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Farming

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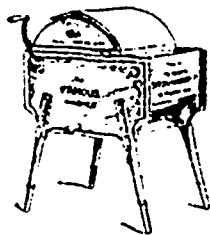
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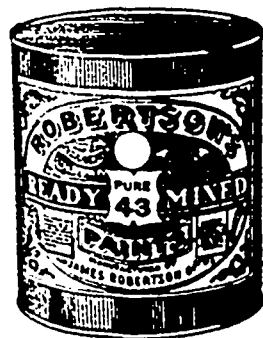
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FARMING

VOL. XVI.

AUGUST 29th, 1899.

No. 52

Look Out for Next Issue!

Next week our annual Exhibition number will appear, and we would strongly advise all our readers to keep a sharp lookout for that issue. It would be a distinct loss for you to miss it. As the time of its appearance approaches we are becoming, if anything, more confident as to the excellent character and thoroughly practical nature of the information which it will contain, and are now thoroughly satisfied that the production, both in an artistic sense, as well as in valuable up-to-date reading matter, will be ahead of anything of a similar kind ever published in Canada. The somewhat detailed outline given in last week's issue will be more than realized, as considerable new material has come to hand in the last few days, which will greatly enhance its value.

We forgot to say anything in last issue about the cover. A specially prepared illustration in two colors, which we consider to be both unique and, at the same time, thoroughly representative of the great industry this journal represents, will appear on the front cover. A well-known artist has been at work on this illustration for several weeks past, and, now that it is completed, we can only say that he has done his work well. In addition to this, the number will contain upwards of fifty photo engravings and drawings, all of which will go to make this number an honor to Canada's important agricultural interests.

We would again remind you that you will be welcome at our tent at the Toronto Fair. Do not fail to call. The tent is located directly opposite the Farmers' Institute tent in the northern portion of the grounds, and all its privileges will be at the disposal of visiting friends. If you have any neighbor or friend who is not already a subscriber to whom you would like a copy of the Exhibition number sent, kindly forward us his name and address.

The Blower Ensilage Elevator

With the advent of the silo has come new and improved machinery for cutting corn and elevating it into the silo. One of the latest developments along this line is the pneumatic elevator or "blower" as it is commonly called. This piece of machinery seems to be coming largely into use in some sections, and is to a considerable extent replacing the ordinary carrier elevator. In several respects it has a decided advantage over the latter if properly managed. One of the difficulties we have heard mentioned by some who have used the blower is to get suitable and sufficient power to run it satisfactorily.

Believing that this subject was of sufficient interest and importance to merit special attention just now we determined to get the experience of a number of farmers who have used blowers for publication in these columns. The questions submitted for reply were as follows:

- (1) Has the blower elevator given you good satisfaction?
- (2) What power do you use in running it?
- (3) Have you found any difficulty in getting sufficient power to operate the blower and cutting-box satisfactorily?
- (4) How high will your blower elevate the ensilage?
- (5) How does the blower compare with the ordinary carrier in facilitating the filling of a silo?

We have already received a number of replies to these questions, some of which appear in this issue. The others

will be published in succeeding issues. Unfortunately, perhaps, nearly all of our correspondents have used steam power for running the blower and consequently have had no difficulty in obtaining sufficient force to operate it successfully. While other power, such as the tread power, gasoline engine, etc., may do the work successfully, so far we have received no information from anyone who has used them to run an ensilage blower elevator. We would therefore be glad to hear from persons who have used any power other than steam in running the blower. The whole question is important and we would like to see the fullest discussion of the subject.

Dairy School Announcements

The Dairy School announcements for the coming sessions are now out. So far we have received those of the Provincial Dairy School at Guelph and the Eastern Dairy School at Kingston, Ont. The former will open on Dec. 4th and close on March 23rd, 1900, and the latter on Dec. 4th and close on April 7th, 1900. Situated as they are, in the Eastern and Western portions of the Province, these schools afford splendid opportunities to cheese and butter makers to become more proficient in their respective vocations.

We are safe in stating that the time has passed when a maker in this province at least can afford to ignore the teaching and practice which a course at one of these schools will give him. The best men to-day, among the younger class of makers especially, are those who have taken the course at the dairy schools and have passed satisfactorily the prescribed examination. Consequently we would urge upon the young men who are fitting themselves for makers to take the full course at one of these schools. Their dairy education will not be complete till they do so. And it would not do some of the older makers any harm to get a little brushing up at the schools during the winter season. The constantly-increasing demand for a better quality of product makes it imperative that every maker should be right up-to-date in everything connected with butter and cheese making.

The Guelph School is making a new departure, which is both timely and important. From Dec. 4th to the 22nd will be conducted a special creamery course to aid makers who cannot spare the time for the full course. This is intended to meet the needs of those who wish to operate a creamery for a portion of the winter and early spring. A course of twenty lectures will be given, covering a number of subjects pertaining to the creamery butter trade, which is becoming so important an industry in this country. The home dairy and regular factory courses will be conducted on the same plans as heretofore. They will begin on January 3rd and close on March 23rd, 1900. Particulars regarding terms of admission, etc., may be had on application to Prof. H. H. Dean, Ontario Agricultural College, Guelph.

The time during which the Kingston Dairy School will be in session will be divided into five courses, four of three weeks' duration each and one of six weeks' duration. The long course will open on January 17th and close on Feb. 27th, and the short courses will be from Dec. 4th to 22nd; Dec. 27th to Jan. 16th; Feb. 28th to March 20th; and

March 21st to April 7th. Students can enter at the beginning of any of these courses. All applications and requests for information should be made to the superintendent, J. W. Hart, Kingston, Ont.

Poultry Fattening Stations

The Department of Agriculture at Ottawa will establish two of these stations in the Eastern Provinces to show how the fattening of chickens can be carried on most economically and profitably, and Professor Robertson goes to the Maritime Provinces this week to make arrangements. The success of the experiments conducted last fall along this line warrant the Government in further extending this important educational work. There is no doubt that a most important export trade can be worked up in dressed poultry, providing the birds are properly fattened and fitted for the English market.

Mr. James Ruddin, of Liverpool, one of the largest dealers in poultry in Great Britain, was in Ottawa last week in the interests of this important trade. He handled the trial shipments sent by the Department of Agriculture last fall, and reported very favorably as to the consignment. He has been travelling through Canada, making arrangements with several firms for shipments of chickens and turkeys to Great Britain. The Department has received enquiries from another large importer in Manchester, who will also be coming to Canada next month to make arrangements for the handling of fattened chickens and turkeys.

While in the Eastern Provinces, Prof. Robertson will make arrangements for the starting of co-operative creameries in Nova Scotia, similar to the co-operative cheese factories started by the Dominion Government in Prince Edward Island in 1892. These will be managed by his department on the same plan that the Island factories were conducted, the object being to develop the butter-making industry of that province.

Death of Macgregor (1487)

By Stockman

Twenty-one years ago as a yearling and a winner at all the local shows Andrew Montgomery bought Macgregor from his breeder, Robert Craig, of Dalry, Ayrshire. The promising youngster was by Darnley (222), out of Flashwood Sally by Prince Charlie (629), g. dam Jean by Loch Fergus Champion (449). Of good pedigree, he proved a good horse and in the next two years won many prizes at the leading shows. As a two-year-old he won everywhere. As a three-year-old he was first at Glasgow and at the Royal and the following year was first at the Highland also. He then left the show ring. When but five years old his progeny won first for group of yearlings at Glasgow. At the Centenary show at Edinburgh they won first and second places for yearlings and first for best group of two-year-olds, beating all the best sires in Scotland. Many of his progeny found their way to Canada and have taken good positions at our best shows. Wherever Clydes are bred, there Macgregor and his owner, Montgomery, of Nether Hall, are known. The old horse who had done so much for his owner died at the home of Sir John Gilmour, Montrane, Fifeshire, where he had just completed a two years' engagement. The immediate cause of death was an attack of inflammation.

Macgregor was not a large horse but had a well-knit figure, a bit down in the back and had excellent feet and legs with fair feather of the best quality. He bred well and generally to his own type. It was often quite easy to pick out every Macgregor colt in the show ring, but it was as a sire of fillies that he had his great reputation. He has departed full of years and honors just as his stable companion Baron's Pride has gone to the top of the list as the most successful sire in Scotland.

A Seven-Year Comparison of Wheats

Press Bulletin Ohio Agricultural Experiment Station

Thirty three varieties of wheat have been grown side by side at the Ohio Experiment Station for seven years. One of these varieties, Penquite's Velvet Chaff, has been grown on thirty different plots, scattered regularly throughout the test, and the yield of the other sorts is compared with that of the nearest plots of Velvet Chaff. The average yield of the thirty plots of Velvet Chaff for the seven years has been twenty bushels per acre, ranging from less than ten bushels in 1896 to nearly twenty-nine bushels in 1898.

Poole and Mealy have exceeded this 7-year average yield by four bushels and more; Early Ripe and Red Russian have surpassed it by between three and four bushels; Currell's Prolific, Gypsy, Mediterranean and Nigger by between two and three bushels; Bearded Monarch, Egyptian, New Monarch and Valley by between one and two bushels, and Dietz, Democrat, Fulcaster, Fultz and Lebanon by less than one bushel.

Jones' Square Head and Jones' Winter Fife have fallen below the yield of the Velvet Chaff, by between two and three bushels per acre; Early Red Clawson, Royal Australian, Sibley's New Golden, Silver Chaff and Yellow Gypsy by between one and two bushels, and Early White Leader, Hickman, Hindostan, Lehigh, Martin's Amber, Missouri Blue Stem and Ruby by less than one bushel.

The Velvet Chaff reached its lowest yield in 1895 and 1896, the average of its 30 plots being 11.42 bushels for 1895 and 9.84 bushels for 1896. In both these seasons Bearded Monarch, Dietz, Democrat, Fulcaster and Fultz fell below Velvet Chaff in yield; Poole and Red Russian gave practically the same yield as Velvet Chaff in 1895, with a small increase in 1896; Gypsy, Mealy, Mediterranean and New Monarch kept above the yield of Velvet Chaff during both these seasons, by a margin of from three pecks to three bushels per acre, while all the other sorts fell below it during one season or the other.

High water mark in this experiment was reached in the crops of 1893, 1897 and 1898, Velvet Chaff yielding 26.72, 27.32 and 28.55 bushels per acre in the tests of those seasons. In all these seasons the yield of the Velvet Chaff was exceeded by Currell's Prolific, Early Ripe, Gypsy, Hindostan, Lehigh, Mediterranean, Missouri Blue Stem, Nigger, Poole and Red Russian, and in the last two by Fultz also.

It will be seen from these experiments that it is not safe to pronounce judgment either for or against a variety of wheat on the basis of a single season's test, especially if the season has been a favorable one, unless the results of the test have been exceptionally decisive. The safest variety would seem to be the one which has greatest strength to resist the influences of an unfavorable season.

Horses Are Horses Again

We have had occasion more than once to draw attention to the improved condition of the horse trade. Notwithstanding the frequent statements made that the place of the horse is being gradually supplied by the automobile and kindred means of locomotion the demand for really good horses of nearly every class continues to increase. A person not wanting to buy does not know the actual condition of affairs, but let him once endeavor to secure a good horse and he will quickly find out how scarce they are. The following extract from the *Western Horseman* sums up the situation very well and draws attention to some of the conditions which are making for improvement in this important trade:

Conditions have undergone great changes during the last twelve months, and to help matters along towards better values in horseflesh the stereotyped greeting on the horse

situation has changed in every one's mouth, and now wherever one hears the subject mentioned, whether it be among farmers, horse dealers or tradespeople, the remark is "Horses are horses again." And sure enough, "horses are horses," as everyone finds out when he undertakes to buy one. Twelve months ago every farmer had horses to sell and seldom refused an offer of any kind; but now many farmers are buying horses for their own use, and many of them are in the market for breeding animals. The truth of the matter is, the civilized world is short of horses, and, owing to the density of population, many European countries, including England, Germany, France, Belgium, Scotland—all now buyers in the United States—are not likely to ever again produce sufficient horses for home use, at any rate, they can buy of the United States more cheaply than they can produce at home.

Government reports from all of these foreign countries show that for some years past the cost of raising a colt till two years old has been \$150 to \$200 per head, and this cost is constantly increasing. These conditions presage much benefit to horse-breeders, and, fortunately, the foreign demand is not confined to any particular class or breed further than that horses must be true to their respective classes, possessing distinctive merit in their classes. All Europeans demand a horse of quality, substance and good behavior, whether they want him for hack use, draft use, carriage use, light driving or racing purposes.

As a rule, American horse-breeders and farmers forfeit more on account of imperfect education and conditioning for market than they get for their surplus in the condition in which it is usually marketed. American farmers and horse-breeders must learn to breed to a purpose and fit their surplus for the market. With this plan adopted and followed a long period of great prosperity awaits horse-breeding in the United States.

Spraying for Mustard

By Frank T. Shutt, M.A., Chemist, Dominion Experimental Farms.

One of the most persistent weeds that farmers in many parts of Canada have to contend with is mustard, commonly known in Europe as charlock. Though an annual, it is most difficult to eradicate from fields in which it has become established, owing to the fact that the seeds—of which a large number is formed—are endowed with a strong vitality and are preserved, by the oil they contain, from decay until favorable conditions for sprouting occur.

Pulling the mustard when it appears among the grain or keeping the weed from seeding by working the land (as under a hoed crop) are the two methods which have hitherto been in vogue to exterminate this pest, and when the work is done thoroughly they may be considered satisfactory and efficient. The former, however, is always costly, and the latter is sometimes not convenient. When, therefore, it was announced in the Agricultural Press that spraying, with certain solutions of sulphate of iron and sulphate of copper, had been tried successfully in England and France, it was deemed advisable to make similar experiments here. We should then be in a position to furnish information at first hand on this subject.

The fields of the Experimental Farm being free from this weed it became necessary to make the trials upon an adjoining farm, and for this purpose a field of barley was selected which showed a considerable amount of mustard. The size of the plot treated in each case was one-tenth of an acre, and the quantity of solution uniformly supplied to each area was five gallons or at the rate of 50 gallons per acre. The date of spraying was June 26th, the grain being from fifteen inches to twenty inches high and the mustard practically the same height and just coming into flower. The chief data may be briefly stated as follows:

Sulphate of iron, 5 per cent.: No effect upon barley. The leaves were practically all stripped from the stems of the mustard, but the weed was not killed, as evidenced by new leaves subsequently starting, the plant flowering and the

seed-pods filling out and maturing. The leafless stems were quite green a fortnight after the spraying and were, apparently, furnishing nourishment to the seed.

Sulphate of iron, 10 per cent.: A slight scorching of some of the leaves of the barley was to be noticed. A fortnight after the spraying this was not discernable, and, though this spray may have slightly retarded growth it is not probable that the yield of grain was affected.

Though the effect upon the mustard was more pronounced than in the foregoing instance, as noticed by the "spotting" on the stems, it was not sufficiently strong to prevent flowering and the ripening of the seeds, a large proportion of which proved, upon testing, to be vital.

Sulphate of copper, 2 per cent.: A certain amount of injury to the leaves of the barley resulted, evidently retarding growth to a somewhat greater degree than the 10 per cent. iron sulphate solution. At the end of two weeks, however, this effect had practically all disappeared, and it became doubtful if there were any permanent injury to the grain. The mustard very quickly and markedly showed the effect of the spraying, both the stems and the leaves dying without allowing the plant to seed. Two weeks after spraying, a few living mustard plants were found in the plot, but it is believed they had escaped the solution owing to the height and overshadowing of the barley.

Sulphate of copper, 5 per cent.: This solution damaged the barley in a much more pronounced manner than the preceding solution; in all probability it somewhat lessened the yield of grain, though, as the ground was very uneven in character, no comparative data on this point could be obtained.

The mustard was all killed; an inspection two weeks after the spraying did not reveal any living plants.

In order to ascertain the effect of these solutions upon this weed at a younger stage of growth than that just reported upon, mustard seed was grown in rows in a plot upon the Experimental Farm. When the mustard plants had reached the height of six to nine inches they were sprayed as follows:—July 20th: *Sulphate of iron, 5 per cent.* Not all killed; the few survivors possessed green stems and in time sent out new leaves. It is extremely doubtful, however, if the plants will have sufficient strength to flower. *Sulphate of copper, 2 per cent.*: All the plants died within a few days.

July 22nd: Further sprayings were made. *Sulphate of iron, 5 per cent.*: The stems were stripped of all their leaves, but in the course of a few weeks fresh leaves had appeared on many of the plants. *Sulphate of iron, 10 per cent.*: Though somewhat more severely attacked than by the 5 per cent. solution, there was sufficient vigor left in many of the plants to send out new leaves, after a few weeks.

Sulphate of copper, 2 per cent.: Only a very few of the older and more vigorous plants escaped destruction, probably not more than three to five per cent. This solution is evidently strong enough to kill all mustard plants six inches in height and less.

Sulphate of copper, 5 per cent.: All the plants killed.

From the above data, I make the following inferences:

1. That a two per cent. (2%) solution of sulphate of copper (that is two pounds in ten gallons of water) is, all things considered, the most effective, safest (as regards the grain crop) and most economical to use. The spraying should be done thoroughly, and for that purpose fifty gallons per acre will be required. If a heavy rain follows the spraying within twenty-four hours, the operation will be required to be repeated.

2. That, in order that the work may be effective, spraying should not be delayed after the mustard plants have reached a height of six to nine inches. If allowed to grow taller than this, stronger solutions would be necessary and in larger quantity, as the grain would then largely protect the mustard.

For many valuable suggestions and much assistance in the work I am indebted to Mr. W. T. Macoun, horticulturist of the Experimental Farm, who concurs with me in the deductions drawn from this investigation.

Hardy Bulbs

By John B. Pettit, Fruitland, Ont.

There is no other class of flowering plants that gives as little trouble or can be so successfully managed by the amateur flower lover as the bulbous class. Their culture is extremely simple, as throughout their growing season they require no more care or labor than does a potato to bring it to maturity, and during their time of rest but little attention is necessary.

Of all the bulbous plants the spring flowering bulbs are most to be desired. These, which are generally called "hardy" or "Dutch" bulbs, come into bloom early in the spring, some of them even showing their dainty flowers while the streamlets are still frozen in the woodlands and the snowdrifts hang along the mountain's brow. After months of intense cold, cloudy, cheerless days and seeming endless nights, there is nothing more pleasant to the eye or that gives more genuine pleasure to the heart than the sight of the dainty spring blooming bulbs forcing their heads through the recently frozen earth and defying the ice king to again go on his mission of destruction. They come at a time when it is impossible to have any other kind of flower out of doors. The conservatory plants cannot stand the frosty nights, the perennials are just beginning to grow and the seeds of the annuals have just been planted in some pan or box in a sunny window. The fact that they are of such easy culture and that the different kinds of bulbs can be secured at such a moderate price should induce every one to plant extensively.

To have a succession of bloom from the time when the snow is still to be seen until on in the summer one should plant Scillas, Snowdrops, Crocus, Hyacinths, Narcissus, Crown Imperials, Preonies, Daffodils, Tulips, Lilies, etc.

Bulbs will thrive in any kind of soil and in any situation, so no one should be without them on that account. While this is a fact better results are obtained when more care is exercised in the selection of soil and location. A rich, deep, sandy soil gives best satisfaction, located where the beds may receive at least a part of the forenoon sun. In preparing the bed it should be spaded up deep and be made fine. The bulbs should be planted from two inches to six inches deep and from three inches to six inches apart according to variety and size. The bed should be slightly raised above the surrounding soil so that water will not settle around the roots and bulbs.

Although most of the Holland bulbs are perfectly hardy they do much better if they have some protection through the winter. A covering of stable manure over the bed after it is planted in the fall, to the depth of four to six inches, is the proper thing. This will keep the bulbs from being repeatedly thawed out and frozen up should the winter be an open one. Besides this the strength is washed out of the manure down into the earth by the autumn rains and thus the soil is kept enriched. By this annual covering the flowers are made much larger and of a more brilliant color. If manure cannot be got use straw or hay or any kind of litter. Of course it must be removed as soon as the frost is out of the ground in the spring.

It must be remembered that all these bulbs should be planted in the fall, and the earlier they are put in the better. Many readers would be astonished to know of the large number of orders for these bulbs that are received in the spring by growers and dealers. While they may be planted on into November, if the soil is not frozen, far more satisfactory results are obtained from earlier plantings. The bulbs have to make the most of their roots in the fall before the ground becomes frozen, for as soon as the frost is gone in the spring the bloom begins to make its appearance and there is no time for the bulbs to make roots, as instead the roots must be feeding the flower and producing a new bulb. The sooner they are in the better, as more time is given for root growth and the stronger the roots the larger and finer the flower the following spring. To give most satisfactory results the bulbs should be planted early in September.

In planting these bulbs do not mix the different kinds in the same bed. Plant the tulips in a bed by themselves and the hyacinths by themselves, and the other varieties in the same manner. Nothing gives more displeasure to the true gardener than to see a bed of mixed bulbs of all kinds and varieties. Hyacinths of dwarf growth and tulips with long stems do not look well together. Keep each kind by itself.

Many people take their bulbs up annually after they have ripened in the summer and replant them again in the autumn. Such a procedure is useless. They should be left in the ground at least three or four years and then the clumps should be taken up and divided and again replanted. By leaving in the ground year after year finer flowers are produced and the labor of replanting is done away with. They also multiply more rapidly when left undisturbed for some time.

Quite often these hardy bulbs do not give nearly so nice bloom the second and after years as they do the first year planted and some lovers of flowers grow disappointed. The reason of this is the bulbs are never allowed to bloom in Holland, but as soon as the bud appears it is pinched off and all the strength from the roots goes into the new bulb which, as a result, is greatly strengthened and made to produce much finer bloom.

Every lover of flowers should plant freely of these hardy bulbs, the culture of which is so very simple and whose brilliant bloom is produced at a time when most desired.

CORRESPONDENCE

No Chains to Break

To the Editor of FARMING:

Your letter of date August 15th is to hand asking for information re ensilage blowers, and which I shall gladly give.

1. The blower has given most excellent satisfaction.
2. I use a 16-horse power steam engine in running it.
3. I have found no difficulty whatever in getting sufficient power to operate the blower and cutting box satisfactorily.
4. I have never tested how high the blower would elevate ensilage, as my silo is only 20 feet high; but I believe that it will elevate ensilage forty feet high without difficulty.
5. There is no real comparison between the blower and the carrier in facilitating the filling of a silo. The blower takes everything up clean and you can place it right against the silo. Besides, there are no chains to break.

JOHN DOWNHAM.

Wisbeach, Ont., Aug. 19th, 1899.

Elevates Five to Ten Ton Per Hour

To the Editor of FARMING:

In answer to your enquiry in reference to the blower elevator cutting box, I may say that it has given us very great satisfaction. The power which we use is a 12-h.p. engine, and we find that it gives sufficient power for a 16-inch throat box. We have used it to elevate to the height of 35 feet, and it did its work well as long as the knives were kept sharp.

We filled eleven silos last year and cut up over 1,000 tons of corn. We cut at the rate of from 5 to 10 tons per hour, according to condition of corn. The blower was run at the rate of 550 revolutions per minute, and required somewhat more power than the carrier machine at the same speed.

The advantages that the blower has over carrier machines are: Ease and rapidity of setting up, one man can put up

pipe in one-fourth the time required for five or six men to put up carriers, the reduction of wearing parts, such as chains, gears, etc., and consequently fewer traps and fixings to carry round, no trouble from wind blowing silage out of carriers and no litter about the machine. I have often cut a whole day with no more litter around the machine than would feed a cow once. We have used a carrier machine for the last ten years, and have no hesitation in saying the blower is better, although you must adapt the capacity of machine to the power used. Our blower is made by the Thoms Imp. Co., Watford. It is the fan-on-the-wheel principle. Our experience with small attached blowers is not satisfactory.

JOSEPH MOUNTAIN.

Avonbank, Ont., August 19, 1899.

A Twelve Horse Power Will Run It

To the Editor of FARMING:

Yours of the 18th to hand. In reply I beg to say that I have used a blower elevator cutting box made by the Wilkinson Plough Co., of Toronto Junction, for elevating ensilage, and it has given the best of satisfaction both to myself and to the farmer. I have driven it with one of John Abell's Triumph engines, fourteen H.P., but it can be driven by any twelve H.P. engine. I find no difficulty in elevating corn thirty five and forty feet. In comparison I would not give the Climax cutter for a car load of carrier machines.

W. A. DEARING.

Palermo, Ont., Aug. 21st, 1899.

Could Blow Corn Sixty Feet High

To the Editor of FARMING:

Yours of the 18th inst. received re the blower elevator cutting box. I have one of the Wilkinson make, and it works well. I have run it with a Haggert ten horse power engine satisfactorily. It cut my corn last year as fast as I could feed it, and never choked in any way. I believe it could blow the corn sixty feet high. It blew the corn with great force against the roof of my silo, which is thirty-two feet from the ground where the box was working. I would not be bothered with carriers when I could get a blower. There is nothing to keep in repair. The pipes may wear out, but it will be a long time.

JOSEPH FEATHERSTON.

Streetsville, Ont., August 21st, 1899.

Makes 600 Revolutions per Minute

To the Editor of FARMING:

Yours of the 15th inst. received regarding the elevator blower for a cutting box. I have a blower, and it has given me the best of satisfaction.

(2) I use steam power for running it. It is the only power I think that would run it successfully, as it requires to be run at a pretty high speed. I run mine at about six hundred revolutions per minute.

(3) I have a six horse power engine of my own, and I find that I have sufficient power to run it all right. My engine being small it does not require much wood or water to run it per day, and it comes very useful for sawing wood, chopping feed, pumping water, etc. So I have no difficulty about power.

(4) My blower will elevate the ensilage as high as I put my pipe. I have elevated it thirty-two feet, and had no trouble at all, excepting when the knives got very dull or the steam ran down. It chokes up very quickly if the box slacks down.

(5) The carriers are not in it at all alongside of the blower. There are a good many silos in this vicinity, and they are all making arrangements to have blowers put on their cutting boxes. I have had a good many calls for my engine to run them. I had a box with carriers myself before I got the blower, and so have tried both. The blower takes up everything, so that there is no waste around, and it is clean.

J. ATKIN.

Arkona, Ont., Aug. 18th, 1899.

Uses the Ordinary Horse Power

To the Editor of FARMING:

Replying to yours of the 15th inst., asking for my experience with blower ensilage cutter (1) I would say that it has given me good satisfaction.

(2) I run it with horse power.

(3) I have found no difficulty whatever in getting power enough to elevate corn into my silo, which is twenty two feet high, as I only had on four team any time, and part of the time we did it with three teams.

(4) My silo is only twenty-two feet high, and there seemed to be no difficulty whatever in elevating the ensilage that high.

(5) I consider that there is no comparison whatever between the blower and carrier elevator, as I have used both, and would not go back to the latter under any consideration. The blower is as far ahead of the carrier elevator as it is possible to imagine. I am using Thom's pneumatic elevator, made at Watford.

L. F. STAPLES.

Ida, Ont., August 18th, 1899.

Must Have Sufficient Power

To the Editor of FARMING:

We have just received your favor asking information in regard to blower. We will try and give you our experience as near as possible. We have only used it for putting one crop of corn into the silo, and we were well pleased with it after we got to understand how to manage it properly.

We used for running it a threshing engine. It requires power and speed to elevate the corn as fast as it comes through the cutting-box. If you have not sufficient power the pipe will clog with corn. We elevated the corn about twenty-seven feet, but could have put it higher if necessary. We think the blower all right for filling silos. We have never used the carriers, but from what experience we have had we would prefer the blower to the carriers.

We are well pleased with the silo and think it a very good thing for farmers keeping stock largely. We are trying to make our farming pay through stock raising and feeding. We sell nothing off the farm excepting a little fall wheat, and have to buy quite a quantity of grain besides what we raise. We have a small herd of thoroughbred Shorthorns, but not enough to advertise any for sale. We feed a number of steers yearly for the Old Country markets.

We like your paper very much, and are reading everything we can get hold of in regard to farming. We believe there is a better way of making the farm pay if we only knew how to do it. We like the way Mr. D. McPherson writes. He gives more results from his farming operations than any other writer that we know of. That is just what the farmer wants to know, how to make the best paying

results out of the money he has invested and still keep his farm from becoming exhausted. Any information we can give you from time to time will be freely given.

PLUMSTEEL & GIBBINGS.

Clinton, Ont., Aug. 16th, 1890.

Works Well

To the Editor of FARMING:

In reply to a letter received from you regarding the handling of the pneumatic elevator, I would say that it has given good satisfaction for the purpose for which we used it. Having no silo in which to put our cut feed, and not any too much room, we put on the long pipe and blew the ensilage into one corner of the mow over the granary, thus leaving us the barn floor clear for running purposes. I have always used an engine, which causes it to run steadily and with ease.

In regard to the height to which it could elevate, I might say that we can blow ensilage twenty-eight feet high, and twenty feet from that again, or across a twenty foot mow.

As to the pneumatic elevator compared with other carrier boxes, I might say that our box saves men, and will throw the stuff further than any carrier could do with the same power.

JOHN R. BRUCE

Watford, Ont., August 17th, 1899.

Far Ahead of the Carrier

To the Editor of FARMING:

Yours of the 16th inst. to hand re blower elevator cutting box, and in reply I would say that the blower elevator has given me the very best of satisfaction. I used a threshing engine to run mine, and it had no difficulty in giving sufficient power to run the blower and cutting box. My silo is only twenty-eight feet high, but I do not think there would be any difficulty in elevating thirty-five feet. I consider the blower far ahead of the carrier machine. I do not think there is much difference in the power required for driving them and the blower is much cleaner, not littering the ensilage as the carrier machine does, and it is not nearly so expensive to keep in repair. It feeds easier, as there seems to be a suction from the blower that greatly facilitates feeding.

JOHN BRIGHT.

Myrtle, Ont., Aug. 21st, 1899.

Several Kinds of Blowers

To the Editor of FARMING:

Yours of the 17th inst. just to hand. In reply would answer as follows:

(1) The blower, as an elevator, has given me the very best of satisfaction. I filled eight silos last fall, and had no trouble whatever.

(2) *Re* power; we used a 12 horse power threshing engine, but it was no work for it. I believe a 6 or 8 horse power would do, or even less, as I can work the same machine with my 16 windmill very satisfactorily. I might say here that my blower is made by the Thom Implement Works, of Watford. I believe there is more in throwing the corn than there is in blowing it. This machine gives it a throw and all it requires is sufficient wind to keep it going.

(4) As for how high my blower will elevate ensilage, I have not the slightest idea. My own silo is 38 feet high, and it appeared to do the work just as easy as the lower ones. This is the highest silo I have filled, and I wanted to test the machine, so I put on the long cut for one load mine is a 16 inch cutter). We reckoned that we were

cutting 20 tons per hour, and it never once choked nor gave us the slightest trouble.

As for question 5, I can say nothing about the ordinary carriers as I have had no experience with them; I know there must be a great deal less trouble with the blower in setting; also, there is no waste. Sometimes, with the carriers, the wind will blow considerable away in the elevating.

I might say that blowers for filling silos are not all got up on the same principle. Some use cupola blowers, which require a very high speed, as the whole of the work is done by the force of the wind, consequently they require more power to operate them.

Last season I ran my cutter about 420 revolutions per minute. The fans that cause the wind are on the same fly wheel the knives are attached to. The cut corn makes a half circle, is sent off by centrifugal force and goes straight up until it strikes the elbow at the top, which turns it into the silo. It will not work corn with any horizontal pipe, but will send cut straw or any light substance any desirable distance.

PAUL MADGE.

Thames Road, Ont., Aug. 19th, 1899.

Commercial Fertilizers: Seed Oats

Mustard Seed in Ontario Oats Causes Trouble in Nova Scotia

To the Editor of FARMING:

Please find enclosed two dollars which will pay for FARMING to December 31st, 1899. By way of encouragement I wish to say that your paper is well worth the money. I have been particularly interested with the articles on fertilizers, as I am in the business and want to give my patrons the best value for their money. In Mr. Frank Wallis' article (see FARMING, June 20th, '99), he does not state whether the experiments extended over a number of years, or whether it was only a single experiment. I find in my farming operations that my best laid schemes will "gang aft aglee," and that though you manure with what you please there are times and seasons when the soil will not do its best. Hence the necessity of repeated trials before a conclusion is reached. My own solid opinion is that commercial manures are too high in price, and that some way should be devised whereby they can be cheapened to the farmer.

Enough of this. To put it mildly, Mr. Editor, I am mad, and there are some hundreds of people in this and adjacent districts madder. To make it short I will inform your readers that I am engaged in the seed grain business. One of the heaviest items in that business is oats, which in former years were largely supplied from P.E. Island. But owing to the produce of that most pernicious weed mustard we were compelled to stop buying P.E. Island oats, and of course turned to Ontario for a supply. The first year or two we hadn't much trouble. The seed was very good and clean, but not so this year. The same weed has been shipped to us in abundance, and you can imagine the dealer's feelings after having encouraged his patrons to buy recleaned White Banner seed oats, grown in Ontario, and thereby avoid having their land ruined with wild mustard, to have them one and all coming back and telling you that they would far rather have had their land remain idle than to have sown oats containing such a troublesome weed. There were three if not four car-loads of these oats bought from a leading seedsman of Peterboro', Ont., and they are scattered over this county within a radius of thirty miles, and I would guarantee this seed merchant the warmest reception he ever got should he chance to come this way. His agent guaranteed them to be *As recleaned White Banner seed oats*, and when my customers called my attention to the black seeds in the grain I told them that I could not

think the seed could be injurious, as I did not for a moment suppose the intelligent, far-seeing and thrifty farmers of Ontario would allow their fields to be over-run with so ruinous a weed.

Perhaps the people to whom I am writing will say, "What does the trade amount to anyway? We won't be hurt if we don't get it." Perhaps not; but for their information I will say that the county of Cumberland has about 35,000 inhabitants, that we buy annually from 250,000 to 300,000 bushels of oats for seed and feeding purposes, that our flour trade will reach 20,000 barrels, besides some 50 carloads of mill feed and other coarse grains. If the trade is no good all right. If it is worth having the farmers and dealers had better have a care about what they are giving us, as it will take years to get the idea into our people's heads that it is safe for them to buy Ontario oats for seed. And any seed grain grown west of New Brunswick will be looked upon with suspicion.

B. W. RALSTON.

Amherst, N.S., Aug. 16, 1899.

Winter Wheat

Results of Tests Made by Ontario Farmers

To the Editor of FARMING:

Eighty varieties of winter wheat have been grown in the experimental department of the Ontario Agricultural College for at least five years in succession, and the power to withstand the cold weather, strength of straw, amount of rust, yield of grain, weight per measured bushel, etc., of each variety, have been carefully determined each year. The results of these practical field experiments at the college form the basis for the selection of a few of the very best kinds for testing on the farms throughout the province. The co-operative experiments of the past few years show that those varieties which have given the best average results in the experiments conducted at the college for five years in succession have nearly always given good satisfaction on the farms of the province.

In the autumn of 1898, seven varieties of winter wheat were used in the co-operative tests. These were divided into three sets with three varieties in each set; the Dawson's Golden Chaff being used in all the sets as a basis by which the results of all the varieties could be compared with one another.

The past winter was exceptionally severe on the winter wheat crop throughout Ontario, consequently the number of complete tests is not so large as usual. Reports of successfully conducted co-operative experiments with winter wheat were received from seventy-two experimenters before the 12th inst. at which time we started to work up the summary results in order to place the information before the wheat growers at as early a date as possible. It is interesting to know that these seventy-two good reports came from no less than twenty seven counties and districts in Ontario, including Essex in the west, Carleton in the east, and the District of Algoma in the north. As we sow about one million acres of wheat in Ontario each autumn, the results of the winter wheat experiments conducted on the different farms throughout the province are of inestimable value to those interested in wheat-growing.

The following table gives the comparative yield of straw and grain per acre of the varieties of winter wheat tested on seventy-two farms in 1899:

	Straw per acre. (Tons.)	Grain per acre. (Weighed bushels.)
Dawson's Golden Chaff.....	1.3	22.5
Stewart's Champion.....	1.1	22.4
Early Red Clawson.....	1.3	22.1
Early Genesee Giant.....	1.2	21.3

Imperial Amber.....	1.3	20.4
Bearded Winter Fife.....	1.1	19.4
Golden Drop.....	1.0	16.2

Three of the foregoing varieties have been used in the co-operative tests over Ontario for each of the past six years. The next table gives the average results of the six years' experiments with each of these varieties at the Agricultural College and also throughout Ontario.

Varieties	O.A.C. Tests average 6 yrs. (Bushels per acre.)	Ont. Tests. aver. 6 yrs. (Bushels per acre.)
Dawson's Golden Chaff.....	47.5	30.4
Early Genesee Giant.....	42.5	27.6
Early Red Clawson.....	43.5	27.6

CONCLUSIONS.

1. In the average yield of winter wheat per acre, the Dawson's Golden Chaff stood highest among 11 varieties tested over Ontario in the year 1893, among 9 varieties in each of the years 1894, 1895, and 1896, and among 7 varieties in each of the years 1897, 1898, and 1899.
2. In the co-operative experiments for 1899, the Stewart's Champion, Bearded Winter Fife, and Dawson's Golden Chaff came through the winter the best, and the Golden Drop the poorest.
3. The Early Red Clawson and Imperial Amber were the first and the Bearded Winter Fife and Stewart's Champion were the last to mature in 1899.
4. Dawson's Golden Chaff and the Early Genesee Giant possessed the strongest straw and the Bearded Winter Fife the weakest straw in the tests of this year.
5. Stewart's Champion and the Bearded Winter Fife produced the longest and the Golden Drop the shortest straw in 1899.
6. In the co-operative experiments of each of the past six years, the Dawson's Golden Chaff was one of the least and the Early Genesee Giant was one of the most affected by rust.
7. In 1899, all varieties were practically free from smut, which is nearly always the case when no smut is sown with the wheat.
8. The Stewart's Champion and Dawson's Golden Chaff produced the plumpest and Imperial Amber and Early Red Clawson the most shrunken grain in this year's tests.
9. The Stewart's Champion and Dawson's Golden Chaff were the most popular varieties, and the Golden Drop was the least popular variety with the experimenters in 1899.
10. During the past seven years, the Dawson's Golden Chaff has been an exceedingly popular variety with the farmers who have been conducting these co-operative experiments throughout Ontario.

DISTRIBUTION OF SEED FOR TESTING PURPOSES.

The following two sets of winter wheat varieties will be sent free, by mail in one-half pound lots of each variety, to farmers applying for them, who will carefully test the three kinds in the set which they choose, and will report the results after harvest next year. The seed will be sent out in the order in which the applications are received as long as the supply lasts.

Set 1.	Set 2.
Dawson's Golden Chaff.	Dawson's Golden Chaff.
Early Genesee Giant.	Diamond Crit.
Early Red Clawson.	Gold Coin.

Each person wishing one of these sets should apply as early as possible, mentioning which set he desires; and the grain, with instructions for testing, and the blank form on which to report, will be furnished free of cost to his address, until the supply of grain for distribution is exhausted.

All communications should be addressed to
 C. A. ZAVITZ,
 Experimentalist.
 Agricultural College,
 Guelph, August 17th, 1899.

The Farm Home

Cooking Vegetables.

By Mrs. S. T. Rorer.

In the first place you all know, without my telling you, that cabbage is more digestible raw than cooked. The why is easily explained, if one knows the chemical condition of the cabbage. The calcium oxalate is soluble in water; if the cabbage is boiled carelessly or rapidly, this secretion is dissolved in the water, thus the cabbage is rendered less digestible from the fact that you have taken from it one of your aids to its digestion; and, in this rapid boiling also, you dissolve a volatile sulphurised oil, the odor of which is not agreeable and is thrown throughout the house in the evaporation of the steam. To prevent this, then, throw the cabbage into boiling water to which you have added a little salt. This will coagulate the outside; then push the kettle back where it cannot again possibly boil, until the cabbage is tender and white. The water may be kept at a temperature of 200° (Fahr.) and the kettle uncovered. Q. Why? A. The air falling directly upon the water in the uncovered kettle prevents the danger of boiling and enables the cook to watch it more easily. Q. Do you use boiling water to cook all vegetables in? A. Yes. Old potatoes, however, sprout at the expense of the starch nearest the surface of the potato. If they are soaked in cold water, and put to boil in cold water they will frequently become more mealy than when put into hot water. This is the only exception of which I can now think. Green and top ground vegetables retain their color and flavor better if cooked in salted water; while the white and underground vegetables, rich as they usually are in woody and amylaceous fibre, are better cooked in unsalted water; the fibre is less toughened.

The Ideal Farm Kitchen.

By Jeanette Wragg Miller.

In my mind's eye I see my ideal kitchen, and I long for the time when it will be a possession. In the meantime I will make the kitchen I have as near ideal as I can. First I should want a room about 12x14 feet with two outside doors on opposite sides, and no less than two windows and good transoms to the outside doors; a no less than nine-foot papered ceiling with attractive papered walls; the floor of two inch hardwood flooring. Then I should want a nice range, and instead of the reservoir I would have a six-gallon brass or copper water tank; in a convenient place I would have a nice, large sink with both cold and hot water piped to it. This would save

so many trips to the stove, and also save the use of a tea kettle. Then a nice hardwood table, a large cupboard for all cooking utensils, which should be of granite. And I want a pantry, and if no closet, then a place fixed in which aprons, hats, coats, towels, etc., may be put and kept out of sight, for the nicest kitchen in the world would be spoiled by such things hanging on the wall. I would want neat curtains on the windows and linoleum on the floor, and in winter a clean, rag carpet. In addition to a couple of hardwood chairs I want one rocking-chair and, if I had room, two small ones, so when the "guid mon" drops in for a moment's chat at 10 a.m. I shall have a comfortable place for him to sit, and perhaps some cookies fresh from the oven. Three-fourths of a woman's time is passed in the kitchen (I mean farmers' wives); for this reason I should like to make it the most pleasant room in the house. I also would have one or two attractive pictures on the wall, and many little conveniences and attractions which any woman will think of, but those are not worth mentioning. If I can get the room and the principal things I'll manage to rest without trouble. I expect to get many ideas from the contributors in regard to this same kitchen.

Every Day Recipes.

BROWN BREAD.

One large cupful of sponge, one pint sweet milk or water, one teaspoonful soda dissolved in water, one half of a cupful wheat flour, one cupful Indian meal, two cupfuls graham flour, one-half of a cupful molasses. Mix all well together, mold into loaf, let rise and bake. Now should the housewife desire a slight change, she may use Indian meal and flour wholly in the above recipe and she has an Indian loaf; or she may substitute graham for the Indian meal and have a graham loaf.

GERMAN COFFEE CAKE.

Take a pint of sponge, knead into it one-half of a cupful sugar, one tablespoonful butter, one teaspoonful cinnamon; roll into a sheet one and one-half inches thick. Place this in a baking tin, wet the top with sweet milk, cover with sugar and bits of butter and sprinkle over with cinnamon. Let it rise and bake in a moderate oven. Very good eaten hot or cold.

PARKER HOUSE ROLLS.

Scald one pint of sweet milk; when cool add it to two coffee-cupfuls of sponge, a piece of butter the size of an egg, a little salt and one tablespoonful

of white sugar. Beat thoroughly, adding two quarts of flour, or enough to make a thick sponge. Let this rise; when light add flour and mold, roll out and cut with large cookie cutter; put small piece of butter in the centre of each fold over, press edges together, let rise and bake.

BUNS.

Take one pint of sponge, two well-beaten eggs, one cupful sugar, one cupful butter or lard, one cupful milk, one cupful currants, one half of a teaspoonful nutmeg, flour to make a stiff sponge. Let rise; when light knead in more flour, roll out, cut with small cutter, lay in buttered tins; do not let them touch each other; wet the tops with milk or beaten egg, sprinkle on sugar, let rise and bake.

MUFFINS

are a good tea or breakfast dish. Take a large cupful of sponge, add to it one tablespoonful of sugar, one-fourth teaspoonful salt, two eggs, one pint milk or water. Beat thoroughly, add flour to make a thick batter. Let rise; when light bake in gem pans or muffin rings, which should be well buttered and heated when the mixture is put into them. One may use part corn-meal in the above receipt, and have corn meal muffins.

The Young Housekeeper.

She Should Find Interest and Pleasure in Her Daily Occupations.

"The true advice to give a young, restless housekeeper is to put more mind into her work; to find in her daily occupation studies interesting and important, which will surely conduce to her own benefit as well as to the well being of her household," writes Katharine Roich, of the "College-Bred Woman in Her Home." "She may easily fill her mind with the annoyances, the disagreeable and monotonous details, the confinement, the interruptions of the daily life, but by intelligent use of her time, by systematizing her work, by simplifying her manner of life, and by resolutely seizing her opportunities she will find time for favorite studies and for interests outside of home. Let a woman gird up her intellect and courage—she needs both—to the high office she accepts. Let her not be anxious, but cheerful, striving every day to make her work more complete, more perfect, and to win from the daily care the refreshment which she needs. While she may be often weary she will not then be restless nor discontented, realizing that she has secured in her home some of the things best worth striving for. And her friends will see in her own

intellectual life and character a richness and sweetness of which she may be quite unconscious. For in the quiet of her home, with its thinking, and planning, and working, the bearing of many cares, and loving, unselfish ministrations for others, there will spring up in herself sincere, generous sympathies, sound judgments, and cultivation of mind and spirit which will prove her best reward."

A Lotion that Removes Freckles.

To remove freckles, mix one ounce of lemon juice, a quarter of a drachm of powdered borax, half a drachm of pulverized sugar, and let it stand in glass for a few days; then apply it, and let it dry on the skin. Or apply with a linen cloth two tablespoonfuls of grated horseradish mixed with a teacupful of sour milk. If a girl freckle easily she should keep this lotion and use it frequently, being careful not to allow it to touch her eyes.

To Take the Sting out of Sunburn.

A good cure for sunburn is made by slicing and soaking a cucumber for a few hours in milk and bathing the face two or three times a day with it. Dry the face carefully afterward, using a soft towel.

Conundrums

I went to France and stopped there. I did not stay there because I did not go there. I came away from there because I did not go there at all. Answer—A watch.

The man that made it did not want it. The man that bought it did not use it. The man that used it did not know it.—M. P. Answer—A coffin.

Why is a hill like a tree? Answer—Because if you want to get to the top you have got to climb.

What preserve would an egg name if it could speak? Answer—Marmalade (Marmalade).

Which is the most difficult train to catch? Answer—The 12.50, because it is ten to one if you do catch it.

What nation does a criminal dread most? Answer—Condemnation.

Why is a dog biting his own tail like a good manager? Answer—Because he makes both ends meet.

Why are stars the best astronomers? Answer—Because they have studied (studied) the heavens since the creation.

If Mr. Rowland Hill were to give each of his children a gold dollar why would he be like the rising sun? Answer—Because he tips the little Hills with gold.

What trees flourish best upon the hearth? Answer—Ashes.

What word has five letters from which if you take away two will leave one? Answer—Stone.

When a bad boy is whipped what color is he? Answer—Yell oh!

I met a man driving sheep. Said I,

"Good morning! How are you and your twenty sheep?" Said he: "I have not twenty sheep, but if I had as many again and half as many and two and a half I would have twenty sheep." How many sheep did he have? Answer.—Seven.

Books and Bulletins Received

Thirty-first annual report of the State Board of Agriculture of the State of Missouri for 1899.

Orchard and Forest Tree Culture—a bulletin containing report of evidence of W. T. McCoun, horticulturist, Central Experiment Farm, before the select standing committee, House of Commons.

Annual Reports of the Cheese and Butter Associations of the Province of Ontario, 1898, giving a verbatim report of the addresses and discussions delivered at the annual convention held during January and February last.

Man was made before woman. When God looked at Adam he said to himself, "Well, I think I can do better if I try again," and then he made Eve. God liked Eve so much better than Adam that he has made more women than men ever since.—*A Little Girl's Essay on "Boys."*

TORONTO

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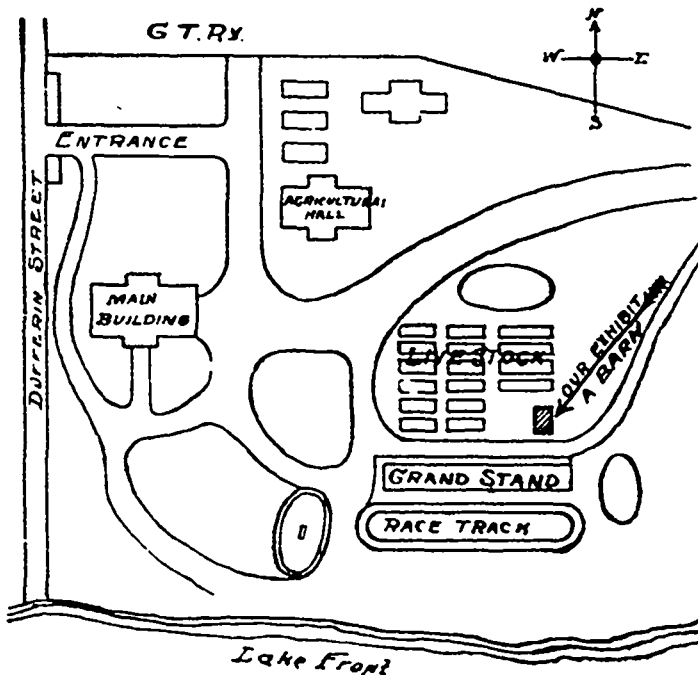
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W. J. ELLIOTT, Principal.

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Sketch of Exhibition Grounds, Toronto, Ont. Our Barn is in rear of GRAND STAND—where the arrow points



FARMERS

We want you all to come and see us at the TORONTO EXHIBITION, from Aug. 28th to Sept. 8th. You will find us at

OUR BARN

the Walls and Floors of which are built with Battle's Thorold Cement. Our Mr. James Battle will be there to welcome you and show you some work done with our famous

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**ESTATE OF JOHN BATTLE
THOROLD, ONTARIO**

Farming.

A PAPER FOR FARMERS AND STOCKMEN

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Change of Address.—When a change of address is ordered, both the new and the old address must be given. The notice should be sent one week before the change is to take effect.

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

Discontinuances.—Following the general desire of our readers, no subscriber's copy of **FARMING** is discontinued until notice to that effect is given. All arrears must be paid.

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

Advertising Rates on application

Letters should be addressed:

FARMING,
CONFEDERATION LIFE BUILDING,
TORONTO

American Shropshire Association

Mr. Mortimer Levering, secretary of the above association, writes of date August 13th as follows: "The annual meeting of the American Shropshire Registry Association will be held Monday morning, September 4th, 1899, 10 o'clock a.m., in the parlor of Shaftesbury Hall, on Queen street west, near Yonge street, in the city of Toronto, Canada. This will be during the great Toronto Exposition and Show. Railroads will sell round trip tickets half fare on all roads leading into Toronto. This will be a banner meeting, and we hope to see you there."

Southern Fair, Brantford

The Directors of the Brantford Southern Fair have again appointed their Exhibition to extend over five days, commencing on Saturday, September 16th, and ending on Thursday, September 21st. It is intended that the Southern Fair this year will eclipse that of 1898 as much as that of 1898 did the Fair the previous year.

The main objects of the Society are being kept well in view, over \$4,000 in cash prizes being provided as premiums for excellence in the various departments.

In addition to the large outlay on building, and grounds last year, the Directors have now in course of erection an immense modern exhibition horse stable, capable of providing comfortably for that department.

The Ladies' Department is again in charge of the Ladies' Board of Directors, who are adding many new features.

Entertainment for visitors is being provided in many ways. Platform attractions will be by the best artists that can be had, and these will be supplemented by horse jumping, military sports, band concerts, fireworks, etc., etc.

Arrangements have been made for the carrying of passengers and exhibits at single fares on and after September 15th and good for returning up to the 23rd, and also for excursion rates on special days.

Publishers' Desk.

Mining Investments.—Parties desirous of investing in mining stocks have something well worth considering in the Hillside Consolidated Mining Company, whose claims are located at the now famous Republic camp, Washington State, U.S.A. One of the directors of the company is Mr. E. Garity Parker, mining broker, Toronto. The property of this company consists of two full-sized claims and one fraction, situated in the Eureka mining district, about three miles north-west of

Mixed Paint

that contains the right ingredients, the right amount of each, mixed right, is better paint than any man can stir up with a stick out of the raw materials. When a man buys some white lead and some oil and mixes some paint and "guesses it will do," he is as much better the times as a woman who should grind her own grain into flour. **THE SHERWIN-WILLIAMS PAINTS** contain white lead—just enough—because white lead is one ingredient of good paint. They contain some zinc—not too much—because good paint requires zinc. They are the best paints made to-day, because the best materials, best machinery and most skillful workmen are employed in making them.

THE SHERWIN-WILLIAMS PAINTS

are made differently for different uses—with different qualities for outside and inside work, rough painting and decorative painting. Get the right kind for your work. "Paint Points," the book we send free, will help you to paint wisely and well.

THE SHERWIN-WILLIAMS CO.,
Paint and Color Makers,
Canadian Dept.,
21 St. Antoine Street,
Montreal.

WHITE LEAD
used alone,
covers well
but will
not last.
It chinks and
rubs off.

ZINC
used alone,
spreads well
but will
not last.
It cracks and
peels off.

Increase your business
by advertising in **FARMING**

STILL IN THE VAN

SEED WHEATS

Pearce's Paramount

Gold Coin

Diamond Grit

Early Arcadian

AND ALL THE LEADING VARIETIES

CATALOGUE Now Read —Send for One.

Also, our 72-page **POULTRY CATALOGUE** Ready to Mail Sept. 1st
BULB CATALOGUE Now Ready

JOHN S. PEARCE & CO. - LONDON, ONT.

The National Cream Separator

MANUFACTURED BY

THE RAYMOND MANUFACTURING CO.

LIMITED

GUELPH, ONTARIO

A wise investment that progressive farmers are buying as they buy other useful machinery. The National will yield from $\frac{1}{2}$ to $\frac{1}{4}$ lbs. of butter per week per cow more than is being done by the old laborious wasteful methods of skimming milk. One pound of butter per week from one cow for 9 months, at 15c. per lb., will pay 8 per cent. interest on the cost price of the National. Easy to run by boys 8 to 12 years old. Easy to clean. Simple to operate. The neatest in style and finish. A perfect skimmer. Guaranteed as represented, and a trial for one week given to intending buyers. If not satisfactory, may be returned to us at our expense. No risk. Sold on their merits. Send for testimonials and Catalogue.

GENERAL AGENTS

Creamery Supply Company

MARKET SQUARE, GUELPH, ONTARIO

Also Dealers in Creamery and Dairy Supplies.

ACTIVE AGENTS WANTED

Style No. 1.
Capacity—330 to
350 lbs. per hour
Price, \$75.00.



the town of Republic. An idea of the value of this property, and how those interested in securing a good investment view it, may be gathered from the fact that the company have already refused two offers for a controlling interest in the stock, the figures involving in both instances a cash outlay of \$35,000. The directors of the company have finally decided not to let the control go out of their hands.

On the Side.—Visitors to the Toronto Fair who wish to see a good, wholesome comedy should patronize the Princess Theatre. The management of this theatre has arranged for the production of two excellent farce comedies—Charles Wyndham's "Pink Dominoes" the first week, and Sol. Smith Russell's greatest comedy, "Peaceful Valley," the second week of the Exhibition. These plays will be put on by the Cummings Stock Company, which has earned a reputation in this city for first-class shows at low prices.

Pioneer Apple Receivers.—In this issue of our paper appears the advertisement of Eben James, agent for Woodall & Co., Liverpool and other British apple receivers.

Through an advertisement in our columns a year ago several extensive growers were reached and have shipped consignments with most satisfactory results.

Woodall & Co. claim the honor of being the first receivers of American apples on the English markets. In 1849 they received from W. A. Underhill, of Croton Point, N. Y., owner of an orchard of Newton Pippins, celebrated at that time for its fine fruit, 50 barrels of apples which sold for £5 per barrel. The original account-sales is framed, and is now hanging on the wall in the old Underhill mansion at Croton Point. Messrs. Woodall are one of the leading apple receiving houses of Liverpool, England, and have been in the business upwards of eighty years.

Stock Notes.

SHORTHORN IMPORTATIONS.—The following items from the *Breeder's Gazette* of August 10th, speak well for the enterprise of some of our live stock breeders:

"On returning from Scotland with a large importation of Clydesdales Mr. N. P. Clarke, St. Cloud, Minn., stopped over long enough in Ontario to purchase fourteen head of Shorthorns from the high-class herd of Mr. W. D. Flatt, near Hamilton, which he believes to be the premier herd in Canada to-day."

"Among the cattle in quarantine at Quebec are about thirty head of Scotch Shorthorns belonging to Mr. W. D. Flatt, one of the most enterprising and enthusiastic breeders in Ontario, whose herd at Hamilton has sprung into prominence on account of the judgment and liberality displayed in the selection of superior foundation stock. About fifty head of Shorthorns are also quarantined at Quebec for Mr. Cargill, another Ontario breeder."

SHEEP IMPORTATIONS.—Last week Mr. Robert Milar arrived at Pickering Station with six carloads of imported sheep. Shropshires formed the bulk of the lot and included some very choice animals from the best English flocks. Next in point of numbers were Cotswolds, and they had a lot of winners at the Royal Show. Nine of these prize sheep went to Geo. Allen, Oriel, who intends to exhibit at the Fall Shows. He has a lot that will be hard to beat. The shearling Cotswold rams from the flocks of Garne and Houlton were very good, large sheep, growthy and well woolled. The pick of them went to Geo. Harding & Son, of Waukesha, Wis. A number of local breeders were on hand and bought a few, Thompson, of Uxbridge; McCrae, of Guelph; Bowker, of Brantford; Boldson, of Balsam; Boynton, of Dallon, and others getting selections. A small lot of Lincolns from Henry Dudding, Great Grimby, Lincolnshire, went to Capt. Robson, of London, Ontario. There were a few Oxford Downs and Hampshires, prize winners at the Royal Show. A very choice show lot of Shropshires were forwarded to W. L. Elkins, Folly Farm, Philadelphia, Pa., and McFadden Bros. and W. O. Frithman had a selection of choice Shrops, which, with a number of Canadian bred, made up three carloads for Iowa. The sheep were a good lot, and wer

The Ashes of Wheat

Are 76 per cent. Phosphates

By far the greatest portion of which is Phosphate of Magnesia. The requirements of an acre of average crop of clover are 25 per cent. more phosphate than wheat or other grains and 75 per cent. more magnesia, and an acre of turnips requires over 50 per cent. more Phosphate than the grains.

Thomas-Phosphate Powder

(REGISTERED)

is the safest manure to meet these demands, as it supplies Phosphate of Magnesia as well as Phosphate of Lime and of Iron. Faithful experiment has shown that Thomas-Phosphate increased the yield of mutton by 175 per cent., whereas the hay yield has only increased 50 per cent. Turnips properly phosphated have also shown greatly increased feeding value.

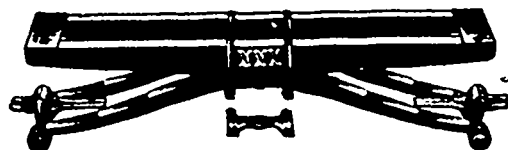
THE THOMAS-PHOSPHATE CO.

BOARD OF TRADE, TORONTO.

Carry your Stock and Farm Produce on Waggon fitted with the celebrated

"XXX" Bolster Springs

They are the only perfect spring made. In comparison with these all others are useless. Address J. H. MORROW, General Sales Agent, Brighton, Ont. Special inducements to introduce where we have no agent.



Thom's Pneumatic and Propellor Elevator Feed Cutter

Our machines have filled more silos, twice over, than has been filled by all the other combined families of imitation machines.

It's foolish boasting for any firm to say that their machines are the only practical pneumatic cutters on the market.

We are the originators and the patentees, and the only safeguard against being humbugged is to see that the machine you purchase is marked "Thom's Patent."

Every honest manufacturer in Canada knows that we are the leaders and that our machines represent all that is latest and best.

We guarantee to fill any silo in Canada, we are not what the height may be, at the rate of 10 to 12 tons per hour.

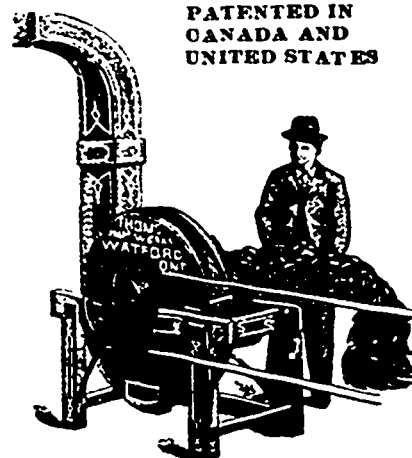
And we remind the farmers, we make High Grade Plows, Riding and Walking. Our latest is the "Ideal" Two-furrow Gang, for two or three horses, intended to do the work of two ordinary walking plows.

Whenever our Plows are not already known, special prices to introduce them. Once on the farm they prove a comfort.

THOM'S IMPLEMENT WORKS

Established 1875

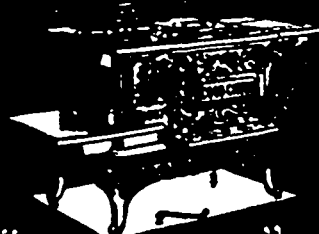
PATENTED IN CANADA AND UNITED STATES



"Good Cheer" Stoves and Ranges.

evenly heated, perfectly ventilated, extra large Steel Plate Ovens bake and roast admirably and save fuel. Fully guaranteed.

SOLD BY LEADING DEALERS EVERYWHERE



THE JAS. STEWART MFG. CO. WOODSTOCK ONT. LIMITED

much admired by the breeders who were present at Pickering Station.

H. DUDDING'S ANNUAL SALE.—One of the most notable events of the year is the annual sale of Mr. H. Dudding's Shorthorn cattle, and Lincoln Longwool sheep. This event took place on July 25th last at Riby Grove, Stallingborough, Lincoln, in the presence of a very large company, amongst whom were included most of the principal export buyers and home breeders. From the Shorthorn herd, which numbers considerably over three hundred head, there were selected the following which made the prices and values as given with them:

	Highest price.	Average.	Aggregate.
8 cows and calves...	£ 36.2.0	£ 52.16.6	£ 422.12.6
8 two-year-old heifers...	79.16.0	43.11.6	348.12.0
13 yearling heifers...	57.15.0	31.15.7	413. 3.6
8 two-year-old bulls...	378. 0.0	148. 3.7	1185. 9.0
7 one-year-old bulls...	170 5.0	49.19.0	349.13.0

SUMMARY.

29 cows, heifers, and calves.....	£ 40.17.6	£1184.8.0
15 bulls.....	102.6.10	1535.2.0
44 animals averaged.....	61.16.0	

Of the above, seven females and ten bulls were purchased for the Argentine, Messrs. F. Miller, D. McClelland, G. Lahnsen, G. G. Guinness, Olde & Kingsland, being the principal buyers for export. The rams from this noted flock were rapidly disposed of at the most satisfactory average of thirty-three pounds five shillings and sixpence per head, Mr. F. Miller, who secured last year's champion ram at the 1898 sale for 1,000 guineas, being the principal buyer; Messrs. Olde, Church, Hughes, etc., also buying for export. The yearling ewes made from twenty-five guineas per head, at which price the unbeaten three yearling ewes at all the English shows during the present season were purchased for the Argentine. The day following the sale Mr. H. Dudding sold to two export buyers a further lot of sixty grand yearling rams at values which were equally as satisfactory as those secured at his sale.

MR. J. E. CASWELL'S annual home sale at Laughton, Falkingham, was very successful, 74 grand typical Lincoln rams being disposed of, mostly to home breeders, at a satisfactory average, prices ranging downwards from ninety guineas, at which Mr. H. Dudding secured a very capital ram.

SALE ANNOUNCEMENT.—Mr. W. F. Stephen, Brook Hill Farm, Trout River, Quebec, will sell by public auction early in October his splendid herd of Ayrshires. The announcement of this sale will appear in the Exhibition number of FARMING, and parties desiring to secure first-class stock of this well known milking breed should make a special note of it. This will be a splendid opportunity for parties desiring to establish a herd. The stock is in fine condition and nearly all the animals to be offered are comparatively young, many of them cows in their prime.

SHORTHORN IMPORTATIONS.—Mr. Thomas Russell, Exeter, Ont., is making another importation of pure Scotch bred Shorthorns. The importation consists of eight animals and are just out of quarantine at Quebec. Among them is the bull Hampton Prince and the cow Strawberry Blossom II., the latter winner of the Sweepstakes for three successive years at the Kincardineshire county show, Scotland. Included in the lot are two of Strawberry Blossom's calves. And all the cows imported have sucking calves with them. Mr. Russell intends exhibiting at the Industrial Fair.

Bailey's Hydraulic Ram

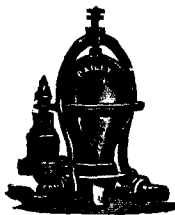
Runs 24 Hours a day and 365 days a year.

40 Years' Experience

Water Water Water
FOR FOR FOR
House Stock Irrigation

Once started costs one cent per month. As simple as a wheelbarrow and as efficient as a Corliss engine. Information and instruction in plain terms. Prices on Ram or complete outfit by return mail. Address

PRYCE W. BAILEY
Expert, Seneca Falls N. Y.



GLENHURST HERD OF YORKSHIRES...



Noted prize-winners. Choice quality and heavy milking families. Extra fine young animals for sale. Also

Leicester Sheep and Berkshire Swine

DAVID BENNING

WILLIAMSTOWN, ONT.

TREDINOCK STOCK FARM, ST. ANNES DE BELLEVUE, QUE.

Imported and Home-Bred Ayrshire Cattle

Winners of 34 prizes in 1898 at Toronto, London and Ottawa—17 of them Firsts.

Six Young Bulls for sale, five of them dams shown at the above three shows, and all sired by Imported Bulls, four of them being by Napoleon, the Sweepstakes Bull of Toronto.

Also a few HEIFERS and COWS. Apply to **ROBERT REFORM.** **JAMES BODEN**
Prop. | St. Annes de Bellevue, Que. | Mgr.

NITHSIDE FARM HERD OF

LARGE ENGLISH BERKSHIRES

A choice lot of **Boars** and **Sows** of all ages for sale. None but **First-Class** stock sent out and satisfaction guaranteed in every case. A grand lot of young pigs to select from.

E. E. MARTIN,

Canning P.O., Ont. Paris Station, G.T.R.



Hursley Stock Farm

A. J. C. C. Jerseys

Popular St. Lambert blood. 12-year-old bull ready for service to offer, also a number of

extra fine bull calves for sale. Some choice heifers 2 years old and milking for sale. Large improved Yorkshires. A large number of pigs ready to ship. No better to be had.

SILLS SHAVER & SON, Winchester Springs.

Wm. Butler & Son

Dereham Centre, Ont.

Large English Berkshires.



stock or write for prices.

Young stock from 3 weeks up. Boars ready for service, and sows in farrow. Show Boars and Sows. Prices right. Call and see. Mention FARMING.

C. R. DECKER, Chesterfield, Ont.

W. R. BOWMAN,

MOUNT FOREST,

OFFERS 30 Yorkshire Boars and Sows, all ages, at prices away down. 30 Shropshire and Suffolk Shearling Rams and Ewes, at from \$12 to \$15. 25 Lambs, weighing 110 pounds, at \$10.

All Stock Registered.

LIGHTNING WELL MACHY IS THE STANDARD
STEAM PUMPS. AIR LIFTS. GASOLINE ENGINES
WRITE FOR CIRCULAR AND THE AMERICAN WELL WORKS
AURORA, ILL. - CHICAGO - DALLAS, TEX.

HERMANVILLE

..TAMWORTHS..

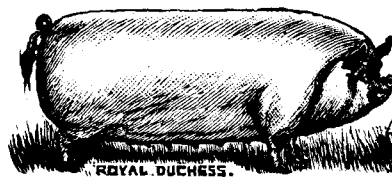
I HAVE several litters nursing, and also a number of June litters of the highest quality and bluest blood in North America. The "Parkhill Mab" strain of Tamworths can only be obtained from me. I make a specialty of choice Breeding and Exhibition stock. I like to ship when "ready to wean." I respectfully 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.

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. tf



SUMMERHILL HERD OF YORKSHIRES

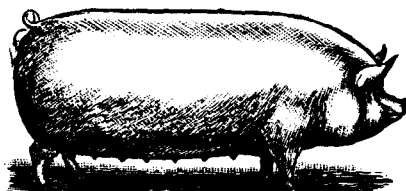


The Lengthy English Type

The largest herd of Imported and Canadian-bred Yorkshires of the large English type in Canada. 25 matured imported sows, among them being several royal winners. Six imported sows sired by Buddington Lad, Royal winner and gold medal boar for the best pig of the white breed. Have those imported stock boars bred by such breeders as Sanders Spencer and Philo L. Mills. 25 April pigs (imp.) of both sexes for sale. Also a number (imp.) in dam. 200 Canadian-bred pigs of all ages for sale. Write for prices. Personal inspection preferred. Prepay express charges and guarantee stock as described.

D. C. FLATT, Millgrove, Ont.

Oak Lodge Herd of Large Yorkshires



The Oldest Established and Largest Herd in America.

This herd has a uniform and fixed type, acknowledged by the best judges to be what the market demands. It has made a record of its own in the show rings, winning more prizes at the largest Canadian and American shows than all other herds combined. Parties wishing high class stock should examine this celebrated herd at the leading shows.

ALL STOCK FULLY GUARANTEED

J. E. BRETHOUR,

BURFORD, Brant Co., Ontario

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. 46

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

Annual Membership Fees:—Cattle Breeders' \$1; Sheep Breeders', \$1; Swine Breeders', 50c.

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 following is a list of the Institutes from which names have been received since the last list published:

Brockville.....	7
Huron East.....	1
Kent East.....	1
Muskoka North.....	5
Ontario South.....	1
Parry Sound East.....	9
Peterboro' West.....	2

Tent of Superintendent of Farmers' Institutes.

The Superintendent of Farmers' Institutes will again have a tent situated on the grounds of the Toronto Industrial Exhibition during part of the time of holding the fair this year, viz., August 30th to Sept. 8th, and will be pleased to meet officers and members of Farmers' Institutes and of the Live Stock Associations, and any person interested in agriculture. Breeders of live stock, institute workers and others are also invited to make this tent their headquarters while in attendance at the exhibition. A desk and writing materials will be placed at the disposal of visitors. Further particulars will be given at a later date.

Farmers' Institute Meetings, 1899-1900.

Below is given a copy of a circular sent to the executive officers of local Farmers' Institutes, together with a provisional list of the meetings. It should receive prompt attention and be returned at as early a date as possible, together with any suggestions as to change in the route. In addition to the meetings in any one Institute district, attention should be given to the fact that it is necessary that good connection be made from the last place of meeting of the preceding Institute in the Division and to the first meeting of the Institute following.

This letter and the lists have been sent out during past years, and such changes as the executive of each local

Institute desired were made. When the Institute *Bulletin* containing a list of meetings is published, if the meetings are not arranged in what the directors or members may consider most convenient, representations should be made to the executive, as all arrangements have been submitted to them for approval and accepted by them.

It is the object to arrange the meetings in such a form that the delegates may travel from one meeting to another most easily and with the least possible expense.

August 24th, 1899.

To the Secretary of the Local Farmers' Institute:

DEAR SIR,—Please find enclosed the list of Farmers' Institute meetings, both regular and supplementary, to be held in your division during the coming season. Please critically examine each of these lists. Great care has been exercised in planning the routes, etc., in connection with these meetings, yet we are aware that it is difficult to arrange each trip in each district as well as it could be done by a resident in the respective district; therefore, I respectfully request you to carefully examine the lists now enclosed. If you find that any improvements can be made in arranging any of the meetings or connections in your *Institute district* kindly notify me at once and suggest the changes you think desirable for economy or convenience, but do not suggest changes that are not *absolutely necessary*, as any changes made will not only increase office expenses, but will also retard the issuing of the Farmers' Institute Bulletin for 1899-1900.

Please notice that the lists now sent you are *provisional only*, and are subject to change, therefore, *do not advertise your meetings on the strength of them*. Kindly return these lists as soon as you have examined them. If I do not hear from you between now and September 15th, I will conclude that the arrangements as outlined are satisfactory to your institute, and will at once give

the lists to the Government printers for publication.

I have sent a copy of this letter to your president and vice-president. If you think it necessary kindly call them together at your and their earliest convenience, and discuss this matter with them, or the matter may be arranged by correspondence. There should be no necessity to call the full Board of Directors together, as this is a matter *under the control of yourself and the other members of the executive*.

Yours very truly,
(Sgd.) F. W. HODSON.

To the President and Vice-President:

GENTLEMEN,—The above is a copy of a letter I have to-day sent your secretary. I also enclose you a copy of each list of meetings referred to. Will you kindly examine them and write your secretary or meet him at your earliest convenience, either privately or in an executive meeting. When you are through with these lists kindly hand them or post them to your secretary, and he will forward them to me with those he now has. I wish all the provisional lists now sent out returned. Kindly give this matter early attention, and oblige,

(Sgd.) F. W. HODSON,
Superintendent.

Farm Help Exchange

From time to time enquiries are received from farmers wishing to hire help asking if suitable men are known. There are, no doubt, at all times, many places vacant or filled with incompetent men because a more competent man is not apparently available. There are also plenty of good, honest, reliable men able to fill these positions acceptably if they had the opportunity. The difficulty is that the one wishing work is unaware of the vacancy, while the employer does not know of suitable persons unemployed. A number of men have been placed in positions by this department, which has proved satisfactory to both employer and employee. This has led us to the opinion that such assistance might successfully be given to a larger number, and be of much service to all concerned.

The plan worked out is as follows: We wish to obtain the names of all who are looking for positions on a farm, with particulars as to age, experience and references; also in what particular department of farm work a position is desired, and what wages are expected; when last employed and reasons for leaving. These names when received will be published *free* in the two following issues of THE AGRICULTURAL GAZETTE, and will then be kept on file in the office until notified that a position has been secured.

One thing should be noted, viz., to send us notice as soon as a person is no longer open for engagement.

We will then furnish upon application (besides being published as above) a list of unemployed to any person desiring farm or dairy help. When making enquiries for help, full particulars as to the position should be given, to include the particular work to be done, probable length of engagement, wages, etc. These situations vacant will also be published *free* in THE AGRICULTURAL GAZETTE in the first two following issues. Should a person desiring engagement or a person wishing to engage help not wish the fact published, the name and particulars will be kept on file only.

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

F. W. HODSON, Secretary.

Situations Vacant

(On farm or dairy.)

Situations Wanted

(On farm or dairy.)

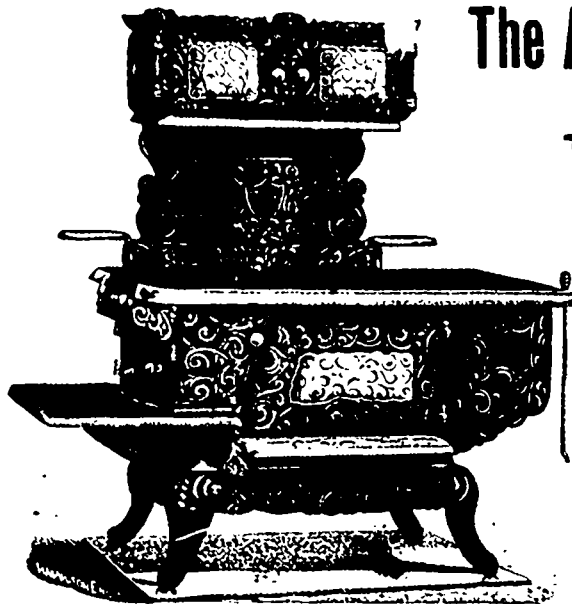
Suitable Canadian and English students placed with reliable farmers.

Light and Heavy Meal Rations for Steers

At the Ontario Agricultural College

During the past winter there has been completed at the Ontario Agricultural College the third of a series of experiments in fattening steers. The object of the experiments has been to study the relative economy of feeding light, medium and heavy meal rations to fattening steers when the feeding extends over a period of five or six months. In this third experiment no ensilage was fed. The meal used was composed of equal parts by weight of corn and oats. In addition to the meal the animals were given a limited quantity of roots, together with what hay they would eat. The hay was of very inferior quality and was cut and mixed with pulped roots a day in advance of feeding. The roots and hay were mixed in the proportion of twenty pounds of roots to fifteen pounds of hay, and each animal was fed all it would eat of the mixture. All fodders were carefully weighed and recorded. The object was to feed only such foods as are available on practically every farm. Had ensilage been fed, or had a better quality of hay been used, no doubt the gains would have been larger.

The steers of the light ration group were started on about one-third of a pound of meal per day per 100 pounds live weight, and this quantity was increased as deemed advisable. With the medium ration steers the aim was to feed about two-thirds of a pound of meal per day per 100 pounds live weight. With the heavy ration steers an effort was made to feed one pound



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of meal per day per 100 pounds live weight. It was found impossible, however, to keep all the steers up to this limit, so they were kept as near it as was deemed safe. The manner in which the rations were increased can be most easily shown by means of a table. The following table shows approximately the average daily meal ration per steer for each group during the different periods:

Period	Heavy ration	Med. ration	Light ration
	meal per steer per day	meal per steer per day	meal per steer per day
December 6th to January 3rd	19	8	4
January 3rd to February 1st	11	8	5
February 1st to March 1st	12	9	6
March 1st to April 1st	12.5	9	8
April 1st to May 23d	12.5	9	9

The meal consumed by the heavy ration group amounted to nearly nine-tenths of a pounds of meal per day for every 100 pounds of the average live weight of the animals throughout the feeding period. The medium ration group averaged two-thirds, and the light ration group slightly over one-half of a pound of meal per day per 100 pounds of the average live weight of the animals during the feeding period.

The results, briefly stated, are as follows:

The heavy ration group made an average gain of 1.77 lbs. per day, at a cost of 7.68c. per pound of gain.

The medium ration group made an average gain of 1.74 lbs. per day, at a cost of 7.22c. per pound of gain.

The light ration group made an average gain of 1.62 lbs. per day, at a cost of 7.21c. per pound of gain.

It will be seen that while the heavy ration group made the largest gain, the light ration group made the most economical gain, though the light and

medium ration groups were practically equal in the latter respect.

It is a significant fact that in each of the three experiments, the heavy ration group made the most expensive gain. The average cost of a pound of gain in the three experiments is as follows: Heavy ration, 7.25c.; medium ration, 6.60c.; light ration, 6.35c.

It would seem, therefore, that when the fattening period extends over six months or more, the animals should be started on a very light meal ration, which should be increased as gradually as circumstances will allow. In this matter the feeder must be guided by the rate at which his animals are gaining. The aim should be to have the animals ready for market on the day they leave the stable, and not a day before, if it can be helped. After a steer is finished, he is fed at a loss, so that an effort should be made not to have him finished long before he is shipped.

No fixed rule can be given as to the amount of meal a steer should receive at the beginning, as much depends upon the condition of the steers. It is probable, however, that in any case it is not advisable to start animals on more than half a pound of meal per day per 100 pounds live weight. For a short feeding period no doubt this quantity would be small enough, and would need to be increased somewhat rapidly. For longer feeding periods, the experiments described would indicate that a lighter ration to begin with, somewhat gradually increased throughout the feeding period, is the most economical.

It must also be borne in mind that the more attention paid to making the coarse fodders palatable, the better the results obtained.

G. E. DAY.

Ontario Agricultural College, Guelph,
August 14th, 1899.

Market Review and Forecast

Office of FARMING,
Confederation Life Building,
Toronto, Aug. 28th, 1899.

General trade in some sections has commenced to assume a more active and fall-like appearance. Money seems to have entered upon a somewhat easy phase although 5 per cent. is the general rate for money on call. Bank discount is from 6 to 7 per cent. according to the nature of the account.

Wheat.

The wheat market shows some improvement over a week ago. During the week the "bulls" and the "bears" have been vying with each other as to who would get the uppermost hand at Chicago. This is the time of the year when the speculative element is at work and one need not be surprised to hear startling rumors every day or two with the world's supply of wheat in sight 67,198,000 bushels as compared with 24,010,000 bushels in 1898. At this time there does not appear to be any likelihood of dollar wheat for a time as some are predicting. However, the markets have a better tone with the European markets firmer.

There is nothing doing at Montreal excepting in Manitoba hard on English account. The market here is firm at 69 to 70½c. for old Ontario red and white west and goose at 67c. north and west. On the Toronto farmers' market red and white is quoted at 72 to 73½c., spring fine at 66c. and goose at 69c. per bushel.

Oats and Barley.

The English markets for Canadian oats keep steady. Some business has been done in the new crop at Montreal at 29½c. with buyers bidding 29c. There has been more enquiry for export. Old oats are quoted about 31c. On this market oats are firm at 27c. for old and 24 to 25c. for new north and west. On the Toronto farmers' market oats bring from 26 to 32½c. per bushel.

The barley market is quiet at Montreal. Here feed barley is quoted at 31c. west. On the farmers' market it brings 40 to 41c. per bushel.

Peas and Corn.

There is reported to be a corner in old peas at Montreal though the English market is dull. Old peas are quoted there at 76c., and 55c. is reported paid for new ones in the Stratford district. New peas are quoted here at 53c. at outside points. On the Toronto farmers' market they bring 63c. per bushel.

American corn is quoted here at 40c. on track.

Bran and Shorts.

These are steady at Montreal. Ontario winter wheat bran is quoted there at \$13.50 to \$14 on track, and Manitoba at \$12.50 to \$13. Shorts are scarce at \$15 to \$16. City mills here sell bran at \$13, and shorts at \$16 in car lots f.o.b. Toronto.

Eggs and Poultry.

The English egg market keeps steadily improving and prices are firm. Some choice lots are going forward from Montreal, but prices are considered too high for much business. Choice selected candled stock is quoted at 15 to 15½c. and other grades at 14 to 14½c. Eggs are a little more in demand here though receipts are not large. They are quoted at 13 to 14c. wholesale, but in the farmers' market they bring 13 to 16c. per dozen.

The prospects are that a big business will be done in exporting dressed poultry this fall. There have been a number of enquiries as to the prospects for doing business from Old

Country firms. There is nothing definite to report yet as to prices. On the Toronto farmers' market chickens bring 40 to 90c., ducks 60 to 90c. per pair and turkeys 10 to 12c. per lb.

Potatoes.

The offerings are fairly liberal at Montreal and new potatoes are quoted at 35 to 40c. per bag. They are selling here at 55 to 60c. out of store and 50c. per bag from farmers' wagons. On the Toronto farmers' market they bring 60 to 70c. per bag.

Fruit.

There is considerable excitement in the winter apple market at Montreal and dealers are looking around for their share of the crop. Quite a number of orchards are reported bought in Ontario at \$1.25 per barrel, and it is reported that as high as \$2 per barrel has been paid by some dealers. Some late reports show that the apple crop of the United Kingdom is a poor one and it is this pert ups that is causing the excitement here. Early apples at Montreal are quoted at \$2 to \$3 per barrel or 20 to 30c. per basket. Receipts have been fair at the Toronto fruit market with trade brisk and prices steady. Crawford peaches bring 75c. to \$1.25 and other varieties 25 to 50c. per basket. Plums are quoted at 25 to 50c., pears at 40 to 50c., grapes 25 to 60c., and apples at 15 to 25c. per basket.

Hay and Straw.

The Montreal market is steady for baled hay under continued light supplies. No. 2 is quoted at \$6 to \$6.50 for choice, and No. 1 old at \$8.50 to \$9, and \$5.50 for clover. Cars on track are quoted here at \$7 to \$8.50 per ton, and straw at \$4 to \$4.50. On the Toronto farmers' market new hay brings \$10 to \$11, sheaf straw \$6 to \$7, and loose straw \$4 to \$5 per ton.

Clover Seed.

Light crops of clover seed are reported all over Canada and the United States. It is estimated by some that red clover will only be about one-fourth of what it was last year. White clover is reported to be poor all over the world, and alsike is said to be a poor yield where threshing has been done. One American dealer says there will be a large crop in Northern Europe, but only an indifferent one in the southern portion. On the Toronto farmers' market red clover is quoted at \$4 to \$5, alsike at \$3.50 to \$5.25 as to quality; white clover at \$8 to \$9, and timothy at \$1 to \$1.75 per bushel.

Cheese.

The cheese situation continues strong and active, though not so much business was done on the local markets during the week owing to the factorymen's inclination to hold. They have disposed of Julys and as Augusts are not suffering are disposed to wait on the market. The ruling prices at the local markets have been 10 3/16 to 10 1/2c., with most of the offers in Eastern Ontario about 10 1/2c. Cable reports are strong, and as stocks are light holders, display no anxiety to push sales. With the large falling off in the make there is at the present time, the prospects are that present prices will be maintained for a time, at least, if not increased. Shipments so far this season from Montreal, Portland and New York show an increase of 102,416 boxes as compared with the same time last year.

Butter.

The English market keeps firm and active, as the *Trade Bulletin* cable of August 24th shows: "The market is firm and higher for

finest grades of creamery, and as stocks of this class are still running light, 1s. to 2s. above last week's prices have been obtained, and business in fancy Canadian marks has been done at 108s. to 110s. There has, however, been a better supply of secondary creamery from the United States, which has sold at from 96s. to 100s., while choice Northern New York State creamery has sold at 102s. to 106s."

The keen edge is reported to be off the market at Montreal, where values are a shade less than a week ago, 21c. being the ruling figure for choice creamery, though sales have been made at 21½c. There is reported to be a big falling off in the supply of milk at the creameries in some sections on account of the drought, which may effect values. A shipment of 5,000 packages of Australian is reported to be on the way to England, but, as it is store butter, it will have to take less than the top prices. The total increase in shipments from this side so far this season is now 157,148 packages as compared with the same period last year.

The market here for creamery is active at 22 to 23c. for prints and 19 to 20c. for tubs wholesale. Choice dairy is quoted at 16 to 17c. for both tubs and prints. On the Toronto farmers' market pound rolls bring 20 to 23c.

Wool.

Prices on the Toronto wool market have not changed during the week, and there is nothing new to report in the situation.

Cattle.

The cattle situation on the whole continues to show about the same general conditions as a week ago. Real prime cattle are steady and firm at all leading American markets, while under-grades are somewhat easier. The latter class are coming in competition with the range cattle at Chicago and other western points, which are preferred by buyers. On Monday the top price of the season was reached at Chicago for fine quality. There was the largest run of the season at Toronto market on Friday and many drovers complained of not being able to get sufficient room for their shipments. The quality of the fat cattle was only medium, there are too many of this class and not enough of the best quality coming forward. Prices for the best quality were steady and firm, while the poorer quality were slow of sale at lower prices, several car loads being unsold at the close. Out of the 1400 cattle on the market, fully 900 were stockers for Buffalo market.

Export Cattle.—Choice loads of heavy cattle sold at \$4.90 to \$5.12½, with light ones at \$4.25 to \$4.60 per cwt. The bulk of exporters sold at \$4.60 to \$4.90 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1000 to 1100 lbs each, sold at \$4.40 to \$4.50; good butchers' cattle at \$3.60 to \$4; and medium at \$3.40 to \$3.60 per cwt. Common to inferior brought \$2.90 to \$3.35 per cwt.

Stockers and Feeders.—The western markets for these have shown a little weakness owing to the lower prices for the lower grades of beef cattle. There was a large run of stockers on this market on Friday. There was a fair trade in these with prices steady at \$2.50 to \$2.75 for heifers and inferior steers; \$3 to \$3.25 for medium to good; and \$3.40 to \$3.50 per cwt. for choice picked lots. Light feeders, averaging 900 to 1000 lbs. each, brought \$3.60 per cwt.; and good heavy steers, weighing 1100 to 1200 lbs. each, sold at \$4 to \$4.25 per cwt.

Calves.—About 25 calves sold on Friday at \$4 to \$8 each.

Milk Cows.—These brought \$25 to \$40 each according to quality.

Sheep and Lambs.

Erick Bros., Live Stock Commission, East Buffalo market report of Aug. 24 in regard to Canadian lambs says:

"The offerings so far this week have not been very excessive, still with the demoralized markets in the East trade here has been dull and lower, particularly, however, on the fair to medium grades. On account of the drought in the States, quite a few of the half-fattened lambs have been rushed to the market, and in consequence this oversupply has weakened values on the better grades."

The deliveries of sheep on this market on Friday were large with prices easier at \$3.50 to \$3.75 per cwt. for ewes, and \$2.75 to \$3 for bucks, with a few picked lots of very choice ewes at \$4 per cwt. Lambs were lower, the bulk going at \$4 per cwt. with a few picked lots at \$4.25 per cwt.

Hogs.

There has been rather a heavy drop in the price of hogs. Prices were easy on Friday at \$5.37½ per cwt. for choice select bacon hogs weighing from 160 to 200 lbs. each off cars, and \$4.62½ for thick and light fats. Essex and Kent corn-fed hogs are worth \$4.50 to \$4.75 per cwt., but are not wanted at these prices. It is reported that even lower values are expected this week. Prices at Montreal are \$5 for selects, and \$4.75 to \$4.85 for heavy weights. The *Trade Bulletin's* London cable of August 24th reads 'hus: "The market has ruled quieter during the week, the recent high level of prices having checked the demand, and some houses, we learn, are shading prices to effect new business." Other cable reports show a decline of 6s. to 8s. per cwt. in Canadian pea-fed bacon.

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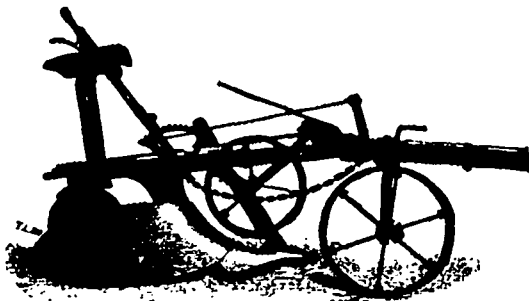
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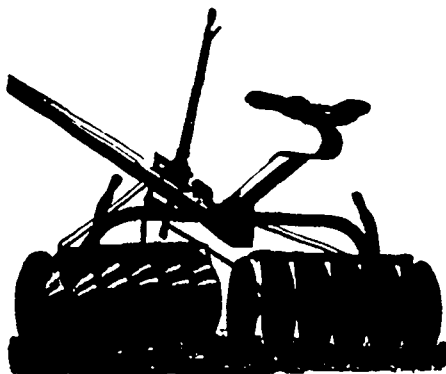
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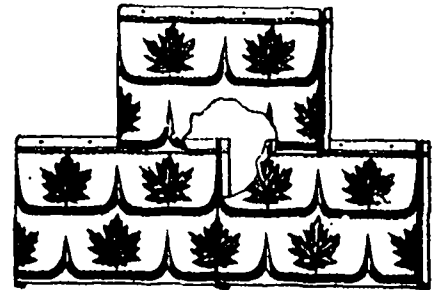
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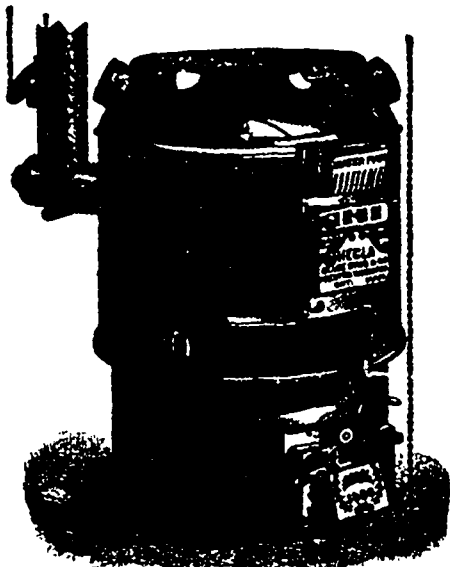
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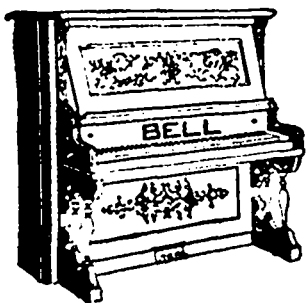
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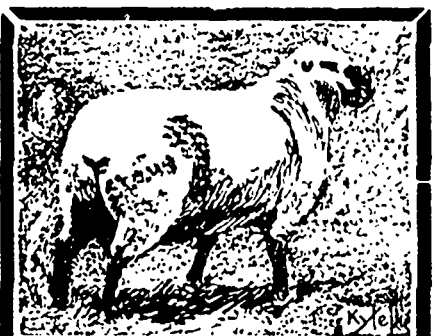
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