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FARMING

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Seed Growth and Selection

The statements on this subject advanced by Prof. Robertson and Dr. Saunders before the Agricultural Committee of the House of Commons open up a wide field for useful discussion and we would like to hear from some practical farmers on the subject. The experience of those who have been operating the same farms for a number of years should serve to throw considerable light on some of the claims which these two authorities have set up. The question as to which is the better method for the farmer to adopt in order to secure good seed is a very important one indeed and is deserving of the fullest discussion. The value of the crop to a very large extent depends upon the quality of the seed sown.

In our correspondence column this issue will be found two letters dealing with this subject. One is by Mr. T. C. Wallace, who is well qualified to discuss such matters, and the other by Mr. D. M. Macpherson, whose wide practical experience makes anything from his pen of interest and value. Mr. Macpherson in his letter makes a very practical proposition, which if carried into effect would do much to demonstrate some of the more modern theories advanced for the benefit of the agriculturist. Whether the Professor and the Director will accept Mr. Macpherson's offer we are not prepared to say. The plan is certainly a practical and feasible one, if the three gentlemen concerned are willing and can find time to undertake the work. It would certainly put the theories advanced to a practical test and be the means of showing what can be done when advanced views are put into operation under conditions as they exist on the average Canadian farm. But be that as it may, the whole question is an important one that we would like to see fully discussed and for which purpose these columns are open.

The Royal Show

A Short Summary of What Took Place at England's Great Show During the Third Week of June

The English exchanges which came to hand last week contain elaborate reports of the Royal Show, which began on June 17th at Maidstone in the south of England and closed a week later. The attendance owing to the rather out-of-the-way place at which the Show was held was below the average, resulting in financial loss to the Society under whose auspices the Show is held.

As a numerical representation of British live stock it cannot rank with a good many shows which have preceded it, but the quality was just about on a par with recent years. The light horse classes were weak in number, but there were some excellent hackneys and ponies. The heavy horse division was a good average for a district far removed from the breeding headquarters, especially of the Shire and Clydesdale, the Suffolk being more numerous than usual. The cattle and sheep, however, were both numerous and representative and there was a very creditable show of pigs. Altogether there was really a good muster of the live stock considering the district in which the Show was held. Next year's Show takes place at York, where a much better representation of visitors and live stock may be looked for.

In the light horse classes there were 257 entries in the forty-three classes, which is small as compared with other years. Of these the hunters and hackneys were out in the largest numbers, and there were very many excellent horses included among them, Mr. C. E. Galbraith's Rosadora winning the female championship in the hackney classes. The display of Cleveland bays and Yorkshire coach horses, though not a great one, was very satisfactory. There was an excellent collection of polo ponies, a breed that is fast becoming popular in England. There was about the usual entry of harness horses and strong competition. Heavy horses were not out in usual numbers, with the exception of the Suffolk. There was a good representative show of Shires. Had all the entries been in their places there would have been an excellent show indeed of this breed, but as it was after the veterinary inspectors had been through several of the classes only from four to eight animals returned to the ring for final adjudication. The Clydesdales compared well with the other breeds, considering the distance which the breeders had to come. If the numbers were not so large as other years the quality compensated for them. The best division was that of brood mares, in which Mr. Herbert Webster's Lady Lothian was at the top. The Suffolk classes were well filled, and there has not perhaps been a better representation of this breed at the Royal. The classes of agricultural geldings were disappointing.

Although it would not compare favorably with the Birmingham or Manchester displays the show of Shorthorn cattle was, all things considered, a very creditable one. There was a large entry, but an unusually large number of the animals entered were absent. In the old bull class Alto, by Excelsior, was first. Two-year-old bulls were but a moderate class, with Count Beauty first winner. He was bred by Mr. Durhie and is sired by Golden Count. In the yearling class Mr. J. Dean Willis was first with Bapton Emperor, a wonderfully compact and thick-fleshed bull. The cow class was a small one, but a quartette of really good animals receiving the principal tickets. Herefords made a good display. In old bulls Tedstone President, by Royalist 3rd, won first place. The female classes were small though excellent in quality. There was a fair display of Devons, so far as numbers were concerned, but in most cases the quality was good. The Sussex cattle were never better represented at the Royal. The show of Aberdeen-Angus was a striking testimony to the steadily increasing popularity of the "Doddies" in England. The entries numbered forty-five in all, and with only one exception the whole of these animals were from herds of the breed in the South of England. The quality was also good, and some bulls of very superior merit were shown. On the other hand the Galloways were not largely represented, but though small in number contained some of the most noted champions of the breed. The classes for dairy cattle were not numerically strong, but some very good types of the various breeds were shown. There were only a few Ayrshires shown. Mr. Andrew Mitchell, who almost swept the boards, was the only exhibitor in the younger classes. The show of Jerseys, though a good one, especially in quality, and with a large entry, was not so large as has been seen when the Royal show has been held in districts in which this breed is so extensively kept. The Guernseys, though on the whole large, and in the cases of most of the classes very satisfactory in quality, was in one or two instances somewhat weaker than was

expected. Cows in milk were not so numerous as is usually the case. The other breeds were only dimly represented.

The sheep exhibit at the Royal is always one of great importance. The number of entries made at this year's show was 631, as compared with 624 in 1898, and 649 in 1897. The sheep this year formed the chief feature of the Show, the entries being larger than last year, and the general average fully as good. The judging in some of the classes was very protracted and competition of the keenest kind. The display of Leicesters was a very creditable one. Cotswolds, though short in numbers, were never better represented. There was an excellent entry of 58 pens in the Lincoln section. Recent years have brought this breed into greater prominence from the fact that the demand for export has been a very large one. Oxford Downs came with a highly creditable muster, and the judges must have thought highly of the animals, for they were liberal in bestowing honorary awards. The Shropshire classes all round made a very satisfactory display, though there was little of what may be termed outstanding excellence, but to compensate for this there were fewer indifferent animals or pens than was the case a short time ago, and the type was very superior. One of the leading winners in this class was Mr. Alfred Mansell, who visited Canada in May last. The entry of Southdowns, which numbered 113, was one of the best for several years past. Greater discrimination seems to have been exercised by exhibitors in making their selections. There was a typical and excellent entry of Hampshire Downs, and some of the breeds not well known in this country were largely represented, such as the Suffolk, Border Leicester, and Kent and Romney Marsh sheep.

The Whites (Yorkshires), large, middle, and small, were undoubtedly the feature of the pig section of the show. Competition in most classes was keen, and in some cases there was a large number of good animals. There was a good class of large white boars, in which Sir Gilbert Greenall's fine boar, Walton Eclipse 2nd, was first winner. Mr. Sandel Spencer was a winner in many of the other sections. The middle whites were a strong class. The Berkshires were hardly so well represented as is usual at the Royal. The class of sows born in 1897 and 1898 is the strongest in this department. The champion prize for the best Berkshire pig in the yard went to Mr. Jefferson's sow, Peel Jessie, his boar, Peel Charlie, being reserve champion. The Tamworths, though out in small numbers, were good in quality. There are indications of a great improvement going on in this breed.

The poultry classes, both live and dressed, were small in numbers. This is said to be due to the fact that the season in Great Britain is a very bad one for chickens. But the falling off was noticeable in old birds as well as in young ones. The produce classes were not as well filled as expected. A very interesting trial of cream separators took place, which formed one of the features of the show.

Working the Garden

The all-important work in the garden is to destroy weeds. The best time to kill a plant is just after the first leaves have shown themselves above the ground. Then it is tender. All that is necessary to destroy it is to stir the ground enough to move the plant. But to find time to do this is the difficulty.

If the garden has been properly arranged a horse and cultivator will go over the garden in a few minutes. If the rows are long, and there is space for turning at the ends, the horse will do quite well. But in a small garden the horse and a cultivator are a nuisance. When this is the case the work is usually put off and the weeds neglected. The frequent stirring of the soil is as important for the garden as for the corn field.

A hand cultivator is a good implement in the garden. What is wanted most is an implement that is always ready. With such an implement the garden may be gone over at

odd spells. It is really surprising how much can be done in fifteen minutes. If the work is begun when the weeds first start there should be no trouble to keep the ground clean and mellow with a very little outlay of time and labor.

As to the time of day when this work should be done many will say that it makes little difference. The best time to kill weeds is the middle of a hot day, when they are cooked very promptly after the roots are cut off. Generally work in the garden is done in the evening, and while it may not be the best time to kill weeds there is not the evaporation from the freshly stirred soil that there is at mid-day, but the soil gathers moisture from the air at that time. However, the main object is to get the work done, no matter what time of the day.

Teaching Agriculture in Public Schools

The Normal School's Relation to It: Mr. Dearness' Appointment to the London Normal School Recommended

In a recent issue of the *London Advertiser* reference is made to a petition signed by the public school teachers in that district strongly recommending the appointment of Mr. John Dearness, Inspector of Public Schools for East Middlesex, to the principalship of the new Normal School shortly to be opened in that city. While we have refrained in the past from taking any part whatever in matters not intimately connected with the agricultural interests of the country, we are constrained in the present instance to diverge a little from what has been our practice, as the appointment referred to indirectly concerns every farmer in this province.

During the past year or two considerable prominence has been given to the teaching of agriculture in our public schools, and at the last session of the Legislature the Minister of Education announced that agriculture would be made a compulsory subject at the departmental examinations, or, in other words, that the teaching of agriculture would be made compulsory in the public schools. To teach this subject effectively teachers are necessary, and efficient teachers cannot be secured without some training. To our mind there could be no better place for giving public school teachers the necessary training in teaching agriculture than at the Normal School. This fact is also partially recognized by the Toronto Normal School authorities, who every year make one of the features of the term a special visit of the students to the Ontario Agricultural College, for the purpose, no doubt, of getting them interested in the teaching of agriculture and what is being done along that line at the college.

If, then, the Normal School is recognized as furnishing a good opportunity for the training of teachers in agricultural subjects, why not go the whole length and where possible appoint principals to control these schools who have a more or less practical knowledge of agriculture and are competent to teach this subject to the students in training under them? It is because we take this view of the situation, so far as the teaching of agriculture is concerned, that we have deviated from our usual course to say a word in behalf of Mr. Dearness' appointment to the principalship of the London Normal School.

Among the other qualifications which eminently fit Mr. Dearness for a position of this kind and which it is not necessary for us to refer to here is, that for a number of years he has been closely associated with the agricultural interests of this province. He has frequently addressed farmers' institute meetings on various agricultural subjects, chiefly those referring to weeds and insect pests, on which he is a recognized authority. His contributions to the

press on the teaching of agriculture in public schools have been practical and to the point and show that he has a comprehensive grasp of the subject. His recent appointment by the Minister of Agriculture as a member of the San José Scale Commission is another testimony to Mr. Dearness' experience and knowledge of the important problems affecting the farmer of to-day and marks him as a man capable of rendering valuable services to agriculture if he had an opportunity of doing so, such as the appointment referred to would give him.

The San José Scale Commission

(Specially reported for FARMERS.)

The San José Scale Commission held a series of meetings in the peninsula between Lakes Erie and Ontario in the last week of June. At three points—Niagara-on-the-Lake, St. Catharines, and Windsor—orchards have been destroyed on account of the scale. A general review of the evidence shows that orchardists who have had trees burned are pretty unanimously in favor of remedial treatment. Outside of those thus directly affected the only witness who took strong ground in favor of this course was Mr. Martin Burrell at St. Catharines. He has taken much pains to study the situation, and gave his evidence in such a manner as to make a strong impression. He quoted Prof. Slingerland to the effect that proceeding on our present lines would destroy very many of our orchards and still leave the scale in the forests to break out again and again. At Fonthill and Grimsby, indeed, it may be said that all the fruit-growers of that district not in the immediate vicinity of scale-infested orchards are strongly in favor of going on and burning infested and suspected trees. Some advised going on even if it cost a million or more, others would continue for a limited time—two or three years. Those who are now so fiercely opposed to the Act said that they were in favor of it a year ago.

The Niagara-on-the-Lake growers contended that it is too widely distributed and too firmly established to be got rid of now by any means; that, like the potato-bug, it is here to stay, and that the wiser course is to try to find means of controlling and remedying it. They held, too, that it is not so destructive in Canada as it is reported to be in the longer and warmer season of the Southern States, and in support of the opinion pointed to the fact that although it had been in their neighborhood six or seven years it had done less damage in the whole township than the scale officers had done in individual orchards. Those whose orchards are merely suspected claim that the scale inspectors coming from infested orchards are liable to bring the scale with them on their hands and clothes. Several of the Niagara growers urged that inspection should cease from the 1st of July to the end of October, the period during which the young lice are running over the trees, because the inspectors could not avoid, if a few trees are affected, carrying it to the other trees in the orchard. They pointed to examples, one of which was the case of a lot of young peach trees examined; four were found infested in the spring and burned, in the same lot in the fall twenty-seven were found to have it.

The insect is extremely minute in size, except when moving in the larval stage and shortly after settling, it is not greatly unlike the bark of the tree in color, and it may be on any part of the trunk, branches, or twigs. These facts indicate what laborious work searching a tree must be. Mr. Benn said that he estimated each inspector occupied on his apple trees about a half-day to each tree. He computed that it would take the staff of twelve men at present working in Niagara 400 days to examine the apple trees in that township, not to speak of the far greater number of other kinds of trees.

At Winona the difficulty of distinguishing the San José Scale from other kinds that closely resemble it was brought to the front. Mr. Foran testified that what the inspectors

had pronounced San José Scale the official entomologist had called Forbes' Scale. Two hours' unsatisfactory re-examination of marked trees in a condemned peach orchard belonging to Mr. Geddes to obtain authentic specimens of the insect emphasized the difficulty.

Almost without exception the witnesses favored larger compensation for destroyed trees than one-fourth of the official valuation. The majority thought the valuation should not be left entirely to one man. A few favored the raising of part of the compensation by taxing fruit, or orchards, or local municipalities concerned.

The nurserymen approved of fumigation and the continued prohibition of nursery stock from the United States. Two of them thought they had noticed some injury to young trees from fumigation, one an instance on cut-leaved birch, the other by resetting fumigated stock and unfumigated stock of the same varieties alongside each other and noting that the latter made more vigorous growth. They generally favored official inspection of the process of fumigation as it was liable to be neglected or slighted by some nurserymen who feel sure that their own stock is free from scale.

It appears that the San José Scale Act was passed at the urgent solicitation of the provincial fruit-growers. Everyone heartily approved of its purpose to stamp out the pest if possible. A good deal depends on the co-operation of the owners of orchards. Some of the Niagara people argue that its measures are so drastic that owners will try to conceal the presence of the insect in their orchards, even with the prospect of compensation, whereas, if remedial measures were substituted, they would hasten to report the discovery of it to the inspectors though no compensation were expected.

Starters and Their Advantages

By B. T. Songergaard, at the National Cheese and Butter-Makers' Convention

For the last two or three years the starter question has been discussed among the butter-makers, and at our conventions. Although something new has sprung up now and then, it is not settled yet; at least, we have not adopted one certain kind for general use and that is one of the many reasons why our butter is not uniform.

In comparing the different kinds of starters I shall use the home-made starter as a scale, as our butter dealer has occasionally been scoring. I have not had any public test between the home-made starter and cream starter. I find the race too uneven. I prefer good buttermilk to a poor home-made starter. Buttermilk produces a quick, South Water Street flavor, but not what I call a delicate aroma. As a starter (not accounting commercial starters) I prefer skim-milk.

I select a patron that I know is clean about milking, and who lives not far from the creamery. He must have healthy cows that have calved from one to three months ago. He brings me the milk I need, from these cows, of the morning's milking. As soon as received I place the milk in cold water and leave it there about three hours to air out. Then I skim it and heat it to 85°, place the can in a box and pack hay around it, so that the temperature will maintain about the same degree. I double a piece of toweling and use for cover, which will allow the gases to escape. I stir it occasionally for two hours, not after. If it coagulates before the cream is ready I place it in cold water without stirring it. Before it is strained into the cream it should be skimmed and stirred thoroughly.

Now, as to what kind of a starter we shall use. I say, make your own from full milk as before directed, but be very careful in selecting the milk. When I left Denmark, the pure culture had not come into general use, but they had studied the home starter thoroughly. If a creamery could not produce good flavor, the butter-maker would

sometimes go to his neighbor's creamery, where he knew they were making fancy butter, and secure some ferment which he applied to his cream. In that way he sometimes succeeded in improving his butter to extra

To find the very best milk for a starter we also pasteurized each cow's milk by itself in a good herd. The cow which left the least of the settled matter we find on the bottom of a can of pasteurized milk we called the best one. Whenever we can improve our grade of butter by using a pure culture, so that it will pay for its expense, then is the time to use it.

While we know that we cannot obtain everything from a starter, I think the time has come when we ought to adopt one kind for general use. As we have it now, I do not wonder that uniformity is something unknown in this country. One is using buttermilk, the second takes from a can of sour cream; the third just leaves some sour cream in the bottom of the cream vat; the fourth makes ferment from sweet cream; the fifth does not make any at all; the sixth heats skim-milk in the morning and uses it the same day; the seventh uses full milk; the eighth Hanson's lactic ferment; the ninth B 41 fresh, and the tenth B 41 stale. I don't doubt but that I have forgotten some.

As to butter for export, it might pay to adopt some good, pure culture, besides pasteurizing the cream, owing to better keeping quality; but that we will have to experiment with if we want to compete with our brothers on the other side of the water.

In Denmark they say that three things are necessary to being a good butter-maker. The first is cleanliness the second cleanliness, and the third cleanliness. Be sure that you are in possession of these three qualities when making a starter.

Travelling Libraries for Farmers

Something for Our Farmers' Institutes to Take Up

This is a reading age, and everywhere people are clamoring for something fresh to read. The outcome of this increased desire for brain food has been the establishment of free libraries in our cities and larger towns, for the purpose of supplying the residents of these places with reading matter. This plan is all right in so far as the cities and towns are concerned, but up to the present time no very feasible plan has been devised for supplying the farmer and his family with reading material. And who needs it more than he, separated as he is from his neighbors and friends? But as yet nothing of a practical nature has been done, in this country at least, to supply the agriculturist and his family with good, up to date reading matter such as a resident of a city or town has at his very door.

In some of the United States there has been a movement of late in the way of remedying this matter that promises to develop into something tangible and practical. As yet the movement is in a somewhat experimental stage, but sufficient has been learned to show that the plan is feasible and of such a nature as would fill a long felt want in rural districts. This movement is along the line of having free travelling libraries, and the plan as carried on in the States of New York, Michigan and Iowa, and to some extent in Minnesota, though not by State Government, is to have a number of small libraries prepared under state control and at the expense of the state, which may be loaned to the various country districts making application for them. When one of these libraries has been read through by the people in one locality it is then passed on to some other section and another library supplied in its place. In this way the people in any locality may have at their disposal during the course of a year practically a library of many thousands of volumes.

As an example of what can be done in this line, the women of Minneapolis last winter gave about one thousand

volumes to be used for the benefit of the people living in a county near that city. These were divided into groups of fifty volumes each and each group packed into a neat travelling case. Any community was free to make application, and soon a number of these small libraries were out among the people, and everyone in that county had practically access to the whole one thousand volumes.

But, to come nearer home, the question is whether such a plan is workable in this country. We think it is. If free travelling libraries can be successfully operated in the states we have mentioned there is nothing to prevent their being carried on here, especially in this province. This would be a good line of work for our farmers' institutes to take up, especially those having large surplus funds secured from excursions. With a few hundred dollars, and supplemented, if need be, by Government assistance, a respectable library might be got together that would prove of great benefit to the members if arranged as we have described. Members could be selected in the different localities to take charge of the smaller libraries and return them when finished to the secretary and secure another one in its place. There seems to us to be something of value in this plan, and we would like to see it worked out by some enterprising institute.

An Egg-Laying Competition

The following table gives the results of an egg-laying competition, which was begun on October 26th, 1898, and concluded on February 14th, 1899, a run of sixteen weeks:

Pen.	Month	1st	2nd	3rd	4th	Total	Pts.
1 Faverolles		0	17	44	17	78	156
2 Black Langshans		5	6	40	20	74	148
3 Brown Leghorns		18	35	44	30	127	254
4 Buff Leghorns		4	59	42	49	154	308
5 Buff Leghorns		6	29	37	20	92	184
6 Minorcas		11	31	27	13	82	162
7 Black s.c. Orpingtons		6	46	36	10	98	196
8 Buff s.c. Orpingtons		0	11	60	50	121	242
9 Buff r.c. Orpingtons		29	43	24	20	116	232
10 Barred Rocks		8	60	48	33	149	298
11 Buff Rocks		20	33	35	21	109	218
12 Gold Wyandottes		26	20	22	65	133	256
Total		136	390	459	348	1333	

Each pen contained four 1898 pullets. A fortnight was allowed prior to October 26th for the birds to get accustomed to their new surroundings.

In regard to this competition, which was conducted by the Utility Poultry Club, at Penrith, England, the *Farmer and Stockbreeder* has this to say:

"The result is interesting. I believe I called it that before. And there are some morals to be learned from a study of the tabular statement, and the notes of the secretary, but I confess I don't see that the competition proves anything in particular, the object being practically to find which breed or strain could produce the best winter layers. The results one will note are diverse, and in some cases unexpected; take for instance the case of the Minorcas pen of six; they laid little more than half as well as the winning Buff Leghorns, and yet it would be absurd to say Minorcas are only half as good as Leghorns. Some of the birds commenced moulting as soon as they arrived, which naturally put them back, while what handicapped others was the indifferent laying of one or more birds in the pen, which only contained four. The secretary gives a word of advice on this head, advising breeders to choose their layers carefully to avoid heavy-looking, thick-headed, lazy birds. This brings us to an interesting point—viz., the art of telling a good layer from an indifferent at a glance. Speaking generally, a good layer is an alert, active bird, but experience alone, plus a certain aptitude, will give the poultry owner the gift of detecting which are wasters and which valuable. To say a lazy looking bird is a bad layer is speaking broadly; nearly all sitting breeds look lazy, sleepy, beside a healthy, active Leghorn or Minorca; often again a

really promising pullet to the ordinary eye will prove to be a failure from the egg-laying point of view.

"But to return for a moment to the Utility Poultry Club. Some writers have vigorously criticized the wisdom of such competition, but, granting for the moment they do no good, what harm do they do? But surely they do good if they only make some poultry-owners devote their energies to breeding for eggs instead of feathers or combs, and some fancy point. It is the custom of some Minorca-breeders to remove the comb from the stock bird, since that appendage has grown so big as to inconvenience the bird. What can be more nonsensical than to breed birds with such combs. Again in the Houdan, so popular in France, breeders here go for the crest, striving to get it as large as possible, and the utility points are neglected."

How to Cross-Breed Poultry

By Samuel Cushman

If your market calls for yellow poultry you must not select stock that does not produce such offspring. Some dark breeds, when mated with white breeds, produce white or very light chickens. White and buff fowls are to be preferred. If you are to raise brown, for some markets demand them, you must not keep pure breeds of the non-sitting varieties. You may cross them with the breeds that lay brown eggs and get excellent stock that produce brown eggs. If you cross for brown eggs, mate White Leghorns or Buff Cochins rather than Wyandottes or Plymouth Rocks, as the result will be much better.

If you cross for egg production, mate compact, yellow-legged Games, white or light colored birds preferred, with stocky Wyandottes or Plymouth Rocks, with Light Brahmas or Buff Cochins. Both Cornish and Indian Games, which are slow growers, Houdans, which are quick growers, have full flesh development, but dark plumage, and they may be mated with Light Brahmas, Buff Cochins, or Wyandottes, with good results.

The best pure breeds for white eggs where yellow poultry is a consideration are White Leghorns (large strain), and White Plymouth Rocks (white egg strain). If you cross for white eggs try the White Minorca-White Leghorn cross.

When dark legs and white skin are not objected to, keep Black Minorcas for large white eggs, and Black Langshans, which are handy for deep brown eggs. A Black Minorca-Langshan cross is probably the best cross for egg-production, if size and number of eggs and hardiness only are considered. Houdans are for flesh. Indian Games and Dorking cocks may be crossed on Langshans with good results if your market does not require yellow poultry.

CORRESPONDENCE

Seed Growth and Selection

To the Editor of FARMING:

I was particularly pleased with your comments on questions raised by Commissioner Prof. Robertson in your issue of June 27th. Mr. Robertson is undoubtedly right in advocating the selection of the best varieties of seeds suited to the country or district, and the continued proper manuring and cultivation, together with seed selection, of the variety selected in the locality, in preference to the far-fetched theory of seed changing. You point out some facts I have long tried to establish in our farmers' minds, viz., that crops require an abundance of all round fertility, but produce large root and foliage, or abundance of seed or fruit, accordingly as they have access to an excess of the element which produces one or the other. In other words, quantity and quality are controllable, and the limit of crop production is unknown, notwithstanding all the expensive experimentation of our stations. But, as you ob-

serve, the question of quantity of grain obtainable is intensely practical, so that the supply of nitrogenous manure is tremendously important. It is here that the great value of clover manuring lies, and clover supplemented with phosphate is undoubtedly the best preparation for quantity and quality of wheat yield. With the increasing population of the world, and consequent demand for food, we are brought face to face with a serious question, so serious indeed that Sir Wm. Crooks called special attention to it at the meeting of the British American Society. I think that too much time and money is expended in trying to demonstrate proven facts, and I believe more practical benefit would be gained by expounding and illustrating the principles of agriculture than in giving object lessons in the detail practices of farming, which every farmer must work out for himself according to his conditions.

It is a grand thing for Canada that we have a Commissioner of Agriculture who is outspoken and fearless in referring to the very department in which he presides, and the directors of our stations should gladly welcome his candid words. I venture to say that the great majority of thinking farmers in Canada are in accord with the Commissioner, and are glad to accept him as their spokesman. As I understand it, he does not condemn the quality of work done by the experimental farms, but thinks it is not directed in the most useful channels. The farmers want plain talk on this subject, and I hope to see it thoroughly thrashed out. In all I may say on this subject I want it understood that I do not attack Prof. Saunders, for whom we all must have great respect, but the public welfare is far more important than any individual.

T. C. WALLACE.

Toronto, Ont., July 4th, 1899.

Crop and Market Conditions on Prince Edward Island

To the Editor of FARMING:

We are having splendid growing weather for the past week, light showers nearly every day with bursts of hot sunshine. The medium and late sown grain is doing splendid, the early sown is greatly retarded by weed growth, the weather being so cold and dry during May. Potatoes are shooting out well and the stand of early potatoes is very good. The patch of potatoes planted on the Island this season is not so large as usual, owing probably to the high prices and scarcity of the seed and the inability of a great many to purchase at so high a price; what is planted, however, I believe is in much better land, and the aggregate, with continued good growing weather, may next fall be as large as usual. Turnips have come up well, for the weather was all that could be desired and the heath is exceedingly large. Pastures are now showing up quite good with the natural outcome, a very large flow of milk going into the factories these days. Dairy farmers are now feeling quite jubilant. Some sales of cheese were made lately at 8¼c., some factories are looking for 8½c. The Dairy Board will meet for business on the 12th and a good many sales "on Board" are looked for. While I do not think the volume of milk is much if any larger just yet than last year, though there are three new factories in operation, yet if this splendid growing weather continues the increase of milk at factories will soon be quite perceptible, and the price at this time is withal much better. No doubt the drought in New England States will affect the market in both butter and cheese to the benefit of the more favored countries. The markets are now quite dull, little or no farm products moving. Since the advent of low prices for eggs our people pay little or no attention to poultry. The egg market has declined in the last five years fully 60 per cent.

J. A. McDONALD

Hermanville, P.E.I., July 1st, 1899

The Basic Principles of Successful Farming

Mr. D. M. Macpherson Discusses Prof. Robertson's and Dr. Saunders' Theories and Makes a Practical Proposal

To the Editor of FARMING:

I have read with considerable interest and amusement the different articles written of late on "The basic principles underlying successful farming," by two of the most prominent professional teachers of agriculture. "When doctors disagree patients should take their prescribed medicine with caution." So when it is so apparent that there is a disagreement and difference of opinion as to the correct diagnosis, and prescribed requirements to discover the causes of loss in farm work, and create new conditions which will increase profits, as defined by Prof. Robertson and Director Saunders, their statements must be taken with caution. Such being apparent it is quite proper that these important matters should be investigated, tested and, if possible, establish who is right and who is wrong. Having carefully perused the writings of these two gentlemen bearing upon these topics I take the liberty of offering a few observations to be printed in your journal if you consider it proper to do so.

The conclusions arrived at as to the difference in theories propounded by these two gentlemen are very small indeed. Both are right up to a certain point, and both are wrong otherwise. Each in their different departments of scientific skill expresses a part of a truth as to the combination of facts which make up the whole truth. Such being the case, a part of the whole truth expressed and discussed is a very difficult position to define as being correct or in error.

The whole truth or basic principles which underlie *maximum, progressive, and profitable farming* is a combination of scientific principles backed up by natural law practically applied. When fully understood and put into practice they cover a wide field of scientific truth woven into a combination so intricate and ultra-dependent that when one part is omitted or overlooked the whole effect is deranged, and often to the extent of converting a benefit into an injury.

Strong, vigorous, well-developed seed when sown into the ground does not necessarily produce maximum profit per acre even if a maximum crop is obtained. It is one important factor, but only one of a large number which are necessary to attain this desirable result. A farmer may, and often does, produce and develop a vigorous seed which matures into a maximum crop, yet these conditions and results, if obtained by a financial loss, cannot be called a financial success—and yet it may be a great success—as to products per acre or per farm. But this is not what the Canadian farmer wants. It is not a large product of this or that crop that is wanted, but the largest possible profit *per acre, per farm, and per county*, and the greatest added value given to land from year to year.

Again, it is stated that economizing fertility, good cultivation, early seeding, clover growing, etc., etc., are the underlying principles of profitable farming. In reply to these statements, I would say that they are merely a part of the whole truth. There are many farmers who successfully practise these conditions and yet experience but only a portion of the extent of profit that they should have. All these factors do materially help to promote and successfully acquire large soil products, but do not necessarily produce maximum profit per farm. My experience, obtained from personal practice, has established the fact—and I here desire to state it—that it is not possible for any farmer in any ordinary pursuit to maintain the fertility of his farm by the most careful conservation of plant food within himself, either by the saving of manures, sowing of

clover, good cultivation, etc., etc., individually or all combined.

A successful farmer must sell farm products in large amounts to realize sufficient cash to pay his expenses, and have a balance left to pay a profit on capital invested, and therefore in the selling of such farm products he must necessarily sell and lose a corresponding amount of soil fertility, the ingredients of which are potash, phosphoric acid, lime, nitrogen, etc., etc. No amount of care in the saving of straw, chaff, roots, animal manures (liquid and solid), manure drainage, or gases arising from fermentation, will make up for the loss of these ingredients, which are made up in the products which are usually sold off of farms. While it is universally admitted that the growing of clover will reclaim nitrogen from the air, yet it is possible that the labor and expenses incurred in the acquiring of sufficient nitrogen in this way would be more than the same amount could be obtained in other direct ways, and it appears to me that nitrogen in sufficient quantities can be obtained at less cost than by or through clover.

These facts, if true, prove conclusively that in order to obtain a maximum profit from farm work and capital invested in farming it does not depend entirely on vigorous seed, soil fertility maintained, early seeding, good cultivation, etc., etc., but upon a combination of these, along with a proper selection of crop, animal and finished product, which when sold will yield the greatest cash and capital profits per farm, and at the same time prepare an annual condition which will cause these to progress to the greatest extent from year to year, thereby making yearly maximum cash profits and increased value to the land of each farm.

To virtually settle this very important unsettled question, "How can an average Canadian farmer be enabled to make his farm produce the greatest growing profit from year to year and at the same time more valuable each year?" I desire to make this proposal for a demonstration test:

Let the Dominion or Provincial Governments, one or either, select three one-hundred acre farms owned by three average Canadian farmers. The owners being known for their honesty, integrity and industry, and all three farmers and farms be selected under average conditions, known and proven to be similar in all details as is possible to obtain. I propose that Prof. Robertson undertake to direct one, Dr. Saunders direct another and I will undertake to direct the third. The government advancing such means to carry on the three farms as each one reasonably calls for. This contest is to continue for five years, or as long after this period as is found desirable to continue the good or bad work. The director of each farm shall put into execution the theories that each submits to the public at the present time. A careful record of results, financial and others, shall be minutely kept in systematic, business-like form. A careful inventory shall be made out at the start, as well as a balance sheet struck off each six months, also a fertility account shall be minutely kept of all debits and credits in such account. All these three farms shall be under the supervision of the Minister of Agriculture, and through him a determination made out each year as to the record of results, etc., etc.

In this way a decision on disputed questions or underlying principles of how to make the farm pay would be acquired as far as the present light on the present discussion goes. These results individually would be watched by the farmers, business men, politicians, professors, and all men, with the greatest of interest, and who knows but it would ultimately revolutionize the present methods of farm practice, farm values, commerce, trade, general prosperity of the country at large.

Although my undertaking such a task would be a great inconvenience to me and I am sure it would also be to the other two gentlemen named; but believing a great public benefit would be conferred by such practical demonstrations I am quite willing to forego the inconvenience of it, and try my hand to prove whose theory and contention is nearest right.

D. M. MACPHERSON.

Lancaster, July 1st, 1899.

The Farm Home

Body Building.

By Mrs. S. T. Rorer.

The average farmer spends much time in learning how to grow crops, how to raise animals, how to keep them, and how to get the very best from them. He keeps them lean as long as he wants them so; when he is ready to sell he quickly fattens them. The human animal is not so very different from the one going on "all-fours," and it is always a matter of great surprise to me why so much time is spent on the commercial side of this question, and so little on the side of health and comfort of the family. Sometimes these same men keep the animals in good condition, while the family is allowed to fall ill from neglect, and without a twinge of conscience, a physician is called in to correct their own shortcomings. If half as much attention was bestowed to the health, care and general living of the family in the house as to that portion which resides in the barn, the doctor's buggy would be seldom at the door. Sickness is certainly caused by disobedience to the laws of nature. We are governed by our appetites. The first palate, that of the mouth, is our average guide; the second, the stomach, when greatly abused, creates a little uneasiness; but, unless it does, we take for granted that we are suffering no discomfort from that which we have eaten, not taking into consideration that nature after repeated offences ceases to be tolerant. One frequently hears of a mother or a father living to be ninety, who boasts of disregarding every law of hygiene, having eaten that which suited best or was most convenient. Forget her for a moment, and look at her progeny, you find them weaker—sometimes mentally, at others physically; just one step lower down in the scale of health and vitality. Her grandchildren, if there be any, are puny indeed; a fourth generation rarely follows, unless there happens to stray into this family, by marriage, some individual who has observed natural laws and put them into practice. Watch the change. You find a sturdy, healthy offspring, from the father who can scarcely congratulate himself on a single well day. Such children, however, must always watch for the "shallow places." The great insane hospitals, as we now call them, are filled with the children of unthinking people. In Pennsylvania (a great State), it is the pride of our legislators that we have the largest of the kind in the country. We have one near my summer neighborhood which holds a thousand souls, while three others of the same sort close by hold from one to two thousand. It happened to be my

privilege to visit these institutions and to look carefully over the food. While there, I investigated many individual cases, that I might make for myself a thorough report of the cause of this great affliction. To my surprise, it was found that two-thirds of the inmates were of country birth, and nine-tenths of these had broken down from preventable causes, while the remaining one-tenth came to their condition from shock or accident. The nine-tenths are there because they have never been taught to care for the body as the great casement of both mind and soul. The farmer feeds the buttermilk to his hogs and the butter to his children. The hogs look it, and so do the children. He sells his eggs, and feeds his children on potatoes. He gives the corn—good, wholesome food—to his hog until it is too fat to stand; then calls you out to look at this "beautiful" animal whose ankles and feet can no longer bear its weight; it is panting from fat pressure—in fact, an object of misery. This he kills and feeds to his children. Why not give the children the corn in the first place, rather than convert it into fat of this diseased form? Buttermilk contains an admirable form of nitrogen, tissue-building food, and this along with an occasional egg—even at a high price—might prevent a breakdown.

Watering Flowers.

One great cause of failure to secure blooms is injudicious watering—deluging at one time and withholding at another and paying no attention to the needs of different varieties. The appetites and needs of plants are as various as those of people and their temperaments differ, too; there are the sanguine, the sensitive, the phlegmatic—each requiring being dealt with accordingly. While one plant will thrive, notwithstanding the utmost neglect and subsist on almost nothing, another must have nourishing food and warm drink. It is a good plan to adapt the water to the temperature of the room, never using cold water and always being sure that the drainage is good. Once a plant will droop and look sickly without any apparent cause, when, if the matter is looked into, it will be found that water stands in the bottom of the jar. A bent wire is always useful in this case, for by penetrating the holes at the base of the pot and tiring the earth, passages will be made for the escape of the water and gas. Then water freely, being sure that the water runs through quickly; drain all off, loosen the soil at the top of the jar and withhold moisture until the plant is again healthy. The calla, as is well-known, requires plenty of

water and that which is quite warm; fuschias are thirsty plants, especially when in flower and moisture is necessary to the Chinese primrose. The majority of plants require a weekly bath; in fact, nothing invigorates them as a shower bath of tepid water. Those which cannot be removed readily for the showering may have their leaves sponged. The ivies should be sponged frequently, while primroses and ornamental leaf begonias should not have their foliage wet, but is well watered at the roots.

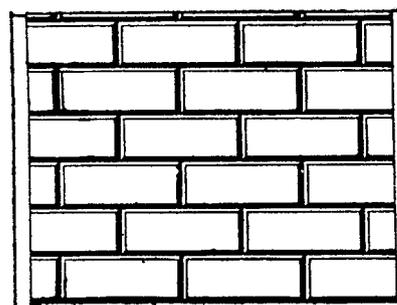
Vegetables for Summer Diet.

Americans are undoubtedly the greatest civilized meat-eaters in the world. Of course savages, who do little in farming, have few vegetables except corn, beans and pumpkins, and live mainly on animals they capture by hunting and fishing. We believe in a due supply of animal food in winter when the air is cold and bracing. But as summer heats come on the animal food should be replaced by vegetables, taking care so far as possible to eat that which is most palatable and whose nutrition most nearly replaces the meat ration. Peas and beans, divested of their skins, which are indigestible, and thoroughly cooked, have all the nutrition of whole wheat. So also have oats cooked without the hull and whole wheat. With some one of these every day and plenty of fruits and vegetables, a man may largely dispense with meats during the summer and be healthier and happier without them.

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Questions and Answers.

Feeding Cows for Milk.

To the Editor of **FARMING**:

Please inform me through your valuable farming paper as to feeding cows for a flow of milk. Which is the better, dry or dampened chop or feed quite wet? Also as to using hot or cold water during the winter months.

L. MOYER, Welland, Ont.

To produce a large flow of milk a cow should be fed liberally. About sixty per cent. of all a cow can eat is required to sustain her body and only after this amount is supplied can there be any return in milk. Some cows can profitably consume more feed than others, and the feeder should learn to discriminate between the individual cows in this regard. A heavy milker should have more concentrated food such as grain than one giving only a small quantity, and it will be an aid to the cow to have the grain reduced to fineness by grinding. The rule should be to feed nearly as much roughage as the cow will consume without overtaxing her; then supply sufficient concentrates to bring the digestible matter up to the required standard. A good ration for a cow is one having a nutritive ratio of 1 to 6. Bran and middlings form a good feed with roughage for a flow of milk. There are so many things connected with this question of feeding a dairy cow that we have not space to go into the subject at length here.

Experiments conducted along that line go to show that it does not pay to wet the feed for milch cows. From an experiment conducted at the Ontario Agricultural College Prof. Dean concludes that "this experiment would indicate that slopping is an expensive way to feed cows." Experiments conducted at the Wisconsin station, where water warmed to a temperature of 70° Fahr. was supplied to one lot of cows in opposition to water at a temperature of 32° given to a second lot. In the first trial the cows receiving the warm water gave six per cent. more milk than those getting cold water, while in

the second trial there is a difference of only one per cent. in favor of the warmer water. Experiments conducted elsewhere show that where water supplied was reduced from 79° to 38°

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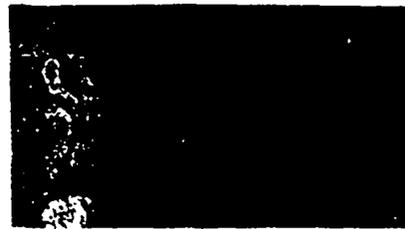
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TORONTO

Fahr, the cows fell off eight per cent. in milk yield. A good plan for watering cows during the winter is to have a large tank in the stable. By keeping this filled and allowing it to stand for a time the water will become comparatively warm and will be better for the cows than if taken directly out of the well.

Special Prizes for Dairy Products.

The Windsor Salt Co., of Windsor, Ont., is offering a number of special prizes for competition at the Industrial Fair, Toronto, the Western Fair, London, and the Southern Fair, Brantford: The prizes offered are cash or medals, as selected by the winners, and no stipulation has been made as to the salt that shall be used. The following is the list of prizes offered by this enterprising firm for 1899, of which every cheese and butter maker should make special note:

AT INDUSTRIAL—\$50 for the best selection of cheese exhibited; \$50 for the best selection of creamery butter exhibited; \$30 for the best selection of dairy butter exhibited.

AT WESTERN—\$50 for the best selection of cheese exhibited; \$50 for the best selection of creamery butter exhibited.

AT SOUTHERN—\$25 for the best selection of butter exhibited.

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Because there has never been an over supply of poultry on the market.

Because it requires a very small investment to realize a good large income.

Because you can hatch them in large numbers with but a nominal expense.

Because you have less trouble hatching with an incubator than with the hen.

Because you can hatch chicks when you can get the most money for them.

Because raising poultry can be made to pay better than corn, oats, or most of the farm products.

Because you can keep your hens laying all the time if you do not let them hatch.

Because hatching chicks with the incubator is a labor-saving and a money-making business.

Because you can hatch chicks during the coldest weather by placing the incubator in the cellar.—*Shoemaker.*

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

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That's what you want when you enter business. Business men have little use for anything except the practical. All the training of this business college is along practical business lines—a college owned by some of Toronto's leading business men and financiers.

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WEST'S FLUID

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and a most effective DISINFECTANT, simply because it is a strong ANTISEPTIC, and destroys the germs upon which such conditions depend, and does not contain corrosive nor irritating properties.

Circulars (specially prepared by a veterinary surgeon) on application.

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THE CO-OPERATIVE FARMER

SUSSEX N. B.,

reaches the farmers of the Maritime Provinces. Get a sample copy—you'll be sure to like it. Ad. rates on application. Address:

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Quick Cure For Lump Jaw

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

Fleming's LUMP JAW CURE



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

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

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

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A powerful non-irritant and healing preparation that is proving a boon to farmers all over Canada for sheep and cattle ailments, such as:

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- RED LICE ON SHEEP
- WOUNDS
- RINGWORM
- BRUISES, ETC., ETC.
- AND SCAB.

Full directions on every can. Cures the worst cases. The most effective and economical dip on the market. If your dealer can't supply you, write us direct for it, and if there's anything out of the ordinary in the ailments of your flocks and herds we'll be pleased to give free any additional advice in the matter.

The Pickhardt Roofing Co. (LIMITED)

STOUFFVILLE, ONT.



An eloquent preacher tells this among his early experiences in a rural parish. One of his parishioners was very ill and finally sent for the minister, who found the man rather reticent, and finally asked if there was anything he could do.

"Parson," was the answer, "sleep would make me well, but the doctor can't make me sleep. I wonder if you'd preach me that long sermon I heard last July."

Stock Notes

Large Importation of White Yorkshires.

During the past year or two a number of valuable importations of purebred stock have been made into Canada but none more important than that of Mr. D. C. Flatt, Millgrove, Ont. Mr. Flatt's importation consists of a number of purebred Yorkshire pigs, brought out by Mr. W. D. Flatt, Hamilton, Ont., an account of whose importation of Shorthorns was given in our issue of June 27th.

Mr. D. C. Flatt's recent importations are amongst the choicest Yorkshire pigs ever brought into Canada. Every animal is either a leading prize-winner at the English Royal and other shows or the descendant of one, as the following particulars regarding some of the animals imported will show:

Yearling boar, 3rd prize-winner at the Royal Show, 1898, and 1st at Lincoln. His sire won 1st prize at the Royal and gold medal for best pig in the white breed classes.

Sow, Fanny B.; sire, Ruddington Lad, the Royal champion boar. This sow is served by the Duke of Rutland, 1st prize in pen of three at the Royal.

Sow, Fanny C.; sire, the Royal Champion; dam, Miss Hollingsworth 39th. She is the dam of numerous prize-winners, and also in pig to Duke of Rutland, 1st prize-winner at Royal.

Sow, Fanny F.; sire, Ruddington King David 5th, he being sire of the champion boar, Ruddington Lad.

Fanny E. is also in pig by champion boar. Sow, Fanny P., in pig to Ruddington Lad 2nd, brother to Ruddington Lad 3rd.

Sow, Fanny D.; sire Ruddington King David 5th, a very grand boar, and from a good sow.

Boar and sow, Forest Ranger and Fanny F., are by Bottesford Ranger 3rd, the sire of the 1st and 2nd prize pens at the Royal and from the sow purchased, Miss Hollingsworth 63rd. She is own sister to the 1st prize sow at Royal last year.

These importations form a very valuable addition to Mr. Flatt's well-known herd of Yorkshires and will tend to greatly increase the importance of this breed in Canada. His enterprise in thus endeavoring to improve the quality of our live stock is deserving of high commendation and a liberal patronage.



Cattle, Hog & Sheep Labels

Spring Ear Patches to suit.

Patent Grain Truck and Bagger

Send for Circular and Prices to
R. W. JAMES,
Farm Implement Forwarding Agency
Rowmanville, Ont.

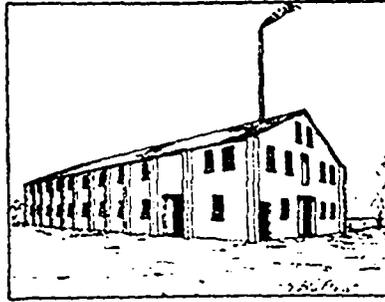
EGGS EGGS EGGS

Black and White Langhans, Darded and White Rocks, Silver-Laced and White Wyandottes, Black Minorcas, Houdans, Cornish Indian Game, Single Comb White and Brown Leghorns.

EGGS—\$2.00 per 15, \$3.00 per 30, or \$8.00 per 100, straight or assorted.

Shetland Ponies; Dorset Sheep; Jersey Cattle.
STRATFORD BROS., Stratford, Ontario

Built with THOROLD CEMENT



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

Size of walls 15 x 100 x 24 feet. Built with Thorold Cement and gravel, from the bottom of foundation to the roof. All this concrete work was done in 114 days under the direction of our traveller, Norval B. Hagar.

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

GRIMSBY, ONT., Dec. 12, 1898.

I, STATE OF JOHN BATTLE,

GENTLEMEN,—It gives me great pleasure to testify to the good qualities of your Thorold Cement. During the past season I built an Evaporator under the supervision of your traveller, Norval B. Hagar, the size of which is 45 x 100 x 24 feet to plate from bottom of foundation, and gables 12 feet high, making top of in all 36 feet high to gables. The first storey is 13 feet high and 12 inches thick, the second 8 feet high and 10 inches thick, gables 8 inches thick. I have a concrete floor in first storey, and the second storey is held up by trusses. There is not a post in the first storey to hold the second.

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

Yours, etc., J. W. VANDYKE.

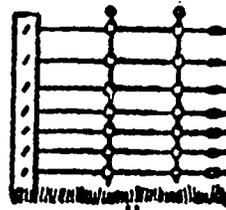
ESTATE OF JOHN BATTLE

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With 100 Rods. Gold Stem-Wind Watch Free.



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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—

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



SUMMERHILL HERD OF YORKSHIRE HOGS



The Lengthy English Type

Largest herd of imported Yorkshires in America. Purchased from the most noted breeders in England. Also 200 Canadian-bred pigs of all ages for sale. Stock guaranteed as described. All trains met at Hamilton by appointment.

D. C. FLATT, Millgrove, Ont.

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Oak Lodge Herd of Large Yorkshires

The Largest Herd of Pure-Bred Yorkshires in America.

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

J. E. BRETHOUR, Barford, Ont



The Ontario 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. 39

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

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

BENEFITS OF MEMBERSHIP.

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

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

A member of the Sheep Breeders' 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 15th 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. HOBSON, Secretary.
Parliament Buildings, Toronto, Ont.

Annual Reports.

Annual reports have been received from the following institutes since the last issue:

Algoma Centre
Grey North
Huron South
Middlesex East
Oxford North
Parry Sound East
Simcoe Centre

Rates on stock to and from exhibitions in Ontario and Quebec.

Rates on purebred cattle, sheep and swine in car load lots from any point in Ontario to any point in Manitoba and the Canadian Northwest.

Mixed car-loads of purebred stock sent at reduced rates.

Association cars of purebred stock from Ontario to Manitoba and the Northwest.

Schedule of rates for stock to Manitoba and the Northwest in the Association cars.

Alphabetical list of stations between Winnipeg and Calgary, giving the number of the section in which each station is situated.

A form of application for space in the Association car.

Rates for shipment of thoroughbred stock between points west of Lake Superior.

Rates from Ontario to exhibitions in Manitoba and the West.

The agreement entered into between the Government of the Northwest Territories and the Dominion Live Stock Associations.

Rates to British Columbia.

Each of these questions is treated under a separate head.

Institute Memberships.

The following is a list of the members received since the last list published:

Bruce North.....	2
Bruce West.....	1
Glengarry.....	2
Grey South.....	3
Lanark South.....	16
Lennox.....	61
Middlesex East.....	5
Northumberland West.....	2
Ontario North.....	29
Parry Sound East.....	5
Simcoe Centre.....	20
Simcoe West.....	56
Wellington Centre.....	3
Wellington South.....	2

Transportation of Purebred Cattle, Sheep and Swine Throughout Canada.

A very important circular has just been issued by the Dominion Live Stock Associations. As the title indicates it treats altogether of the transportation of purebred live stock, and forms a part of the annual address of the secretary of the Live Stock Associations of Ontario. It is very conveniently arranged, and should be in the hands of every live stock man in Canada. Its contents are:

Rates on purebred cattle, sheep and swine in less than car-load lots between local points east of Fort William.

purebred animals registered in records recognized as reliable by the Department of Agriculture are carried at half rates between all points east of Fort William, and car-loads are carried at the rate on settlers' effects between points in Ontario and points west of Fort William, thus effecting a very great saving to both buyers and sellers, and having the effect of more easily distributing better animals throughout the provinces. This has proved of great benefit to all concerned.

It is a well known and recognized fact that the rank and file of the live stock in Canada is not as good as it was twenty years ago, nor do our average export animals sell for as much as the export animals from the United States. This should not be the case. There are two means of remedying this difficulty—first, by the introduction of more and better purebred sires, and second by more thorough and careful feeding and preparation for market.

Since the cheap rates were inaugurated the demand for purebred males has rapidly increased, and the export from the Province of Ontario to both eastern and western provinces has grown rapidly. The associations have done a good work by stimulating this trade and have greatly benefited the farmers generally by collecting and assembling in car-loads individual animals which have been bought from various breeders by western buyers, and, after collecting them, forwarding them to the Northwest and distributing them along the line of the C.P.R. to the individual buyers. Thus, transportation of animals, which formerly cost from \$30 to \$90 per head, are taken from Ontario to the Northwest at from \$10 to \$18 per head. This has had a great effect on the trade. Since January no less than eight car-loads, containing 144 animals, have been thus collected and forwarded to western buyers. Also a valuable shipment has been sent to Quebec and one to Newfoundland. These shipments have all been made up of single animals bought by buyers whose residences are widely separated, and do not include any car-loads which have been bought by one individual and shipped by him at the reduced transportation allowed on cars of purebred animals.

The recent growth in trade has had the effect of stimulating the breeders of purebred live stock to renewed efforts. Before the cheap rates were inaugurated many of the breeders were becoming discouraged and were taking less care of their breeding herds and flocks than in previous years, and some were contemplating going out of the

FARMING

business altogether, while others had decided to do so. All this is now changed, and the Ontario breeders are again beginning to import desirable animals from Britain to replenish their present herds, and we may now confidently look for a continued advance in the quality and number of the purebred flocks and herds in Ontario.

It has been said by some that the reduced rates on purebred stock has had the effect of causing breeders to ask larger prices than formerly for their animals, and that the reduced rates have simply gone into the pockets of the breeders, and have not benefited the buyers. On careful enquiry we find that this is not the case. The demand and the supply govern the price of purebred animals as well as that of other goods.

Another effect has been noticed as the result of increased activity in the purebred trade. A few animals have been sold for breeding purposes which should never have been used for that purpose. There are a certain class of persons who always desire to buy cheap. This is a very unwise course when buying purebred animals. It has been truthfully said that the male is half the flock or herd, yet there are farmers who are so short-sighted that for the sake of saving a few dollars will buy a cheap and inferior sire. To all such we emphatically say that a first-class line-bred grade is more desirable than a poor, scrawny, scrubby thing that is registered. There is no necessity for buying animals of inferior quality. There are plenty of good animals of good breeding, and the purchase of a poor purebred animal is nearly always evidence of penuriousness or bad judgment on the part of the buyer.

The shipments to the Northwest have in most cases been animals of from good to superior quality, yet there has been a few shipped in the Association cars which never should have left the owner's stable other than in a butcher's wagon. Many of the good animals sent West were bought by the secretary or other officers of the Live Stock Associations.

These gentlemen prefer that the eastern or western buyers purchase the animals from the breeders themselves, but in cases where they cannot do this, the secretary or other officer will purchase for foreign buyers. Heretofore no charge has been made for this work except the actual or legitimate expenses incurred while doing the buying. This has never exceeded from two to five per cent. of the cost price of the animal.

Frequently no expenses are incurred and no charges made. In every case, with one exception, where the purchasing has been done by an officer of the Live Stock Associations, entire satisfaction has been given. The following are a number of testimonials received from foreign customers:

Morley, Alberta, June 17th, 1899.

Indian Mission, Methodist Church, John McDougall, Chairman.
F. W. Hodson, Esq., Toronto:

DEAR SIR,—I am particularly pleased with the Bulls. They have been brought through in good shape, and my son and self congratulate ourselves on them. The gentleman who had them in charge did his duty by the stock entrusted to his care as there is ample evidence of same.

Thanking you for your interest in us I am,

Yours truly,
JOHN MCDUGALL

Prince Albert, June 14, '99.

F. W. Hodson, Esq., Secretary-Treasurer Dominion Cattle Breeders' Association:

DEAR SIR,—I reply to yours of June 5th re shipment of three bulls here. I must say they arrived O.K.

Yours truly,
THOS. S. DAVIS,
Per T.P. Manager.

Morden, June 13th.

F. W. Hodson:

DEAR SIR,—The pig shipped to me June 3rd has arrived safe and in good condition. I am well pleased both with the pig and his treatment. Pedigree also to hand.

Yours truly,
LEMON JICKLING

The Grange, Stonewall, Man., June 12th, 1899.

F. W. Hodson, Esq.:

DEAR SIR,—Thanks for yours of the fifth inst. The two sows and boar arrived here on Saturday last (the 10th) in very good condition. They don't look any the worse for their long journey. Many thanks for the trouble you have taken.

Yours faithfully,
T. BRADFORD

Virden, June 12th, 1899.

F. W. Hodson, Esq.:

DEAR SIR,—The bull calf shipped to me arrived all right, and in good condition.

Yours truly,
W. G. LEASK

Regina, Northwest Territories, Canada, May 27th, 1899

F. W. Hodson, Esq., Superintendent Farmers' Institutes, Parliament Buildings, Toronto, Ont.:

DEAR SIR,—I have your letter of the 15th instant, advising me of a shipment of an Ayrshire bull calf from W. M. and J. C. Smith, Fairfield Plains. The calf has arrived safely and in good condition, and I am much pleased with it.

Yours very truly,
J. C. POPE.

Calgary, Alberta, May 29th, 1899.

DEAR SIR,—I beg to thank you for your letter of 15th inst., regarding my thoroughbred stock, and am glad to inform you that they arrived on 25th inst., at Calgary, in good condition. I also wish to thank you for arranging the matter for me in such a thoroughly satisfactory way. I think the condition in which the cattle were on arrival did great credit to the man in charge. Believe me, with many thanks,

Yours very truly,
A. L. S. d'EYNCOURT.

Mr. F. W. Hodson, Toronto.

Souris, Man., May 22nd, 1899.

Mr. F. W. Hodson, Toronto:

DEAR SIR,—May 20th the young bull shipped in "Association Car" reached his destination. Arrived in good condition. Everything satisfactory. Many thanks.

Yours truly,
J. H. KINNEAR.

The Clydesdale Ranch, Millarville P.O., Alta., May 26th, '99.

F. W. Hodson, Esq.:

DEAR SIR,—I had my bull yesterday morning No. 10. I am very much pleased in the way which he has been cared for on the way here. He was looking well and feeling in good form when he landed. I thank you very much for all the trouble you have taken in my interests.

I am, yours very truly,
ROBERT TURNER.

F. W. Hodson :

DEAR SIR,—Filly shipped by J. M. Gardhouse arrived here all right. I don't think it got very well attended to from Portage; if it had not been for another fellow bringing horses from Birtle she would have arrived in not so good shape. It cost more to come from Portage than it did from Ontario to Portage. The Government should try to do something with the branch lines. I am satisfied with the way she (filly) was brought through on the whole.

I am, yours truly,

G. H. BRADBROOK.

N.B.—The Associations took charge of the filly from Ontario to Portage la Prairie, at which point she was re-shipped to Yorkton, via the M. & N. W. Railway. Our responsibility ends upon seeing stock properly re-shipped. We are in no way responsible for treatment received by stock on branch lines of railway in Manitoba.—F. W. HODSON.

Department of Agriculture.
Canada.

Minister's Office, Ottawa, May 17, 1899.

DEAR MR. HODSON,—The sheep arrived all in good order, and I like them very much. With best regards and thanks for your work and bother,

I am, yours very truly,

SYDNEY FISHER.

F. W. Hodson, Esq., Parliament Buildings, Toronto, Ont.

Department of Agriculture and Mines, St. John's, Newfoundland.

F. W. Hodson, Parliament Buildings, Toronto, Ont. :

The Shorthorn bull, the consignment of sheep and the entire horse bought and shipped by you for this Government are very satisfactory in every particular. I must again thank you for your precaution in purchasing.

Please purchase three rams (one of each sort) some time during the summer. I will take them any time after July.

With kind regards,

Yours very truly,

THOS. C. DUDER,

Minister of Agriculture and Mines.

Buyers sometimes state that they have had stock delivered at some point in the West for a less amount of transportation than the Associations can agree to transport same for. This may be quite true. A breeder comes to Ontario and buys, perhaps, twelve or thirteen head and orders a car

He has room for four or five more head, and to take out a full car-load will not cost him one cent more than if the car is only two thirds full. If he can arrange to take other stock besides his own he is quite willing and anxious to do so at a very low rate, as anything he receives in this way is a clear gain to him. The Association cars are not shipped until a full car-load is available and each animal is then charged an equitable proportion according to the space occupied, the charges simply being high enough to cover the cost incurred. Nothing whatever is made out of these shipments by anyone; they are entirely for the benefit of parties having small shipments. If shippers or buyers can have stock delivered at any cheaper rates, no one is more glad to have them do so than the officers of the Dominion Live Stock Associations; but if they cannot arrange to have the stock delivered at a less rate the Associations are quite willing to deliver them at the rates given as per schedule set forth in the pamphlet which we are now reviewing.

The arrangements between the railway companies and the Dominion Live Stock Associations are such that any-

one, whether a member of the Associations or not, enjoys the full privilege of the cheap rates. This has been insisted upon by the secretary and officers of the Associations. The desire has been to benefit the country at large as well as the members. All anyone is required to do is to produce the pedigree of the animal or animals desired to be shipped at the shipping point and ask that they be sent at the rates given the Association, yet we believe that all who enjoy the benefit of the cheap rates should join the Associations and thereby assist in continuing the good work which has been of so much value to the Dominion.

The work of these Associations is entirely carried on by the voluntary subscriptions of the members. The membership fee to the Dominion Cattle Breeders' Association is \$1 per year; the Dominion Sheep Breeders' Association \$1 per year, and the Dominion Swine Breeders' Association \$2 per year. A member of any one of these Associations is at liberty to advertise twelve times each year in THE ONTARIO AGRICULTURAL GAZETTE, published weekly, the stock he or she has for sale. That is, a member of the Dominion Cattle Breeders' Association may send a list of the stock he has for sale to the secretary, who will insert it in the next issue of THE ONTARIO AGRICULTURAL GAZETTE containing stock for sale. He will also be entitled to a free copy of the GAZETTE during the year in which he is a member, and a free copy of each publication issued

by the Association. The members of the Dominion Swine Breeders' Association besides these privileges receives a free copy of the *Swine Record*, an invaluable publication to breeders of purebred swine.

Growth of the Association.

The growth of these Associations has been very gratifying. About eight years ago the membership numbered 15; to-day it is nearly 600, and includes most of the prominent breeders of purebred live stock in Ontario. The work undertaken and accomplished by the officers has been of the greatest value to the farmers and breeders throughout the country.

Besides obtaining the cheap railroad rates here described, they were instrumental in assisting the Dominion and Ontario Departments of Agriculture in obtaining a reduction in the Quarantine Regulations between the United States and Canada, which, according to that eminent authority, Mr. R. Ironsides, of the firm of Gordon & Ironsides, has added \$10 per head to the value of the horned cattle now in the Dominion.

Up to the end of 1891 the Ontario Provincial Fat Stock Show was conducted by the Agriculture and Arts Association, and such local associations to chose to contribute. In 1892 the Dominion Live Stock Associations took a controlling interest, and have since virtually controlled this important exhibition. The result has been most gratifying, as the following statistics exemplify. In 1891 there were 81 entries in all classes. \$120 was received as entry fees; \$86 as gate receipts. Total gate and entry receipts in 1891 were \$188, and \$325 were paid in premiums; a pretty poor showing for an Ontario provincial show. 1892 was the first year in which the Dominion Live Stock Associations were in any way interested in the show, and from that time onward there was a marked growth each year, until in 1898, the sixth year under the new management, there were nearly 800 entries. \$562 were received as entry fees. The gate receipts were nearly \$550. Total gate and entry receipts for 1898 were over \$1,100. Total amount paid in prizes over \$4,500. In addition to the growth of the show new and valuable features have been added, among which are the annual dairy show, a block test in the sheep and swine classes, and illustrated lectures delivered by noted experts during the time of the exhibition.

Another very important feature is the annual election of delegates by each of these associations, viz., the Cattle, Sheep, and Swine Breeders' Associations, to the boards of the great fair associations. Before the establishment of the live stock associations the fair associations were controlled chiefly by citizens. Now in all departments in which farmers are in-

terested the chief work is controlled by farmers. Delegates are sent to and cordially received by the Board of the Toronto Industrial, the Western Fair, the Ottawa Fair, the Peterboro' Fair, and many others. This alone has given the farmers a greater prestige in such matters than they ever enjoyed before, and the influence of the live stock associations is ever widening in this particular. The expenses of the delegates elected to represent these associations at the Fair Boards are borne by the associations and each delegate is instructed to represent the views of the association and not his own.

One of the greatest benefits accruing from the work of the live stock associations has been the more frequent mingling together of the live stock breeders and importers. By this means each member has learned more of the needs of the country and has obtained a better knowledge of methods practised by others. Ten years ago the importers and breeders of live stock were a number of widely-scattered units possessing little public influence. To-day they are a united body wielding a greater and more beneficial influence on agriculture than any other organization in Ontario, and their future influence and power for public good is only limited by their exertions.

Concessions Made by the Rail way Companies and Not Previously Announced.

Hereafter Ontario exhibitors at Winnipeg, Portage laPrairie, Brandon and other western exhibitions may load purebred poultry in their straight or mixed cars of thoroughbred stock, and no additional charge will be made.

The Intercolonial Railway will hereafter carry purebred animals at half-rate on same terms as the C.P.R. and the G.T.R., and other Canadian lines.

BRITISH COLUMBIA RATES.

For car-load rates to British Columbia see page 11 of pamphlet above reviewed.

Single animals may be shipped from any station in Ontario where an association car is being loaded to Vancouver or New Westminster at the following rates:

CATTLE.
Bulls.

Age.	
Under 6 months.....	\$16 00
Over 6 and up to 12 months.....	25 00
Over 12 and up to 18 months.....	50 00
Over 18 and up to 24 months.....	52 00
Over 24 months.....	66 00

Cows and Heifers

Age.	
Under 6 months.....	\$16 00
Over 6 and up to 12 months.....	25 00
Over 12 and up to 24 months.....	39 00
Over 24 months.....	40 00

HORSES.

The rate on stallions or mares is the rate on bulls or cows, respectively, plus

one-tenth the rate on bulls or cows, respectively, to Calgary.

PIGS.

Must be crated in all cases.

Weight (including crate):

Under 50 lbs.....	\$ 7 00
Over 50 and up to 100 lbs...	12 00
Over 100 and up to 150 lbs..	15 00
Over 150 and up to 200 lbs..	17 00
Over 200 lbs.....	22 00*

SHEEP.

Three sheep or under must be crated.

Weight (including crate):

Under 100 lbs	\$14 00
Over 100 lbs	16 00*

When over three sheep from one shipper to one consignee, will be placed in the car without being crated.

Weight:

Under 100 lbs....	\$9 00
Over 100 lbs	10 00*

If stock enough is procured in any

* Or upwards according to weight.

one shipment to consign the car through to the coast, a material reduction will be made in the above rates.

ADDITIONAL INSTRUCTIONS TO THOSE WISHING TO SEND ANIMALS IN THE ASSOCIATION CARS.

Each bull eight months or over must have a copper ring in his nose; bulls over eight months, either shipped or brought to a loading point without a ring will be rejected.

A first-class, new rope halter made of good half inch rope must be furnished by the shipper, with each bullock, and in addition to this with each bull over eight months old, a strong new quarter inch rope six feet long which must be tied to his ring. When the halter or rope as above described is not supplied by the shippers, one dollar extra will be added to the transportation charges to pay for said halter or rope and the trouble of procuring same.

BUTTER WRAPPERS.

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WOODSTOCK, ONT.,
Imports Genuine VEGETABLE PARCHEMENT for butter wrappers. It is the largest house in Canada selling and printing butter wrappers. This paper is not an imitation. It is the

GENUINE VEGETABLE PARCHEMENT, made to our order in Germany, especially for the Canadian market, and its purity and sanitary qualities are guaranteed. It is very strong, has a nice, silky finish, fine fibre, and will not taint the butter like cheap imitations. Highest testimonials from dairymen all over Canada. We sell these butter wrappers, 7 1/2 x 11 inches, cheaper than any house in Canada, and large dealers who have wrappers printed should get our samples and quotations. Free samples sent anywhere. Address,

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No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send them direct to

TOLTON BROS.

GUELPH, ONT.

Market Review and Forecast

Office of FARMING,
Confederation Life Building, Toronto,
July 10th, 1899.

Though we are now in the midst of the midsummer lull, business in wholesale circles is fair and the volume of trade much larger than at this time last year, and profits are said to be more remunerative than a year ago, as cutting in prices is not so general. Money is firm at 5 per cent. on call, and some look for a firm money market right along till fall. Discount at the banks ranges from 6 to 7 per cent. The most striking feature in the financial situation in the United States is the expansion in railroad earnings. Money rates at New York have also been firm of late.

Wheat.

There is no material change to report in the wheat situation. Harvesting of wheat is now well advanced in the winter wheat section of the Western States, and threshing has commenced in the southern portion of the wheat belt. There is no great change to report in regard to the yield, and the quality continues to be reported as quite good. Estimates are beginning to be made regarding the yield in foreign countries. The wheat crop of India for 1898-99 is estimated at 231,806,000 bushels from 23,200,627 acres, as compared with 248,464,000 bushels from 22,771,219 acres in 1897-98.

The English markets during the week have been unsettled, with an advance of 3d. to 6d. reported for Manitoba on the London market. This gain was, however, lost at the end of the week and the situation is quiet. The Chicago market advanced a little on Friday, though the Liverpool cable was lower. There has been a fair business doing in Manitoba wheat at Montreal for English account, and sales of over 100,000 bushels have transpired on the basis of 73½ to 74½c. Fort William.

There is not much enquiry on this market, which is dull but steady at 69 to 70c. north and west for red and white, 70c. for spring wheat, and 68 to 69c. for goose. On the Toronto farmers' market red and white brings 71 to 72c., spring sife 67 to 69c., and goose 69½ to 70c. per bushel.

Oats and Barley.

The American oat crop is maintaining its very promising condition, and the crop in this province looks well, though short in some places. Good business has been done in the English markets during the week, and the market is firmer, owing to light stock. The Montreal market rules quiet at 34 to 34½c. afloat, and it is reported that there are very few oats in the country. Oats are dull here at 29 to 29½c. west, and a cent more east. On the farmers' market they bring 36 to 37c. per bushel. There is nothing doing in barley.

Peas and Corn.

Owing to continuous light stock holders in England are not anxious to do business. The Montreal market is firm under light supplies and a fair demand for the English market at 76½c. afloat. The market here is nominal at 66 to 67c. west. On the Toronto farmers' market peas fetch 60c. per bushel.

Situation of the American corn crop has improved during the week. The Chicago market has ruled lower, and at Montreal American corn is quoted at 39½ to 40c. afloat. It is quoted here at 41 to 42c. on track, Toronto.

Bran and Shorts.

The Montreal market is easier at \$13 to \$13.25 for Ontario bran; \$12 to \$12.50 for Manitoba bran, and \$15 to \$15.50 for shorts. City mills here sell bran at \$13 and shorts at \$16 in car lots f.o.b. Toronto.

Eggs and Poultry.

The egg markets keep up well for this season of the year. A further advance of 3d. per 120 is reported in the English market. Stocks are light and the continental supply is less than expected. The Montreal market continues strong and prices at the present time are fully 3c. to 4c. higher than at the same time last year. The large local British Co-

lumbia and English demand is largely accountable for this. The starting of evaporating egg food establishments at Stratford and Winnipeg also accounts for a good deal of the increase in price. The exports of fresh eggs from Montreal from the commencement of the season to July 3rd were 316 cases, as compared with 6,082 cases for the same time last year, a falling off of 5,566 cases. The Montreal markets is firmer at 13½ to 14c. for choice select candled eggs, and 9½ to 10c. for No. 2. The market is firm here at 13 to 13½c. for choice gathered stock wholesale. On the Toronto farmers' market new-laid eggs being from 14 to 16c. per dozen.

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

Potatoes.

Trading in carload lots is about over for this season at Montreal; but sales of good sized lots have transpired at 55 to 60c. per bag and 75c. in a jobbing way. New potatoes are quoted there at 90c. to \$1 per bushel in a small way. Cars of old potatoes are quoted here at 85 to 90c. per bag and \$1 out of store. New Southern are quoted at \$2.50 to \$2.75 per bag. On the farmers' market old potatoes bring 90c. to \$1 per bag.

Fruit.

The fruit trade at Montreal has been only fairly active. The strawberry season is drawing to a close. Prices are 7 to 8c. per box wholesale, and 10 to 12c. for raspberries. Cherries have been coming in in large quantities and bring 75c. to \$1 per basket. Receipts have been few on the Toronto fruit market, with prices easier in some lines. Strawberries bring 7 to 8c. and raspberries 8 to 11c. per box; cherries, common red, 70 to 80c.; English varieties, 90c. to \$1.10; red currants, 25 to 35c. per basket. Gooseberries bring 30 to 40c. for small and 60 to 75c. for large baskets. New potatoes are quoted at 30c. per basket.

Hay and Straw.

There has been quite an improvement in the hay trade of late. The English market has made quite an advance for Canadian hay, Liverpool being quoted at 60 to 61s. c.i.f. as compared with 49 to 50s. a month or two ago. There has been a lot of buying on American account the crop in the Eastern States being reported short. Hay which sold at \$3.25 and \$4.25 in the Montreal district some weeks ago could not now be bought less than \$6 to \$5.50 per ton. There is also an improved demand at Montreal for baled hay. On this market the demand is fair and prices steady at \$8.50 to \$8.75 for cars on track and \$4.50 to \$4.75 for baled straw. On the Toronto farmer's market old hay is quoted at \$10 to \$12; new at \$7 to \$8.50; sheaf straw at \$5.50 to \$6.50, and loose straw at \$4 to \$5 per ton.

Wool.

The wool market, in so far as Canadian wool is concerned, does not show any improvement. The present price of Canadian fleece wool is the lowest on record, and is two

cents per lb. lower than the prices of wool at the same season in any of the past eleven years. Eleven years ago fleece wool sold at 20c. per lb., while to-day it only brings 14c., and some dealers are very loth to pay that amount, as they claim it is above export value for that class of wool. Though this is the case, large quantities of this year's clip are coming out, and, with an estimated amount of 385,000 pounds of last year's clip on hand in this city, stocks must be accumulating very fast. However, the wool situation in England and the Eastern States continues to be active, and may affect the Canadian market later on.

Cheese.

The cheese situation on the whole is good. The exports from Montreal from May 1st to July 1st were 455,950 boxes, as compared with 379,704 for the same time last year; from New York, 86,176 boxes against 93,761 boxes in 1898, and from Portland 3,355 boxes, as against none last year, making the combined shipments 545,481 boxes, as compared with 473,469 boxes for the same time last year, an increase of 72,012 boxes. Reports from many factories in Western Ontario show a falling off in the make as compared with last year, though the factories East continue to run a full force owing to the more abundant rains in that section.

Prices early in the week were a little off, but later on were stronger. The *Trade Bulletin's* London cable of July 6 reads thus:

"Despite liberal receipts from Canada, there is no accumulation of stocks worth speaking of, the consumptive demand being good. The market keeps fairly steady, as holders are not pushing sales in face of comparatively light stocks. Finest Canadian, 43s. to 44s.; seconds, 40s. 6d. to 42s."

The Montreal market is firmer at 8½ to 8¾c. for finest westerns and 8½c. for finest easterns; undergrades selling at 8 to 8½c. Stocks of cheese are reported light; 8¼ to 8½c. were the ruling bids at the local markets during the week, with a firmer feeling towards the close.

Butter.

The butter markets so far this season have ruled high as compared with other years, but there are signs of an easier feeling, though it may be only of a temporary character. Up to the present time there has been a shortage in the English make and in the supplies from France, Norway and Sweden, Russia and Finland, but owing to recent rains the English make has increased some, though whether it will be such as to effect market conditions much remains to be seen. A weak and lower market is reported at London, Danish being lower as well as Canadian, though stocks in England are small. The Montreal market is easier owing to lower cable advices, and prices have dropped from 17¼ to 18c. for choice creamery early in the week to 17½ to 17¾c.; later on Seconds are quoted at 16¾ to 17¼c. Stocks at Montreal are reported as heavy. A good deal of butter has been bought this year by English houses for future delivery at a monthly rise on the June price

WITH WHAT WE CANNOT KNOW

we cannot be concerned, but we do know that The

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THE AMERICAN will be sent on trial, and we guarantee perfect satisfaction.

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into the fall. Some western dairy sold at Montreal during the week at 14c. for export.

The receipts of choice dairy on this market are not large and there is a good demand at 12 to 13½c. for pails and tubs, and 10 to 12½c. for common; wholesale creamery is steady at 17 to 17½c. for prints and 16½ to 17c. for tubs, and boxes. On the Toronto farmers' market, lb. rolls bring 15 to 18c. and large rolls 12 to 13c. per lb.

Cattle

The cattle situation on the whole shows little material change from a week ago. At Chicago prices have fluctuated somewhat but otherwise very little change is reported. Cable advices quote live cattle as firm. The feeling regarding stockers at Buffalo has somewhat improved. The run of live stock on this market on Friday was not large though enough to supply the demand. The quality of fat cattle was only medium and a great many half-finished cattle that should have been kept on the grass six weeks longer were offered. Trade was slow with prices for all kinds of fat cattle lower, with the exception of well finished stall-fed lots which brought old prices.

Export Cattle.—Choice exporters of heavy weight sold at \$4.75 to \$5.12½, with light exporters at \$4.65 to \$4.75 per cwt. One or two car loads of well finished cattle brought 10c. per cwt. more than these figures. Export bulls are worth \$3.60 to \$4.25 per cwt. for well finished animals, which are wanted.

Butchers' Cattle.—Choice picked lots of butcher's cattle equal in quality to the best exporters, and weighing 1,000 to 1,100 lbs each, sold at \$4.37½ to \$4.50; good ones at \$3.90 to \$4.25, and medium at \$3.55 to \$3.90 per cwt. Common stuff sold all the way from \$2.60 to \$3.65 per cwt.

Stockers and Feeders.—Buffalo stockers were easier on Friday at \$3 to \$3.40 per cwt. Stock heifers fetch \$2.75 to \$2.90 per cwt. Light feeders weighing from 900 to 1,000 lbs. each bring from \$3.60 to \$3.90, and choice, well-bred steers in picked lots bring \$4 per cwt.

Calves.—Too many calves are being offered, and prices were weak on Friday at \$2 to \$8 each, or \$4 to \$4.50 per cwt. Only good calves are wanted. Calves have been in good supply at Buffalo and the demand has been fair and steady.

Milk Cows.—Trade in these was dull and prices easy at \$25 to \$45 each.

Sheep and Lambs.

The Buffalo market ruled strong on Friday. The demand was good and prices stronger, with spring lambs about a shade higher.

Through shipments have been fairly liberal. On this market sheep were easier at \$3.25 to \$3.40 for ewes and \$2.50 to \$2.75 per cwt. for bucks. Spring lambs were plentiful, with prices lower at \$4.75 to \$5.25 per cwt.

Horses

There was a slight decline in prices as well as in numbers at Grand's last week. About forty horses were sold. Work horses brought from \$70 to \$100, drivers from \$60 to \$90. A few special lots were disposed of by private sale; good-sized carriage horses bring from \$125 to \$175 and a very high action sixteen-hand dapple grey horse sold at \$255 to go to England

Hogs.

The market here continues steady and prices unchanged at \$5 per cwt. for choice select bacon hogs, weighing not less than 160 lbs. nor more than 200 lbs. each off cars, and \$4.25 for thick and light fats. Some western corn-fed hogs brought only \$4 to \$4.25 per cwt. by the car lot, but are not wanted even at these figures. The quality of the hogs offered on Friday was better than usual, there being fewer thick and light fats.

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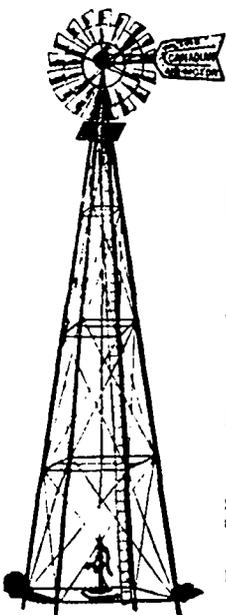
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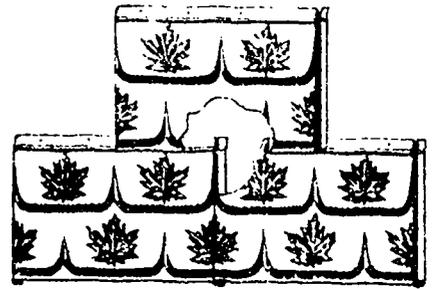
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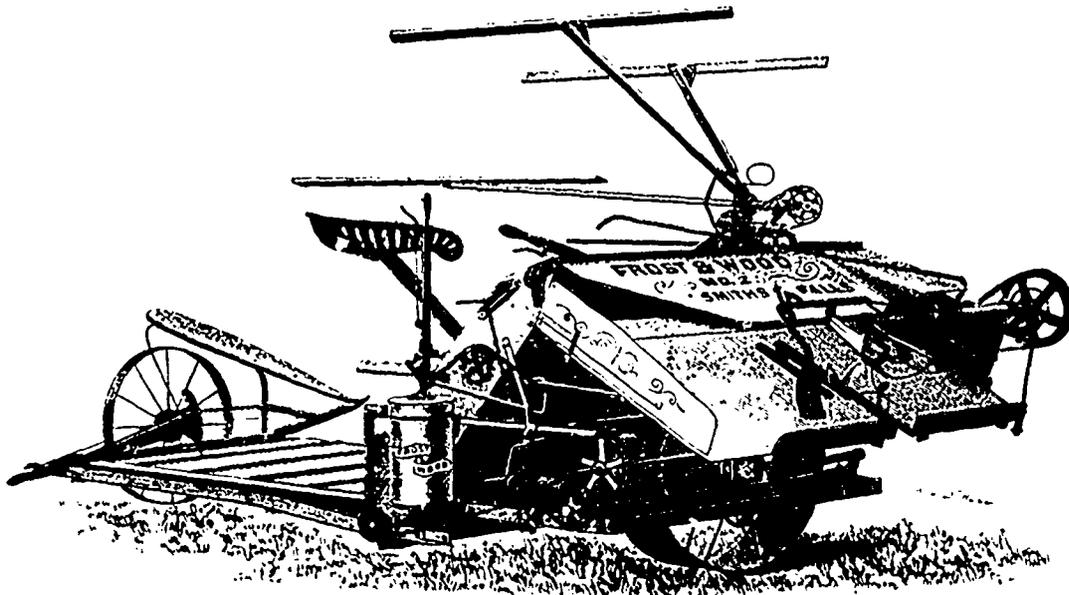
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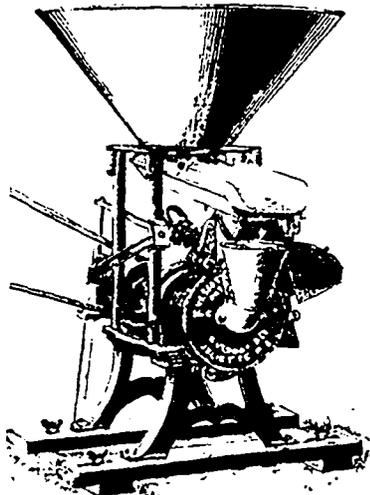
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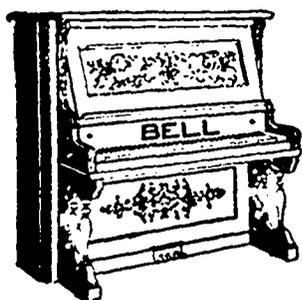
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