes in many places in this province where the conditions of the soil are suitable for its growth, and any remedy that will enable the farmer in such districts to get rid of the weed will be a blessing indeed. Some authorities claim, and there appears to be some good foundation for their contention, that if the growth of wild mustard be due to a certain condition of the soil therefore, if the composition of such soils be changed, the plant would not grow therein. Certain forms of phosphate are said to have this power, and if applied to land where mustard is growing will produce such a changed condition of the soil that the plant cannot thrive therein.

Mr. Doherty's experiments, however, have not been along this line, but have been directed towards finding out substances which if applied directly to the plant will destroy the mustard but will not injure the grain crop. From a letter recently received from Mr. Doherty we gather that some of the experiments have turned out very satisfactorily. About a month ago he tried three different strengths of iron sulphate and three of copper sulphate on six plots. The iron sulphate did not do any injury at all to the crop, nor did it entirely destroy the mustard. A 4 per cent. solution of copper sulphate (4 lbs. of copper sulphate and 10 gallons of water) has been found to be very effective in destroying the mustard and has caused very little if any injury to the grain crop. The cost of the chemicals sprayed will be somewhere about \$1 per acre.

In regard to the effect of this treatment upon the crop Mr. Doherty says:

"According to my Experimental Notes the mustard sprayed on June 24th was dead on June 28th, and there was no apparent injury to the crop. As regards the effect on the crop I may say that the sprayed oats headed out about three or four days later than the unsprayed, and are from four to six inches longer in the straw. I expect that

there will be an increased yield. This I attribute to the extra amount of food available for the crop owing to the death of the mustard. The great difficulty now is the absence of a suitable spraying machine. I am working on one now and expect to have them on the market next spring.

"I pulled some mustard plants on Wednesday last (July 12) which were sprayed on June 24th and they are dead even to the roots."

CORRESPONDENCE

Alfalfa or Lucerne for Pasture

To the Editor of FARMING:

I have found alfalfa or lucerne a profitable crop, but only for pasture. Its greatest benefit as a pasture is that it gives an early bite, and in a dry time when all other grasses are withered it grows right along. I have never cut it as a hay crop. It would have to be cut very early and be well saved to be much good as hay.

The second cutting is considered the best for seed, although either will yield seed. Lucerne and orchard grass make a pasture that will carry a lot of cattle through a dry time when all else fails.

RICHARD STUTT.

Forest, Ont., July 13th, 1899.

NOTE.—This letter is in reply to one we sent Mr. Stutt some time ago regarding the curing of alfalfa or lucerne hay. He has had a wide experience in the growth of this clover for feeding purposes.—EDITOR.

Destroying Mould on Cheese Formalin Successfully Used at the Black Creek Cheese Factory

To the Editor of FARMING:

I am pleased to give you my experience in using formalin on cheese to prevent mould. Our curing-room is a brick one, and our cheese before we used formalin used to get very bad with mould, to use a common expression they got "as black as your hat" during the months of June, July and August.

Last year we used formalin; at first I used a small atomizer to spray it on the cheese, but found it did very little good. I bought a tin sprayer, which was being sold for spraying potatoes, etc., and commenced using it to spray the formalin on the cheese and found that the greater quantity of formalin I used the less mould there was on the cheese.

This season I commenced using the formalin as soon as we stopped using a fire in the curing-room, spraying all the cheese every morning after the room was closed up for the day. We put on as much as a man can before he has to get out of the room, closing all the doors, and it is so strong in our curing-room every morning for an hour or two that a person cannot stay in the room two minutes. The result of using it in this way is that our cheese are as clean almost as when they came out of the hoops. We used in June half a gallon of formalin, which cost \$2.50. I consider it worth twice that amount to have cheese as clean and the curing-room smelling as nice and sweet as ours does.

A great number of cheesemakers say formalin is no good. It seems to me they have not used enough of it. It will certainly destroy mould, and I am satisfied that no curing-room could be any worse for moulding cheese than ours was. To have cheese as nice and clean as they are this year makes me think a great deal of formalin, and I would advise any cheesemaker to get a good sprayer, they can be bought at almost every hardware store, tinshop, or dairy supply-house, and go to work and thoroughly saturate his

curing-room with formalin and then use it every day afterwards. We also use it in our curd-sinks after washing them and find it sweetens them.

Yours truly,

GEORGE H. BARR,
Cheesemaker.

Black Creek Factory, Sebringville, Ont.,
July 17, 1899.

The Principles Which Underlie Successful Farming

To the Editor of FARMING:

I have read with interest the editorial and communication on "Seed Growth and Selection" and "Basic Principles of Successful Farming," in your issue of the 11th inst. The opinions I have advanced on this subject are, I see, referred to by some as theories. I was not aware that I had indulged in any such speculations. Possibly the brief summary which was given in FARMING, divested of the foundations on which the conclusions were based, may have given a wrong impression.

I have heartily concurred in all that has been said in reference to the importance of selecting the best seed for sowing, and have shown that this has been the teaching and the practice of the Experimental Farms from the outset. I am also of opinion that, as a rule, barnyard manure can be applied with the greatest advantage to a root or hoed crop. At the same time, I have given the results obtained at the Experimental Farm from ten years' experience in the application of manure to grain crops, which shows that manure may be applied directly to cereal crops with benefit.

I have differed in opinion regarding some statements which have been made, and have given the reasons for so doing; and have also said what I believed to be necessary in defence of the work of the Experimental Farms. The opinions I have expressed are based on the practical experience gained in connection with these farms, and are supported by many facts.

I must again disclaim any personal feeling in this matter, and I trust that much good will result from the general attention which has been called to the importance of selecting the best grain for seed, and also to the necessity of taking heed to the other important principles which underlie successful farming in this country, namely, the maintenance of the fertility of the land, the proper preparation of the soil, early seeding, and the selection of those varieties for sowing which have proved most productive, as these have all an important bearing on good crops.

I must forbear expressing any opinion on the proposal made by Mr. MacPherson. I shall, however, always be ready to use my best endeavors to carry out successfully any work which may be assigned me in the interests of agriculture in Canada.

WM. SAUNDERS,

Director Dominion Experimental Farms.

Ottawa, July 15th, 1899.

Lime as a Fertilizer and Promoter of Vegetation

To the Editor of FARMING:

For many years I have taken a deep interest in fertilizers, and from experiments coming directly under my observation I am convinced that lime is absolutely necessary, partly because it is taken up by plants and partly because it decomposes all kinds of vegetable matter in the soil and unlocks and renders available the stores of inert food both mineral and organic contained in the soil. It pulverizes clay soils, rendering them easy to cultivate and allowing air and water to penetrate and thus moisten the roots of plants. All crops require a certain quantity of lime in

order to carry on and perfect their growth. A soil deficient in this mineral can never be a very productive one until the deficiency is made good.

The additional crop raised by its use is very striking ; for example, I have been told that Mr. D. L. Simmons, of Colborne, applied lime on a portion of a field of wheat and harvested it last year. He kept the grain separate, and the portion that was unlimed yielded 26 bushels to the acre and the part limed 45 bushels, a difference of 19 bushels per acre.

I should have said that both portions of the field received the same cultivation, only in the one case there was the addition of lime. Mr. Simmons was so well satisfied with the result that he used 400 bushels this season. I noticed an article on liming pasture lands in this week's issue of your paper, and I am pleased to see this important question is being brought to the attention of your readers. If farmers would try lime on a portion of their summer fallow this fall, even on a small scale, the result would prove satisfactory. A very much larger yield and an improvement in the quality of the grain is almost certain to follow its use besides hastening the harvest. This can be done at an average expenditure of not more than \$1 per acre per annum.

Yours, etc.,
G. F.

Milton, Ont., July 20th, 1899.

Locusts in Manitoba

To the Editor of FARMING:

My attention has been called to the fact that a small district in the south-western part of Manitoba has been visited by locusts.

I understand a report has been made by scientific men to the Department of Agriculture of the Province of Manitoba respecting the same.

I have examined the Manitoba papers very carefully to ascertain what action is being taken by the Government to destroy the eggs of the locusts, but hitherto have failed to notice any definite action being taken.

You are well aware of the evil results to Manitoba and the whole Northwest if the locusts are allowed to increase and spread over the country. I trust, therefore, that you will draw attention in your widely circulated journal to the necessity of prompt and effective measures being taken to exterminate the locusts in the small area to which they are now confined.

Yours, etc.,
CANADIAN.

Toronto, July 20th, 1899.

Hydro-Lactic, Gravity or Dilution Cream Separators

To the Editor of FARMING:

During the past year and a half or so there has been placed upon the market in New York, Wisconsin, Michigan, Minnesota, Iowa and several of the other States, as well as in Ontario, several devices or so-called "separators" under various names, such as "Wheeler's Gravity Cream Separator," made by the Gravity Cream Separator Co., Mexico, N.Y.; "Hunt's Improved Ventilated Cream Separator," made by Hunt Manufacturing Co., Cato, N.Y.; "Aquatic Cream Separator," made by the Aquatic Cream Separator Co., Watertown, N.Y.; "Webber's Hydro Lactic Cream Separator," made by the Hydro-Lactic Cream Separator Co., Niagara Falls, Ont., and several others under various other names.

For some time the attention of the public had not been called to these "separators" through the agricultural or dairy press by advertisement or otherwise, they being introduced almost wholly by retail agents travelling through those sections where small herds of cows were kept and the deep-setting or shallow pan system of creaming was in use. But of late the manufacturers of these "separators" have be-

come more forward in introducing their goods, and now we very frequently see very attractive advertisements in the press.

The somewhat extravagant claims made for these separators are best shown by the quoting of a few from the circulars and directions sent out by the various manufacturers:

"Reasons why you should have a Webber Hydro-Lactic Cream Separator:

"It costs but little." "It needs no ice." "It gets all the cream in an hour." "The butter comes quicker." "It is of better quality." "There is more of it than by old methods," etc., etc.

The manufacturers of the other kinds give a large number of similar reasons why the farmer should use their separators.

These "machines" are simply tin cans fitted up with upper and lower side glasses, or a wooden tank lined with tin, with a faucet at the bottom through which the skim milk is drawn off. They all work on the same principle, which is the dilution of the milk with an equal amount of water, or if very rich milk more water is to be used. Thus so far as the efficiency of the work is concerned one should give just as good results as any of the others.

During the past few months we have had several samples of the skim milk from these "separators" sent to us to be tested by the Babcock test. In looking over the results of these tests I found that the per cent. of fat in the skim-milk varied from .8 to 1.4 of 1 per cent. We also had one of these "separators" on trial for some time, and after using it according to the instructions of the manufacturers for some time, making daily tests of the skim-milk, we found the average per cent. of butter fat in the skim-milk to be .85 of 1 per cent.

But upon further investigation of the matter I found that our results were very much the same as those found at the Ontario Agricultural College by Prof. Dean, those of the Cornell Exp. Station by Prof. Wing, and those of the Vermont Exp. Station by Prof. Hills.

At the Ontario Agricultural College the Hydro-Lactic Cream Separator was given thirteen trials, and the diluted milk was allowed to stand from six to twelve hours before skimming. The average per cent. of butter-fat found in the skim-milk was .6 of 1 per cent., while the average of five years' work done with the centrifugal separator, the deep-setting and the shallow pans was as follows

No. of Tests.	Pounds of Milk Skimmed.	Method of Skimming.	Average per cent. Butter-fat in Skim Milk.
150	7,600	Separator	.10
150	7,600	Deep setting	.31
150	7,600	Shallow pan	.38

Thus we can readily see that Webber's Hydro-Lactic Cream Separator did not do nearly so good skimming as did either the deep-setting or shallow pan method of creaming. While it cannot begin to compete with the centrifugal separator, notwithstanding the fact that its manufacturers claim as follows: "It (Webber's Hydro-Lactic Cream Separator) obtains the same results at one-sixth the cost of high-priced centrifugal separators, and requires no outlay for repairs or operation."

At the Vermont Station Prof. Hills used the "Wheeler Gravity Separator," and obtained the following results:

Character of Milk.	Average Per Cent. Fat.	Dilution.	Number of Trials.	Per Cent. of Fat in Undiluted Skim-milk
Herd milk, mostly Jersey grades.....	5.00	$\frac{2}{3}$ milk, $\frac{1}{3}$ water	39	0.63
Herd milk, mostly Jersey grades.....	5.00	" "	3	1.05
Stripper (Jersey) milk.	5.50	" "	28	0.78
" "	5.50	" "	27	1.17
Ayrshire milk.....	3.75	$\frac{1}{2}$ milk, $\frac{1}{2}$ water	23	1.50

In his report Prof. Hills writes: "These same milks were closely skimmed by the centrifugal separator, which, moreover, was able to extract some cream from the diluted skim-milk. The "gravity separator" left in the skim-milk 13 per cent. of the fat of the mixed milk, 17 per cent. of the fat of the stripper milk, and 40 per cent. of the fat of

the Ayrshire milk. The centrifugal separator left between 1 and 2 per cent. of the fat of these milks behind in the skim-milk. These results speak for themselves, and call for no further comment."

At the Cornell Experiment Station Prof. Wing obtained the following results with "Wheeler's Gravity Cream Separator" and "Hunt's Improved Ventilated Cream Separator," in comparison with the Cooley can.

TABLE NO I. MIXED HERD MILK. MANY OF THE COWS NEARLY DRY.

Date.	Number of hours set.	Per cent. fat in whole milk.	WHEELER'S.					HUNT'S.					COOLBY.						
			Pounds of milk.	Temperature.	Pounds water.	Temperature.	Temperature when skimmed.	Per cent. fat in skim-milk.	Pounds milk.	Temperature.	Pounds water.	Temperature.	Temperature when skimmed.	Per cent. fat in skim-milk.	Pounds milk.	Temperature.	Temperature when skimmed.	Per cent. of fat in skim milk.	
July 6.....	14	3.95	30	92	30	53	70	.76	25	92	25	52	69	.66	33½	92	42	.90	
" 7.....	14½	4.1	25	86	25	56	72	.86							53	86	40	1.25	
" 8.....	15	3.6	25	94	25	50	72	1.00							35	94	38	.80	
" 9.....	12	3.9	20	88	20	48	66	1.00	25	88	25	48	68	1.00	28	88	42	1.20	
" 11.....	17	3.6	20	92	20	56	64	1.20	28	92	28	56	64	1.00	20	92	44	1.01	
" 12.....	16	3.6	20	87	20	47	68	.80	28	87	28	47	65	1.04	34	87	38	.90	
Average.....								94						1.01					1.01

TABLE II. MILK FROM COWS COMPARATIVELY FRESH.

July 13.....	16½	3.75	20	94	20	56	70	.90	28	94	28	56	70	1.40	33	94	40	.50	
" 14.....	16	3.7	20	94	20	55	72	.80	28	94	28	55	72	.80	33	94	40	.50	
" 15.....	16	3.75	20	94	20	54	72	.40	28	94	28	54	72	.40	33	94	40	.60	
" 16.....	16½	3.8	20	94	20	60	70	.60	28	94	28	60	71	.40	34	94	37	.50	
" 17.....	16	4.0	20	95	20	50	73	1.00	28	95	28	50	73	.90	37	95	38	.65	
" 18.....	16	3.9	20	96	20	48	75	.90	28	95	28	48	75	1.90	34	96	42	.50	
" 19.....	16	3.65							36	96	28	58	76	1.00	38	96	40	.50	
" 20.....	16	3.45							30	95	30	54	74	.60	34	95	41	.40	
" 21.....	15½	4.1	20	94	20	58	75	.90							35	94	44	.65	
Average.....								79						.93					.53
Average both tables.....								86						.97					.77

In the summer of 1892 Prof. Wing visited seventy farms, and the fat content of the skim-milk was determined at each place. On forty of these farms shallow pans were used and on thirty a deep-setting system, in most cases the Cooley was in operation. The average results were as follows:

	Per cent. of fat in skimmed milk.		
	Lowest.	Highest.	Average.
Forty farms using shallow pans.....	.15	1.63	.39
Thirty farms using deep setting.....	.14	.60	.30

The centrifugal separator has been so perfected that the loss of fat in the skimmed milk is reduced to a minimum, and it is now recognized by both manufacturers and users of separators that the percentage of fat in the skimmed milk need not be more than .05 of 1 per cent. In actual practice at the Iowa Dairy Creamery here, our separators on an average for the past week have skimmed as close as .047 of 1 per cent., and on several occasions we have found the algebra to be skimming as close as .02 of 1 per cent.

We are now able to judge the efficiency of these gravity cans. It will be seen that in no case do they approach anywhere near the efficiency of the centrifugal separator and, in most cases, the percentage of fat in the skimmed milk is decidedly more than would be called good creamery by either the shallow-pan or deep-setting process.

After conducting a thorough test of the various makes of the gravity or dilution separators, Prof. Wing sums up his results as follows:

"Gravity of dilution separators are merely cans or tanks in which the separation of cream by gravity process is aided by dilution with water."

"Under ordinary conditions the dilution is of no benefit.

In may be of some use when the milk is all from 'stripper' cows, or where the temperature of melting ice cannot be secured."

"These cans are not 'separators' in the universally accepted sense of that term, and cannot work in efficiency with them."

"They are even less efficient than the best forms of deep, setting systems, such as the Cooley creamer."

"They are no more efficient than the old fashioned shallow pan; but perhaps require less labor."

"In all probability they will give better results if used without dilution and immersed in as cold water as possible, preferably ice water."

The advantages claimed for these "separators" are reduced cost, lessened labor, durability and the obviation of the necessity of ice storage and use. The disadvantages which certainly attach to any such a device are the need of a relatively large tank room and the dilution and deterioration of the skim-milk. There seems also to be good reason for believing that a more serious disadvantage, poor creaming, may be added to those already cited.

It does not appear to me, however, that the convenience, simplicity and cheapness of the apparatus compensate for its lack of efficiency; or that it ought to compete successfully with the centrifugal separator. Its use in a herd of twenty cows for a year would entail a loss of butter fat, not to say anything of the deteriorated value of the skim-milk, which would go far in paying for the more expensive, yet in the long run the cheaper, centrifugal separator.

W. J. KENNEDY.

Iowa Ag. College, Ames, Iowa,
June 30th, 1899.

The Farm Home

Combination of Foods.

By Mrs. S. T. Rorer.

Going back for a moment to the combinations of foods, if we consider many tables throughout the country, we find pork and potatoes almost daily upon them. This pork is largely fat, heat and force food; potatoes the same; consequently, this class of people lack repair food for the tissues of the body; and it will be remembered that the mental condition of the people in the various insane hospitals frequently follow a great physical breakdown from this cause. To make it still plainer, we will compare the human being to a house. When you are building a house, you put in sufficient lumber, bricks and mortar to make the structure perfect. Then, next, you furnish proper heating apparatus; and for this you must have constant fuel. But the framework of the house needs occasional repair, and for this you select materials suited to those from which the house was originally built. If a post is rotted, for instance, and it is not given immediate attention, the whole structure begins to totter and settle on the weak side. Now, it is exactly the same with the human being. If any of the tissues of the body lack the necessary repair material, the whole frame becomes shattered, and it is frequently impossible to return it to its normal condition. The nitrogenous foods, as meats, eggs, milk, old peas and beans are repair foods—while fats, starches and sugar are heat and force foods. The first corresponds to the structure material of the house, the second to the fuel for heating. We do not need to run nitrogen mad, as the average dietitian of to-day is doing, but we must have sufficient to give us an evenly-balanced dietary. Dr. Fothergill once said to the class at Guy's: "There is not one grain of common sense in eating potatoes and fat pork; but there is a deal of uncommon sense in eating beans and pork." Nor should the dietary be alike in every man; the student would certainly be most unwise to live after the same manner and eat the same food with the laborer; and with four men, all sitting at the same table, having different occupations, it is not necessary that each one of the four shall have a separate meal cooked, but it is necessary to have sufficient variety from which each one can select that best suited to his requirements.

Regarding the quantity of food, much may be said; this impression I would like to give, that the minimum amount to sustain life, in work or idleness as the case may be, is desirable. The average person eats twice as much as is necessary for his well-being, and each ounce of food con-

sumed more than is needed for the body's requirements is one ounce of food to be gotten rid of. Thus the economy is worn out, not by actual service, but by doing an unnecessary amount of overwork. In cold climates fat is the best of the heat foods. The Esquimaux feed upon blubber. Going to the South, we find the natives preferring rice, sweet fruits, as bananas containing inuline rather than starch, dates and figs rich in nature's sugar. The so-called savage knows by instinct what to eat and how to eat it; the consequence is, their bodies are in tolerably healthy, good conditions. Civilize them and they immediately fall ill—not on account of the civilization, but from the uncivilized food used by most civilized people.

"Good Morning."

How the Salutation is Given in Various Countries.

"How are you?" That's Swedish.
 "How do you are?" That's Dutch.
 "How do you stand?" That's Italian.
 "Go with God, senior." That's Spanish.
 "How do you live on?" That's Russian.
 "How do you perspire?" That's Egyptian.
 "How do you have yourself?" That's Polish.
 "Thank God, how are you?" That's Arabian.
 "May thy shadow never grow less." That's Persian.
 "How do you carry yourself?" That's French.

"How do you do?" That's English and American.

"Be under the guard of God." That's Ottoman.

"How is your stomach? Have you eaten your rice?" That's Chinese.

Some Conundrums.

When are two apples alike? When pared.

When is a chair like a lady's dress? When it is sat in.

Why is a defeated army like wool? Because it's worsted.

When does a chair dislike you? When it can't bear you.

What three letters turn a girl into a woman? "A-g-e."

When is a soldier not half a soldier? When he is in quarters.

What do we often catch yet never see? A passing remark.

Why is life like this riddle? Because you must give it up.

What money brings the most substantial interest? Matrimony.

Why does a man sneeze three times? Because he cannot help it.

Why is a bed cover like a blister? Because it is a counter-pane.

Why are some women like facts? Because they are stubborn things.

What fruit does a newly-married couple resemble? A green pair (pear).

What is a kiss? A receipt given by a lady on paying your addresses.

On what day in the year do women talk the least? The shortest day.

Why is an egg like a colt? Because it is not fit for use till it is broken.

Why is a very ugly female a wonderful woman? She is an extraordinary one.

Established 1868.

Incorporated 1887.

...THE...

Western Fair

LONDON, ONT.

September 7th to 16th, 1899

Again this ever progressive Exhibition is to the front with new and attractive features. **More Space Demanded. More Given.** 4,800 square feet added to Machinery Hall; 1,200 square feet added to Dairy Building. Large Open Stand added, doubling the capacity. \$1,500 added to Prize List. Attractions better than ever and more of them.

SPECIAL TRAIN SERVICE ON ALL RAILWAYS.
ENTRIES CLOSE (POSITIVELY) SEPT. 6th.

Space allotted as entries are received.

PRIZE LISTS NOW READY

LT.-COL. WM. M. GARTSHORE,
 President.

J. A. NELLES,
 Secretary.

When is a clock on the stairs dangerous? When it runs down and strikes one.

Why does tying a slow horse to a post improve his pace? It makes him fast.

Why is a widow like a gardener? Because she tries to get rid of her weeds.

Why are gloves unsaleable articles? Because they are made to be kept on hand.

Why ought meat to be only half-cooked? Because what is done cannot be helped.

What word may be pronounced quicker by adding a syllable to it? Quick.

Why should Benjamin marry Annie? Because he would be Bennie-fitted, she Annie-mated.

What is the difference between a mouse and a young lady? One harms the cheese, the other charms the he's.

What is the difference between stabbing a man and killing a hog? One is assaulting with intent to kill, the other killing with intent to salt?

How to be Healthy.

Here are the rules given by the celebrated French Dermatologist, M. Felix Chaleux, for a clear beautiful complexion and perfect health:

Don't drink tea or coffee.

Drink pure water.

Eat grapes, apples, raisins and figs.

Eat a few salted almonds daily.

Don't eat much animal food.

An egg or two a day, soft boiled, instead of meat.

Eat an orange every day or so.

Walk two or three miles a day.

Bathe the whole body daily in tepid water.

Don't fret, don't worry: be calm and quiet.

Follow the above you will be perfectly strong, healthy, beautiful, and live to great age.

"Pa, where did the doctor bring our baby from?"

"From heaven, Bert."

"Are there lots of babies there?"

"I suppose so, dear."

"Then, pa, why do we pray to go to heaven--aren't you sick enough of babies?"—*Pick-Me-Up.*

WANTED.

We want one good man to represent **FARMING** at each **Fall Fair in Canada**. Applicants will be expected to interview stockmen and farmers generally, to deliver sample copies of the paper, solicit subscriptions and advertisements, and in other ways advance the interests of **FARMING**. A good income is assured. References required. Address "**Farming**," Confederation Life Building, Toronto.

SCHOOLS.

TORONTO

LOOK AHEAD

Young Man! Young Woman!

to a happy and successful future, and remember that Education is a most important factor in winning success just now. Give your education a practical turn and you'll never regret it.

Lay your plans for spending a term in the

CENTRAL BUSINESS COLLEGE

of Toronto at an early date. Some of you can enter **NOW**. Others can't start until the fall. Get a Catalogue at any rate, and study our advantages. Write

to **W. H. SHAW, Principal.**

Enter FOR YOUR SUMMER COURSE NOW

A good way to spend your summer vacation and one that will prepare you for business in the early fall. Enter now for our \$3 summer course in writing, book-keeping, shorthand, or type writing, and be fitted for the position waiting you.

BRITISH AMERICAN BUSINESS COLLEGE.
 V.M.C.A. Building, cor. Yonge and McGill Sts., TORONTO.
 D. Hoskins, Chartered Accountant, Prin.

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Agents Wanted. Ontario Binder Twine Co., Union Station Arcade Toronto, Ont.

SCHOOLS

STRATFORD

Fall Term Opens Sept 5th

Central Business College
 STRATFORD, ONT.

Write to day for our new catalogue. It's the finest business college catalogue in Canada, and represents the most progressive and best school.

W. J. ELLIOTT, Principal.

Feeds and Feeding

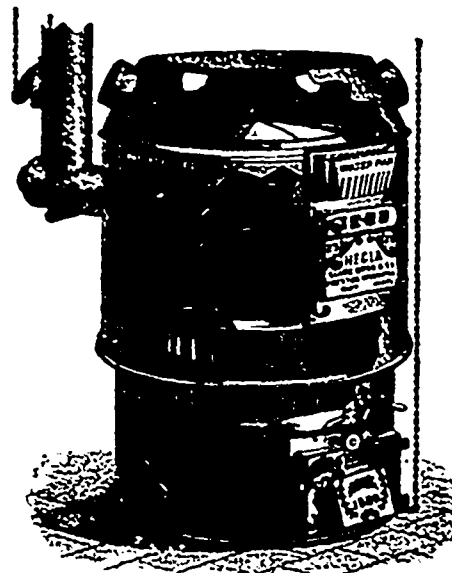
A book for Farmers and Stockmen. Price, \$2. Sent postpaid on receipt of price. Address:

Farming TORONTO

CANADIAN OFFICE & SCHOOL FURNITURE
 FINE BANK OFFICE, CHURCH & LODGE FURNITURE, DRUG STORE FITTINGS. SEND FOR CATALOGUE

TORONTO ENGRAVING CO.
 THE ART ENGRAVING HOUSE OF CANADA
 CUTS BY ALL PROCESSES
92 BAY ST. TORONTO

Let Us Heat Your House...



WITH OUR
Hecla
 Coal or Wood
Furnace

in which we have incorporated all the latest improvements in Furnace construction. The Dome and Radiator are combined and constructed with our Patent Fused Joint, making it absolutely gas-tight. It is fitted with a large double-feed door, making it suitable for large, rough wood. The fire-pot is in two pieces, with a flanged extended surface, which keeps it from warping or burning out. The Hecla works perfectly with any kind of Fuel: hard coal, wood, and soft coal, for which we provide a Hot-Blast attachment which ensures perfect combustion. Send a rough sketch of the building you want heated and we will give you estimates and advice.

We Manufacture all kinds of Furnaces, Stoves and Hollowware.

WINNIPEG, MAN.

CLARE BROS. & CO.

PRESTON, ONT.

QUESTIONS AND ANSWERS

Thomas - Phosphate and Wild Mustard.

To the Editor of FARMING:

Would you kindly give us through the columns of your valuable paper any information that you can as to the effects of 'Thomas' Phosphate on mustard in a crop. The writer is under the impression that he saw it advocated in a pamphlet some time ago for this purpose, and would like to know whether he is right or not, for if it will kill mustard it will be a great advantage in this section of the country. Any reply which you can give, or which may arise through discussion, will be much appreciated. We have noted with interest the various lines in the last few issues on this subject.

Thanking you in anticipation, we are,
Yours truly,

King, Ont. A. DAVIS & SON.

Answered by Mr. T. C. Wallace.

Referring to the inquiry of Messrs. A. Davis & Son, Thomas-Phosphate has not been advocated as killing wild mustard, but there are some observations on the subject which point to an important conclusion. Grain fields which produced straw, but comparatively little grain, owing to rich nitrogenous and potash manuring with barnyard manure, being liberally treated with Thomas-Phosphate produced very much increased grain yield and practically no wild mustard, while parts of the same field not receiving the phosphate were full of mustard and other weeds. If it is true that the wild weeds appear and flourish under certain unbalanced conditions of the soil, this is very reasonable and certainly worth a trial. The extraordinary developments of clover under the influence of Thomas-Phosphate on meadows and pastures may be ascribed to a somewhat similar soil action, and on this point there is certainly no longer room for doubting the fact, even without admitting the theory. I certainly recommend the application of Thomas-Phosphate to lands infested with wild mustard, for I have seen excellent results from the treatment, and it is much safer than eradicating the pest with sulphates, as recommended by some scientists, as the general results of sulphating land, on future crops, have not shown it to be desirable. If your correspondent will put his land in good, all-round condition and give it an excess of phosphate in the form of Thomas Phosphate Powder, he need no longer fear wild mustard, and will increase his grain yield to a point he has never dreamed of.

Mistress (greatly distressed as Bridget awkwardly drops the chicken on the floor when about to place it on the table)—“Dear me! Now we've lost our dinner!” Bridget — “Indade ye've not. Oi have me foot on it!”

Quick Cure For Lump Jaw

Not one case in a hundred that cannot be cured by one to three applications of

Fleming's LUMP JAW CURE



Trade Mark Reg. d.

Lump Jaw has heretofore baffled treatment. It has infected herds and pastures, and caused loss of hundreds of thousands of dollars. This new remedy cures quickly, thoroughly, and permanently. Leaves jaw smooth and sound. Easy to apply; costs but a trifle compared with results.

GUARANTEE.—Every package sold under positive guarantee; money back if it should ever fail to cure.

Sent everywhere by mail, Price, \$2.00.

FREE A valuable illustrated treatise on cure of Lump Jaw sent free to readers of this paper.

Address: **FLEMING BROS.**
Chemists, ST. GEORGE, ONTARIO

FOR SALE

- Des Moines Incubator and Brooder
- Bradley's Meat Meal
- Cracked Bone and Bone Meal
- The Ideal Egg Food
- Lightning Lice Killer
- Oyster Shells
- Mica Crystal Grit
- Bone Cutter
- Grinding Mills
- Root Cutter
- Drinking Fountain
- Leg Bands

Send three cents for illustrated catalogue. Poulter's Guide, 15c. per mail

ROCROY FARM
24 St. Sulpice St., Montreal

FARM LOANS

CREDIT FONCIER F. C.

This Company has a large amount of money to lend on improved farms at low rates.

Correspondence is invited from farmers who wish to buy more land, to improve their properties, or to save money by reducing interest.

W. E. LONG, Manager,
28 Wellington St. East.
TORONTO.

Salt

DESTROYS WEEDS AND INSECTS

A heavy dressing of Salt is the most effectual means of exterminating weeds and insects. Autumn applications are strongly recommended for this purpose.

1,000 lbs. per Acre

is necessary to destroy wire worms and deep rooted weeds. We have a few cars of first-class Refuse or Land Salt on hand. Send for prices.

R. & J. RANSFORD,
CLINTON, ONT.

THE FINCH WOOD PRESERVATIVE AND PAINT
Unequaled for Farm Building. Send for Circulars.
FINCH WOOD PRESERVATIVE and PAINT CO.
TORONTO, ONT.

FREEMAN'S THREE-PLY READY ROOFING

... EASILY APPLIED ...

Great Reduction in Prices. Send for Price List, etc

Parliament Buildings, Toronto, October 20th, 1898.
THE W. A. FREEMAN CO., 57 Ferguson Ave., South, Hamilton, Ontario:

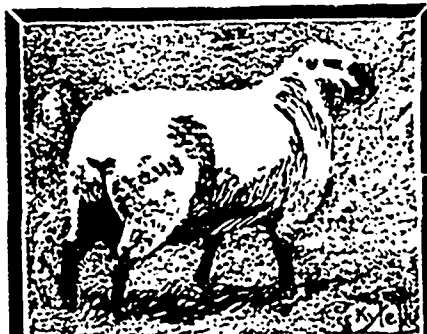
Gentlemen,—Nine years ago I purchased from you a large quantity of material known as Freeman's Ready Roofing, with which I roofed the north half of my barn and two sheds, 60x20 each. This year we re-painted this roof and found it in excellent condition. A shingle roof put on part of the barns two years before was badly in need of repair. I shall hereafter use your ready roofing on all my out-buildings.
Yours truly,
(Signed) F. W. Houson

W. D. FLATT HAMILTON P.O. and TELEGRAPH OFFICE



OFFERS FOR SALE

- 7 Imported Scotch Bulls.
 - 16 Canadian Bred Bulls.
 - 21 Two-year-old Imported Scotch Heifers.
 - 3 Yearling
- Also a number of Young Cows including both Imported and Canadian bred served by Golden Fame (imp). Prices consistent with quality. Correspondence and inspection invited.



Persiatric Sheep and Animal Wash

For the complete and effectual removal of all insects or vermin peculiar to sheep and cattle. Powerful, without being harsh; immediate in effect, without any irritating effects; it leaves the animal refreshed and in good spirits after use; does more than destroy the pests, it completely removes all traces of their attacks—healing sores or boils, curing open sores and leaving the skin whole and sound. Mr. G. A. Brodie, a prominent stock-raiser of Betheda, Ont., used it with great success in castrating lambs, the wash healing the wounds rapidly and keeping the maggots away. He considers it the most effectual wash in the market, and heartily recommends it to farmers generally.

If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks or herds and we'll advise you how best to use it.

The Pickhardt Rontrow Co. (LIMITED)
STOUFFVILLE, ONT. Trade Mark

A Nova Scotia Farmers' Meeting.

At the annual meeting of the Pictou County Farmers' Association, held on July 4th, the following resolution was passed in reference to an Agricultural College for Nova Scotia:

"Whereas—An act was passed at the last session of the Provincial Parliament, authorizing you to expend a certain amount in establishing and equipping an agricultural college in the province, and

Whereas—Certain parts of the province are strongly agitating for it to be established in the Western Counties, and

Whereas—Truro is a more central point, and is a locality where all farming operations can be successfully carried on, and

Whereas—the Normal School, where our teachers have to spend a term before being permitted to teach in our schools, is at present located in Truro, and

Whereas—The farmers are agitating to have agriculture taught in the schools, we therefore respectfully ask that the proposed agricultural college be established in Truro."

The annual picnic of this association took place at the Provincial Farm, Truro, on July 6th, and was largely attended. Addresses were delivered by a number of prominent speakers and a most profitable time was spent.

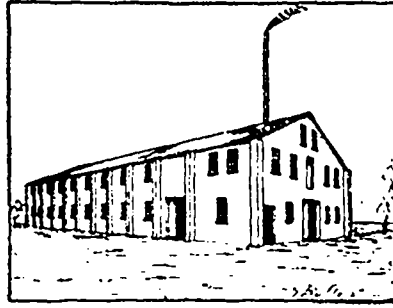
Stock Notes.

T. A. COV, Brantford, Ont., writes that his stock are doing well and that he will be on hand with a big exhibit of Berkshires, etc., at the fall fairs.

JAMES TOLTON, Walkerton, Ont., writes: Abundant rains have kept the pastures good. Stock are getting along nicely. The season's crop of Shorthorns are eight bull calves and one heifer so far, all sired by Earl Warwick, and they promise well. I have some promising one, two and three-year-old heifers. Could spare some heifers. The Oxfords are in their usual form. Have already sold most of the buck lambs, some to private parties, but mostly for shipment to the Canadian Northwest. The stock prospects are bright. There seems to be a demand for all we can raise.

AN IMPORTANT SHIPMENT OF SHEEP TO CANADA—On Saturday, the 1st July, Messrs. Alfred Mansell & Co., Shrewsbury, acting as agents for Messrs. D. G. Hanmer & Sons, Ontario, shipped per the SS. *Mount Royal* from the Millwall Dock, London, one of the most choice consignments of sheep that have left England this season, including in all 106 sheep of various British breeds. The consignment comprised some valuable specimens of Shropshire sheep, including several prize-winners at the Royal and other shows from the noted flocks of Messrs R. P. Cooper, A. Tanner, A. E. Mansell, W. Thomas, T. S. Minton, S. F. M. Nevett, J. Harding, J. S. Harding, and R. Bach. Oxfords were represented by selections from such celebrated flocks as Mr. Albert Brassey, M.P., Mr. J. T. Hobbs, Mr. W. J. P. Reading, Mr. H. W. Stigoe, Mr. W. A. Arkell. The South-downs contained some nice sheep from Mr. Ashley, D. Potter and Mr. Geo. Jonas. Some Dorsets from Mr. W. R. Flower, and some Cotswolds from Mr. W. T. Garne and Mr. W. Thomas, will undoubtedly figure successfully at the States fairs. Taken as a whole, the sheep were splendid specimens of their respective breeds, and should do much to foster a trade between Canada and the Mother Country.

Built with THOROLD CEMENT



EVAPORATING FACTORY OF J. W. VANDYKE, GRIMSBY, ONT.

Size of walls 45 x 160 x 24 feet Built with Thorold Cement and gravel, from the bottom of foundation to the roof. All this concrete work was done in 143 days, under the direction of our traveller, Norval B. Hagar.

Mr. Vandyke states that he effected a saving of from \$1,000 to \$1,200 by building concrete walls instead of stone or brick.

GRIMSBY, ONT., Dec 12, 1888.

ESTATE OF JOHN BATTLE,

GENTLEMEN.—It gives me great pleasure to testify to the good qualities of your Thorold Cement. During the past season I built an Evaporator under the supervision of your traveller, Norval B. Hagar, the size of which is 45 x 160 x 24 feet to plate from bottom of foundation, and gables 12 feet high, making top of in all 36 feet high to gables. The first storey is 13 feet high and 12 inches thick, the second 8 feet high and 10 inches thick, gables 8 inches thick. I have a concrete floor in first storey, and the second storey is held up by trusses. There is not a post in the first storey to hold the second.

I also built a barn, under the supervision of your Robert G. Hagar, size 36 x 70 x 14 feet from bottom of foundation to plate, and I consider I have a 1 building both in strength and workmanship, for the walls are straight and plumb as any building could be, and they are far cheaper than either stone or brick.

Yours, etc., J. W. VANDYKE.

ESTATE OF JOHN BATTLE THOROLD, ONT.

Mention this page.

PUREST AND BEST

Windsor Salt...

FIRST PRIZES

Were awarded to 8 exhibitors at the Industrial Fair, Toronto, and Western Fair, London, 1887, who used Windsor Special Cheese Salt in curing cheese exhibited, and to 9 exhibitors at the same exhibitions who used Windsor Special Butter Salt in salting butter exhibited.

GOLD MEDALS

Awarded for the best exhibits of Creamery and Dairy Butter at both exhibitions were won by exhibitors using Windsor Butter Salt.

No stipulation was made as to the use of Windsor Salt.

The Windsor Salt Co., Limited
Windsor, Ont.

HERMANVILLE ..TAMWORTHS..

I HAVE several litters nursing, and also a number of June litters of the highest quality and bluest blood in North America. The "Parkhill Mab" strain of Tamworths can only be obtained from me. I make a specialty of choice breeding and exhibition stock. I like to ship when "ready to wear." I respectfully solicit your valued orders, and will be glad to quote you prices, delivered free in any part of Canada or the U.S. Address—

Hermanville Farm, P.E.I., Can.

Wm. Butler & Son

Dereham Centre, Ont.

Importers and exporters of Pure-bred Live Stock. Breeders of Guernsey cattle, Chester White and Duroc Jersey Swine. Stock delivered free in carload lots to any part of Canada. Write for circulars, calendars, etc.



SUMMERHILL HERD OF YORKSHIRE HOGS



The Lengthy English Type

Largest herd of imported Yorkshires in America. Purchased from the most noted breeders in England. Also 300 Canadian-bred pigs of all ages for sale. Stock guaranteed as described. All trains met at Hamilton by appointment.

D. C. FLATT, Millgrove, Ont.

.. HIGHEST TYPE OF BACON HOGS ..

Oak Lodge Herd of Large Yorkshires



The Largest Herd of Pure-Bred Yorkshires in America.

This herd has won the best prizes offered for the breed during the last ten years. Only one breed kept, but the choicest of its kind. Three imported stock boars and several sows that have all been winners at the largest shows in England, also winners at prominent Canadian and United States shows. Pigs of all ages for sale.

J. E. BRETHER, Barford, Ont.

The Agricultural Gazette

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

VOL. II.

No. 41

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

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

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' Associations allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

The list of cattle, sheep, and swine for sale 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.

F. W. HODSON, Secretary.
Parliament Buildings, Toronto, Ont.

The Stock List.

The following is a copy of a circular which has been sent to the members of the Dominion Cattle, Sheep and Swine Breeders' Associations:

TORONTO, July 21st, 1899.

Dear Sir,—The Exhibition number of FARMING in which is published the *Ontario Agricultural Gazette*, will be issued on August 31st. We intend to publish a complete list of the stock for sale in this issue and wish to make it as large as possible. In order to do this it will be necessary that we receive your list of stock for sale not later than Aug. 21st. By giving this matter your attention you will oblige,

Yours very truly,

F. W. HODSON.

An Abridged Report of English and European Experiments Which are of Value to Canadian Farmers.

BARNYARD MANURE.

It is well known that barnyard manure, if neglected, rapidly loses the greater part of its fertilizing value and becomes practically worthless, except to improve the mechanical and physical properties of the soil. It is also well understood by practical men that it is not economical to carry out some of the elaborate methods of preservation which have been suggested. To be economical the method of management must be simple and involve as little labor and expense as possible. Scientific men have been directing their energies for some time in the line of simplifying methods of management and preservation of farm manures, a summary of which is given in *Farmer's Bulletin*, 56, of the U. S. Department of Agriculture.

Inasmuch as the direct fertilizing value of manure depends so largely upon the nitrogen which it contains, the investigations have been mainly, into the availability, changes, and causes a prevention of loss of this substance. There is a wide difference between the fertilizing value of the nitrogen of the solid and liquid parts of the manure. The effectiveness of

the former has been found in experiments to be only 10 per cent. of that of nitrate of soda, while that of the latter was over 90 per cent., being very nearly equal to that of sulphate of ammonia. The nitrogen of the solid excrement becomes available very slowly in the soil or in the heap, while that of the urine is in a soluble form, rapidly converted into ammonia which may escape into the air. It was found that the effectiveness of the nitrogen of the solid excrement is not materially increased by mixing it with the liquid part, the nitrogen of such a mixture being decidedly less available than that of either nitrate of soda, sulphate of ammonia or green manures. The conversion of the nitrogen of the urine into ammonia, moreover, is apparently hastened by the admixture of solid excrement and straw.

CHANGES IN MANURE THE RESULT OF ORGANISMS.

The changes which manure undergoes, which it brings about in the soil, and which so largely determine its fertilizing value, are merely the work of microorganisms, which, though insignificant individually, multiply with astonishing rapidity and are thus able to accomplish startling results. These microorganisms begin their work as soon as the manure is voided; in fact, it is believed that many of them come from the stomach of the animal along with the manure. At any rate, the air and litter of the stable swarm with them, and the odor of ammonia, which can be detected very soon after the excrement is voided, shows that they commence their work without delay.

These organisms are of various kinds. Some require air (or oxygen) in order to grow; others flourish only when oxygen is absent. Most of them affect the quality of the manure injuriously, but some may be made beneficial. The management of manure thus becomes largely a question of controlling these minute organisms.

CHECKING THE ACTION OF THE ORGANISMS.

The most effective means of checking the action of the organisms which

require oxygen for their growth is to exclude the air. During experiments it was found that they were capable of completely converting the nitrogen of urine into ammonia, which escaped into the air, in twenty-four hours when air was freely admitted, but that the escape of ammonia was almost entirely prevented by excluding the air, although the nitrogen was still largely converted into ammonia. The same changes occur in the solid excrement, but much more slowly. In one experiment mixtures of dung and litter which were exposed to the action of the air were found to lose as high as 17 per cent. of the nitrogen which they contained in about seven months. In other experiments in which a current of air was drawn through the manure the loss was over 40 per cent.

It is due to the beneficial effect of excluding the air that deep stall manure has been found so much more effective than manure stored in an ordinary pile. Maercker, an eminent German investigator, has recently found in experiments with oats that the nitrogen of deep-stall manure compared favorably with that of sulphate of ammonia and nitrate of soda, while ordinary barnyard manure was either without effect or lowered the yield.

The unsatisfactory results with the latter are accounted for, not only by the fact that the manure had probably lost a large part of its fertilizing value by careless treatment, but also because the manure as well as the litter mixed with it contained peculiar microorganisms, known as denitrifying organisms, which are capable of converting available nitrogen into forms which are of little or no use to the plant when the manure is applied to the soil. In these experiments, moreover, the manure was applied in much larger amounts than is usual in practice, and the denitrifying organisms were thus distributed in the soil in sufficient numbers to work injury. Other experiments indicate that when manure is applied in the usual amount this is not likely to happen.

Careful attention to the construction of the manure pile so that air will be as completely excluded as possible, keeping the heap moist, and avoiding alternate wetting and drying have been suggested as means of preventing loss of valuable fertilizing constituents and of promoting a decomposition which will largely reduce the power of the manure to convert available nitrogen into less valuable or useless forms in the soil. Here we have an explanation of the effectiveness of well-rotted manure; not only is the availability of its own nitrogen increased, but its power to injuriously affect available nitrogen from other sources is reduced.

One point which has been clearly brought out by recent investigations is that the addition of straw may very

decidedly reduce the fertilizing value of manure, the injurious effect being greater the larger the amount of straw used. The excessive use of straw as litter should therefore be avoided if the most effective manure is desired.

Toronto's Great Exhibition.

Anticipating a large increase in the exhibit of utensils and products in the dairy department this year, the directors of the Toronto Industrial Exhibition have considerably increased the space over former years. The refrigerator accommodation will also be nearly doubled. In view of this exhibitors need not fear that the articles sent will not be properly displayed. Intending exhibitors of butter and cheese are recommended to read over carefully the conditions set forth in the prize list, especially those having reference to the special prizes. Exhibitors of dairy butter should be careful to use nice packages of the proper size, and those sending ten pound rolls should not send in boxes or baskets large enough to hold three or four times the quantity. Exhibitors of cheese should ship in good, sound boxes large enough to hold the cheese, and see that no nails or tacks are driven into the sides. The superintendent will be glad to give any information to intending exhibitors if requested.

In reference to other departments of the exhibition it is only necessary to state that the indications are that the entries will be fully up to any previous year, while there will be many new and unique features. For one thing, there will be a great many more industries in actual operation, manufacturers having seemingly determined that that is the best way to show their goods. In the way of special attractions a number of engagements have been made of high-class novelties, and as regards inventions and electrical displays the exhibition will be particularly well up-to-date. As an instance, it can be mentioned that a New York firm has been arranged with to give an exposition of wireless telegraphy, wireless telephoning and the improved X-Rays. A novelty will be the creation of an artificial water ascent and fall by the explosion of a quantity of gun cotton beneath the waves, sending tons of water high into the air. An exhibition will also be made of saving lives from a wrecked steamer, rockets being fired, life lines strung, and so on. The military spectacle will be of a dual nature, illustrating the battles of Omdurman in Egypt, and Iloilo in the Philippines, after which the Anglo Saxon unity movement will be shown by a grand pyrotechnic display on a scale never before attempted on the continent. Of course the customary reduced rates will be given on all lines of travel. All that remains to be said is that entries for live stock, dairy products, ladies' work, fine arts, honey, and all classes of manufactures close on Saturday, August 5th; for grain, field roots and horticultural products on Saturday, August 12th, and for poultry and dogs on Saturday, August 19th.

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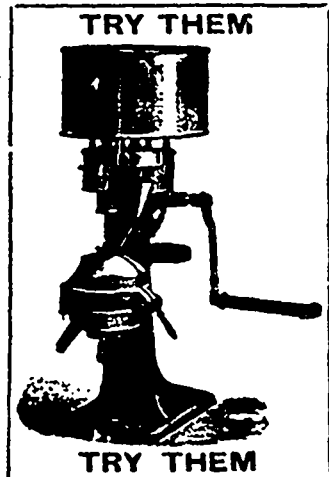
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Market Review and Forecast

Office of FARMING,
Confederation Life Building,

Toronto, July 24th, 1899.

Trade generally is not specially active just now, but during the week there have been unmistakable signs of an improvement in some sections. Merchants state that collections have not for years been better than during the last month or six weeks. Money continues firm, and likely to remain so for awhile.

Wheat.

A month or two ago when July wheat in Chicago advanced to 78½c. and September option to 79½c. many felt that these increased values had come to stay, but as the season wore on and the crop prospects became brighter and considerable old wheat began to be marketed in the West, prices took a turn the other way, and at present the situation seems to be in favor of buyers. The world's supply in sight is now 28,339,000 bushels larger than it was at this time a year ago, and the Canadian and United States supply 24,000,000 bushels larger. From this it would appear that everything is favorable to continued low prices. The European crop situation, however, as shown by reports elsewhere, is not of the best, and it seems pretty well established that Russia is going to have a big shortage, so the situation may change at any time.

The English markets show an easier tendency, with 3d. lower reported for No. 1 hard Manitoba. Chicago futures rallied some at the end of the week and a considerable amount of the gain was maintained. The decline in wheat has brought about a corresponding decline in flour. The Montreal wheat market is easier and lower at 69½ to 70c. afloat Fort William for No. 1 hard Manitoba. No. 2 red winter is quoted at Ontario points at 67 to 68c. f.o.b. Ontario red and white is quoted here at 68 to 69c. north and west, and goose at 67 to 68c. On the Toronto farmers' market red and white brings 70½c., spring five 66c., and goose 60c. per bushel.

Oats and Barley.

Already a speculative business is under way regarding the new oat crop, which promises to be a large one both in Quebec and Ontario, and dealers are offering at 32½ to 33½c. afloat at Montreal. There is no life in the English market and prices are lower. Stocks are liberal and holders are anxious to realize. The Montreal market is quiet. On this market oats are quoted at 29c. west. On the Toronto farmers' market they fetch 36 to 37c. per bushel. The business in barley still continues nominal.

Peas and Corn.

The English market has ruled a little firmer for peas. As with oats Ontario dealers are offering the new crop at about 55c. west, or equal to 62½c. afloat Montreal. Spot prices there are 65½ to 66c. per bushel, but there is not much doing. On the Toronto farmers' market 60c. is the ruling figure.

Reports regarding the Western corn crop continue favorable. The Chicago market is inclined to be higher. American is quoted at 41 to 42c. per bushel in carload lots Toronto.

Bran and Shorts.

The Montreal market is steady at \$13 to \$13.50 for Ontario white bran, and \$12 to \$12.50 for Manitoban. Shorts are quoted at \$15.50 to \$16, and Middlings at \$16 to \$17 per ton. Americans are reported to be buying bran in the west. City mills here sell bran at \$13 and shorts at \$16 in car lots f.o.b. Toronto.

Eggs and Poultry.

There is a good demand at London and Liverpool for Canadian eggs, which have advanced 3d. per long hundred. Buyers on this side seem to be not through with pick-

ling yet, due to the short crop of eggs. Fresh stock coming to Montreal is not good, but as hens will soon have the run of the harvest fields better quality is looked for. Shipments so far this season from Montreal show a falling off of 8,614 cases, and receipts 20,818 cases. The Montreal market continues firm and active owing to competitive buying. Ordinary stocks bring 12 to 12½c., and choice candled 13½ to 14c. wholesale. On this market new-laid eggs are quoted at 13½ to 14c. wholesale, and on the Toronto farmers' market bring 15 to 18c. per dozen.

On the farmers' market here chickens fetch 50 to 90c., and ducks 80c. to \$1 per pair, and turkeys 10 to 11c. per lb.

Potatoes.

The reports from the potato crop on the whole are favorable. Recent rains have very much improved it. At Montreal new stock is more plentiful, and prices are lower at \$1.30 to \$1.35 per barrel, wholesale. On the Toronto farmers' market new potatoes bring 65 to 75c. per bushel.

Fruit.

As will be seen elsewhere, the American peach crop will be largely a failure, and the apple crop just fair. This condition applies to these crops here, though there will likely be a fair crop of peaches in the Niagara district. Growers of small fruits such as strawberries have had a very good season so far, and have received fully fifty per cent. more than the bottom prices last year for their strawberries. Raspberries have also been higher, and at Montreal have brought 8 to 8½c. per box wholesale. Red currants are selling there at 40 to 50c. per basket, and black at 60 to 75c. Gooseberries bring 35 to 40c. per basket. On the Toronto market receipts have been fair, prices steady, with trade generally good. Raspberries bring 7 to 8½c., black raspberries 5½ to 7c., red currants 40 to 55c., black currants 70 to 90c., and cherries 75c. to \$1 per basket. Gooseberries bring 30 to 40c. for small and 70c. for large baskets.

Hay and Straw.

Reports regarding the hay crop indicate a much larger yield than was expected some weeks ago. A fair average crop of timothy is expected in Quebec. The local market at Montreal keeps well supplied, but the demand continues good. Prices for car lots of clover are \$5.25 to \$5.50; for No. 2, \$6 to \$6.50; and \$8 to \$8.50 for No. 1. These prices are for baled hay. Baled hay here brings \$7.50 to \$8.75, and baled straw \$4 to \$4.50 per ton in car lots. On the Toronto farmers' market old hay brings \$10 to \$11, new hay \$7 to \$8.50, sheaf straw \$6 to \$6.50, and loose straw \$4 to \$5 per ton.

Cheese.

Cheese continues firm, and the situation is a healthy one. Ever since prices at Montreal advanced from \$4 to \$4½ and 9c. for June goods, dealers on this side have been saying that prices would take a tumble. But the very opposite seems to be the case, and today, with a good consumptive demand and no accumulation of stocks in Great Britain and an advance in the cable during the past few days of one shilling, the outlook for cheese is good, and July's are likely to bring a good figure. Though shipments of cheese from Montreal show an increase so far of nearly 80,000 boxes as compared with the same period last year, it must be remembered that at the beginning of the season there was a shortage of 250,000 boxes in last season's output. There has been considerable talk of late of short sales, but this kind of trade has not been as large as expected and has had very little influence on the market other than to give some of the English houses the idea that cheese was going to be cheaper. Finest

Canadian is quoted firm at London, England, at 43s. 6d. to 45s., and fine at 41 to 42s. 6d. Finest Western is quoted at Montreal at 8½ to 9c., and finest Eastern at 8½ to 8¾c. At the local markets during the week prices have ranged from 8½ to 8¾c. with 8¾ to 8¼c. the ruling bids at the end of the week. At Brockville, on Thursday, cheese sold at 8½c., which is equal to 9½c. at Montreal. The bulk of the June goods are now out of factory-men's hands.

Butter.

Though our exports of Canadian butter so far this season show an increase of fully 82 per cent., there does not appear to be any lessening of the British demand for Canadian goods. Canadian creamery seems to be gradually growing in favor, and sales made this season on the open market in England have brought as high prices as were paid for the best Danish of the same day. The situation in the English market is shown by the *Trade Bulletin's* cable as follows:

"London, July 20, 1899.—Since my last cable a firmer feeling set in, with a further advance of 3s. per cwt., and a good business has been put through at the advance, but at the moment business is quiet, owing to holders becoming more conservative in their offerings, as stocks are light, with no show of accumulations at present. Finest Canadian creamery 92s. to 94s. Fancy mild salted factories 95 to 96s. Good to fine creamery \$4 to 90s."

Shipments from Montreal so far this season show an increase of fully 40,000 pkgs. as compared with the same period last year, while those from New York show a falling off of nearly 20,000 pkgs. The Montreal market is active and holders of fancy brands are asking 18½ to 18¾c., and though cable orders only warrant about 18½c. being paid, sales are reported at 18½ to 18¾c., which is nearly a cent over the highest price a week ago. While this is so, some fair lots, but not so fancy in quality, have sold under 18c.

On this market creamery prints bring 18 to 19c., and boxes 17 to 18c. per lb. Choice dairy tubs bring 13 to 14c. and medium 11 to 12c. and dairy lb. rolls 14 to 16c. per lb. in large lots. On the Toronto farmers' market lb. prints bring 15 to 20c. and large rolls 12 to 13c. per lb.

Wool.

There is nothing new to report in the wool situation. Prices continue about the same at 13 to 14c. for fleece, 8c. for unwashed and 15 to 16½c. per lb. for pulled wool.

Cattle.

There is no material change in the cattle situation. As a rule western markets have been lower for inferior grades, though first quality brings good prices. Cables are inclined to be slow. There was a large run of live stock on Friday on Toronto market, and trade, considering the large run, was fair and all good cattle were bought up at good prices. Poorer grades were slow of sale at a little lower prices. The quality of the fat cattle was only fair, but not quite as good as has been coming forward.

Export Cattle.—Choice, heavy exporters sold at \$4.90 to \$5.25, and light ones at \$4.70 to \$4.80 per cwt. Export bulls seem to be scarce, with prices firm at \$3.80 to \$4.50 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1,000 to 1,100 lbs. each, sold at \$4.37½ to \$4.50 per cwt. Good butchers cattle bring \$3.90 to \$4.25; medium, \$3.55 to \$3.90; and inferior to common, \$2.50 to \$3.55 per cwt.

Stockers and Feeders.—Stockers have ruled easier both on this market and in the west.

At Chicago operators seem to be uncertain whether the market is going to live or die. On Friday on this market prices for Buffalo stockers were easier, few of good quality being offered. Prices ranged from \$2.90 to \$3 per cwt. for heifers, and \$3.10 to \$3.25 for steers. Very few feeders were offered, but choice, well bred steers, weighing from 900 to 1,000 lbs. each, are worth from \$3.60 to \$4 per cwt.

Cattle.—These are easier at Buffalo. The market here is slow, and the twenty offered on Friday brought \$4 to \$8 each.

Milk Cows.—These being \$26 to \$47 for the general run. One extra choice fresh milker brought \$60 on Friday's market.

Sheep and Lambs.

At Chicago and Western markets sheep ruled easy and quiet during the week, while East the markets were more active at the end of the week. On Friday at Buffalo there was a good demand for sheep at steady to strong prices and also for good spring lambs, but common stuff was easy. The deliveries on Toronto market on Friday were large and prices firm at \$3.50 to \$3.65 for ewes and \$2.50 to \$3 per cwt. for bucks. Prices for lambs were firm at \$3.50 to \$4.50 each or \$5 to \$5.75 per cwt.

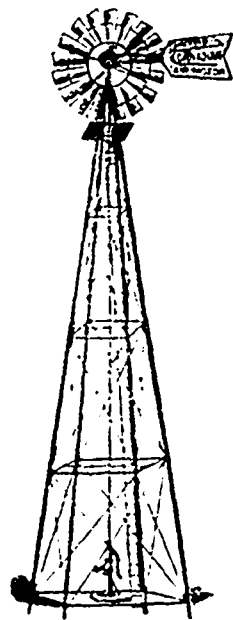
Hogs.

The hog market shows a material advance during the week, and though receipts were large on this market on Friday prices were firm at \$5.12 1/2 per cwt. for choice select bacon hogs of good quality weighing not less than 160 nor more than 200 lbs. each, unfed and unwatered off cars, and \$4.37 1/2 for thick and light fats. Unculled car lots sold at \$4.50 to \$4.90 per cwt. There appears to be a good, active demand for hog products just now both at home and abroad. There is a rumor that bacon of certain quality is getting scarce, and that dealers will not have enough to meet the English demand.

The Montreal market has been steadier at \$4.60 to \$4.75 for light averages and \$4.35 to \$4.50 for heavy grades and prices will likely be higher this week. The English bacon market keeps firm and active. As the *Trade Bulletin's* London cable of July 20th shows:

"The market for Canadian bacon is firmer and higher, the advance cabled by me last week having been supplemented by a further rise of 3s. per cwt. Canadian bacon is in favor here and shipments now arriving meet a good demand."

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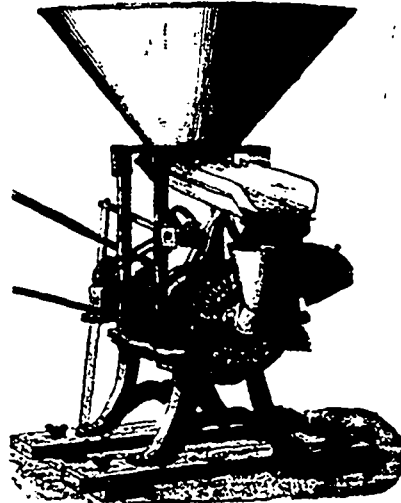
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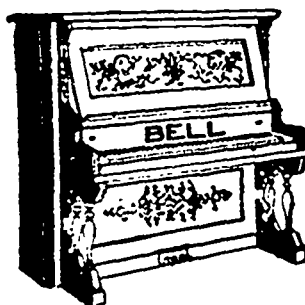
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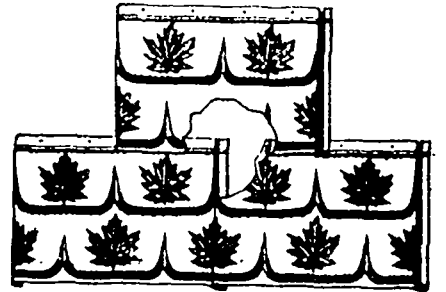
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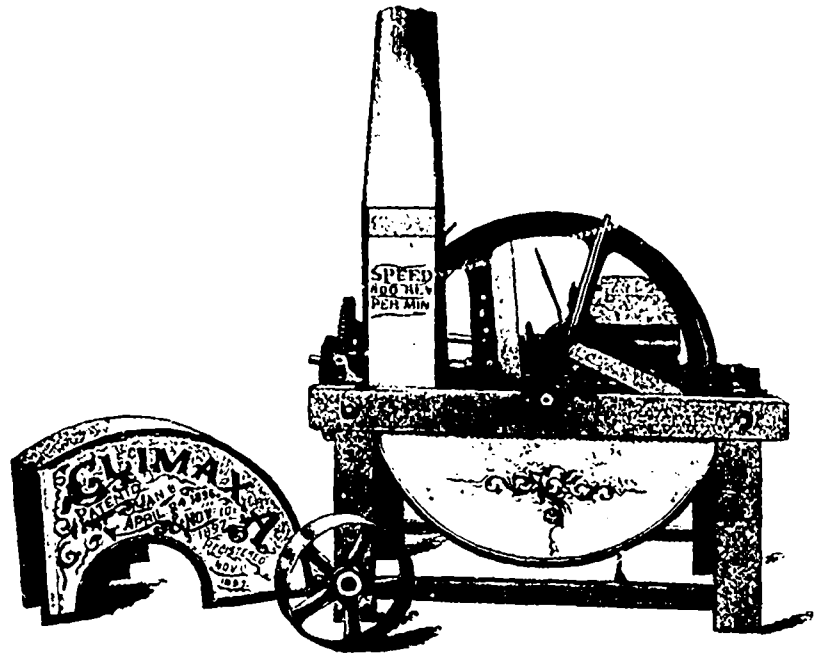
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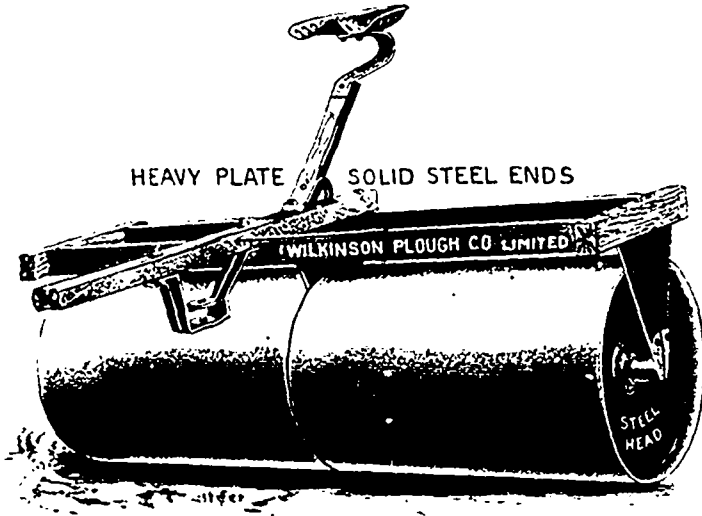
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