

The Farming World

A PAPER FOR
Farmers and Stockmen

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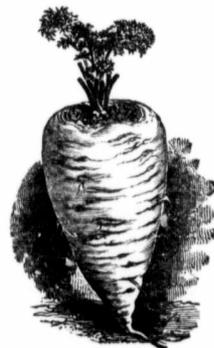
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The Farming World

For Farmers and Stockmen

VOL. XVIII.

FEBRUARY 26th, 1901

No 27

Too Many Inferior Hogs Marketed



IN a letter which we received a few days ago from a leading pork-packing firm outside of Toronto, appears the following statement: "Notwithstanding all that has been

written and all the encouragement that has been given, we find a great many hogs coming in that are utterly unsuitable for either Canadian or English trade."

From this it would appear that our farmers have not all reached perfection in the quality of hogs required to meet the needs of the bacon trade. There has, undoubtedly, been a great improvement during the past year or two, due largely to the educational methods as advocated through the Farmers' Institutes, the winter fair, the distribution of literature on the subject, and last, but not least, through the agricultural press, but more aggressive work is evidently needed. A great many farmers are still breeding and feeding hogs along the old lines, resulting in a lot of animals being marketed which, as the above extract states, are suited neither for the Canadian or the English trade.

There cannot be many farmers, in this province, at least, who are not more or less familiar with the needs of this trade and of the type of animal required for the export market. Then why has there not been even greater improvement along the lines we have indicated? We think one answer to this question is to be found in the manner in which hogs are usually purchased from the farmer. As far as we can learn, there are comparatively few drovers in the country who make any distinction whatever between good and bad quality when making their purchases. The farmer who has a batch of thick, fat hogs, totally unsuited for the English trade, will get as much per head for them from the drover as his neighbor who is endeavoring to raise the right quality. Not long ago, in conversation with a farmer in the western part of this province, who raises a large number of hogs, he stated that the drovers in his section offered no encouragement whatever to raise the right type, paying as much for one kind as the other. So long, then, as this condition of affairs exists, all this educational propaganda will be without avail.

Unless the average farmer can see a little more money in raising the bacon hog, as compared with the other kind, he is not likely to give much attention to producing the former; and who could blame him. Perhaps the new Live Stock Dealers' Association, recently formed in this city, may be able to remedy matters, and bring about better methods of buying in the country.

Another factor that is working against the production of the best type of bacon hog at the present time is the great scarcity of hogs of any kind in the country. The manufacturing of bacon in Canada has grown so rapidly of late that some of our packing houses can hardly get sufficient supplies to keep their establishments running, and, consequently, are taking both good and bad quality at prices that should be very remunerative for the producer. Such a condition of affairs is all right from the farmers' standpoint, so long as it lasts. But in building up the export bacon trade or any other trade of a like nature, we must look to the future. It is quality that counts in the long run, and we cannot hope to build up and increase this important trade with any degree of permanency unless some attention is given to supplying the kind of hogs which the market demands. We have strong competitors in the field, such as Denmark and Ireland, which are bending their energies in the direction of quality, and unless we do the same this most promising of our Canadian export trades is sure to come to grief. This whole question, then, is of the greatest importance to the packer and farmer alike. If we can supply the English market with a first-class quality when things are brisk, we will stand a much better chance in that market when trade is dull and prices are low. It is to be hoped, therefore, that this improvement in quality, so noticeable during the past year or two, will continue till every hog marketed in Canada will be suitable for making the finest quality of bacon.

It is encouraging to note the rapidity with which our bacon trade has grown during the past year. The imports of Canadian bacon into the United Kingdom for the year ending December, 1900, amounted to \$5,377,225, as against \$3,809,305 for the year previous, an increase of \$1,567,920. The imports of Canadian hams for the same time amounted to \$2,234,-

710, as against \$1,506,060 for 1899, an increase of \$728,650. Our combined exports of bacon and hams for 1900, therefore, totalled \$7,600,000, as against \$5,300,000 for the year previous. This is a good showing and indicates what can be done by improvement in quality. By still further attention to quality this trade can be doubled, if not trebled, in a very few years.

Bonus for Sugar Beets

The Hon John Dryden, Minister of Agriculture, introduced a bill in the Legislature on Thursday last, making provision for the encouragement of the sugar beet industry. The first clause provides for the setting apart annually out of the consolidated revenue of the province of the sum of \$75,000 for three years for the purpose of encouraging the growth of sugar beets, and the establishment of factories for the production of refined sugar therefrom. Out of this fund a bounty will be paid to manufacturers of first-class sugar, made from such beets of one-half cent a pound for the first year and one-quarter cent per pound for the products of each of the two following years, and no longer. Should the amount claimed as bounty exceed \$75,000, the distribution thereof shall be pro rata, according to the amount of production.

Provision is made that during the first year of the operations of such factory the beets shall be paid for at the rate of at least \$4 per ton at the factory, and for the two following years at \$4 and such additional price at the same rate as shall correspond to the proportion of saccharine matter which such beets contain in excess of 12 per cent. In the event of a dispute as to the quantity of saccharine matter, reference shall be made to the analyst of the Ontario Agricultural College, or to such persons as may be nominated by the Lieutenant-Governor-in-Council, whose report shall be final.

Industrial Fair Association

The annual meeting of the Industrial Fair Association was held on Tuesday of last week, and contrary to the expectations of many everything passed off quietly and in order. There was some criticism of the affairs of the Association during the past year, but on the whole the discussions that took place were largely commendatory of the Industrial Fair, and what it has accomplished in bringing Ontario and Ontario products to the notice of visitors from all parts of the continent. This was specially so in the remarks made by parties living out of the city. The Directors' report for 1900 showed a very satisfactory state of affairs. The gate receipts were the third largest of the twenty-two successive exhibitions held under the auspices of the Association. The cash profit, after meeting all expenses, was \$6,573.94, which is over and above the cash reserve fund of \$10,000 retained by the Association for current expenditures. The total receipts from all sources were \$103,628.45, including \$42,248.25 gate fees, and \$28,224 receipts from the grand-stand. Reference was made to the withdrawal of the Agricultural Implement Manufacturers from all the larger shows in Ontario, and regret expressed that for purely business reasons this important department was absent

from the fairs this year. The other departments of the Fair were referred to as being quite up to former years in the quality and quantity of the exhibits.

All the members of the old Board of Directors who offered were re-elected and four new directors. The complete board of management for 1901 are as follows: Dr. A. Smith, George Booth, Ald. O. B. Sheppard, Hon. John Dryden, Ald. G. McMurrich, G. H. Gooderham, Robert Davies, R. J. Score, Dr. J. O. Orr, S. E. Briggs, W. E. Wellington, W. K. McNaught, B. Saunders, Geo. Vair, J. K. Leslie, H. N. Crossley, Ald. Oliver, Ald. Dunn, R. Y. Ellis and John A. McGillivray, who represents the Dominion Cattle Breeders' Association to the show.

During the past year or two the Industrial Fair and its management have come in for a large share of criticism, chiefly from Toronto daily papers and some of its citizens. We presume the object of this criticism has been to bring about an improvement in the affairs of the Association and the show itself. While this has probably been the case in a large measure, we are inclined to think that a great deal of the criticism of late, both from the daily press and from other sources, has got beyond the wholesome stage and is bordering on the destructive. At any rate, this criticism has been so persistent and one-sided, that it has created the impression among many people outside of the city that the Industrial Fair has reached its zenith, and is rapidly on the downward grade. The citizens of Toronto surely do not wish an impression of this kind to get abroad in the country. The interests of the Industrial and those of Toronto are so closely identified that the latter cannot afford to have the former retrograde in the slightest degree. It would, indeed, be a misfortune not only to the city, but to the province, to have the Industrial Fair stand on a lower plane than it has occupied for the past few years. In fact every effort should be made to have it take a higher place than ever before, which we think it can do if the necessary buildings, etc., are provided in which to accommodate the exhibits and display them properly.

Considerable complaint has been made as to the methods by which the membership of the Association is formed. As to the merits or demerits of this we have not time to discuss here. We are inclined to think, however, that the desire of the city and city council to have more direct control over the Association, and the exhibition should be taken with a little caution. A large annual fair like the Industrial to be made a success, must have the sympathy and support of the agricultural community. This the Industrial Fair, under its present management has, in a very large degree, and those who are advising a change in the management, by placing the Fair under more direct city control, should move very carefully, lest they antagonize the agricultural interests, and thus work lasting injury to future fairs. The fact that the membership of the Association is made up so largely of representatives from the various live stock, dairy and other organizations identified with agriculture, and that these representatives are given a prominent part in the management of the affairs of the Association, gives the Industrial Fair a standing throughout the country at large, which it could not otherwise get. While the agricultural feature of the Fair may

not be the whole show, it is the most important part of any annual fair, and the present management have acted wisely in catering to it as much as possible. A little new blood on any board of management is always a good



The pioneer home of J. T. Maynard, Chilliwack, B.C. Children home from school and the cows ready to be milked.

thing, while a wholesale change from experienced to inexperienced men might be injurious. For this reason we are pleased to note that so many of the old board are to manage the Industrial for 1901.

For Ontario Agriculture

Premier Ross brought down the estimates for the year on Tuesday last. The total asked is \$3,782,406, compared with \$3,723,292 last year, an increase of \$59,114. The current expenditure is estimated at \$3,408,608, a decrease of \$17,908, compared with last year. The expenditure on capital account is placed at \$254,433, an increase of \$60,954, and for "other purposes," \$119,325, an increase of \$16,069. The estimates for agriculture amount to \$202,842 as against \$205,725 for 1900.

Among the increases are: The Swine Breeders' Association grant, \$1,500 to \$2,000; Poultry Associations, \$1,650 to \$2,000; Experimental Union, \$1,200 to \$1,400. Another item that we are pleased to see is \$34,500, which is to be expended in a laboratory and museum and to overhaul the main college building, so as to provide increased accommodation for students at the Ontario Agricultural College.

The Local Fairs

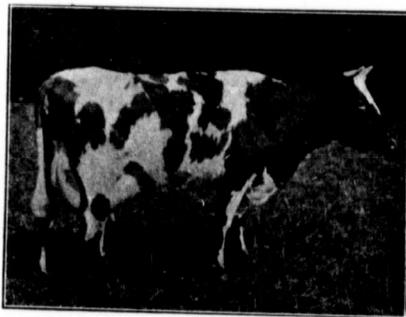
We publish elsewhere in this issue a report of the proceedings of the Canadian Fairs Association. This has become a most important organization whose deliberations are arousing considerable interest. The regulation and, if need be, the reorganization of the local and district fairs throughout the province, has become a vital question, and will require the greatest skill and foresight to deal with. Whether anything better than we have at the present time will be accomplished, remains to be seen. Certain it is, however, that some change of methods is necessary in a great many cases, if our local and district fairs are to be made the educational factors in the country for which they were originally intended. Like the big city fairs, the special attraction, the horse race,

etc., are gaining a prominent foothold at many of these fairs, and to counteract this tendency and make these fairs thoroughly educative in their objects means hard work for somebody. A great deal can be accomplished by co-operation, and if the Farmers' Institutes and the local agricultural societies can be brought into active relations with each other, and under one management, as suggested by Live Stock Commissioner Hodson, at the meeting, this whole question may be placed on a better basis. Some excellent papers were read at the convention which we shall publish at a later date. The association wisely decided to have the proceedings of the convention published for distribution.

A Holstein-Shorthorn Grade

Mr. E. D. Tillson's best cow, No. 56, shown herewith, is a grade from a Holstein bull crossed on a Shorthorn cow, a seven-year-old. During her first year as a two-year-old she gave 10,100 lbs. of milk in eleven months. The third year in milk she made 17,740 lbs. in ten months and twenty-one days. Her fourth season the record was 20,134 lbs. in twelve and a half months. During 1900 this cow has had a rest, but we expect her to do good work this year. The herd record for 1899 was as follows: The best ten cows averaged 1,500 lbs. milk per month, or 616 lbs. butter per year; the second ten best cows averaged 1,242 lbs. milk, or 507 lbs. butter; third best ten, 1,103 lbs. milk, or 450 lbs. butter; fourth best ten, 1,033 lbs. milk, or 450 lbs. butter; fifth best ten, 890 lbs. milk, or 363 lbs. butter, and five others averaged 787 lbs. milk. The entire herd of 55 cows made an average of 11,472 lbs. milk or 468 lbs. butter during twelve months and three days. We are now milking sixty-four cows, but, including heifers coming in, the herd will consist of about eighty cows this winter.

Our method of feeding is as follows: In winter at 5.45 a.m. cows are fed well-cured clover hay and milking begins immediately after. At 8 o'clock feed full-balanced ration of ensilage and grain, consisting of pea and corn meal and bran and cottonseed, the latter only when purchasable at a reasonable figure, and linseed and other meals when prices warrant their use. At



Property of Mr. E. D. Tillson, Tilsonburg, raised and especially studied by his manager, Mr. J. D. MacLeay.

4.30 in the afternoon ensilage and grain ration is again fed, and at 6 o'clock, just after milking, we feed all clover hay they will eat up clean. Fresh spring water is always running fresh in water box in each stall; there is also a

box of salt in front of each cow. Cows are not again disturbed until morning, with exception of manager's nightly inspection at 10 in the evening.

In summer cows are sprayed to ease them from fly trouble. Fed one-half ration of ensilage and grain and daily turned out to pasture. In hot weather, however, the cows are stabled all day, turning them out in the evening to grass. Talking is not allowed during milking hours, and no rough handling in any shape is permitted. Manager frequently strips cows after milker, and in presence of the milker. Each cow is fed according to capacity and its individuality carefully noted. This is an important point in the feeding of a dairy herd.—Superintendent J. D. MacLeay, Annandale Farm, Norfolk County, Ont.

Profitable Farming

Some weeks ago we were asked to publish in full the address of Prof. Roberts, of Cornell University, on this important topic before the Ontario Experimental Union, but owing to our space being overcrowded with other matter we have not been able to do so till this issue. However, as it is an address that will bear reading at any time, we trust that its publication at this late date will be appreciated.

Development of Women's Institutes

(Continued from last issue).

NORTH GREY.

This was the third institute formed, and they have gone ahead rapidly from the first. Most of the officers reside at Kemble. The secretary of the Farmers' Institute writes me that some of the ladies are accompanying him to most of his supplementary meetings throughout the riding, and assisting him in his programme.

On January 8th fifty-five ladies attended their meeting at Kemble. Mrs. W. Westaway discussed "Methods in Housework;" Mrs. J. Davidson, Lake Charles, read a most excellent paper on the "Assimilation of Food," while Mrs. McGregor, of Kemble, discussed "Woman's Work."

CO-OPERATION ON THE FARM.

Mrs. James Gardiner in an address before the North Grey Institute, stated:

"To make a success of farming there must be co-operation between the farmer and his wife. I know of no occupation where the wife must so necessarily be a co-partner in the business with her husband, and I hope she will always receive her just remuneration.

There are so many interests about the farm, closely connected with the housewife, that they are almost a part of her work as well. It is not necessary for a woman to work in the fields, but there is a distinct woman's work in the country and on the farm as well as in any other condition of society, and there is no notion so disastrous to the young housewife as to begin to feel above her position.

Let the farmer and the farmer's wife unite. Agree to work together to mutual advantage, and not go on, as is too often the case, to a one-sided development. With this in view, let

us place before ourselves a high ideal and strive to attain it, and let us develop a fondness for our calling for what we love to do we will surely do well."

MAKE HOME BRIGHTER.

Mrs. D. McTavish, President of the West Bruce Women's Institute, says to her fellow members:

"Whatever raises the standard of the home raises the standard of the nation, for the home is the foundation of the state. Just in proportion as we raise the one we raise the other. Then as mothers, wives and daughters let us try all in our power to interest both ourselves and our families in those things which will make us healthier, happier and more enlightened. Knowledge is power. Then let us arm ourselves with that power which will make home brighter and give greater zest to life. We do not claim that the institute is going to work miracles, but it is a means to an end. Let us, therefore, avail ourselves of that means."

IN THE HOME DAIRY.

Mrs. John Pherrill, of Brooklin, at the Women's Institute meeting at Myrtle, not long ago, brought out the following points on the subject of butter-making:

1. To make good butter it is necessary to have proper utensils.
2. In order to get all the cream out of the milk it is necessary either to have a separator or a cabinet creamer.
3. The separator is preferable because it leaves the skim-milk still warm for the calves.
4. The creamers can only be used where there is a constant supply of ice.
5. We keep our milk at a temperature of from 37 to 47 degrees in summer, and 35 degrees in winter.
6. We lost \$2 a week in handling the milk of ten cows in creamers without the use of ice.
7. The milk should be drawn off the creamers 12 hours after setting in summer, and 24 hours in winter.
8. Cream should be kept in a cool place until there is enough of it to churn, when it may be moved to a room with a temperature of from 56 to 58 degrees, and stirred twice a day.
9. In summer we churn three times a week; in winter twice.
10. To cream from the separator or creamer we add a quart of sour milk to six or seven gallons. This assists in the ripening.
11. A milk thermometer is absolutely necessary where a uniform quality of butter is desired.
12. Twenty-four hours before churning we raise the temperature of the cream to 60 degrees, and if kept at this point until churning it will be found ripe.
13. Cream treated in this way should in 30 to 35 minutes produce butter granules about the size of wheat grains. The butter milk should then be drawn off through a perforated dipper, and slightly warm water added three times.
14. Three quarters of an ounce of salt to the pound should be added if the butter is to be made up right away. If soft, however, it should be set in a cool place for two or three hours, and then worked over again, when another quarter of an ounce to the pound should be added, as some of the salt added at first will have leached out by the repeated washings.
15. If soft butter is made up without work-

ing over, soft grains will soon accumulate on the outside, as a result of the water oozing out later on.

16. Overworking the butter spoils the grain and gives it a greasy appearance, while underworking makes it streaky, because of the salt not being thoroughly distributed.

17. Butter color should always be added to please the buyer.

With a really good article, marketed in an attractive manner it is never difficult to make a profitable sale.

CORRESPONDENCE

The Summer Fallow

Editor THE FARMING WORLD:

I notice in the notes by the Superintendent of Farmers' Institutes, page 51 of last issue, that Mr. Elliott says: "Surely the day has come when deep plowing must be done away with, and summer fallowing regarded as hurtful rather than beneficial to our soil." I am not a believer in very deep plowing, but nearly all writers and institute speakers do away with the summer fallow. But like Mr. Elliott, none of them tell us how to clean our land of Canada thistles and other noxious weeds. This is the most important part of the summer fallowing. And if we can do this successfully without the summer fallow, it will be of very great benefit to the farmers of Ontario if Mr. Elliott, or some of our readers, will tell us how?

Now, if this is not too long, there is another question I would like answered. What is meant by the term so often used "surface cultivation?" Is it to cultivate a stubble field with a cultivator, and then sow another crop? I notice some farmers have practised this of late years.

Yours, etc.,

L. Rogers.

Weston, Ont., Feb. 9, 1901.

Amend the Drainage Act

Editor THE FARMING WORLD:

I should feel obliged if you would, in your paper, call attention to the following reforms needed in the present drainage act. First. That the control of the act be taken out of the hands of the township councils and put into the hands of a joint stock company, all drainage work to be under a directorate of from three to five to be selected from some of the shareholders, every payer to a drain to be considered a shareholder to the amount of his assessment... be divided in five or ten dollar shares and a vote on each five or ten dollar share.

Second. That the directorate shall have power to levy and collect money with the consent of shareholders for use of said work only.

Third. That all drainage work be carried on in the natural channels as near as practicable; that all corporations under this act shall have the right-of-way in all water-courses, subject to charges for damages, as present work they may appropriate.

Fourth. That no drain to be constructed after the passage of this act, shall have a less capacity than one yard square to every five hundred acres, with fall of three feet and corresponding size, as the fall increases or diminishes.

Fifth. That every civil engineer shall give bonds to the amount of work, or be made ans-

werable for suit-at-law for same if not found practicable.

Sixth. That each and every shareholder shall be duly notified of all meetings and any intention of change in work.

Seventh. That the township council be required to issue debentures the same as in schools, etc., for building, etc.

Eight. That the shareholders appoint a secretary, treasurer, etc.

Ninth. That all appropriations of portions or parts of drain by other corporations be subjected to consent of owners or to arbitration.

Old Subscriber.

Port Alma, Ont., Feb. 19, 1901.

Breeding Horses for Army Mounts

Editor THE FARMING WORLD:

There has been a great deal said of late in your valuable journal advising horse breeders as to the profit there is in breeding horses suitable for remounts for army purposes. In looking over the reports of the different horse breeders' associations in your last week's issue, the same thing was often spoken of. Our politicians are also making a specialty of this matter, while our Farmers' Institute delegates tell us the prospect is good for a fair market and a good price. This is encouraging, indeed, and I think this part of the programme has been well advertised, as no doubt it should be.

I think, however, the main point has been seriously neglected, and that is educating the farmer as to the right breed of sires to use to produce the quality of horse desired. We may all have our opinions in this matter, but if any breeder has made a success in this line, in my opinion it would be a good idea for him to give his experience through the columns of *The Farming World*. This is a very important matter at this time of the year, and too little has been said on this line. I might ask the question; will the hackney sire produce the right animal, or will the thoroughbred do better, bred on our native stock, or what breed of horses seem best suited for this purpose?

A good discussion on this matter would be of much profit to horse breeders at the present time. If we are to supply this demand, and we can do it, let us get at it right at the start. It is only too true we have let our best mares go, but this is not all loss, for they have made a reputation for us where they have gone, and we have plenty of good ones left. Horse breeding is assuming its old time proportions, and with our past experience and proper sires we can successively compete with any other country in the world. Let us hear from the breeders.

Bruce E. Johnson.

Picton, Ont., Feb. 18, 1901.

Organization in Prince Edward Island

Editor THE FARMING WORLD:

Prince Edward Island farmers are better organized than many give them credit for. Except Ontario and Manitoba, in no other province in the Dominion is there better organization among the farmers. The fact that there is no Farmers' Institute system in the province makes it appear to a great many outside that

there is no organization. No doubt the lack of a system of Farmers' Institutes is a long felt want and will, probably, come now, very shortly, that there has been instituted a department of agriculture on lines similar to Ontario.

That local organizations are not now doing nearly as well as they might, is patent to all, and it is certain that the renovation of these local institutes will come within the scope of the new Minister of Agriculture.

First of all, there is the Farmers' and Dairymen's Association, established in 1892, chiefly through the efforts of the then Professors of Agriculture in the P. W. College, something of the plan of the old Farmers' Institute Association of Ontario. By the F. and D. Act, of 1892, each electoral district, of which there are fifteen, is empowered to form two local Farmers' and Dairymen's Associations within its precincts, thus making possible the establishment of thirty local farmers' associations. By complying with the act, each local association is entitled to ten dollars annually from the Provincial Government. The only requirement necessary on the part of the local association, once they were organized, is to hold two public meetings in the electoral district in which they are situated annually. As a matter of fact most associations held more than two meetings each year. The ten dollar grant from the Government is intended mostly to pay for hall rent, fuel, etc., and to partly pay the expenses of the local delegates to the Central Association. The Central Association is made up of delegates from the local associations, and receives from the Provincial Government the sum of \$50. In fact, the local organizations are subject to the Central, as it is to the Central Association that the local associations must report, and from its treasurer they draw their ten dollar annual bonus. Each local association is officered by a president, vice-president, secretary-treasurer and an executive committee.

The Central Association is officered also by a president, vice-president, secretary-treasurer and an executive committee, composed of the delegates present from the local organizations. On or before July 1st each local association must report to the secretary of the Central, giving a sworn statement of how the Government grant had been expended, whether in hall rent, fuel, payment of delegates, etc. This is necessary before the bonus or grant for the next year can be obtained. On the second Tuesday in July the annual meeting of the Central Farmers' and Dairymen's Association takes place at Charlottetown, each local association being entitled to send three delegates. For many years this annual Central meeting has not been of much benefit from an educational point of view, no more than to elect officers for the ensuing year. So great has been the paucity of independent action of the Central Association at its annual meetings, that many local associations have become careless whether they send delegates or not, preferring to use the money necessary to pay the expenses of the delegates, for some local purpose.

This has been the greatest barrier to the success of the organization. The officers of the Central for many years failing to put forth any reasonable effort to make the annual meeting of much interest. For the reason, probably, that so little has been done for the advancement of agriculture at the annual Central meeting, it has been the practice to hold a semi-annual meeting at some point in the country

during the month of January. These meetings have been very successful. Probably the principal reason why the annual meeting has been so bare of results is the fact that it is held in July, when farmers are busy and the weather very warm, for the experience everywhere is that farmers are chary of discussing knotty problems in the dog-days. The winter meeting, however, is becoming more interesting and instructing each year. From reports of these meetings for the last two years furnished The Farming World by me, the reader is quite familiar. Last year a two-day meeting was held at Marshfield in January. Prof. Gilbert, of the Central Experimental Farm, being the chief outside speaker. It was a great success. The winter meeting of the Central takes place this year at Middleton, and is expected to be the best meeting yet held, if we may be allowed to judge from the form and ability of the leading speakers, viz., Prof. J. W. Robertson, Maccoun, of Ottawa, and Prof. Robert Robertson, of the Maritime Experimental Farm. What is wanted to bring this association into more prominence is a Farmers' Institute system. The Central Association can well be done away with entirely, and its place taken by a Superintendent of Farmers' Institutes. Through the co-operative efforts of the new Minister of Agriculture, Mr. Rogers, and Mr. Hodson, who is in a position to give his valuable assistance, a reorganization will likely soon take place, and a system of Farmers' Institutes will be introduced this present year.

One of the most healthy organizations in the province is the Fruit Growers' Association. This association is made up of the leading men in the province. The Lieutenant-Governor is the honorary president, and for years attended every session, and added his share of knowledge to the meeting. The leading spirit of the association is the Rev. Father Burke, of Alberton. Senator Ferguson, a leading fruit grower, is one of the most interested members, while his Lordship, the Bishop of Charlottetown is an honorary member, and at the meeting last year presided at the evening session. This association has a large membership, who pay an annual fee of one dollar each, and receive \$150 from the Provincial Government. They publish an interesting and handsome annual report. The annual meeting for 1901, takes place this week at Charlottetown at which they have engaged several prominent foreign speakers, as Profs. Robertson, Maccoun, Hubbard and Robertson. It is growing every year, and is fast becoming a power for the advancement of fruit growing in the province.

Another organization, now two years old, is the P.E.I. Dairy Association, which is affiliated to the P.E.I. Cheese Board. This association is made up of the presidents and secretaries of the several numerous co-operative dairying associations, and others interested in dairying. They receive a grant of \$300 from the Dominion Government and \$400 from the Provincial Government. With this money they employ instructors, who visit the different factories periodically throughout the season, and see that the product of the factories are up to the standard. So great has been the results of the work of this association, both in education and in the business of selling the factory products, that Island cheese has sold higher, in the past season, than any cheese in Canada.

J. A. Macdonald.
Hermanville, P.E.I., Feb. 5, 1901.

Improved Methods of Farming

Address by Professor I. P. Roberts, Cornell University, Ithaca, N.Y., before the Ontario Experimental Union, 1900

The farmer may pay anywhere from \$20 to \$200 per acre for land. In the purchase he pays for three things—first, location and the right to occupy the land to the exclusion of others; second, the plant food in the soil; and third, the things which are upon the soil, as houses, barns, trees and the like. The cost of all these usually make a severe drain upon the purchaser's resources. He must now give the larger part of his energies to making the land produce crops which shall not only pay interest on the first investment, but for the labor expended, and in addition to this he desires to secure profits. Usually all of the returns come through his ability to transform dormant plant food in the soil into salable organic matter.

We will ignore the value of location and the buildings for the present, as these can always be easily determined. We are most concerned about the possibilities of the land, for all success in agriculture has its beginnings in the soil. The average of twenty-nine analysis of rather lightish soils from various localities shows that the first eight inches contained, in round numbers, 3,000 lbs. of nitrogen, 4,000 lbs. of phosphoric acid, and 16,000 lbs. of potash per acre, and the second eight inches contained 4,000 lbs. of nitrogen, 1,800 lbs. of phosphoric acid, and 6,800 lbs. of potash.

The first thing that attracts our attention is the vast amount of nitrogen in the sub-soil. It is evident that some of the nitrogen of the surface soil in these light lands has been washed into the top of the sub-soil and we get the first hint, in this case, of how to manage this land. Here we want tap-rooted plants that will bring the nitrogen from the sub-soil to the surface. It is not usual for the sub-soil to contain more nitrogen than the surface soil, though in sandy lands this may be and frequently is the case.

The best part of the soil, so far as total nitrogen is concerned, is sometimes found in the first eight inches of the sub-soil, the nitrogen in the surface soil having been washed down. We find these lightish soils contained per acre on the average 7,000 lbs. of nitrogen, 5,800 lbs. of phosphoric acid, and 22,800 lbs. of potash in the first sixteen inches of soil. It would be interesting to figure how many tons of commercial fertilizers with a composition of 4 per cent. nitrogen, 4 per cent. phosphoric acid, and 8 per cent. potash it would take to furnish as much plant food as is contained, on an average, in these soils which were analyzed, and it would be still more interesting to compute the cost of this amount of plant food if it had to be purchased in the form of commercial fertilizers.

The question naturally arises, why land which contains such an abundance of plant food usually fails to produce a full crop? Under present methods, from such land is often secured only half of a really good crop. Pre-supposing that the climate is suited to the plants grown, three factors then play an important part in productivity—available plant food, moisture, and the physical condition of the soil.

AVAILABLE PLANT FOOD.

In practice we find that the larger part, in fact nearly all of the plant food in the soil can not be used by the plant, because, first, it may be tough plant food, second, there may not be enough moisture present, and third, the physical conditions of the soil may be such that the plant will not be comfortable.

With the exception of nitrogen, nature seeks to conserve plant food in the soil by locking it up, and, in many cases, the nitrogenous compound also are locked up by nature's forces and made unavailable. The business of the farmer is to so cultivate and manage his operations as to unlock and make available some of the plant food which has laid in the soil for ages, and so far as any good it has yet done might as well not have been created. Some of this lazy plant food is owned by lazy farmers, and some of it is owned by farmers who have not yet comprehended the first great principles of successful crop production. If we analyze the crop which is taken from the land it is found that only a small proportion of the total weight of the plant has been taken from the soil, and a still smaller proportion of it is composed of the three leading elements which are likely to be either deficient in the soil or unavailable.

Wheat is one of the most exacting plants that we grow, requiring not only an abundance of readily available plant food, but also superior conditions of the soil. In 1890, the average yield of wheat in the United States was 14 bushels per acre. If we allow that two pounds of straw are produced for every pound of grain, it is found that the average wheat crop of the United States removes from each acre of land 29.73 lbs. of nitrogen, 9.49 lbs. of phosphoric acid, and 13.69 lbs. of potash. When the amount of plant food taken from an acre by an average wheat crop is compared with the amount of plant food in each acre of soil, we immediately wonder what factors have entered into wheat culture to produce such a paucity of yield in the presence of such vast stores of potential plant food.

It may be said that some reserve must be carried in the soil, and that by no method can the soil, by cropping, be exhausted of all its potential power. But something must be radically wrong when the farmer fails to get out of the soil, by means of a wheat crop, less than 53 lbs. of nitrogen, phosphoric acid and potash, all told, when the soil analyzed contained 7,000 lbs. of nitrogen, 5,800 lbs. of phosphoric acid and 22,800 lbs. of potash per acre.

VALUE OF SUPERIOR TILLAGE.

Then the prime effort in agriculture should be to transform tough and lazy plant food into available plant food. It is not the amount of plant food which soil carries, but rather the amount of food which the plant can secure during the crop season which governs productivity and profit or loss. To show how a soil car-

rying a limited amount of plant food may be made to yield large returns by superior tillage. I quote from some experiments conducted at the Cornell University Experiment Station.

From some plots in 1895, 6,967 lbs. of dry matter per acre of maize and stalks equal to 31,600 lbs. of green material, were harvested per acre. From other plots 26,000 lbs. per acre of green oats and peas in the following year. These plots have been producing since an average of 300 bushels of potatoes per acre, except during the present year of severe drought, when they produced nearly 200 bushels per acre. This soil was not treated with commercial fertilizers or farm manures nor has it been for the last six years. A sample of it was analyzed and it was found that one acre one foot deep weighed 2,082 1-2 tons. The soil contained 172 tons, that is 8.25 per cent. of moisture. A portion of this soil was passed through a sieve of 1-18 of an inch mesh which divided it into two portions. The fine portion was found to constitute 56.79 per cent. of the soil, and the coarse portion, or gravel, 41.85 per cent. The coarse material was finely powdered by mechanical means and analyzed with the following results:

In fine material.

Nitrogen	3,074.9 lbs.
Phosphoric Acid	3,784.5 lbs.
Potash	12,063.0 lbs.

In gravel.

Phosphoric Acid	4,009.0 lbs.
Potash	11,329.8 lbs.

Fine material and gravel.

Nitrogen	3,074.9 lbs.
Phosphoric Acid	7,793.5 lbs.
Potash	23,392.8 lbs.

If now we take two-thirds of these amounts (which would fairly represent the amount of plant food contained in the first eight inches) in order to compare with the average amounts contained in the twenty-nine soils analyzed, it is found that this soil carried only a little more than half as much plant food as did the forty-nine soils, and yet the crop was probably twice as large as these soils which were abundantly supplied naturally with nitrogen, phosphoric and potash.

This raises the question as to how much potential plant food it is necessary to carry in the soil in order to secure most economical results. I am fully persuaded that most soils are carrying two or three times as much plant food as they need to carry to produce good crops. There is not so much danger of reducing productivity by rational cropping as there is by ignoring the laws of plant growth and the principles of tillage.

PLOW DEEP AND OFTEN.

Jethro Tull said: "Tillage is manure." This is not strictly true, but tillage may well take the place in part of manure. To make available the tough and lazy plant food of the soil I believe the plow should be used more extensively than it is. As a rule, we do not plow deep enough and often enough. Of course there are lands in the West that are so light and loose, and which contain plant food so available, that too frequent plowing may be detrimental. We can all very well understand this. But with a large proportion of our eastern lands, the tendency is for them to become hard, in fact, so

hard and compact that the water cannot percolate through the soil in a reasonable length of time, neither can the proper amount of air be held in the soil, and lacking friability the plant food instead of becoming more available tends, as time goes on, to become less and less available. This leads us immediately to the thought of underdrains when we have to deal with the most refractory soils. When they are not too tenacious, deeper and more frequent plowing may serve all purposes. Plowing tends to allow the water to percolate through the soil, aerates it, thereby permitting it to "weather," it hastens nitrification and tends to improve the physical conditions of the land, which are often of prime importance. A plant that is uncomfortable never reaches its full standard of perfection. Plowing also permits a more efficient and rational tillage of the surface soil. It would extend this paper to too great a length to go into the details of the shape of the plow, when to plow, and how to plow. It is self-evident that some improved methods of agriculture should be introduced, since out of these vast stores of plant food contained in most arable soils, in the first sixteen inches, the farmer, as yet, is able through plants to utilize each year in wheat culture but 53 pounds per acre, all told, of the three valuable plant foods which are sometimes deficient in soils. A good soil may contain plant food sufficient for from 600 to 1,000 average crops of wheat; which average, however, is less than one half of what it should be.

What if twenty-eight bushels of wheat were raised instead of fourteen bushels per acre? Would the land soon be depleted so far as to seriously reduce productivity? Well, if you are fearful that one hundred to two hundred years hence some one may have to apply commercial fertilizers to preserve the normal yield, then you should raise small crops or none at all. Far better preserve and increase productivity from year to year and then the future will take care of itself, for if the land produces abundantly you need not be solicitous about the quantity of potential or lazy plant food which the soil carries.

BETTER TILLAGE DEFINED.

What are the methods for preserving and increasing the productivity of the land? First, better tillage (and this term I use in a generic sense) which begins with hot plow shares and ends with fine earth mulch, that is all those numerous operations by a varied assortment of implements which arouse the potential lazy plant food and make it more available, which tends to conserve moisture and to make the soil comfortable for the growth of high-class agricultural plants. Too many are still practicing squaw farming; they scratch the land, cast in a few seeds and go fishing or into town. In many cases this lazy plant food is best whipped up by light applications of lime. Sometimes it is made available by fall plowing, by freezing, by "weathering," by frequent tillage, and by compacting the soil at certain seasons of the year and for certain crops. Having whipped up the soil by smiting it intelligently and often, still the highest profitable yield may not be secured, very often because the plant food has become so fearfully lazy that no amount of application of hot plow shares will force it into activity.

It is often found that an application of well preserved farmyard manure not only adds plant food, but materially assists in making available plant food which before had been unavailable. Humus in the soil plays a very important part in crop production. Then to increase productivity it will be necessary to preserve as carefully as possible all barn manures and apply them in the most economical way. Nature raises plants to feed animals and then scatters the refuse manures thinly on the surface in the fall or early winter where plants are growing. We may not follow nature's method always because conditions are not always suitable, but wherever they are suitable no better method of applying barn manures can be practiced. I need not say that the conservation of manures about the barn is one great factor in improving farming.

Still the land may not produce satisfactorily, although it is drained and looks to the casual observer as though nothing more was wanting. We have seen that often the second eight inches of soil is as rich or richer than the first eight inches. This indicates that tap-rooted plants should be grown in the rotation—rape, turnips, and best of all, clovers. But it happens that in most of the North and East countries but one harvest crop can be raised in a season. This results in allowing the land to lie bare, or at best, sparsely covered with noxious weeds, for four to six months of the year.

We have seen, and I think proven conclusively, that most of the plant food in the soil is lazy. Then why not keep the land at intervals between crops, covered with living plants that they may, shall I say, "digest," some of this tough material and build it up into organic structures, that subsequent harvest plants may when plowed under and partly decayed? Unless it has been found wise to fall plow, then sow in the harvest crop or immediately after the harvest crop has been removed, such cover crop as experience has shown to be most satisfactory. Even where it is desired to practice fall plowing a cover crop may frequently be raised between the time that the field is relieved of its harvest crop and the time of late fall plowing.

THREE ELEMENTS OF IMPROVED FARMING.

I think, then, we may sum up the three great elements of improved methods of farming. Having fitted the land by sub-draining and plowing also, in the best possible manner, having preserved and applied intelligently all barn manures, having kept the land covered as far as possible throughout the entire year with living plants (cover crop), and still not having secured the productivity which we desire, or should naturally expect, the opportunity is open for experimentation. How shall we find out why the results are not as complete as we had a right to expect from our improved methods? It may be that a little lime would greatly increase the yield, but no professor of agriculture or chemist is likely to solve such problems without actually testing the soil with grown plants. Grant once said that the way to resume was to resume. The way to find out is to find out. It is not a very serious job to apply a bushel or a barrel of lime to a given area and to compare the yield of this area with a like area adjoining. Or it may be that one of the

principal elements, as phosphoric acid, is lacking. The way to find whether this be so or not, is to find out—by applying phosphoric acid and noting results. These investigations or experiments may be carried on very cheaply and accurately by any farmer if he is not like some of the plant food in the soil—lazy.

In like manner nitrogen or potash or both of them combined can be tried. In other words, if we want to know more about the effects of tillage, manures, cover crops, and commercial fertilizers, and the like, the safest and surest way of making new discoveries is to ask questions of the plant.

THE CONCLUSIONS.

Now comes the interpretation. The conclusions must not be jumped at, but every step in the investigation should be verified, because he who tells a lie to himself, having a truthful plant, cannot filch from the plant its good name, but it will make him poor indeed. Having exhausted all home resources to make the land more productive, and not having fully reached the desired goal, and having found out the story of the plant by questioning the farmer is prepared to know accurately whether he can afford to buy nitrogen at 12 to 15, phosphoric acid at 7, and potash at 4 1-2 cents per pound respectively. It may be that he can, in rare cases, buy this nitrogen at 12 cents per pound, transform it through the plant into wheat and sell the wheat at one cent per pound but the chances are that in this operation he will lose money, no matter how much wheat he raises. Nitrogen being the most expensive of the three elements desired, and being easily procurable through cattle foods having a high content of proteids and leguminous plants, I think that it may be safely set down as a sound principle in agriculture that the farmer should aim to secure all the nitrogen wanted through these two channels. Not so with the mineral constituents. These, in time, may become depleted and so far decrease production that the only way to secure them, is by purchase. But both of the mineral constituents are low-priced, as compared with nitrogen and usually in cereal culture only the phosphoric acid is likely to be deficient in well-managed land.

But it is both foolish and unprofitable to buy high-priced plant food, when there is abundance of lazy plant food in the soil which can, by better methods of farming, be made available. As a rule too, the farm is the place from which we should sell things and not the place to which we should bring things purchased in the city. Our people are now rejoicing because the balance of trade is in our favor, that is, we sell more than we buy. In like manner, the farmer must plan to keep the balance of trade on his farm, that is, sell more than he purchases. Competition in all farm products has become so great that no adequate remuneration and profit can be expected or secured from farming unless improved methods be practiced and the greatest skill be shown in the direction of nature's forces. That is, we are to work in harmony with nature and not antagonize her. To do this, one should be fairly well acquainted with nature's modes of action and the best place to get this knowledge in our generation, is at an agricultural college.



Ideal Farm Homes

We present with this issue design No. 40. This, as can be seen by the perspective view, is a very handsome two-story house. It is very imposing in appearance, and while on this line let us say that one of the points often neglected in selecting a site for a house is the height of the ground from the street. By looking at the perspective here it will be seen that the height of the ground is about $2\frac{1}{2}$ feet from the sidewalk. This gives a nice chance for a single terrace, and not only that, but it raises the house up so

that it gives it a much better appearance. This same house set on a level with the sidewalk, or below it, as some of them are, raising the house by use of higher underpinning, would have an awkward appearance. For these reasons the selection of a house site is something that should be more carefully looked into than is the case in a great many instances.

This house has eight rooms besides the bath-room, closets, pantry, etc. The porches are of good size, and the house is so designed that it is light and airy.

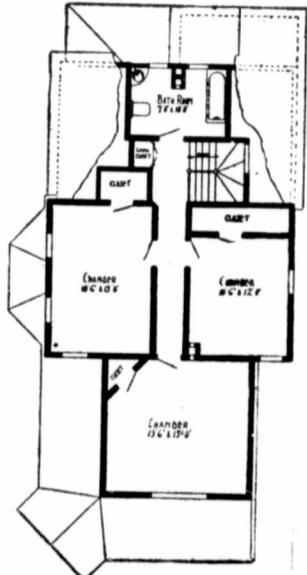
The size of this house is 29 feet in width by 49 feet in length, exclusive of porches. We can furnish blue prints and specifications of the plan for \$5.00. The blue prints consist of cellar and foundation plans, first and second floor plans, front, rear and two side elevations, wall sections and all necessary interior details. The \$5.00 not only pays for the blue prints, but for the specifications, which in themselves amount to nearly twenty-two pages of typewritten matter.

This house can be built for about \$2,000, and by glancing over the specifications it will be seen that they specify that only good material shall be used but the work shall be done in a thorough, workmanlike manner. As in all of our other plans, the material to be used is a reasonable priced finishing lumber, such as yellow pine interior finish, maple or beech for the flooring in the kitchen and dining-room, and a cheaper grade of flooring for the other rooms. There is no plumbing provided for in the specifications, as in many places where these houses are built there is no plumbing used. Neither are the mantles in the different rooms provided for. The reason of this is that there are so many different ideas in regard to what a

mantle should be, if we put in a mantle we would have to say what priced mantle we figured on. A mantle can be gotten all the way from \$5.00 to \$500. With the exception of this, from the bottom of the cellar to the ridge boards, everything is included in the specifications, and one reason for our publishing these designs is that we wish our readers to know for how little money a really beautiful house can be provided. Blue prints and specifications for this dwelling can be had from the office of THE FARMING WORLD for \$5.00.



First Floor Plan.



Second Floor Plan.

The Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP

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

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

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers residing 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 Sheep Breeders' Association, to advertise sheep 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 10th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

A. F. WESTERVELT, Secretary,
Wellington Buildings, Toronto, Ont.

The Guelph and Ottawa Provincial Auction Sales.

Before this issue of THE GAZETTE reaches the hands of most of our readers the Provincial Auction Sale at Guelph will have been a thing of the past, but those who were unable to get to Guelph can still attend the Ottawa sale on March 6, where animals of quite as high a quality and type will be sold. The sale starts at 9 a.m., and will be continued on the following day, at the same hour, until all the stock are disposed of. Catalogues, the preparing and printing of which involved a large amount of work, have been sent to all who applied for them. The total number of cattle and swine of all breeds entered runs up to 300 head.

Report of the Secretary of the Dominion Cattle, Sheep and Swine Breeders' Association.

My annual report, as heretofore, includes a summary of the work for the year, of the Cattle, Sheep and Swine Breeders' Associations. These associations are annually becoming more influential and their work is increasing in importance. The work done is being more closely scrutinized each succeeding year, and while more funds have been placed at our disposal from year to year, better work is expected of us and more of it. The more work we do, the more we are expected to do. As representing the live stock interest, a broad view should be taken of the work of the association, and the objects sought should be, first, what will increase the quality of our stock, and second, how afterwards may the highest market price be procured for the produce we have for sale? It should be borne in mind that anything done along these lines is a direct benefit to the country at large. While the work of the associations is apparently in the interest of breeders of pure stock, it is but a means to an end, because the pure-bred stock of the country has a direct influence on the stock raised by

the rank and file of the farming community. Any work which is of benefit to the breeders of pure-bred stock is, therefore, of benefit to all breeders and feeders, and the work of the associations should have the co-operation and receive the hearty support of all persons who may be interested in the live stock industry.

The educational work in connection with the Winter Fair has been undertaken for the purpose of giving such instruction as will fix in the minds of breeders and feeders the ideal animal suitable for the best markets, as well as the study of the principles of breeding necessary to produce such animals and how best to care for and feed in the best and most economical manner.

The following is a brief summary of the most important work accomplished by our associations the past year:—

1. Lists of expert judges nominated, printed and supplied to all fair managers.

2. Appointment of delegates to Fair Boards to look after the interest of the live stock exhibit at the larger fairs in the Province. Last year was the first year the representatives of the cattle breeders' associations were allowed membership in the Toronto Industrial Association. In the draft for reorganization, the following is the representation in the Toronto Industrial Association:—

Dominion Cattle Breeders' Association, two delegates.

Dominion Sheep Breeders' Association, two delegates.

Dominion Swine Breeders' Association, two delegates.

3. The annual report for 1899, consisting of an issue of 22,000, was placed in the hands of each member of a live stock association and of a farmers' institute throughout Ontario. In it was printed a full report of lectures delivered at the Winter Fair, London, and the essays and statements supplied by the various exhibitors.

4. In the matter of transportation, shippers of registered stock between local stations in less than car lots are able to ship their stock at the reduced rate of one-half the regular tariff, upon compliance with the regulation of the railway companies. Pure-bred stock was shipped to the West as often as a carload was available. There were twelve cars shipped. In these cars enough horses to about fill one car were taken to the West. While this part of our work is of great assistance to the buyer in the West and the seller in Ontario, there is one great drawback, that is, the uncertainty as to when a car will be shipped. The rate to British Columbia is now much reduced, the rate to New Westminster being \$150 for an

ordinary car and \$225 for a palace horse car 50 feet long, which will accommodate one and a half times as much stock. The rate is \$175 to the boundary country, where a part of the route is by water. In 1898 the rate on an ordinary car of stock was \$251. This will mean that a much larger portion of the stock used in British Columbia will be purchased in the Province of Ontario instead of being brought in from the States to the south. Three cars of stock have already been shipped to British Columbia this year.

I wish to again impress the advantage of shippers making themselves thoroughly familiar with classification of weights and the number of railway circulars governing rates and the dates of issuing. Agents at small stations are very often not as familiar with their circulars as they should be, and much trouble would frequently be saved if shippers would make it their business to see that their agents keep informed as to the latest regulations regarding the shipment of pure-bred stock. When a new circular is issued, a copy of it will be found printed in the Agricultural Gazette. Should the agent refuse to comply with any regulation, the matter should at once be laid before the district or general freight agent, who will have the matter adjusted. When any overcharge is made, before a refund can be obtained it is absolutely necessary to produce the original receipted shipping bill. The secretary representing the associations is perhaps in a better position to take these matters up than persons individually are, a number of refunds having been made the past year after a first refusal by a company. This is an example of the result of having an organization whose good will corporations consider it their interest to cultivate. A circular is now being issued by the Live Stock Commissioner and the live stock associations, covering the railway regulations and rates between points in Canada.

The following committee:—Hon. John Dryden, F. W. Hodson, Robert Miller, Arthur Johnston, William Linton, H. Wade, Dr. Andrew Smith and Peter Christie, waited on the Traffic Managers of the Canadian Pacific and the Grand Trunk Railways and made arrangements for the passenger and freight rates to the auction sales. The Traffic Managers also agreed to transport registered horses between local points at the same rates as registered cattle, sheep and swine, and to grant a rebate on the passenger fare to anyone purchasing a carload of stock in Ontario.

5. The lists of stock for sale by members of the associations have been published monthly in the Agricultural Gazette. All members of the associations do not seem to realize how much sought after and how closely these lists of stock are scanned by those wishing to purchase. The last list, however, published on January 23, shows that value is attached to it by a large number of breeders.

6. The Farm Help Exchange is doing a good work, and by the number taking advantage of it, it can readily be seen in what estimation it is held. During the past year 230 advertisements have been inserted. This, while adding considerably to the office work, I believe, one of the best means of drawing attention to the work of our associations. The associations are in such a position to-day, and I believe are doing such good work, that the more prominently their work is brought into public notice, the better it will be for the associations and for the live stock interests generally. The Agricultural Gazette is now well established as the official organ and mouthpiece of the

live stock associations. Our work in this direction should be pushed vigorously, and your Secretary should be instructed to use every endeavor to make this organ such that it will in the most sense be the centre and represent the most advanced thought in regard to matters of interest to our live stock trade.

Stock Purchased.

This is yearly becoming a more important part of the work of the associations, fulfilling commissions for persons outside of the Province, including the Governments of the Northwest Territories and British Columbia. Last spring three carloads, including two hundred sows and twenty-five boars, were purchased for the Northwest Government, and were sold by auction at the following points:—Calgary, Olds, Red Deer, Lacombe, Wetaskiwin, Le Duc and Edmonton.

These cars were transported free by the Canadian Pacific Railway. The object of the Northwest Government was to import a more improved class of swine into the Territories, and have them distributed in the districts in which it was considered advisable to encourage and foster this industry. It is expected that this work will increase the demand for stock in the districts. The cost of the shipment was practically covered by the prices obtained at the sale. One feature was demonstrated, that when a reserve bid was placed on an animal, buyers considered they had bid the full value of the animal when the reserve bid had been reached, and, as a general thing would bid no further, while in the case of as good an animal, perhaps, but no better, put up without reserve, the bidding would go much higher.

Last fall a mixed carload of stock was purchased for British Columbia. A palatial horse car was used and well filled. This shipment was so successful that a second sale is to be held in British Columbia under Government auspices, on March 12, at which twice as many head of stock will be sold.

Four carloads of stock were purchased for a Western buyer.

Provincial Winter Fair.

The Provincial Winter Fair of 1900 was by far the most successful held under the auspices of the live stock associations. At the last annual meeting it was decided that the work of the winter fair could not be conducted so as to derive the most good unless permanent buildings, properly fitted, were provided. Definite offers to erect a suitable building were made by the cities of Guelph and Brantford, and the past summer was accepted. During the past summer and fall a fine stone building was erected, and, while not entirely completed, was in fairly good condition for holding the show. The building on the ground floor covers the acre of ground. The fittings provided by a special appropriation of the Legislature for that purpose, include a special apartment for the dairy cattle, a lecture room, a room for hanging the carcasses, a boiler room, and a killing room. The dairy stable, the lecture room and offices and the poultry killing are comfortably heated. The building is supplied with tracks, and travellers, so that the carcasses can be easily transferred from the killing room to the hanging room, and from there to the lecture room, when required. The killing room, when re-fitted with proper appliances, and provided with purposes a 72 horsepower boiler is fitted, capable of heating the entire building, should it any time be thought advisable to do so. The building is lighted throughout with electric light. Seating accommodation is provided around the cattle show ring. The lecture room was found to be inadequate, and although it will be impossible to provide accommodation for as large a number as wished to attend, an appropriation is wished so that the seating capacity can be almost doubled by taking out the two small rooms between the lecture room and the cattle ring. Provision will also be made so that the feed can be stored in the centre of each double tier of pens, by

running an extra hurdle down the centre, and taking about one and a half feet off each pen. This will add a great deal to the general appearance of the building another year. The building outside will another year present a better appearance, as it will be completed and nicely painted. A great deal of credit is due to the city and county, and the societies and townships contributing towards the erection of this building. As for the show itself, the number in attendance testified to the popularity of this institution. It is an evidence, that in order to get a good attendance, it is not necessary to provide "attractions." It is a hope shown by the anxiety to learn, as the demonstration lectures. This was the first amalgamated show of the Provincial Fat Stock and Dairy Show, and the Ontario Poultry Show, now known as the Provincial Winter Fair. The poultry department was quite a centre of attraction. There were over 2,000 entries in the department. The dressed poultry exhibit showed a much better quality than the previous year, but was not so large as it should have been.

Thirty-four of the farmers' institutes took advantage of the privilege of having their members admitted free to the show. This is practically 50 per cent. of the institutes in western Ontario. There were about 1,600 admitted on source of revenue, it was the means of inducing a large number of the side districts, and it is by doing this and giving them something of value when they get there, that the expenditure of the money spent in carrying out this work is justified. Outside of it is estimated that about 10,000 persons visited the fair. The receipts for admission amounted to \$1,152.70. The free admission swelled the attendance, it is what we want, and I believe it good policy that it should be continued. I would suggest, however, that for the five dollars the admission allowed any one institute be reduced to one hundred, and that an additional five dollars be charged for each additional institute. Our policy in connection with the Winter Fair should be to add to the quality of the exhibits rather than to the quality, to increase the attendance and to obtain the best possible instructors and lecturers. If necessary, some expense should be incurred in this connection.

All the delegates appointed to address farmers' institute meetings during the season of 1900, were present at all the meetings. A number of representative agriculturists from the Maritime Provinces were brought to Guelph by the Live Stock Commissioner. It would be well if next year similar arrangements could be made with respect to representatives from western Canada.

Annual Auction Sales.

At the last annual meetings it was decided to commence the work of conducting annual auction sales. A committee was appointed, and sales are now arranged to be held at Guelph on Feb. 27th, and at Ottawa on March 6th. There will be over 100 cattle offered at each sale, and from 25 to 30 pigs. Fifteen thousand circulars have been sent out to persons interested, and advertisements have been placed in the Farmers' Advocate, the Farming World, The Weekly West Farmer, The Calgary Herald, The Gazette and The Co-operative Farmer, Sussex, N.E. The work is well in hand by the committee, and all arrangements are practically completed. It is hoped that each member of the live power to assist in bringing to a successful issue this very important work. The rules have been given a wide distribution, and have been framed to protect the interests of both buyer and seller. Successful sales will benefit to all breeders of stock—of only a few head—and will be a bene-

fit to the live stock trade generally. Each breeder should look on their success as a personal matter, and should make every effort to push ahead this portion of the work of the associations.

Cattle and swine only will be offered at the above sales. It was decided that a sale of sheep could best be conducted in the fall of the year.

Cattle Breeders' Association.

The affiliation of the Shorthorn Breeders' Association, the Holstein Breeders' Association, the Jersey Ayrshire Breeders' Association and the Canadian Dominion Cattle Breeders' Association is a source of strength to our cattle industry. The commercial work to be done for the general advancement of the live stock industry of this Province can be better done by one association, representing all the breeders of all the breeds, than by any one association representing but one breed. No matter how strong in numbers that association may be, members of the above associations, by affiliation, are entitled to the full privilege of membership in the Dominion Cattle Breeders' Association, to advertise their lists of stock for sale monthly in The Gazette, and to free admission to the Provincial Winter Fair. The live stock associations now represent an organization of about 2,000 breeders, and are in a position to demand any rights to which they are entitled.

Association Cars for the West.

One hundred dollars has been appropriated by the Dominion Shorthorn Horse Breeders' Association, and \$50 by the Jersey Breeders' Association, to assist in paying the wages of a man in connection with these cars. At the suggestion of the Live Stock Commissioner, I believe it would be well if arrangements could be made to ship these cars at advertised times. It would be of a great deal of service to sellers and buyers, as each would know exactly when an animal could be shipped. If more stock were offered than could be shipped in one car, a carload could be shipped earlier, and a second at the advertised time. It might be necessary sometimes to ship a car without being entirely filled, but the slight expense incurred would be far overbalanced by the convenience and advantage to buyers and sellers in knowing the time at which an animal could be delivered. I believe a car could be safely advertised each year for January 15, February 15, March 15, April 15, May 15, and October 15.

Following is a list of pedigrees and transfers recorded in 1900:—

Berkshires	1,290
Yorkshires	1,466
Polester Whites	270
Poland Chinas	74
Tamworths	482
Duroc-Jerseys	57
Essex	18
Total	3,557

Volume 10 was published and sent to members for 1899. Volume 11, containing a full list of pedigrees registered in 1900 will be issued within a week and will be placed in the hands of members for 1900. At the last annual meeting it was decided to print the volume of the Record quarterly, to issue the certificates at present, but to shorten the printed form. At a meeting of the Executive it was decided for 1900 to print the volume as formerly, six months of the year having been made in the cost of printing I would suggest that the swine record be issued quarterly, that 200 copies be issued instead of 400, and that advertising be inserted in the back of each publication. In enlarging the publication as an advertising medium would be increased, and free copies could then be placed in the hands of live stock associations, Agricultural and Experiment Stations and agricultural papers throughout Canada and the United States. It would be an advantage to the association and to the swine industry of the country to have the

Swine Record in the hands of all these institutions. The cost would be materially reduced. More benefit would be received from the publication. It would be an advertisement of the association and of the breeders wherever placed. This, together with the additional grant of \$500, should this year place the association in a good position financially.

Premium List of Winter Fair.

In issuing the prize list during the last two years, 2,000 copies have been issued. Special prizes were solicited and any person giving a prize was allowed a page advertisement, and permitted to make an exhibit at the show. At the last show space was taken up by these exhibits, which could have been put to better use for the purpose of the show if occupied by the live stock exhibit. This year I would suggest that 10,000 copies of the prize list be issued, and advertising inserted. I believe that \$300 in cash can be easily made in this way, over and above the cost of printing, and the room occupied by the exhibit of special prizes will be available for other purposes.

Admission to the Show.

The general admission to the show should be:—Gentlemen, 25 cents; ladies, 10 cents; children under twelve, 10 cents.

Lectures.

A great deal of attention should be given to the lectures on live stock. This is one of the most important and popular features of the show. Care should be taken to get the very best men to talk on the various subjects, even if it is necessary to incur some expense in doing so. This is an important department which it is necessary to keep improving, and it should be made as thoroughly practical and useful as it can possibly be made. To assist in this work the Dominion Department of Agriculture have agreed to bear the expense of procuring lecturers and having them make special preparation.

Payment of Judges.

I would suggest that the Judges be paid ten dollars for their services at the Winter Fair, upon receiving from each one a report for publication on the classes over which he adjudicated, and it would be well to consider the advisability of appointing but one judge in place of two.

Ten Per Cent. Added to Prizes.

Instead of this amount being given for statements of feeding after the show, I believe it would be in the best interest of the work to have these statements given before the show, so that they could be made use of at the show by the lecturers. I suggest that they only apply to animals to be shown in the dressed carcass competition, and that this statement be given before an animal be allowed to enter in this competition.

Dressed Carcass Competition.

In the dressed carcass competition in the pure bred classes the name and number of the animals should be given at the time of making the entry, and in the grade classes distinctive names should be given. This is necessary in order to make a comparison of the prizes won alive and as dressed carcasses. I suggest that in the competition of dressed carcasses in the cattle department for 1901 the pure breeds show together, and a class for grades be added, and that the prizes be as follows:—

Section 1—Pure breeds—1st., \$50.00; 2nd., \$30.00; 3rd., \$20.00; 4th., \$15.00.
Section 2—Grades or crosses—1st., \$50.00; 2nd., \$30.00; 3rd., \$20.00; 4th., \$15.00.

It would also be well to limit the competition to steers under three and heifers under three.

Sheep Prizes.

It would be well to consider the advisability of confining the dressed carcass competition entirely to wethers. When ewes and wethers are shown in separate sections when alive, it is impossible to make a comparative statement of prizes won alive and as a

dressed carcass if ewes and wethers are shown in the same section when dressed.

Swine Prizes.

At the last meeting of the Board of the Winter Fair it was by motion suggested that the prizes for bacon hogs be offered as follows, a section for pure breeds and a section for grades. The prizes for bacon hogs both alive and dressed might then be as follows:—
Section 1—Pure-breeds—1st., \$30.00; 2nd., \$27.50; 3rd., \$25.00; 4th., \$22.50; 5th., \$20.00; 6th., \$17.50; 7th., \$15.00; 8th., \$12.50; 9th., \$10.00.

Section 2—Grades—1st., \$20.00; 2nd., \$15.00; 3rd., \$10.00.
Sweepstakes—1st., \$15.00; 2nd., \$10.00; 3rd., \$5.00.

Disposal of Carcasses.

Arrangements should be made to have all carcasses entered in the competition put up at auction the last afternoon of the show.

Dairy Test.

The rules governing the dairy department should be left in the hands of the dairy committee for revision.

The special work of the association this year should be:—(1) To push the auction sales. (2) To co-operate with the Live Stock Commissioner in developing inter-Provincial trade. (3) To push and make as valuable as possible the educational features of the Winter Fair. (4) To arrange for the live stock exhibit at the Pan-American Exposition. (5) To develop The Agricultural Gazette.

Twelfth Annual Report of the Dominion Swine Breeders' Association.

The annual meeting of the Dominion Swine-Breeders' Association convened at the Palmer House, Toronto, February 21, 1901, at 1.30 p.m., president, Wm. Jones, in the chair.

On motion of George Green, seconded by Thomas Teasdale, the minutes of the last meeting were taken as read.

The secretary-treasurer then read his annual report, which, after being taken up clause by clause, was adopted. (See page 617.)

Considerable discussion took place as to the suggestion made by the secretary in regard to allowing one hundred members of any one Farmers' Institute free admission to the Provincial Winter Fair on payment of \$5 by said institute and \$5 for each additional hundred.

A number of the members thought this should be limited to \$5 for fifty members from any one institute, while others were of opinion that the members of these institutes should be charged regular admission fees.

It was agreed, however, that the plan suggested by the secretary was a good one as it had worked out well last year and was the means of bringing out a great many Institute men and promoting the show in general.

A protracted discussion arose as to the advisability of allowing the classification in the bacon class to remain as last year and to amend the secretary's report in this respect.

Jos. Featherston moved, seconded by Geo. Green, "That the secre-

tary's report be amended by striking out the word "alive."

This resolution was carried. Later it was decided to reconsider it, and the following motion was adopted:

Moved by F. W. Hodson, seconded by A. W. Smith, "That on condition the packers carry out their promise and give at least from three to five hundred dollars towards the prize list of the Provincial Winter Fair that the classification stand as stated in the secretary's report."

ELECTION OF OFFICERS.

The election of officers for 1901 resulted as follows:

President, Wm. Jones, Mount Elgin; Vice-President, G. B. Hood, Guelph; Secretary-Treasurer, A. P. Westervelt, Toronto.

DIRECTORS.

Berkshires—Thomas Teasdale, Concord.

Yorkshires—J. E. Brethour, Burford.

Chester Whites—R. H. Harding, Thorndale.

Poland Chinas—W. M. Smith, Fairfield Plains.

Duroc Jerseys—L. B. Tape, Ridgetown.

Tamworths—Andrew Elliott, Galt.

Suffolks and Essex—Jos. Featherston, Streetsville.

Ontario Agricultural College—Prof. G. E. Day, Guelph.

General Director, Geo. Green, Fairview; Auditor, J. M. Duff, Guelph.

REPRESENTATIVES TO FAIR BOARDS

Toronto Industrial, D. C. Flatt, Millgrove, and Thos. Teasdale, Concord; Ottawa, A. P. Westervelt, Toronto, and Campbell Smith, Hintonburg; London, Geo. Green Fairview, and D. De Courcy. Bornholm; Peterboro, Robert Vance, Ida; Guelph, G. B. Hood, Guelph, and Jas. Anderson, Guelph; Brantford, J. E. Brethour, Burford; Belleville, J. M. Hurley, M.P., Belleville; Kingston, J. M. Hurley, M.P., Belleville.

DELEGATES TO PROVINCIAL WINTER FAIR.

Prof. Day, Guelph; G. B. Hood, Guelph; Wm. Jones, Mount Elgin.

JUDGES FOR WINTER FAIR.

Thomas Teasdale, Concord (G. B. Hood, Guelph, reserve), on Poland Chinas, Chester Whites, Duroc Jerseys, and Essex; Wm. Jones, Mount Elgin, on Yorkshires and Tamworths; R. H. Harding, Thorndale, Berkshires and Grades; H. B. Jeffs, Bond Head (reserve).

EXPERT JUDGES.

The following are the expert judges recommended:
Berkshires—P. W. Boynton, Dol-

lar; Alex. Smith, Maple Lodge; Wm. Jones, Zenda; W. G. Caven, East Toronto; James McEwen, Kertch; John Boyes, jr., Churchill; Henry Jones, Zenda; H. J. Davis, Woodstock; J. C. Snell, London; Thos. Teasdale, Concord; Geo. Green, Fairview; Robert Vance, Ida; T. A. Cox, Brantford; Jas. Quirie, Delaware; Jos. Featherston, Streetsville; R. P. Snell, Snellgrove; C. R. Decker, Chesterfield; Chas. Youngs, Brooksdale; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; Jos. Barnett, Rockland; E. E. Martin, Canning; H. B. Jeffs, Bond Head; Wm. Linton, Aurora; E. Bilen, Ridgetown; G. B. Hood, Guelph; J. E. Brethour, Burford; Alex. Hart, Hempstead; W. A. Shields, Milton.

Yorkshires and Tamworths—Lou Rogers, Weston; Geo. D. Betzner, Copetown; R. J. Kerr, Mimosa; W. R. Bowman, Mount Forest; Wm. Jones, Zenda; R. J. Garbutt, Belleville; E. Dool, Hartington; R. H. Harding, Thorndale; N. M. Blain, St. George; A. Dunn, Ingersoll; J. H. Simonton, Chatham; G. North, Marden; A. Elliott, Galt; L. F. Master, Haysville; A. C. Hallman, New Dundee; D. G. Hammer, Burford; John Nichol, Hubrey; J. E. Brethour, Burford; H. Caldwell, Orchard; W. Elliott, Hamilton; C. C. L. Wilson, Ingersoll; F. C. Fearman, Hamilton; A. Laurie, Wolverton; Wm. Davies, Toronto; Richard Gibson, Delaware; Henry Dedels, Kossuth; G. B. Hood, Guelph; Jos. Featherstone, Streetsville; H. E. Sharpe, Ida; A. F. McGill, Hillsburg; J. G. Mair, Howick, Que.; J. M. Hurlev, Belleville; Geo. Gler, Grand Valley; James Stephen, Trout River, Que.; R. McLochlan, Harriston; Jos. Fletcher, Oxford Mills; Robert Nichol, Brussels; A. F. Foreman, Collingwood; J. Y. Ormsby, Woodstock; Jas. Leach, Toronto; Wm. Howe, North Bruce; Chas. Yapp, Brantford; G. E. Day, Guelph; F. Shore, White Oak; H. J. Davis, Woodstock; D. C. Flatt, Millgrove; W. R. McDonald, Ridgetown; W. Elliott, Galt; R. G. Martin, Marysville; J. E. Cousins, Harriston; Geo. Green, Fairview; J. W. Calbeck, Augustine Cove, P. E. I.; J. G. Clark, Ottawa; J. G. Smith, Hintonburg; D. Drummond, Myrtle.

Suffolks and Essex—Wm. Jones, Zenda; Geo. Green, Fairview; Thos. Teasdale, Concord; James McGarvin, Chatham; R. H. Harding, Thorndale; Jas. Main, Milton; D. DeCourcy, Bornholm; C. W. Yapp, Brantford; G. B. Hood, Guelph.

Duroc Jerseys—Geo. Green, Fairview; Wm. Jones, Zenda; Thos.

Teasdale, Concord; J. E. Brethour, Burford; R. H. Harding, Thorndale; W. M. Smith, Fairfield Plains; Jos. Featherston, Streetsville; W. N. Tape, Bentpath; Geo. Bennett, Charing Cross; H. George, Crampton.

Poland Chinas—Thos. Teasdale, Concord; Jos. Featherston, Streetsville; J. H. Snarey, Croton; Jas. Main, Milton; Geo. Green, Fairview; W. M. Smith, Scotland; Wm. Jones, Zenda; Henry Jones, Zenda; Oliver Drury, Fargo; C. W. Yapp, Brantford; R. Willis, Glen Meyer; R. H. Harding, Thorndale; Lawrence Tape, Ridgetown.

Chester Whites—E. D. George, Putnam; R. E. Birdsall, Birdsall; Albert Baracky, Bloomington; Wm. Jones, Zenda; J. C. Snell, London; Geo. Green, Fairview; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; G. B. Hood, Guelph; Thos. Teasdale, Concord; Gideon Snyder, Jarvis; Jos. Cairns, Camlachie; Jos. Featherston, Streetsville; Thos. Brooks, Brantford; J. L. Jarvis, Paris; T. A. Cox, Brantford; H. George, Crampton; G. Bennett, Charing Cross; W. Tape, Ridgetown; J. E. Brethour, Burford; J. C. Nichol, Hubrey.

NEW BUSINESS.

Mr. F. W. Hodson, Dominion Commissioner of Live Stock, suggested that this association should do something in the way of giving a grant towards paying the wages of a permanent man to look after the cars of live stock being shipped to the West, and on motion of D. C. Flatt, seconded by R. H. Harding, it was resolved:

That the Dominion Swine Breeders' Association grant the sum of \$50 towards paying the wages of a permanent man in arranging and looking after the carloads of live stock being shipped to the West.

On motion of J. E. Brethour, seconded by Alex. Smith, it was resolved: That the thanks of this association be tendered to our able and energetic secretary for the excellent manner in which he has conducted the affairs of the association during the past year.

The entire oversight of the new Provincial Winter Fair Building at Guelph has been undertaken and carried out successfully by him, and we wish in this manner to indicate to Mr. Westervelt our appreciation of his untiring efforts in our behalf.

We also desire to bear testimony to the splendid service rendered to the Association by Mr. F. W. Hodson, who in his capacity of Commissioner of Live Stock for the Dominion, has on all occasions lent his experience, his time, and his untiring energy to the work of our association. Carried.

Meeting then adjourned.

Thirteenth Annual Report of the Dominion Sheep Breeders' Association.

The annual meeting of the Dominion Sheep Breeders' Association was held in the Palmer House, Toronto, at 10 a. m., on February 22, 1901, the President, Mr. A. W. Smith, in the chair.

The minutes of the last meeting were taken as read.

The Secretary-Treasurer read his annual report, which was taken up clause by clause and adopted with the amendments, as given below:

It was recommended that the general admission to the Provincial Winter Show be the same as last year.

On notice of D. McCrae, seconded by Richard Gibson, it was resolved: That the clause relating to "Ten per cent. added to prizes" be left as last year, that is, the report on feeding be made after the show instead of before. Carried.

Moved by Major McGillivray, seconded by Captain Robson: That the Secretary be instructed to inform the Provincial Winter Fair Board of the action of this meeting on the appointment of judges and the sheep prizes. The action in one case being a single judge, and the other confining prizes to carcasses of wethers, as amended. Carried.

President's Address.

BY A. W. SMITH, OF MAPLE LODGE.

Gentlemen,—I have great pleasure in congratulating the sheep breeders of Canada upon the flourishing condition of our trade or business. The past year has been one of the most prosperous, I believe, in my recollection for the sheep breeders of the Dominion. And this, I believe, applies to all the mutton breeds, and principally because they are of the mutton breeds.

Some years ago almost the only mutton or lamb placed on the market of the United States from the West was that from Merinos, but with the decline in the price of wool the sheep raisers turned their attention to improving the mutton qualities of their sheep, with the result that all our surplus breeding stock have found a ready market in the West, and, as the quality of western mutton and lamb improved, so also did the demand for it, and for some time not sufficient was offered at the large market centres to supply requirements. In Chicago alone fifteen to twenty thousand a day are picked up more readily by far than as many hundred would be a few years ago. This in turn creates more demand for our Canadian sheep, for the observant ranchmen have discovered in Canada a country where

they can procure sheep, not only of the very best type and quality, but with rugged, hardy constitutions, free from all diseases that so often decimate flocks in almost all other countries. So we are with practically an unlimited market for our sheep, and a climate so thoroughly healthy, food so easily and luxuriantly grown, and our breeders so eminently fitted to raise the highest types of the different breeds, because of their intelligence, foresight and hereditary hustling habits.

I consider it very fortunate for the breeders and sheep raisers generally of Canada that our principal aim is to produce mutton and lamb of the finest quality, because it is so much more stable than when wool is the chief object for which we breed. The price of wool is so much controlled by the whims of fashion that it is impossible to follow it with profit. But when we are catering to the appetites of the lovers of choice lamb we are on sure footing and know what we have to do, and do continually, for it is only the prime saddles, chops and legs that are always in demand. And, while that low price of wool may reduce the returns from our flocks somewhat in one direction, it is after all profitable for us, because it holds our largest customers steadily in one straight road, which requires what we can supply, and prevents their running after some of the breeds useful for wool only, and which we produce only in small numbers.

I think we can congratulate ourselves, also, upon the wonderful success our exhibitors have had in competition with all parts of the Continent, at the large exhibitions, where our stock have been placed in competition.

ELECTION OF OFFICERS.

The election of officers for 1901 resulted as follows:

President, A. W. Smith, Maple Lodge; vice-president, R. H. Harding, Thorndale; secretary treasurer, A. P. Westervelt, Toronto.

DIRECTORS.

Cotswolds—D. McCrae, Guelph. Leicesters—Jas. M. Gardhouse, Highfield.

Hampshires and Suffolks—John Kelly, Shakespeare.

Dorsets—John A. McGillivray, Uxbridge.

Southdowns—John Jackson, Abingdon.

Oxfords—Jas. Tolton, Walkerton.

Lincolns—John Gibson, Denfield.

Merinos—W. M. Smith, Fairfield Plains.

Shropshires—D. G. Hanmer, Mt. Vernon.

Ontario Agricultural College—Prof. G. E. Day, Guelph.

AUDITOR.

J. M. Duff, Guelph.

DELEGATES TO FAIR BOARDS.

Toronto Industrial—J. M. Gardhouse, Highfield; John Jackson, Abingdon.

Ottawa—F. W. Hodson, Ottawa. London—A. W. Smith, Maple Lodge; A. P. Westervelt, Toronto.

Provincial Winter Fair—A. W. Smith, Maple Lodge; John Jackson, Abingdon; Jas. Tolton, Walkerton.

JUDGES FOR PROVINCIAL WINTER FAIR.

Moved by Richard Gibson, seconded by J. M. Gardhouse: That the appointment of judges for the Provincial Winter Fair be left in the hands of the Winter Fair Board. Carried.

The following expert judges were then chosen:

EXPERT JUDGES.

Cotswolds.—John Rawlings, Ravenswood; Wm. Thompson, Uxbridge; Val. Ficht, Ortel; R. Honey, Brickley; Jas. Hume, Arkell; W. G. Laidlaw, Wilton Grove; Jos. Ward, Marsh Hill; J. D. Davidson, Belhaven; John Slater, Buttonville; Jas. Russell, Richmond Hill; Thos. Teasdale, Concord; J. C. Snell, London; F. Bonnycastle, Campbellford; John Park, Burgessville; J. Hardy Shore, Glanworth; Wm. Rae, Arkell; A. Johnston, Greenwood; A. J. Watson, Castlederg; Prof. Day, Guelph. *Judges nominated*—Toronto: R. Miller, Stouffville; T. Hardy Shore, Glanworth; Jas. Hume, Arkell. London: W. Thompson, Uxbridge; Wm. Rae, Arkell. Ottawa: W. G. Laidlaw, Wilton Grove; F. Bonnycastle, Campbellford. Chicago: Prof. Curtiss, Ames, Ia.

Leicesters.—Jas. Fennell, Bradford; H. B. Jeffs, Bond Head; A. R. Archer, Warwick; Geo. Whitelaw, Guelph; John Wells, Galt; Hardy Shore, Glanworth; Abraham Easton, Appieby; E. Wood, Appleby; Wm. Parkinson, Eramosa; R. Parkinson, Eramosa; John Orr, Galt; Wm. Watt, Salem; Wm. McIntosh, Burgoyne; Thos. Currelly, Fullarton; R. Eastwood, Mimico; John Kelly, Shakespeare; And. Thompson, Fergus; J. K. Campbell, Palmerston; J. C. Snell, London; G. B. Armstrong, Teeswater; John Gibson, Denfield; C. E. Wood, Freeman; Jos. Gaunt, St. Helens; J. M. Gardhouse, Highfield; And. Whitelaw, Guelph; William Whitelaw, Guelph; R. C. Martin, Marysville; Alex. Smith, Maple Lodge; Alex. Waldie, Acton; Walter Nichol, Plattsville; H. G. Arnold, Maidstone; Prof. Craig, Ames, Ia.; John Marshall, Cass City, Mich.; J. W. Murphy, Cass City, Mich.; Prof. Curtiss, Ames,

Ia.; D. C. Graham, Cameron, Ill.; Geo. Penhale, Exeter; Jas. Snell, Clinton; John Wright, Chesley; Prof. Day, Guelph; M. Kennedy, Northwood; D. Lillico, Ayr. *Judges nominated*—Toronto: William Parkinson, Eramosa; Jas. Fennell, Reserve. London: John Wright, Chesley; J. B. Jeffs, Reserve. Ottawa: John Orr, Galt; Brantford: W. Whitelaw, Guelph.

Dorsets.—Jas. Kelly, Shakespeare; Chas. Fairbairn, Bobcaygeon; Robert Miller, Pickering; J. C. Snell, London; J. M. Gardhouse, Highfield; Jas. Johnston, Trafalgar; John Campbell, Vernon; John Jackson, Abingdon; J. G. Hanmer, Mt. Vernon; Richard Gibson, Delaware; W. H. Beattie, Wilton Grove; Prof. Curtiss, Ames, Ia.; Thos. W. Hector, Springfield-on-the-Credit; G. P. Everett, Mount Vernon; Mortimer Levering, Lafayette, Ind.; A. Danks, Allamuchy, N.J.; Prof. Craig, Ames, Ia.; Jas. Tolton, Walkerton; H. N. Gibson, Delaware; G. McKerrrow, Sussex, Wis.; Henry Arkell, Teeswater; Henry Arkell, Arkell; E. O. Denton, Somerset, N.Y.; Herbert Hamner, Burford; R. Bailey, Union.

Southdowns.—John Miller, Markham; H. N. Gibson, Delaware; John Jackson, Abingdon; T. C. Douglas, Galt; Henry Arkell, Teeswater; W. H. Beattie, Wilton Grove; A. Simenton, Blackheath; Wm. Telfer, Paris; J. G. Hanmer, Mt. Vernon; Jas. Smith, Mt. Vernon; H. B. Jeffs, Bond Head; Jas. Scott, Aberfoyle; Geo. McKerrrow, Sussex, Wis.; Prof. Curtiss, Ames, Ia.; Prof. J. A. Craig, Ames, Ia.; J. C. Duncan, Lewiston, N.Y.

Oxfords.—Smith Evans, Gourcock; Jas. Tolton, Walkerton; R. J. Hine, Dutton; Kenneth Finlayson, Campbellton; Henry Arkell, Arkell; William Dickson, Mildmay; Peter Arkell, Teeswater; John Harcourt, St. Ann's; J. H. Jull, Mount Vernon; W. H. Arkell, Teeswater; John E. Cousins, Harriston; Arch. McKenzler Corwhin; R. E. Birdsall, Birdsall; Geo. McKerrrow, Sussex, Wis.; W. A. Shafer, Middleton, Ohio; J. V. Cooper, Pictou; Wm. Newman, Cherry Valley; Wm. Arkell, Teeswater; Jas. L. Tolton, Walkerton; L. Parkinson, Greenock; A. E. Hlott, Pond Mills; D. Brown, Iona; H. N. Gibson, Delaware; W. Lee, Simcoe; Prof. Craig and Prof. Curtiss, Ames, Ia. *Judges nominated*—Toronto: Jas. Tolton, Walkerton; Henry Arkell, Arkell; London; W. H. Arkell, Teeswater; J. L. Tolton, Walkerton.

Hampshires and Suffolks.—R. Gibson, Delaware, Ont.; H. Arkell, Arkell; Prof. J. A. Craig, Ames, Ia.; Ira Hiller, Thoonton, Mich.; W. H. Beattie, Wilton Grove; Jas. Bowman, Guelph; Prof. Kennedy, Columbus, Ohio, U.S.; W. R. Bow-

man, Mount Forest; John Kelly, Shakespeare.

Lincolns.—L. Parkinson, Eramosa; J. T. Gibson, Denfield; W. Oliver, Avon Bank; T. E. Robson, Ilderton; G. Walker, Ulderton; John Geary, J. C. Snell, London; R. W. Stevens, Lambeth; John Mitchell, Glencoe; John White, Eramosa; A. W. Smith, Maple Lodge; Geo. Whitelaw, Guelph; Hardy Shore, White Oak; J. H. Patrick, Ilderton; Jas. Petty, Hensall; J. M. Gardhouse, Highfield; Prof. Craig, Ames, Ia.

Shropshires.—R. Gibson, Delaware; G. P. Everett, Mt. Vernon; J. Conworth, Paris; W. H. Beattie, Wilton Grove; A. Brown, Picton; R. Miller, Stouffville; J. Hanmer, Burford; J. Campbell, Woodville; D. G. Hanmer, Burford; M. Levering, Lafayette, Ind.; A. Elliott, Galt; J. Dickin, Milton West; J. S. Thompson, Cas's City, Ind.; Geo. Allen, Allerton, Ill.; W. G. Pettit, Freeman; D. J. Campbell, Woodville; G. Phin, Hespeler; Chas. Calder Brocklin; H. N. Gibson, Delaware; Geo. Hindmarsh, Ailsa Craig; C. W. Gurney, Paris; W. E. Wright, Glanworth; J. Miller, Brougham; H. Hanmer, Burford; Prof. Curtiss, Ames, Ia.; J. C. Duncan, Lewiston, N.Y.; G. McKerrrow, Sussex, Wis.; Prof. Day, Guelph; S. Hagar, Plantagenet; I. S. Barnett, Rockland; Geo. L. T. Ifer, Paris. *Judges Nominated*—Toronto: Geo. Allen, Allerton, Ill.; Geo. Hindmarsh, Ailsa Craig; reserve, W. H. Beattie, Wilton Grove; London: J. C. Duncan, Lewiston, N.Y.; reserve, Geo. Phin, Hespeler; Ottawa: R. Gibson, Delaware; reserve, A. Elliott, Galt. Provincial Winter Fair, Geo. McKerrrow, Sussex, Wis.; reserve, Prof. Curtiss, Ames, Ia.

Merinos.—Rock Bailey, Union; Andrew Terrell, Wooler; G. P. Everett, Mount Vernon; W. H. Beattie, Wilton Grove; W. M. Smith, Scotland; R. Shaw, Glanford Station; J. G. Hanmer, Mount Vernon; Geo. McKerrrow, Sussex, Wis.

NEW BUSINESS.

Moved by John Campbell, seconded by J. A. McGillivray: That this association request Fair Boards to strike out the section in prize lists in which prizes are offered for ewes two years and over, substituting therefor a prize for pen of three shearing ewes, bred by exhibitor, and that ewes shall be shown singly instead of in pairs. Also that the prizes offered for aged rams shall be confined to those under three years old.

This resolution was taken up clause by clause and passed on as follows:

On motion of John Jackson, seconded by R. Gibson, it was resolved: That it is the opinion of this meeting that aged ewes be

struck out and either shearing ewes or lambs substituted.

It was also resolved that ewes be shown singly instead of in pairs.

PAN-AMERICAN.

Mr. F. W. Hodson, Dominion Commissioner of Live Stock, stated that the Dominion Government would pay for the transportation and maintenance of live stock going to the Pan-American Exposition; and they would also give free transportation to two men for each carload of stock.

R. H. Harding moved, seconded by John Kelly, That this arrangement would be satisfactory to the Sheep Breeders' Association. Carried.

A report was received from the committee, appointed at the last meeting, in regard to dogs killing sheep. It was referred to a committee composed of the following gentlemen: John A. McGillivray, Uxbridge; D. G. Hanmer, Mt. Vernon; John Jackson, Abingdon; J. C. Snell, London; Richard Gibson, Delaware.

On motion of D. G. Hanmer, seconded by John Jackson, it was resolved: That the thanks of this association be tendered to our able and energetic secretary for the excellent manner in which he has conducted the affairs of the association during the past year. The entire oversight of the building and equipment of the new Provincial Fair building at Guelph has been undertaken and carried out successfully by him; and we wish in this manner to indicate to Mr. Westervelt our appreciation of his untiring efforts in our behalf.

We also desire to bear testimony to the splendid service rendered to the association by Mr. F. W. Hodson, who, in his capacity of Commissioner of Live Stock for the Dominion, has on all occasions lent his experience, his time and his untiring energies to the work of our association. Carried.

Moved by J. A. McGillivray, seconded by D. G. Hanmer: That a copy of the above resolution be sent to the Hon. John Dryden, Minister of Agriculture for the province, and one to the Hon. Sydney Fisher, Dominion Minister of Agriculture. Carried.

J. A. McGillivray moved, seconded by Jas. M. Gardhouse: That the sum of \$50 be granted by this association to assist in paying the wages of a man taking charge of the live stock cars going to the West. Carried.

Mr. Hodson asked for an approximate number of sheep likely to be sent from Ontario to the Pan-American Exposition. The representatives of the different breeds informed him of about the number of the respective breeds that would be sent, and on motion of Richard Gibson, seconded by D. G. Han-

mer, it was resolved: That the matter be left in the hands of the Live Stock Commissioner.

Moved by Richard Gibson, seconded by D. H. Hanmer: That in the opinion of this meeting it is advisable to have the annual meeting held in Toronto some time in February, if possible, in conjunction with the other live stock meetings. Carried.

Meeting adjourned.

FARM HELP EXCHANGE

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

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

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

Help Wanted.

Boy wanted on a farm near Carleton Place. No. 691. b

Good man wanted on a farm on a yearly engagement. No. 692. b

Good man wanted on a farm where live stock are kept. No. 693. b

Boy, or man, wanted by the year to work on a farm of 150 acres, tend cattle in the winter and help milk. State wages wanted. No. 694. b

Single man wanted by the year. Must be temperate and used to all kinds of farm work. Good wages to the right man. No. 695. b

Good single man wanted by the year, on a 100-acre farm, for general farm work. Wages, \$150 a year with board. No. 696. b

Wanted, a man to do general farm work in Manitoba. Must be gentle with stock and not use tobacco or intoxicants. No. 697. b

Boy wanted on a farm. Must be sober and steady. Will engage for a year. No. 698. b

Man wanted by the year. Must be strictly honest and kind with stock. Would have to milk. No. 699. b

Wanted, stout boy of steady habits, 16 to 18 years of age, willing to do general farm work. Must be a good milker. State age, wages wanted, and give good references. Work to begin March or April 1 and last till the end of October. Address Robert Easton, Box 27, Paris, Ont. b

Boy wanted on a farm by the year for general farm work. Good wages given. No. 700. b

General farm hand, married or single, wanted by the year. Must understand the care of stock and be a good plowman. Duties to commence April 1. Nice house and garden attached. No. 701. b

Man and boy wanted for general farm work; also girl to help in the house. No. 702. b

Man capable of doing all kinds of farm work wanted immediately on a 90 acre farm, where live stock, principally sheep, are kept. No. 703. b

Man and wife wanted. Man must be strictly temperate, honest and trustworthy, understanding the care of stock and general farm work; wife capable of managing the dairy and poultry. Or would let the farm on shares, furnishing everything. Also young, unmarried man wanted for general farm work. Must be able to care for stock and milk well. No. 704. b

Wanted a single man, Scotchman or Canadian preferred, who understands general farm work, the care of cows, and can milk. Must be temperate. Would engage at once. No. 705. b

Two men wanted for general farm work in Manitoba. No. 706 b

Wanted, immediately, man and wife for farm in Manitoba; also girl to take charge of house. No family. Send references. Also good, strong boy. No. 707. b

Single man, between 40 and 50 years old, required on a farm of 100 acres near Sutton West. Must be able to milk and plough well, and be sober. Member of the Church of England preferred. Will engage for 7 or 8 months, or by the year. To start March 1. Good home. No. 708. b

Two young men wanted on a farm for 8 months, or by the year. Must have a knowledge of general farm work, be steady, and have no bad habits. To start April 1. Apply to A. B. Smith, Moosomin, Assa. b

Wanted, a married man to work a small farm in the heart of a lumbering county in New Brunswick, 10 miles from the nearest village. Principal occupation will be to watch land in case of fire, and make himself generally useful in winter. Could employ 2 sons if willing to work. Good camp and hovels on farm. Yearly engagement. No. 709 b

First class farm hand, married, wanted; wife to help with the milking. Good wages, comfortable house, and good garden to a suitable man. Also wanted, man and wife, without family, wife to do house work in a small family, and man to take care of cows. Give references and wages asked. No. 710. b

Herdsmen wanted for a dairy

herd. Must be a first-class feeder, good milker, and look well after stock. No. 711. b

Capable man, good horseman, wanted to travel with a stud horse in Manitoba. Must be able and willing to do general farm work besides, and look after stock when not otherwise engaged. Reasonable wages and good home. No. 712. b

Wanted, on or about March 1, two or three good men, who understand all branches of farm work and have no bad habits. Farm is in British Columbia. Wages, \$25 a month and board for three months and \$20 per month during the winter. No. 713. b

Married man required for general farming and dairying. Permanent employment to the right man, who must be sober, industrious and a good milker. Milk is shipped to Toronto. House, garden, etc., free. No. 714. b

Wanted, reliable married man as a general farm hand on a fruit farm, man with no family, unless they are grown up. Wife should be a good cook, and willing to board extra help, if necessary. References required. Also position open for a couple of young men. No. 715. b

Domestic Help Wanted.

Housekeeper wanted, to take charge March 1 or April 1, in family of one, with a farm hand in summer. Good wages to a suitable person. No. 716. b

Housekeeper required, middle-aged woman preferred, must be competent, and capable of taking care of children. Give references. No. 717. b

Competent domestic wanted in a family of two adults and two children in Central New York State, where one farm hand is boarded and lodged. Should be between 20 and 45 years old, of good health and character, kind and honorable, able to cook and help in the washing and ironing. Wages, \$12 a month. No. 718. b

Situations Wanted.

Place as farm manager wanted by a young man, unmarried, with a mother and sister; would prefer to be near Toronto. No. 492. b

Sober, steady, young man wants a place on a farm. Has had good experience in farming. No. 493. b

Wanted, situation by a man who has had practical experience in handling poultry for eggs and market, and in the use of incubators and brooders. Is also a good, reliable man to take charge of a dairy. Can milk and make butter and run cream separator. Would engage with or without board or house supplied. Uses neither liquor nor tobacco. State wages given. No. 494. b

Man born and bred on a farm, with good references, wants a place. wages asked \$200, house, garden and keep for a cow. No. 495. b

Place as foreman wanted by the son of a large farmer in Scotland, who has had a practical training in all branches of farming and care of live stock. No. 496. b

Cheesemaker and buttermaker, with three years' experience, hold a first-class certificate from the Western Dairy School at Strathroy, is open to engagement. Good references. No. 497. b

Permanent position by the year wanted in a creamery or on a dairy farm by a competent man. No. 498. b

Young man, 21 years old, who has always lived on a farm and is used to all kinds of farm work, and is an abstainer from liquor and tobacco, wants a place. Good references. No. 499. b

Situation wanted as working foreman of a farm in Manitoba. Will furnish references from either Ontario or Manitoba. Is married. No family. No. 500. b

Married man, with two children, wants a place as working foreman on a Manitoba farm. Is at liberty to engage at once. No. 501. b

Domestic Situation Wanted.

Position as housekeeper wanted by woman with one little boy five years old. Has had good experience in the care and working of butter, and is honest and trustworthy. Good references. No. 502. b

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

The chief island in the group of three in the channel is the isle of Jersey, but little larger than the average New England township. It has a population of 60,000, the value of the land is over \$700 per acre, and the land rents for about \$100 per acre per year. Thirty acres is a large farm. About six acres is the average size of the farms. The land is very fertile, being enriched by an abundance of sea-weed. The average temperature is 60 degrees. Vegetation is luxuriant. The chief interest to us is that the island is the home of the Jersey cow, the great butter cow of the world. The Jersey cow at home is never turned on pasture, but is always tethered, because the island has no permanent pastures. The Jersey standard of butter production on the island is two pounds per day for a cow. These cows are valued at about \$250 each. The highest price ever paid for a cow on the island was \$5,000, and this by an American.

The Farm Home

To the Loser.

So you've lost the race, lad?
Ran it clean and fast?
Beaten at the tape, lad?
Rough? Yes, but it is past.
Never mind the losing,
Think of how you ran,
Smile and shut your teeth, lad—
Take it like a man!

Not the winning counts, lad,
But the winning fair;
Not the losing shames, lad—
But the weak despair;
So, when failure stuns you,
Don't forget your plan—
Smile and shut your teeth, lad—
Take it like a man!

Diamonds turn to paste, lad—
Night succeeds to morn,
Where you'd pluck a rose, lad,
Oft you grasp a thorn!
Time will heal the bleeding—
Life is but a span;
Smile and shut your teeth, lad—
Take it like a man!

Then when sunset comes, lad,
When your fighting's through,
And the Silent Guest, lad,
Fills your cup for you,
Shrink not—grasp it boldly—
End as you began,
Smile and close your eyes, lad,
And take it like a man.

—C. F. Lester, in Success.

Studies in Nature

While reading Mr. C. W. Nash's "Bird Notes" I wondered why more of the boys and girls, young and old, on farms spend so little time in Nature Studies. What a world of life and beauty is all around us, and yet how comparatively few of us take the slightest interest in the study of nature, whether of insect, bird or plant life. It is true we know the robin, and, perhaps, are pleased to see him on his return from the sunny south, but we know so little about his habits that we deliberately shoot him because he steals cherries. We never stop to think that we can well afford to present him with all the fruit he can eat in the two or three weeks of the cherry season, nor consider that his appetite may be equally large during all the remaining weeks of summer and that he must eat something besides cherries. Would it not be a good plan, as the spring approaches, for us to forget for a time our everlasting house work and get away to the fields and woods and see if we, too, cannot learn something of the birds. We can take the boys and girls with us. If we cannot possibly get away from the kitchen on week days, it would be no desecration to spend some Sundays in the woods. If I were allowed to preach sermons I would say that: We would show our gratitude to the Creator much more, possibly, by going out and enjoying the beauties He has scattered so plentifully around us, and by learning to know and love His creatures, than we do by going to some man-made church to listen to the very inferior music—

is not the best of it inferior to the bird voices? and to listen to an inferior sermon. Can the best sermon compare with the teachings of Nature, the insects, the flowers, the bird preachers. If we learned to know even a little of these things it would help to drive out some of the cruelty and selfishness, to say nothing of conceit, from our natures. Man is sometimes given to imagining himself as the only part of creation worth paying any attention to. He takes an interest in domestic animals only because through them he gets his food and clothing, but of the worlds of insects and birds he knows nothing, and cares less. Until through his indifference he finds that many of his best friends are being destroyed and his enemies are increasing surprisingly, and consequently his food supply is threatened. Then, and then only, does he awaken to the fact that he is not the only creature to be considered.

In spite of the fact that we have ornithological, entomological, geological, and botanical societies, and probably an abundance of literature on these subjects, I believe I do not exaggerate when I say that the average farmer—his includes men, women, boys, and girls on the farms—does not know by sight—to say nothing of the life history of—fifty birds, fifty insects, fifty wild flowers, and he knows much less about stones, etc. He may be well up in history, geography, politics, and religion, even though he forgets to "consider the lilies of the field."

M. E. GRAHAM.

Hints by May Manton.

Men's Outing Shirt. No. 3746.

The comfortable, well-fitting outing or negligee shirt is a garment that has become essential to every man's wardrobe. The excellent model illustrated combines all the latest features and can be relied upon as absolutely up-to-date. As shown, it is made of Madras in stripes of grey on white, but chevot, percale are also correct, and wash silks, silk striped flannels and Scotch flannels are much liked for genuine hard service.

The shirt is cut with a shallow, pointed yoke at the back, below which it falls with slight fulness. The front fits smoothly, the opening being finished with an applied box plait, which is extended below the waist line to give a shirt waist effect when worn without a waistcoat. On the left side is placed a patch pocket that is finished with stitched edges. The sleeves are in regulation shirt style, finished with slightly rounded cuffs. The neck can be completed with a soft, rolling collar, or a neckband, to which separate collars may be attached with studs as preferred.

To cut this shirt for a man of medium size, $5\frac{1}{2}$ yards of material 21

inches wide, $4\frac{3}{8}$ yards 27 inches wide



3745 Men's Outing Shirt,
34 to 44 in. breast.

or $3\frac{3}{8}$ yards 32 inches wide, will be required.

The pattern No. 3746 is cut in sizes for a 34, 36, 38, 40, 42, and 44 inch breast measure.

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

Some New Salads.

Scallop and Tomato Salad.—Clean one pint scallops. Add juice of one lemon, cover and let stand one hour. Drain, dry between towels and season with salt and pepper. Dip in crumbs, egg and crumbs and fry in deep fat. Cool, marinate with French dressing and serve with slices of tomato.

French Dressing.—Mix one teaspoon fine chopped shallot, three-fourth teaspoon salt, one-eight teaspoonful paprika, two tablespoons lemon juice and four tablespoons olive oil.

Milk Tickets

EVERY PATRON OF
EVERY FACTORY

Should insist on receiving a monthly statement of the milk delivered from his farm.

Our Ideal Milk Ticket is used by all the best factories. 25c. a hundred, \$2.00 a thousand.

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FARMING WORLD

Confederation Life Building,
Toronto

Tomato Mayonnaise.—Mix one-half teaspoonful each of mustard, salt and powdered sugar, and a few grains cayenne. Add two egg yolks and one and one-half teaspoons vinegar. Add gradually one cup olive oil, and as mixture thickens dilute with lemon juice and vinegar, using one tablespoon each. Add enough tomato catsup to color.

Corn Salad.—Drain one can corn, marinate with a French dressing seasoned with onion juice and mustard, and arrange on a bed of green.

Fruit Salad.—Arrange tangerines cut in thin slices crosswise, prunes cooked with wine, Malaga grapes skinned and seeded, and branded peaches in a glass dish. Pour over a wine dressing and serve very cold.

Wine Dressing.—Mix one-half cup sugar, one-eighth cup sherry wine and two tablespoons Madeira.

French dressing should never be put on the greens until the last moment before serving. Oranges should never be cut too long before use, as they will have a bitter flavor. Instead of cut-the-peeled orange straight across, as is customary, it is better to avoid all tough membranes by slitting the back of each section and scooping the pulp out. Celery that is used in salads should first be cut into cubes.

Cucumbers when used in a salad are also cubed. Very much depends on these cubes.

Its Component Parts.

Round the chopping bowl they go,
And into it deftly throw
Beefsteak from the evening meal,
Which defied the eager steel
Of the hungry boarders, who
Vow'd 'twas all too tough to chew ;
Turkey from the New Year's spread,
Cracker crumbs and crusts of bread,
Cold potatoes, fried and boiled,
Scraps of ham that might have spoiled.
Mix them up and chop them small,
As into the bowl they fall.
Now some onions quickly slice,
Add the oatmeal and the rice,
Part of Monday's chicken pie,
Mutton chop, a little dry,
Seems that's nearly all the stuff,
But, then, I guess it makes enough.
Pepper, salt and water add,
And here's some hash that won't be bad,
Double, double, toil and trouble,
Burner blaze and skillet bubble !
—Chicago Record.

Novel Use for Milk.

In the near future we are destined to wear buttons, comb our hair, thump piano keys, and shout at telephone receivers made from skim-milk. Before being converted into the above-named articles, however, the skim-milk undergoes a secret process by which lactroid is formed.

Lactroid in its pure condition is a translucent, hard substance, somewhat resembling ivory in appearance, but is sufficiently plastic under certain conditions to allow of its being molded under pressure. By mixing with various kinds of pigments lactroid can be made in any shade desired. It is also practically non-inflammable, is remarkably dense, tough and strong, and is not so easily injured by heat as

hard rubber, or affected by various solvents which attack celluloid, rubber, etc.

Our representative recently visited a creamery at Garden Prairie, Ill., where he received interesting information concerning lactroid and its uses. In one part of the building his attention was drawn to a large pile of stuff not unlike in appearance to ground bone, but of a more transparent and glossy appearance. This was the prepared or dried curd. Before being ready for conversion into suitable material for the making of buttons, etc., this curd is shipped to another factory in Vermont, where it undergoes the toughening and coloring process. There appears to be as yet no limit in sight as to what uses it can be put.—*Dairy and Creamery.*

Bean Porridge.

The old-fashioned dish, so common in the country in our early days, is just as wholesome and desirable now, during the cold weather, and might well take the place of many of the sweets and pastries which are offered the school children at luncheon or supper. This is an old recipe modernized. It should be made or begun the day before it is to be served. Select a piece of beef, about four pounds, from the shank or aitch bone, having a little fat and lean well mixed, with gelatinous tendons and joints and some bone. Wipe clean, cut in small portions, remove all the crumbly bones, then put it on to boil in four quarts of cold water. Bring quickly to the boil, then draw the kettle back where the water will merely bubble, and let it cook till the meat is free from the bones and the gristly portions are tender. Remove the best portions of lean meat as soon as tender and reserve these for some other dish, like pressed meat, hash, etc. Strain the liquor and set it

away to cool till the next day. Pick over and soak over night one pint of common white beans. In the morning put them on in fresh water and let them cook slowly on the back of the stove till the skins crack. Add a pinch of soda, then pour off the water (but not down the sink) and rinse in cold water. Remove the fat from the meat liquor, and put the broth on to boil, add the beans and more water, enough to make about four quarts in all. Wet half a cup of cornmeal in cold water and when the beans have cooked one hour stir in the meal, and when well mixed and thick like a thickened soup draw the kettle back and let it simmer three or four hours. Season to taste with salt and pepper. This may be made with corned beef liquor.—*American Kitchen Magazine.*

Love's Alphabet.

A the Art of man and maid,
B the Blush, so fair, displayed,
C the Challenge in the eyes,
D the Dart that quick replies,
E—but why the rest recall?
The rest is E-Z: that is all.
—Edwin L. Sabin, in the Saturday Evening Post.

Hanging a Picture.

By hanging pictures low the apparent height of the room is increased. In halls hang strong photographs, engravings and drawings in black and white.

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Picture cords should be as near the color of the wall upon which they are put as possible. The centre of the picture, as a rule, should not be much above the level of the eye.

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Business Notes.

Sheep and hogs, page 631.

Page Wire Fence on page 635.

Dr. Hess Stock Foods, page 631.

Ayrshires and Jerseys on page 631.

Shortborns sales on pages 630 and 631.

Poultry and incubators. See page 629.

Fleming Lump Jaw Cure, on page 628.

W. Ewing, Montreal, for seed catalogue. Page 606.

Great sale of stallions at Grand's Repository. Advt. on front cover.

Catalogues mailed free for Ripley's Cookers. See advt. on page 631.

Secure a copy of the Ra dford Ideal Homes announced on page 635.

Atlantic Refining Co. on page 606. This paint is giving good satisfaction.

For big strawberry plants write N. E. Mallory, Blenheim. Advt. on 606.

Call and see Joliette Grinders at 108 Front street east. Advt. on page 635.

Tolton Bros. motto is a good one. Not how cheap, but how good. See page 606.

Agents have a good thing in selling steam cookers, See U. S. Specialty Co., page 606.

Rolling Bearing Steel Wind Mills. See Gooli, Shapley & Muir, advt. on page 606.

F. B. Warren offers a rare chance for a man and family to go to Manitoba on page 631.

Winona Nursery has a full line of fruit and ornamental trees for spring. See page 606.

Champion Evaporator for maple syrup and sugar. Write Grimm Co., Mont. Cal. See page 606.

Simms' 20th Century Seed Catalogue presents a summer appearance. Their announcement on front cover.

Toronto Poultry Co. are giving sound advice to farmers to improve their poultry stock. Advt. on front cover.

Combault's Caustic Balsam is certainly a safe and speedy cure. Write for particulars as announced on page 628.

H. D. Smith, Compton, Que., is to sell Sandra, Hereford cow, sired by Mark Haana, at Ottawa. Sale March 6. See page 632.

Harvesting machine agents should get in a line of M. Moody's goods. Freight is paid by Moody. See their beautiful binder on page 635.

Cream separators are a necessity on the farm. Several good machines now in Canada to choose from The Vermont Co. announcement on page 633.

QUESTIONS AND ANSWERS

SWINE.

A subscriber at Dorland, Ont., asks what is the effect of lime on heavy clay soil? How should it be applied and when? What is its effects on different crops?

The action of lime on any soil is largely mechanical. It has however, a chemical action which in some cases is important in the decomposition of minerals and particularly in the disintegration of refractory silicates. It is also supposed to act upon the phosphates in the soil, converting them into phosphates of lime and making them more available as plant food. The effect of lime on heavy clay soils is to make them more friable and easily cultivated and putting them in a condition so that water may pass through more fully. This will make clay soils less susceptible to extremes of dry or wet weather and make it a good home for the roots of the plants. The action of lime on sandy soils is supposed to be the reverse of that on clay soils, though this is not altogether clear.

The quantity to be applied to any soil varies considerably as to the condition of the soil. It is perhaps better to apply lime in small quantities and often than a large amount at one time.

The tendency of lime is downward in the soil, so that it should always be applied at the surface and never plowed under. Lime should be incorporated in the soil when it is in an active or quick state and before it has had a chance to lose any of its active principles. The best way is to slake the lime with water and put it on the soil immediately. Do not let it air slake, as a great deal of its active power will be lost. Quick-lime can be applied by a grain drill. There are lime spreaders used in the United States for this purpose.

The fall is considered a good time to apply lime, though it may be applied at any season. The more general practice to apply the lime is in the spring immediately before sowing.

There is little difference in the effect lime has on the different cereal crops. The use is largely to stiffen instead of being incorporated in it in the form of silicates, etc. Lime is believed to be very effective in destroying microscopic insects in the soil injurious to plant life. Some modern authorities doubt this, yet it is generally believed by practical men to be the case.

Canadian Ayrshire Breeders.

The third annual meeting of the Canadian Ayrshire Breeders' Association was held in the Monument National Building, Montreal, on Feb. 15, 1901. Mr. A. Kains, Byron, in the chair. Among those present were Hon. Senator Owens, Montreal; F. W. Hodson, Dominion live stock commissioner, Ottawa; T. Lockie Wilson, Alexandria; J. C. Smith, Hintonburg, Ont.; A. Clark, Brimston's Corners Ont.; J. W. Nimmo, Toronto; A. Wood, Vankleek Hill, Ont.; A. Hume, Burnbrae, Ont.; R. Brooks, Brantford, Ont.; W. W. Ballantyne, Stratford, Ont.; John Morrin, Belle Riviere; T. D. McCallum, Danville, Que.; R. Hunter, Maxville, Ont.; Thos. Irving, North Georgetown; Jas. Bode. Ste. Anne de Bellevue, and Henry Wade, Toronto, secretary-treasurer, and J. P. L. Berube, eastern secretary.

The secretary-treasurer's report stated that 1,480 cattle had been recorded during the past year, against 1,264 the previous year, an increase of 226. The total number of members of the association is 190, an increase of fifty over 1898. Vol. 10 of the Herd Book is now in the hands of the printer, entries closing March 1.

Continuing, the report stated:

"I am very pleased to state that the Ross cow pedigrees, which affected the bull Bonnie Scotland, and several hundred others, has been accepted, allowing a great number of the best animals in Quebec, New Brunswick, Nova Scotia, some in Ontario and Manitoba, to be passed, so that the future of this association will be much brighter. They have also been accepted by the American Association.

"It is pleasing to be able to state that the sales of Ayrshire cattle have greatly increased during the past year. In the last half of the nineteenth century the Ayrshire cattle trade has advanced steadily along with the butter and cheese industries; and there is nothing to prevent a continuance of this advance, even in the twentieth century. I would like to see a large representation of these fine cattle at the Pan-American Exposition, to take place this coming summer. But unless we send good ones it would be better to stay at home. We have the cattle, and I have been informed that the Dominion Government will pay the transport, and no doubt the local Government will do something also. We were victorious last time at Chicago, and should be at Buffalo also. The show of cattle takes place from September 9 to 21, just after the Toronto Show. The en-

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tries are to be closed on July 15, 1901."

The financial statement showed receipts of \$1,935, and expenditure of \$1,491.95, leaving a balance on hand of \$443.29. The assets of the association are \$1,585.29, with no liabilities.

OFFICERS ELECTED.

The election of officers resulted as follows:

President—W. F. Stephen, Trout River, Que.

First vice-president—F. W. Hodson, Ottawa.

Vice-presidents—Ontario, N. Dymont, Clappison's Corners; Quebec, Robert Ness, Howick; Manitoba, George Steel, Glenboro, Man.; Assiniboia, C. W. Peterson, Regina, Assa.; British Columbia, A. C. Wells, Chilliwack; P. E. Island, Hon. Mr. Rogers, Charlottetown; Nova Scotia, Fred. Black, Amherst; New Brunswick, M. N. Parlee, Sussex.

Directors—Ontario, W. Stewart, jr., Menie; W. W. Ballantyne, Stratford; A. Kains, Byron; R. S. Brooks, Brantford; J. C. Smith, Hintonburg; A. Hume, Menie; F. W. Hodson, Ottawa. Quebec—W. F. Stephen, Trout River; James Boden, Ste. Anne's; W. Wylie, Howick; Hon. Wm. Owens, Montreal; Nap. Lachapelle, St. Paul; R. Hunter, Maxville; R. Ness, jr., Howick.

Executive committee (Eastern Division)—Messrs. Hunter, Owens and Lachapelle.

Executive committee (Western Division)—Messrs. Stewart, Ballantyne and Smith.

Revising committee—Messrs. Hodson, Owens, Smith, Ness and Wade.

Eastern Secretary—J. P. L. Berube, Montreal.

Secretary-treasurer—Henry Wade, Toronto, Ont.

Delegates to Industrial Exhibition—W. W. Ballantyne and W. Stewart; Western Fair, A. Kains and R. S. Brooks; Ottawa, F. W. Hodson and Jos. Yuill; Sherbrooke, Que., T. D. McCallum and Robert Ness; Quebec, Nap. Lachapelle and D. Drummond.

It was moved by James Boden, seconded by John Morrin: "That the different fair boards appoint two judges to judge Ayrshire cattle. Judges recommended—Toronto Industrial, G. H. Muir, A. Kains, D. Drummond and T. D. McCallum; Ottawa Central, T. D. McCallum and D. Drummond; London Western, W. W. Ballantyne and William Stewart; Quebec Exhibition, Horace Lamarche and John Morrin; Sherbrooke, James Boden and A. Drummond; Kingston, John H. Douglas, Warkworth.

On motion it was resolved that Hon. Thomas Ballantyne, Jos. Yuill, and James McCormick, John Morrin, Jas. Drummond and Thomas Irving be made life members of the association in recognition of the valuable service they have rendered in promoting the Ayrshire breed of cattle.

A discussion took place as to the advisability of making each member of

the Canadian Ayrshire Breeders' Association a member of the Dominion Cattle Breeders' Association, resulting in the following motion:—

Hon. William Owens moved, seconded by W. W. Ballantyne: "That the Canadian Ayrshire Breeders' Association make each member, by virtue of his membership, a member of the Dominion Cattle Breeders' Association at a fee of 50 cents per member, and that two delegates be appointed from the Ayrshire Association to represent the Ayrshire interests on the Board of the Dominion Cattle Breeders' Association." Carried.

The delegates selected were W. W. Ballantyne and Dan. Drummond.

OBJECT TO TUBERCULOSIS.

Moved by Hon. Wm. Owens, seconded by R. Hunter: "That in the opinion of this association, the cattle breeding industry is seriously menaced by the tuberculin test, as applied to cattle purchased for importation or sold for export; that the test as now applied is misleading and of no real value. Therefore, we respectfully ask the honorable the Minister of Agriculture for the Dominion of Canada to discontinue the test so far as within his power." Carried.

On motion of J. Lockie Wilson, seconded by George H. Muir, it was resolved: "That we, the members of the Canadian Ayrshire Breeders' Association, in meeting assembled, express our regret that up to this date no action has been taken by the Government for the regulation of railway and ocean freight rates; that we especially urge that immediate action be taken by our representatives at Ottawa for the appointment of a permanent commission for the regulation of rates and the prevention of the great discrimination that now exists, and for the removal of the handicap now placed by the carriers on Canadian farmers' produce in granting lower rates for the larger and longer haul of our American competitors, who are thus placed in a better position than the farmers of Canada, in the markets of the world. Also, that a copy of this resolution be forwarded to the Dominion Government."

Moved by Alex. Hume, seconded by Wm. Stewart: "That we urge upon the different fair boards to hold their exhibitions one week later, as the time selected is too early for the exhibitors." Carried.

Canadian Fairs Association.

The Canadian Fairs Association met in Toronto on Wednesday and Thursday of last week. There was a good attendance of representatives from the various local and district fairs throughout the province, though there were not as many from the township fairs as we would like to see. Mr. J. T. Murphy of Simcoe, presided. One of the chief addresses of the convention was made by Mr. F. W. Hodson, Dominion Live Stock

Commissioner, Ottawa, who spoke strongly against some of the special attractions engaged for many of our larger fairs. He showed that in 1895 there were 96 district societies and 361 township, agricultural and horticultural societies receiving assistance from the Government, and pointed out that during the past 26 years these societies had done a great deal in improving the agriculture of Ontario by the introduction of pure-bred stock and improved variety of seeds, and by stimulating the farmers to the development of superior products of all kinds.

In referring to the objects of the district and township societies, he declared that all the clauses but one allowing an annual exhibition seemed to have been lost sight of, with the result that a network of small shows covers the entire country. Although the Act had been amended from time to time it is antiquated. He advocated an entire reorganization of these societies by uniting the institute and fair system under one board of directors in each district.

Mr. John Burns, of Whitby, read a paper on "Special Attractions at Exhibitions." Mr. Burns particularly emphasized the fact that if a fair or exhibition was conducted without special attractions, but on a purely agricultural basis, it would meet with a far greater success.

In a paper by Mr. D. H. Price, Aylmer, on "The Value of Special Attractions at Our Fall Fairs," almost the direct opposite view was expressed. He pointed out that fairs having speeding in the ring and attractions of a moral nature added greatly to their success.

Among others who addressed the meeting were C. C. James, Deputy Minister of Agriculture, Capt. McMaster and G. C. Creelman.

The following officers were elected: President, J. Thomas Murphy, Simcoe; first vice-president, John Burns, Whitby; second vice-president, W. B. Sanders, Stayner; secretary-treasurer, Alex. McFarlane, Otterville; assistant secretary and editor, Prof. Creelman, Toronto; Executive Committee, Messrs. James Mitchell, Goderich; J. W. Sheppard, Cayuga; George Robinson, Erin; S. McClure, Elder's Mills; D. A. Price, Aylmer; Wm. Laidlaw, Guelph; Frank Metcalf, Blyth; auditors, J. Y. Murdock, Jarvis; J. M. Gardhouse, Highfield. It was decided to hold the next annual meeting in Toronto.

Western Fair Association.

The thirty-third annual meeting of the Western Fair Association was held at London on February 20th. The receipts for the year, as shown by the secretary's report, were \$28,591.47, or \$6,050.57 less than last year, but the balance brought forward from 1898 was \$8,496.99, against \$2,631.50 in 1899, thus making the actual receipts in each year almost the same. The am-

ount expended in prizes this year and last was about the same. Assets have slightly increased, being now \$48,811.62; liabilities, nil. The directors are the same as last year, excepting that Mr. Geo. Taylor resigns and Mr. Geo. McCormick takes the position. Following is the full list of officers:—Lieut.-Col. W. M. Gartshore, president; J. W. Little and Allan Bogue, vice-presidents; D. Mackenzie, treasurer; John A. Nelles, secretary; directors elected by Fair Board, Lieut.-Col. W. M. Gartshore, Lieut.-Col. F. B. Leys, A. M. Smart, James H. Brown, J. S. Pearce, W. M. Spencer, Thomas A. Browne, W. J. Reid, Geo. McCormick, R. A. Carruthers, J. W. Little, R. Shaw-Wood; directors elected by the City Council of London, Mayor F. G. Rumball, Ald. James Malloch Ald. Richard Wray, Ald. W. H. Winnett, Ald. J. W. Bartlett, Ald. Henry Winder; directors elected by the East Middlesex Society, Allan Bogue, John Kennedy, Wm. Moore, C. E. Trebilcock, J. Laidlaw, George Scatcherd.

Good Roads Meeting.

At a Good Roads Convention, held in Ottawa a few days ago, the Hon. F. R. Latchford, Minister of Public Works for Ontario, made a most important declaration in regard to good roads. He said the Ontario Government had a million dollars of actual cash in the bank, and was prepared to grant financial aid to this amount towards the construction of good roads as soon as the municipalities had decided whether the County Councils or Township Councils should expend the money. The assistance to be granted by the Government would be of no practical good until the point had been settled, and the municipalities had settled upon a policy as to how the money could be best expended. Whether the municipalities should contribute a considerable sum themselves, in addition to the amount to be granted by the Government, was a question for them to consider. Several interesting and practical addresses were delivered during the day, among them being the following: "Relation of Good Roads to Modern Agriculture," Hon. Sydney Fisher; "Good Roads as a Factor in Modern Civilization," Prof. James Robertson; "A Macadamized Road in Russell County," W. C. Edwards, M.P.

The Tuberculin Test.

A deputation of cattle men holding opposite views on the tuberculosis test and other regulations affecting tuberculosis stock interviewed the Minister of Agriculture on Feb. 15, with a view to having made some regulation more acceptable to all. Mr. W. C. Edwards championed the present regulations requiring a rigid tuberculin test in quarantine of all imported cattle, while Mr. David McCrae, of Guelph, advocated the abolition of the test, not only in quarantine, but all over the country. Hon. John Dryden, Minister

of Agriculture for Ontario, was prevented from being present by the snow blockades, but he was coming to support Mr. McCrae. Hon. Sydney Fisher is not in favor of abolishing the test, but a compromise was agreed on, whereby changes in the method of administering the test will be made. It was agreed that legislation should be introduced abolishing the law that now prohibits selling the hides of tuberculosis stock. Scientists say there is no danger of contagion from the hides.

The San Jose Scale.

The Ontario Department of Agriculture is taking steps for the checking of the San Jose scale, and to that end, through a committee, will be in a position shortly to fill orders for crude petroleum and whale oil soap of a very good class for treating infested trees. Applications should be sent to Mr. George E. Fisher, Freeman, Chief Inspector. Mr. Fisher has just addressed a circular to the fruit-growers of Ontario, in which he speaks thus of the dangers now imminent from the San Jose scale:

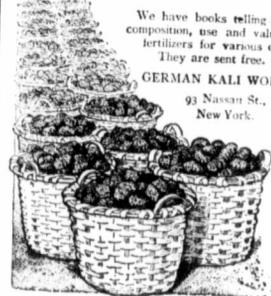
"During the past year the increase and spread of the San Jose scale in this province have been very great, and in sections which are generally infested, such as to cause considerable alarm. Many growers now realize it to be a very dangerous enemy to fruit trees, and one which should be vigorously fought. The rapid increase, quiet and far-reaching distribution, together with its habit of getting beyond the reach of remedies, make it exceedingly difficult to combat. Orchards in which only a small portion of the trees were marked during the inspection of 1899 now have the scale on every tree, and many trees that were then but slightly infested are encrusted. All orchards in such sections are more or less affected, and growers have seldom discovered the scale in them till they have found it on the fruit. Considerable quantities of badly-affected fruit were discarded as unmerchantable, the keeping quality being seriously impaired by a severe attack, and in some cases the fruit was not even gathered from badly infested trees."

Utilizing Natural Resources.

At a meeting of farmers, held at Otonabee, on Feb. 15, Mr. W. J. Thompson, B.S.A., gave some information on utilizing the natural resources of the soil that is interesting.

He spoke chiefly of principles in manuring, pointing out the methods of controlling the three important constituents in manure and in the soil for all crops—ammonia, potash and phosphate. Increasing the supply of ammonia, which was the most expensive element, when bought, depended on preventing stock manure from heating. This could be brought about by four methods—using land plaster, in the stable, keeping the

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manure under cover and well tramped, soaking well with water and drawing it out into the field, as fast as made, and spreading broadcast. In addition to these, ammonia supply can still further be secured by ploughing under legume crops, such as clover and peas. A crop of clover ploughed under when in blossom has been known to add as much as \$50 worth of ammonia per acre.

The second section of the discourse was in regard to the control of potash. Clay or clay loam soils are richest in potash. The greater part of the potash of stock manure is to be found in the liquid; therefore, it is important to prevent the manure from leeching. The straw produced on the farm contains nearly all the potash taken off by the crop. It is safe to conclude, therefore, for general farm purposes, particularly in Ontario, that the ammonia and potash supply could be economically kept up without any outside expense.

The third important constituent, phosphate, is that which enters into the composition of all grains, and seemed to be directly associated with getting best feeding qualities in grasses and clovers. This constituent has been largely sold off in grain. This fact, in itself, would account largely for the general failure in getting clover to grow when sown in connection with the grain crop. A ton of clover, moreover, is shown by latest investigation to require seven times more lime and phosphoric acid than 50 bushels of oats. If farmers could have followed up the method of even bringing back all the bran their grain could produce when sold off the farm, there would be no general necessity for the use of phosphate. In stock-raising, too, more phosphate would be taken off in a ton of beef than in a ton of wheat. If, therefore, the bones of the animals sold off the farm were brought back and ground up and applied to the land, the phosphate supply would still further be increased.

In addition to these three chemical materials it is important to introduce in the soil a large amount of vegetable matter. This could only be brought about with the aid of the straw in stock manure and the ploughing under of green crops. Farmers often overlook the practical principle of feeding the crop rather than the soil. It does not matter what kind of soil he has; to produce the same crop he has to follow out the same principles in manuring.

Horses for Great Britain.

A communication has been received by the Minister of Agriculture from the High Commissioner's office transmitting a letter received from Mr. King, Manager of the Horse Mart, Trafford Park, Manchester, of which the following is a copy:

"Your valuable letter of the 16th, which appeared in the Manchester *Guardian* of yesterday's date, prompts me to write you respecting the busi-

ness of Canadian horses, which I am convinced is capable of great development in this country. The reduced exports from Canada, as against increasing exports from the United States of America, proves that the industry is not thoroughly worked in Canada, where (or at least in some districts) there is an almost bewildering supply of horses in breeders' hands. The establishment of the above-mentioned business at Manchester has led me to correspond with many well-known men in the trade, but there appears to be considerable apathy in Canada about pushing export business, and the result is that America is stepping in and taking the large bulk of the business, to the loss of Canada. There is a splendid field at Manchester for a large horse trade with Canada, as the district is so densely populated and has such vast requirements for all kinds of horses. Of course, I do not presume to ask you for any personal influence on behalf of our individual business here (which is curiously the only one of its kind at present owing to past requirements having been obtained in or via other parts of the United Kingdom); at the same time you will observe there is a very powerful company behind the Manchester Horse Mart, with a capital sufficient to justify the attraction of large Canadian exports to Manchester, as soon as breeders on the other side can be woke up to the fact that there are extensive and regular requirements of Canadian horses in England and a good market for the same at Manchester. The Manchester Liners trade regularly between this port and Canada, and the accommodation on them for carrying live stock is very first-class. Please pardon my troubling you with this letter, which I have written on behalf of Canada and for the sake of Canadian farmers. If you suggest any way by which we can promote business I will gladly follow your lordship's counsel."

It has been suggested to Mr. King by the High Commissioner that he should consider the question of sending a representative to Canada for the purpose of bringing the advantages of the mart before interested parties in Canada.

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A Manayunk fish dealer advertises: "When looking for fresh lobsters don't forget me."

A Utah gentleman who was in New York recently invited a certain bright and charming young lady to go to the theatre with him. Her home is on the upper West side, in a neighborhood reached by either the Boulevard or the Amsterdam avenue cars. As they were leaving the young lady's home she remarked to her escort in the hearing of her dignified and somewhat astonished parents:

"We will take the Amstergosh avenue cars. My father won't let me say dam."—*Utica Observer*.

Poultry

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Rose Comb Black Minorcas: 1 cockerel, 3 pullets, \$5.00.
Rose Comb White Leghorns; 1 cockerel (scored 93 by L. G. Jarvis), 4 pullets, \$6.00.
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AND BROODERS

Are the best and cheapest you can buy. It will pay you to write for full particulars before placing your orders.

Address the Manufacturer,

J. E. MEYER,
KOSSUTH, ONT.

DES MOINES INCUBATOR CO.

The BEST and the CHEAPEST

95 PER CENT. hatches are often reported by those who use these Incubators. One reason for this record is absolute uniformity of temperature in egg chamber. Correct instructions for operating; has fire-proof lamp. A great mistake it would be to purchase an incubator or brooder without first getting a copy of our 148-page Catalogue. Send 6 cents for Illustrated Catalogue of Incubator, Brooder, Poultry and Poultry Supplies. The Poultry's Guide, New Edition, 15c.

O. ROLLAND, Sole Agent for the Dominion
4 St. Sulpice St., Montreal.

Farm for Sale

A rare chance for a man with family going to Manitoba. One section of A1 land, large buildings, first-class water and ready for crop.

Write for particulars to F. B. WARREN,
35 Front St. E., Toronto

Farm for Sale

150 Acres, a half-mile from Royalton; Churches, High School and station, a fine two-storey house, 15 rooms, extra well finished, 3 barns, never-failing running water at the house and barns, 2 good orchards—a fine locality. Address E. W. W., Royalton, Vt.

Our market reports are reliable and up-to-date. They are written specially for The Farming World and are of inestimable value to every farmer.

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Horses.

From a very early period a stud of Clydesdale horses has been maintained at Windsor. The numbers are few, but the quality has ever been select. The rigid allegiance to the northern breed through these years of surpassing prosperity in the fortunes of the rival Shire variety has been the cause of some pardonable surprise. It has been reasoned that the latter, not merely because of the higher values it commands, but also on account of the comparative proximity of the Royal farms to the headquarters of the breed, would have rendered a better account of itself in the financial returns of the holdings. The adherence to the Clydesdale breed, however, in common with the continuance of certain other methods which altered circumstances suggest, might have been advantageously displaced by others, is the result of a rule laid down forty years ago, and strictly enforced by Her Majesty, forbidding avoidable disturbance of the scheme drawn out by the Prince Consort. Whatever was the practice pursued or the breed kept in His Royal Highness's time it was by strict injunctions to remain, and it so comes about that a few Clydesdales, headed by the prize horse Britain—bred, if we mistake not, by the same Mr. R. Findlay who bred the noted Baron's Pride of the present day—having been introduced by Mr. Wilson in 1854, the Clydesdale breed has remained impregnated against the advance of the conquering Shire. Not a few prizes have been won at leading shows by the Windsor Clydesdales.

M. Wm. Riddick, Crookdale Hall, Aspartia, has sold the very useful stallion Life Member, 10080, to Messrs. Bowden & Macdonald, Exeter, Ontario. Life Member was bred by Mr. John Wallace, Skelton Pasture, Penrith, and is by Prince of Carruchan, out of a dam by Baron Scott.—*North British Agriculturist.*

A sale of horses was held on Feb. 6 by Messrs. Dixon and Wallace in the Horse Bazaar, Glasgow Cattle Market. There were 100 animals catalogued, consisting principally of vanners and a number of cobs and ponies. Van and draught horses met a good demand, and ponies were in fair request. Old sorts met a slow trade. Best vanners realized up to \$85; secondary, 10 to 20%; and inferior, down to 4%; best draught horses, to 40%; secondary, 12 to 18%; and inferior, down to 6%; cobs, £5 to £25; best ponies, 18%; and secondary and inferior, 3 to 5%.

The special sale of thoroughbreds consigned by Mr. N. Dymont, Barrie; Mr. Joseph Duggan, Toronto; F. M. Ware, New York; Major Dent, Malton, Eng., and others will take place on March 12, at Grand's Repository. The catalogues which may be had on application, include the following valuable stallions:—Imp. Sentinel, consigned by Major Dent, Malton, Eng.; Homecrest, imp. Courtown, imp. Superior, imp. Cannie Boy, Oceanic, and Foam, also a large number of mares and geldings. Individually and as a collection this is by far the best lot ever offered in Canada. The usual sale will be held on Tuesday of this week, when two carloads of sound young horses will be sold.

I. Devitt & Son, Freeman, Ont., write:—Our horses are wintering well this year. The stallion, Grandeur II., is in excellent form for this season, weighing about 2,200 lbs., with a good, clean set of limbs and extra good feet, and he knows how to handle them. He has proved himself a good breeder. The young horses are of the blocky type, have plenty of good, clean, hard bone, good feet, and good action if properly managed; will make prize winners. The brood mares are a good, even lot, and are in good breeding condition, besides being in foal to Grandeur II. and Lord Channing. Our stock have been carefully

bred with a view to uniformity of type and good strong, constitutions, and in tracing their pedigrees will be found such well-known sires as Boydston Bay, Grandeur, Darnley, McGregor, Good Hope, and many others. Our shorthorns are doing well this winter.

Cattle.

Rockwood, Ont., is in the centre of an extensive beef raising community and also an extensive turnip raising section as well, as was seen by the great number of farmers who were teaming them and loading them on cars to be shipped to the United States where they are manufactured into jam. We hear much about pure food conventions and the adulteration of food, but if the jam eaters of the world get nothing worse than good sound, Canadian grown swede turnips they will do well. Turnips form practically the whole of the succulent food given to cattle in this section as the silo is practically unknown, in fact some farmers are not sure that ensilage will make good cattle food. The turnips sell for 10c. per bushel, and as this section is noted for its great turnip crop they are considered a paying crop at this price.

Arriving at Rockwood, we rode out with Mr. F. H. Waters, a progressive young farmer, who lives about a mile and a half out of Rockwood. Mr. Waters is following general mixed farming, and breeds Shorthorns and Cotswolds.

His rotation, and indeed the one generally followed in this section is peas on sod, oats, one or two crops according to the land, turnips, barley, and seeded down with timothy and clover, to be left for two years hay and one of pasture—where fall wheat can be grown it usually follows peas and then one crop of oats.

He has a small but select herd of Shorthorns, bred from stock obtained from Henry Arkell's well-known herd. He has two nice bulls to dispose of.

Across from Mr. Waters' is the farm of Mr. John Sockett. Here the system of farming is much the same. He also breeds Shorthorns and Cotswolds. Mr. Sockett has such confidence in the Provincial sale at Guelph, that he has entered four bulls. He still has four young bulls about eleven months old and a few heifers in calf to Statesman that he can spare. The foundation of his stock was laid by drafts from Arkell's importations, and later by selections from the principal herds of Ontario. The stock bull is Statesman, tracing back through Indian Statesman to Indian Chief imported. The flock of sheep consist of about forty registered Cotswolds and also some good ram lambs fit to head any herd.

On the next lot is the dairy farm of Mr. John Taylor, where he keeps about twenty-five dairy cows. He finds it hard to keep up the flow of milk and is thinking of building a silo. He is in the horse business also, for we noticed a couple of nice stallions on the farm.

On the opposite side of Rockwood about the same distance from town are the farms of the McNabbs and the Burnses where the descendants of the two original families hold nearly a thousand acres of choice land. Near here also is the birthplace of the great railway magnate, Jim Hill, who obtained his education in the Rockwood academy, and his first commercial training in a store in Rockwood.

John McNabb is one of the oldest Shorthorn breeders in this section, as he has been in the business for the last twenty years. He always has been very particular in selecting his stock, and in buying, the best has been none too good. He has always kept up the milking qualities and used the best bulls obtainable. The stock bull used for the past four years was Chas. Dickens, a

Shorthorns

SHORTHORN BULL

—for sale—

Also a few Heifers

ALEX. BURNS, Rockwood, Ont.

TWO SHORTHORN BULLS

—FOR SALE—

Also a few heifers

T. D. WATERS, Rockwood, Ont.

SHORTHORN BULLS

Four Bulls, eleven months old, and a few Heifers for sale. All eligible for registration in American Herd Book. Also 25 Yearling Grade Rams, and 6 registered Cotswold Lambs.

JOHN SOCKETT, Rockwood, Ont. P.O. and Station.



SHORTHORNS

FOR SALE

These Registered Bulls were sired by Brave Baron; by the noted imported Indian Chief.

2 Bulls, 16 Months old, Roan color.

1 Bull, 13 " "

2 Bulls, 11 " Fancy "

Terms on Application.

YOUNG BROS.,

Whitby Main, Ont.

Lake View Farm

OSHAWA, ONT.



1 Bull, 11 months,

Color Red.

1 Bull, 12 months,

Color Red.

1 Bull, 10 months,

Color Red.

All Shorthorns.

These Registered bulls

were sired by Grand

Sweepan imported bull

and half brother to the

noted British statesman.

He was got by Royal

James. Terms on application.

THOS. ALLIN & BROS.

Lake View Farm, OSHAWA

ONT.

ARTHUR JOHNSTON,

GREENWOOD P.O., Ont.

Offers for sale at Moderate Prices:

11 Imported Bulls and Bull Calves.

36 Imported Cows, Heifers and Heifer Calves.

45 Home-bred Cows and Heifers.

13 Home-bred Bulls.

CATALOGUES ON APPLICATION.

R.R. Stations:

Claremont on the C.P.R.

Pickering on the G.T.R.

22 Miles East of Toronto

son of Watt's Royal Sailor. This year he was first in his class at both Toronto and London. Mr. Watt, his breeder, thought so much of him that he bought him back to use in his own herd.

In the stalls were five fine cows of Rob Roy breeding, also five choice heifers of Royal Sailor blood. He has three very promising bulls. One has just been sold to head the herd of Mr. Peter Down, Fergus, while the other two sired by Chas. Dickens, are for sale, and fit to head any herd. One a rich red, the other a roan bull of exceptional merit. For the past five years Mr. McNabb has taken the herd prize at the Erasmus Union show held at Rockwood.

Another of the old breeders whose herd was founded about 28 years ago is Mr. Alexander Burns. His stock bull Lord Blaney is a Cruickshank of a rich red color, and got by Lord Balso. Mr. Burns has two bulls and a few heifers he could sell. One of them, Aberdeen Stamford, a young red bull from a Royal Sailor dam, and half brother to Dora Stamford, which sold for \$1,300 at Flatt's sale.

The other is a young roan bull from George Bruce, a well known prize winning animal. In hogs he prefers a cross between a Yorkshire and a Berkshire as in this way he claims he can get a more perfect bacon hog than in any other.

We are pleased to call the attention of our readers to the advertisement in another column of the auction sale of Mr. R. C. McCullough, Georgetown, Ont. This is an important sale of Shorthorns, and will be held within half a mile of Georgetown. All animals will be sold without reserve, thus affording a splendid opportunity for securing some good stock at market values.

We should like to draw the attention of our readers to the advertisement of Mr. Paul L. Kennedy's auction sale in another column. Mr. Kennedy has a choice lot to dispose of and everything will be sold without reserve as he is giving up farming and leasing his farm. Catalogues sent free upon application. Conveyances will meet the morning trains at Acton.

We wish to draw the attention of our readers to the advertisement in another column of Mr. Cowans dispersion sale of Shorthorns and Leicesters, at Galt, on March 13. The Shorthorns are of good milking families, while the sheep are a choice lot of young ewes.

Sheep.

Our representative called at Farnham Farm, the home of one of the oldest and best known sheep breeders of Canada. This farm, which is situated at Arkell station, C.P.R., and about four miles from the Royal city of Guelph, comprises 300 acres of loamy soil, which Mr. Arkell states is gradually improving in richness. Mr. Arkell, not only being a pioneer in the stock business, was also one of the first to accept the scientific system of supplying nitrogen for the clovers and pea crop, and he also instituted the custom of the ten-hour system for his help in his section, and he states that most of the farmers are now following the same plan. They find that ten hours' hard work is enough for any man, and in case of hired men he can get more work better done, and also, it will be done more cheerfully.

The rotation followed by Mr. Arkell, though the principles are the same, differs considerably from what the most of our teachers tell us is the correct one—and we give it here for the consideration of those who may have farms of similar nature. First, peas sown on sod; fall wheat; oats, one or two crops, according to the strength of the land; roots; barley, and seeded down with timothy, alsike and red clover.

He has a large proportion of alsike, and after the red clover has run out the alsike and timothy will still give a good crop for five or six years.

The advantages of this system are that he can now manage his farm with one-half the teams and labor, can raise heavier crops, increase the fertility of soil, and by leaving the land so long in grass he saves the expense of re-seeding with grass seed and also the risk of loss through failure to catch.

Coming to the barns we first inspected the flock of Oxford Downs for which Farnham is

Shorthorns

AUCTION SALE

BATES' SHORTHORN CATTLE and LEICESTER SHEEP

Wednesday, March 13, 1901

Eleven cows and heifers of five bulls. Good milky strain of Princess and Duchess families.

Thirty-five ewes, descended from the flock of Mr. Thomson, Elora. Catalogues on application. All trains met.

WM. COWAN, V.S., Galt, Ont.

Important SHORTHORN SALE

34 head of Shorthorns, the property of

R. C. McCULLOUGH, - - Georgetown

Tuesday, March 5, 1901.

At one o'clock, at his farm, half-mile west of Georgetown.

Terms 12 months' credit, 6 per cent. off for cash. Positively no reserve. Catalogues upon application.

Also a draft from the herd of Mr. Wm. Newton, Limehouse. 11 cows in calf to Master Mason, a first-class bull from the herd of J. & W. Russell, Richmond Hill. This bull is from the imported cow Roan Princess, of World's Fair fame.

John Smith, 71 P.P., Brampton, Auctioneer.
R. C. McCullough, Georgetown, Ont., Prop.

IMPORTANT SALE

-of-

30 SHORTHORN CATTLE

and

20 SHORTHORN GRADES

The property of Paul L. Kennedy, Acton.

Saturday, March 2nd, 1901

At 12 noon at his farm on lot 28, concession 5, Esquating Township, 1½ miles east of G.T.R. station, Acton.

Terms 10 months' credit on approved security, or 6½ per annum off for cash. No reserve, as Mr. Kennedy is retiring his farm. Conveyances will meet morning trains. Catalogues on application.
THOS. INGRAM, PAUL L. KENNEDY, Auctioneer, Acton, Ont. Prop.

THOROUGHBRED

AYRSHIRES

All High-class Pedigree Stock and Prize Winners.

The winnings of this herd last season (1899) were 37 prizes, 17 of them being firsts; also gold and silver medals at the leading fairs in Canada. The sweepstakes at Toronto, London and Ottawa belong to this herd—one imported bull, 13 imported females, and a number of A1 home-bred animals. A few choice cows, heifers, and calves for sale at moderate prices.

W. WYLIE, HOWICK, QUE.

Send for particulars.

CLYDESDALES FOR SALE

1 Stallion, 6 years old; 1 Stealion, 2 years old; 3 Yearling entire, 9 brood mares in foal to good sires. Also several fillies and a few young Shorthorns. Farm a quarter of a mile from Burlington. Station on G.T.R.

I. DEVITT & SON, Freeman, P.O., Ont.



ROCK SALT for horses and cattle, in ton and car lots. **Toronto Salt Works, Toronto**

JERSEYS AND TAMWORTHS

Young Stock For Sale

A. ELLIOTT & SON, Inglewood Farm GALT, ONT.

YORKSHIRES and BERKSHIRES

Boars and Sows both breeds, three months old. Boars fit for service. Sows ready to breed. Sows safe in pig. All stock of the large lengthy smooth type, and registered. Correspondence Solicited.

JAMES A. RUSSELL, Precious Corners - Ontario

SHAWANOO

We breed for Mutton and Wool

HILL

Have for Sale

FLOCK

40 ram lambs, 30 ewe lambs, a few breeding ewes.

JOHN RAWLINGS,

Forest, G.T.R. RAVENSWOOD P.O. ONT.

FARNHAM FARM

OXFORD DOWN SHEEP

All ages and sexes for Sale. Can spare a few ewes in lamb to imported Bryan.

HENRY ARKELL, - Arkell, Ont.

Cheap

Cattle and Hog Feed

Oat dust, Barley Dust, Meal Seeds, etc. Can load either Grand Trunk or Canadian Pacific Ry. Quotations furnished on application to—

JAMES WILSON,

Fergus, Ont.

Operating Monkland Mills, Broomfield Mills and Fergus Elevator.

RIPPLEY'S COOKERS.

Sell from \$10.00 to \$45.00. Made of boiler steel. No flues to rust or leak. Can't blow up. Guaranteed to cook 25 lbs. feed in 2 hours, and to hot water in stock tanks 200 feet away. Will heat dairy rooms. Cash advance and prices mailed free. **RIPPLEY HARDWARE CO., Box 218 (U.S. Pat.), Grafton, Ill., London, Ont.**

Cheese and Butter

Makers of these articles, in many instances, do not pay the necessary attention to the quality of the salt they use. Some people think that "salt is salt," and it does not matter where it comes from or who makes it. This is a great mistake, for it is essential that the purest salt should be used. The number of prizes obtained by users of

"RIOE'S or COLEMAN'S" DAIRY SALT

at the various exhibitions is conclusive proof that these brands of salt stand unrivalled. For prices, etc., address

R. & J. RANSFORD,

Clinton, Ont.

justly noted. The flock consists of some 200 head, seventy breeding ewes, forty yearling ewes and ninety rams. We also noticed a pen of splendid ewe lambs and yearlings and another pen of fourteen rams which Mr. Arkell is fitting for heading flocks and for show purposes, of which he makes a specialty and has already a large number of orders for next summer.

The flock is headed by the imported Bryan which Mr. Arkell claims is the best ram he ever owned. He was bred by J. Bryan & Sons, South Leigh, Whitney, England, and selected by Mr. Geo. McKergow, Sussex, Wis., who said he was the best field yearling in England. He also imported at the same time a ram lamb from A. Brassy and ten ewes from the Manor Farm, Fairfield. The ewes are all in good shape and the lambs are just beginning to come.

In Shorthorns he has a select lot of about twenty head. Of these one heifer and two promising young bulls, one red and the others roan, about twelve months old, will be offered for sale at the live stock sale in Guelph.

The herd is headed by his stock bull Twentieth Crown Jewel, bred by J. & H. Nicholson. In the stalls we noticed some choice females. One fine heifer, 22 months' old, has a fine calf from Crown Jewel.

Mrs. Arkell makes a specialty of Barred Plymouth Rocks, of which she has about one hundred. These have been carefully bred from the choicest stock for about fifteen years.

For the benefit of his brother farmers we might give Mr. Arkell's experience with lucerne, in the growing of which he has been very successful, only having lost it through frost one winter. He has found that it has given a large quantity of hay on which his sheep do wonderfully well, but last summer, for the first time in several years, he lost several from bloating on lucerne pasture. So we see it is necessary to use considerable caution in turning flocks out on it.

We understand that Messrs. Brethour & Saunders, of Burford, Ont., have sold the celebrated prize winning Yorkshire boar, Oak Lodge Conqueror, for a handsome figure, to go to the United States. Further particulars regarding this important sale will appear in a later issue.

Poultry.

Mr. W. J. Bell, Angus, Ont., recently shipped the 1st prize young gobbler and 2nd prize yearling hen at Guelph Winter Fair to Mrs. Smith, of Roscommon Co., Ireland. This makes 64 turkeys he has shipped to Mrs. Smith since February, 1894, and for which he has received \$525.

Mr. Bell writes as follows: "In stock notes, February 5, you make a slight mistake in saying the bronze gobbler weighed 46 lbs. before I took him to the show. It was after he came from the show that he fattened up to the 46 lbs. My notes merely stated that he reached this weight at home. I have been advertising in FARMING and its predecessor, *Live Stock Journal*, for the past 13 years and have had better results this year than ever. I depend on it to sell my stock and it has never failed me."

In last week's stock notes under this heading through a typographical error a communication from James Ford & Son, Drumming, Ont., was made to appear as coming from James Lord & Son. It is due this well known firm of poultry raisers that this correction should be made.

We beg to draw the attention of our readers to Mr. Hamner's advertisement of his dispersion sale of Shropshires in another column. Stock sale to begin at one o'clock sharp.

OTTAWA SALE, MARCH 6th

At
Your
Own
Price



H. D. SMITH, Compton, Que.
H. reford Co. "SANDRA"
C. H. R. (1353), due to calve
March 20th to "Mark
Hanna," and Hereford
Heifer, "Sandra Ingleside"
C. H. R. (1455), sired by
"Mark Hanna" and now
in calf to "Prince Ingleside
2nd." For further particu-
lars address,

H. D. SMITH,
Compton, Que.

Pure-bred Ayrshire Imported Cattle.

LARGEST AND MOST
EXPENSIVE IMPOR-
TATION IN AMERICA.



Bred for the dairy with grand constitution, and champion prize records awarded them in Scotland and England. Sweepstakes herd Montreal, Toronto, London, and Ottawa, in 1897; also Toronto, 1899. Awarded four years in succession best prize at Ottawa's great exhibition, and special gold medal at Montreal, herd prize and W. W. Ogilvie's special \$100.00 prize. Their individual prize records are of the same distinguished honors as the four years of their exhibition career. Stock all ages for sale, and at prices in reach of all.

Maple Grove
Ayrshire Stock Farm
LYN, ONT.
Line G.T.R.

R. G. STEACY,
Importer and Breeder.

Brockville, Ont.
Box 720.

Dr. Hess' Stock Food

WILL MAKE MONEY FOR YOU

7 lb. Sack, 65c. 12 lb. Sack, \$1.00.

It is a scientific compound of the essential elements that are lacking, in the various foods upon which hogs, cattle, hogs and sheep generally subsist. It produces flesh by compelling the system to do its best. It permits no food to pass off undigested. Sold by dealers generally, or address THE GREIG M'P'G CO., Montreal.

Please forward two-cent stamp and we will mail you our 64-page veterinary book, which tells you how to doctor your own stock. Address:

DR. HESS & CLARK, Ashland, O., U.S.A.

OAK LODGE YORKSHIRES



are acknowledged to be the best type of bacon hog to produce the ideal carcass for the best English trade. CHAMPIONSHIP HERD AT TORONTO INDUSTRIAL EXHIBITION FOR NINE YEARS also sweepstakes on Dressed Carcass at Provincial Winter Show. We have on hand now a large herd of different ages. Our prices are reasonable and the quality is guaranteed to be choice. Write

BRETHOUR & SAUNDERS,

Burford, Ontario

The Modern Way to Destroy Sheep Ticks

IS BY THE USE OF

INSTANT LOUSE KILLER

It is not a dip, but a powder, that can be applied in zero weather. No slop, no muss, no danger.

There is no profit in letting ticks sap the life out of your sheep during winter, and there is no longer any call for it. With Instant Louse Killer the weather cuts no figure.

Examine your sheep at once, and you will probably find ticks and lots of them. Don't wait on the weather, wait on the sheep with a package of Instant Louse Killer. Guaranteed Put up in one-pound packages, with perforated top, ready for use, very convenient. PRICE, 35 CENTS. Sold by dealers generally, or address

THE GREIG MANUFACTURING CO. - Canadian Agents. - MONTREAL

W. C. EDWARDS & CO. Breeders and

.....Importers

LAURENTIAN STOCK AND
DAIRY FARM,
North Nation Mills, Que.

Ayrshires, imported and home-bred herd headed by imported Tam Glen 2nd, No. 1310 D. A. H. B. Jersey all of the celebrated St. Lambert family; herd headed by Lisgar Fogs of St. Anne's 2574 A. J. C. C. Be- fire Figs. Young stock of all the above breeds for sale.

Post Office, Telegraph Office, and Railway Station, North Nation Mills, P.Q., on the C.P.R.

A. E. SOBRYER,
Manager

PINE GROVE STOCK FARM.

Rockland, Ont.

On the C.P.R. and G.T.R. Railways.

Special bargains on young bulls of superior merit and select Scotch breeding. Also tick young heifers at the right prices.

Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

J. W. BARNET,
Manager



Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Feb. 25, 1901.

Though trade in wholesale lines is quieter buoyant feeling permeates commercial circles generally, and confidence in the future is as implicit as ever. The spring business is spoken of very encouragingly and payments continue satisfactory. Money seems ample for all legitimate demands, with quotations at 5 to 5½ per cent. on call. Discounts on commercial paper are steady at 6 to 7 per cent.

Wheat.

The wheat situation continues the same. Nothing has occurred during the week to stimulate bull speculation, though there is still some talk of a corner in wheat in certain centres. Estimates regarding yields vary so much that it is hard to keep the correct bearings of things. The *Trade Bulletin* of last week says:

"At the moment there is an amplitude of wheat in sight for all legitimate requirements. The visible supply it is true has decreased during the past week about 812,000 bushels, but the world's total amount in sight increased during the same period 2,780,000 bushels, and 13,500,000 bushels more than last year at this time."

The growing crop in the Western States maintains its good condition, but is much unprotected. The movement of grain has been moderate. Cable reports have been somewhat irregular. The local markets have ruled fairly steady at 65½c. to 66c. at Ontario points, Spring at 69c. to east, and goose at 66c. west. On Toronto farmers' market red and white bring 68½c. to 69c., and spring wheat 60½c. per bushel.

Oats and Barley.

A little better local demand is reported at Montreal for oats at 31½c. to 32c. in store. Oats are reported firm here at 29½c. for No. 1 white east, 29c. for No. 2 middle frights, and 28½c. north and west. On the farmers' market here oats bring 32½c. to 33c. per bushel.

The barley market keeps steady at from 40½ to 42c. middle frights as to quality. On Toronto farmers' market barley brings 44c. to 47c. per bushel.

Peas and Corn.

The market for peas keeps quiet with quotations at 63c. to 64c. at Ontario points. On the farmer's market here peas bring 65c. per bushel.

Corn supplies in the west seem to be liberal but are firmly held. Car lots of Canadian yellow are quoted at Montreal at 46½ to 47c. and American mixed at 48 to 48½c. per bushel. American No. 3 yellow is quoted here at 45½c. on track Toronto.

Bran and Shorts.

Car lots of Ontario bran are quoted at Montreal at \$16.50 to \$17, Manitoba at \$17 in bags, and shorts at \$10.00 to \$18 per ton. City mills here quote bran at \$16.00 and shorts at \$17.00 f.o.b. in car lots, Toronto.

Eggs and Poultry.

The English market for eggs is quieter and dealers there are complaining that they have been paying too much for Canadian pickled stock. New laid eggs are becoming more plentiful, and Montreal quotations are 19 to 21c. in round lots. There is reported to be plenty of cold storage eggs offering. Offerings of new laid here are large and the market keeps steady at 20c. in case lots, on Toronto farmers' market new laid bring 23 to 25c., and fresh 18 to 20c. per dozen.

A fairly active demand is reported in dressed poultry at Montreal, where choice turkeys are quoted at 9 to 9½c., young chick-

ens at 7½ to 8c., ducks 7½ to 9c., and geese at 6 to 7c. per dozen in case lots. There is a good demand for fresh fowl here and prices are firm for turkeys at 10 to 11c. per lb. and for geese at 7 to 8c. Chickens are worth 30 to 60c. per pair, in a jobbing way. On Toronto farmers' market chickens bring 50c. to \$1, and ducks 75c. to \$1.25 per pair, and turkeys 11 to 13c. and geese 7 to 9c. per lb.

Potatoes.

Car lots of Ontario potatoes are quoted at 45 to 47½c. per bag at Montreal. Quotations here are 30 to 32c. for car lots on track. On farmers market potatoes bring 30 to 40c. per bag.

Hay and Straw.

A good local and export demand continues for baled hay, though some dealers complain that farmers are asking too high a figure in the country to enable them to do business at a profit. Cable quotations last week showed a decline of 4 to 5c. for No. 1 Canadian hay. Montreal quotations are \$11 to \$11.50 for No. 1, \$9 to \$10 for No. 2, in car lots. At country points east from \$8.25 to \$9 have been paid for No. 2 quality. The market here keeps steady and active at \$10 to \$10.50 for No. 1, and \$9 to \$9.50 for No. 2, in car lots on track, Toronto. On the farmers' market here hay brings \$14 to \$15, sherd straw \$9.50, and loose straw \$6 to \$7 per ton.

Seeds.

There is a good demand at country points for seeds. Red clover keeps firm at Montreal at \$7 to \$9 per bushel as to grade, \$7 to \$9 for alsike, \$2.50 to \$3.00 for timothy, and \$2 to \$2.25 for flax seed. Quotations on Toronto farmers' market are \$6 to \$6.6 for red clover, \$6 to \$6.80 for alsike, and \$1.40 to \$2.25 per bushel for timothy.

Apples.

On Toronto farmers' market choice apples bring \$2.50 to \$3.50 per barrel, and culls \$1.75 to \$2.50.

Cheese.

Though there has been a little more trading in the lower prices the general situation shows little change. The English dealer is still buying from hand to mouth, and seems determined that he will not advance values if he can help it, though he may have to before the new season opens. Present prices seem reasonable as compared with last year at this time when they were strong at 12½c. to 13c. Montreal quotations are 9¼c. to 10½c. for finest westerns.

Butter.

The Montreal *Trade Bulletin* has the following summary of last week's trade in butter:

"There can be no doubt that the shipments of Manitoba butter to this market have had a good deal to do with keeping prices down at their present level. This class of butter has filled the hiatus which existed in the common grades, and seems to have replaced Western dairy entirely. It has also found its way to Halifax and St. John, N.B., there being no demand now for Western for those destinations. About 1,300 packages arrived a few days ago, packed in all shapes and all sizes, and about 700 pkgs. of which were offered at 15½c. and the range for Manitoba dairy is from 15½ to 17c. Western is dull sale at 17 to 19c. As regards butter, on this market in a jobbing way at 22½ to 23c. for finest, a few lots of fancy having exceeded the outside figure. But some of the largest holders inform us that they cannot get over 22c. for good sized jobbing lots, seconds selling at 21 to 22c. There is, however, a better enquiry, and stocks are being gradually reduced, and it would not surprise us to see a better market later on. A few lots are going forward to the English

market, 740 pkgs. going forward last week. The shipments of butter from Canada via Montreal, Portland, St. John and Boston from May 1, 1900, to date were as follows:

1899-1900.	1900-1901.
Packages.....	271,256
	483,241.

This shows a decrease of 211,985 pkgs., or over 50 per cent."

Creamery prints are active here at 23 to 24c. and tubs at 20 to 22c. per lb. There is a fair movement in dairy at 18 to 19c. for lb. rolls and 17 to 18c. for large rolls in a jobbing way. On Toronto farmers' market lb. rolls bring 20 to 23c. each and large rolls 18 to 22c. per lb.

Cattle.

The cattle situation has not improved any, and there appears to have been only a moderate demand at most American markets for cattle, though really prime quality brings a good figure. Trade has been only fair at Toronto during the week, and on Friday well-finished cattle were hardly as brisk as a week ago, while inferior, and even common stock were slow of sale. The run of live stock was composed of 865 cattle, 845 hogs, 404 sheep and 25 calves. There is little improvement in the quality of the cattle offered, the bulk being of the inferior class. Prices were easier for exporters, especially for light and unfinished cattle. The highest quotation for straight loads was \$4.85, with some picked lots of twos and threes selling at \$5 per cwt. Prices for butchers' cattle, with the exception of the best quality, were easier and many drovers were unable to sell except at a sacrifice. Some feeders and stockers were sold, and more well-bred steers would have been taken. The bulk of the calves offered were of poor quality, good ones are wanted. The milch cows and springers offered were only of inferior quality, the bulk going at \$35 to \$45 each.

Export Cattle.—Choice loads of these are worth from \$4.60 to \$5 per cwt. and light ones \$4.00 to \$4.50 per cwt. Heavy export bulls sold at \$3.85 to \$4.25 and light ones at \$3.40 to \$3.60 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters', weighing 1,000 to 1,100 lbs. each, sold at \$4.25 to \$4.35 per cwt., good cattle at \$3.40 to \$3.75, medium \$3.15 to \$3.30, and inferior to common at \$2.40 to \$3 per cwt.

Feeders.—Heavy, well-bred steers, from 1,000 to 1,150 lbs. each, sold at \$3.60 to \$3.90 and other quality at \$3.40 to \$3.60 per cwt. Light steers, weighing 800 to 900 lbs., sold at \$3 to \$3.35 per cwt.

Stockers.—Yearling steers, 500 to 600 lbs. each, sold at \$3 to \$3.30 off colors and inferior quality at \$2 to \$2.25 per cwt. Yearling bulls, 600 to 900 lbs. each, sold at \$2 to \$2.25 per cwt.

Calves.—These are in less demand at Buffalo, choice to extra bringing \$7 to \$7.25 per cwt. At Toronto market calves bring \$3 to \$10 each.

Milch Cows.—These sell at from \$30 to \$55 each. Those offered on Friday, with two exceptions, were a pretty scrubby lot.

Sheep and Lambs.

The Buffalo market continues about the same at \$5.50 to \$5.65 for choice to extra lambs, and \$4.50 to \$4.75 per cwt. for choice to extra sheep. At Toronto market on Friday sheep were quoted at \$3 to \$3.50 per cwt. for ewes, and \$2.50 to \$3 per cwt. for bucks. Grain-fed lambs sold at \$4.25 to \$4.75 per cwt., and ordinary farmyard lambs at \$3.75 to \$4.25 per cwt.

Hogs.

There was not a large delivery of hogs, and prices remained firm at quotations. Best select bacon hogs, 160 to 200 lbs. in weight, unfed and unwatered off cars, sold at \$6.75 per cwt., and light and thick fats at \$6.25. Un-culled car lots of hogs sold at \$6.50 to \$6.60 per cwt.

The Wm. Davies Co., Toronto, will pay \$6.75 per cwt. this week for select bacon hogs, and \$6.25 for light and thick fats.

At Montreal prices have ruled firm at \$7 per cwt. for right quality of hogs. Last year at this time the packers there were paying \$5.25 per cwt. for the same quality. The *Trade Bulletin's* London cable of Feb. 21 Canadian bacon reads thus: "The market has maintained its firmness for Canadian bacon have advanced another 2s. with a good demand at the rise.

The prices for dressed hogs keep at a good figure. On Toronto farmers' market they bring \$8.25 to \$8.75 per cwt.

Horses.

Trade in the general class of horses has been dull during the week. Dealers state that there is no money in handling any but really first-class horses suitable for the export trade. The demand for ordinary work horses and ordinary drivers is limited, and farmers are reported to be holding these classes at too high a figure to give dealers a chance. Some horses were sold at Grand's last week for \$85 to \$115, which cost \$100 to \$130 each in the country.

Beet Sugar Bounty.

The Dominion Government was on Friday asked to grant a bounty in aid of the manufacturer of beet root sugar, such bounty to consist of one cent a pound for the first two years, three quarters of a cent for the third year, half a cent for the fourth year, and one-quarter of a cent for the fifth year, after which it would be discontinued. The request was made by a deputation consisting of Messrs. D. H. Price, Aylmer, Secretary; John Parry, Dunnville, President; W. K. Snider and James Bowles, Reeve, Sombra; J. Shuttleworth, Brantford; Ald. Parnell, London, and Mr. N. B. Gash, Honorary Solicitor. Mr. Snider was the chief speaker, and he pointed out that the farmers of Lambton County could raise beets containing the necessary percentage of sugar. In the State of Michigan \$4.50 a ton was paid for what is known as "the 12 per cent. standard beet," and 33½ cents for every 1 per cent. above the standard. The United States duty, however, amounted to 80 cents a ton, and the freight rates to 50 cents, which would reduce the price obtained by the Lambton farmers for their beets to \$3.20 a ton. It was necessary, therefore, to find a market at home, and this could be done if the Government would grant a bounty.—The Ministers replied that the views expressed would receive consideration.

Farm Workshop.

Every farm should have a roomy workshop. The need of one is keenly felt early in the fall, when the implements and tools are collected to be stored under shelter. There will be many winter days when a workshop will be required. Many farmers are handy with carpenter and other tools, and could readily make many of the repairs tools and implements require. The saving when such repairs can be attended to on the farm are twofold, for both expense and the often serious loss of time going to town or city is

100 Important Unreserved Auction Sale of Registered Shropshire Sheep 100

THURSDAY, MARCH 7 1901, 'at

MAPLEHURST FARM, Adjoining Burford Village.

Comprising 55 Shearling ewes, 10 aged ewes (a splendid lot), mostly bred to an imported Mansell Ram, 7 extra good shearling rams, 28 ram and ewe lambs of superior quality and covering, sired by Diamond Prince (imported), bred by J. S. Harding and from imported Minton and Thomas ewes. Sale of stock one o'clock sharp. Conveyances will meet all trains.

H. HANMER, Burford, Ont.

saved. When during the busiest season, often in harvest time, a break occurs that necessitates a trip to town the loss is often considerable. A good supply of bolts with fitted nuts, various sized nails and screws, different sized brass rivets, washers, etc., should always be kept on hand. Repairs should never be delayed. Quick attention means a stitch in time to save nine. On some large farms the workshop is one of the leading features, and includes a blacksmith's forge, so that not only woodwork repairing is done, but that which requires the use of the forge in making repairs where iron rods, etc., are employed. The having the conveniences and tools at hand for making the needed repairs will afford the boys a chance to develop their ideas and show their skill and tastes in a direction that may prove of value to them in after life. We have seen a farmer with a handsaw, a poor hatchet and a jackknife do a job of repairing that no carpenter would ever have undertaken with such an apology for carpenters' tools. A workshop on the farm will prove a time-saver on many occasions. Such a place in winter will enable the farmer to take advantage of the bad weather and have everything in readiness for early spring work. If he has fence posts to hew and "shape up" the workshop will enable him to continue his work independently of the weather. He will in fact, find so many things that he can do in that workshop that he will soon wonder how in the world he ever got along without one.

Here is one great use of the workshop not measured by dollars and cents if it sets the youth to thinking and doing, greatly enlarging his practical knowledge, making him more independent and resourceful and giving him a manifest advantage in life's race. It frees him from the one great curse that follows the excessive division of labor which tends to make a man a mere machine, exercising only certain muscles and developing certain faculties at the expense of the rest, deadening thought and destroying symmetry of character. The work that is "mixed with brains" wins the prize, but what is there to stimulate thought or develop character in the man who for six days every week, year after year, piles brick in a yard or sweats in the drying room of a sugar refinery, sticks hogs for the great pork packers, shovels coal into a furnace or quarries it by the dim light of a lamp in the mine.

So mark this as regards the farmer: In the long run he who mechanically raises the same crop year after year in the same way will not only financially but as a man be left far behind in the race

FARMER'S LOW HANDY WAGONS



Wide-Tire Wheels
Made to fit any axle.

They are lighter, stronger and much cheaper than wooden wheels.

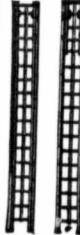
Wrought Iron Wheels
with Wide Tires

should be used by every farmer, in fact by everyone who has a wagon.

Dominion Wrought Iron Wheel Co.

DEPT. A. TORONTO, ONT.

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Extension Ladder

Light, Strong, Convenient and Cheap.

Port Colborne, April 10, 1900.
Dear Sir—Have you an agent down here for your goods? The ladder I got from you seems to take with the public, and I wish you would send agents' prices so if I can do anything I will take it up or let them know who your agent is.

L. TURNBULL.

(See our ad. in last and next week's issues.)

For stacking, or for picking apples, and for general use about the farm the WAGGONER LADDER is unequalled. Made in all lengths.

Ask your local Hardware Merchant for our goods.

Or write for catalogue (free) to

The Waggoner Ladder Co., Limited,

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The only All Canadian trans-continental Railway. Through train leaves Toronto daily except Sunday to Winnipeg thence daily

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Medicine Hat, Calgary,
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Unexcelled Dining Car Service North Bay to Fort William, and Rat Portage to Medicine Hat.
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Assistant General Passenger Agent,
1 King St. East, Toronto.

with him who intelligently diversifies his crops, and that man who with discrimination adds the resources of the farm workshop will generally be the winner.—*Baltimore Sun.*

Stop

Don't you think it is nearly time you bought a



Grain Grinder

Particularly a "JOLIETTE"
For your convenience we have opened a branch in Toronto, where we are carrying a large stock, and can suit any power. Come and see us, or drop us a line.

S. VESSOT & CO.,
108 Front St. East, TORONTO
Factory at Joliette, Que.

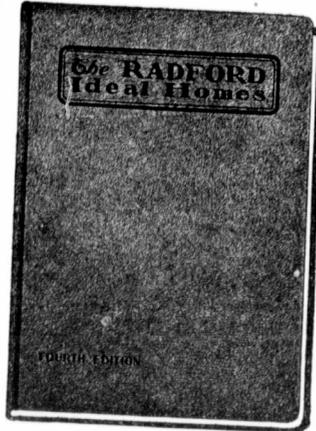


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If you use Page Fence you will like it, but will not be stuck like the gentleman in the picture. The Page Fence is woven in our own factory, from coiled wire made by ourselves, and twice as strong as that used in other fences. Get this year's prices, they are lower than last year.
The PAGE WIRE FENCE CO. (Ltd.)
WALKERVILLE, ONT.

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Are you interested in moderate-priced cozy homes? Get "Ideal Homes," containing 66 plans of medium prices, besides plans of four good, sensible barns, one store building, and two church plans; 34 of these houses range in cost from \$500.00 to \$1,500.00, the others from \$1,550.00 up. This cloth bound book of 72 pages, 8 1/2 x 10 1/2 inches in size, sells for 50 cents; but we have made special arrangements with the publishers so that we can furnish this book of House Plans free to anyone sending us one new subscription to THE FARMING WORLD. Any present subscriber, not in arrears, may have a copy for 50 cents. You cannot afford to miss this opportunity to save money when you are ready to build. In remitting, send post office or express order to—



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\$15.00 PER TON.

An opportunity for farmers to try this famous fertilizer at small cost.
Guaranteed 18 per cent. Phosphoric Acid.
THE KING MILLING CO. Limited.
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Man Wanted

WANTED a good reliable man to represent THE FARMING WORLD. One with a horse and rig preferred. A good income guaranteed to the right man. References required. A chance for farmers' sons during the winter months. Address at once:

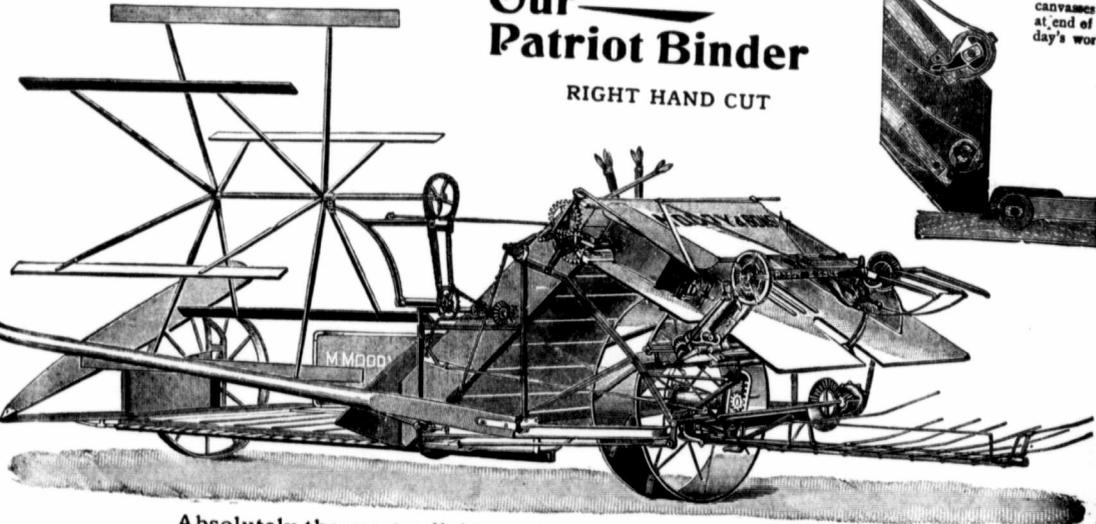
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MATTHEW MOODY & SONS Terrebonne, QUE.

Maxwell's "Favorite" Churn.



Patent Foot and Lever Drive.	No.	Holds	CHURNS
0	8 gal.	1 to 3 gal.	
1	10 "	1 to 5 "	
2	15 "	2 to 7 "	
3	20 "	3 to 9 "	
4	25 "	4 to 12 "	
5	30 "	5 to 14 "	
6	40 "	8 to 20 "	

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because they know it produces a better article, which brings the highest price.

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WINDSOR, : : : : ONT.

LUMP JAW MASTERED

Stockmen killed their Lump Jawed Cattle, or save them, die by inches, until Fleming's Lump Jaw Cure demonstrated that the disease was easily cured. If you have a case in your herd, we wish to show you how quick it can be cured with this remedy. No cost if it fails.



Annand, Ont., Nov. 7, '99.
Fleming Bros., Sirs—Please forward by return mail one bottle of Lump Jaw Cure. I have cured three cases of Lump Jaw and have two more well under way to cure, from one bottle. Find enclosed \$2. Yours, etc.,
JOHN C. McLAREN.

Price \$2, or three bottles for \$5. At your druggists, or sent prepaid by mail.
Our pamphlet—free to readers of this paper—tells how to remove bunches or lumps of every sort from cattle or horses.

FLEMING BROS., Chemists
Room K, 58 Bay Street, TORONTO, Ont.

THE U.S. SEPARATOR AHEAD AS USUAL

At the **Maine State Dairymen's Association Meeting** at Augusta, Dec. 4-5, 1900, there were 59 entries of butter, of which 15 were by users of the **Improved U. S. Separator**. Highest 98, lowest 91, average of the 15 entries **95.6** 12 were by users of the Alpha-DeLaval Separator. Highest 96½, lowest 85, average of the 12 entries **91.6**

NOTE THE FOLLOWING FACTS

The users of the **U. S. Separator** averaged **FOUR POINTS** higher than the DeLaval.

The Highest, 2d Highest and 3d Highest scores went to users of the **U. S.**

Six, nearly one half, of the **U. S.** entries scored higher than the highest DeLaval.

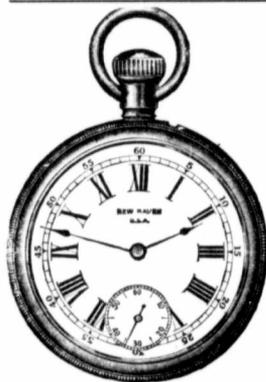
The **U. S.** stood **FIRST** in all the different classes and special premium offers.

At the **New York State Dairymen's Association Meeting** at Watertown, Dec. 11-13, 1900, there were 65 entries of butter, and that scoring the **HIGHEST (98½)** was made by B. C. Rockwell, Spring Water Creamery, West Bangor, N. Y., and was the product of the

Improved United States Separator.

Intending purchasers should remember that if they wish to obtain the best results they must, of necessity, buy the **Improved United States Cream Separator**.

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193 No duty on Improved U. S. Separators shipped into Canada.



No Matter

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Five Good Points

- FIRST**—It is made by one of the best manufacturers in the world. Every one is guaranteed.
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- FOURTH**—The case is nickel-finished, and looks just as well as solid silver. With ordinary wear it will keep its color for two or three years—much longer with care. The works will last ten or fifteen years.
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Any one sending us six new subscribers to **THE FARMING WORLD** will receive one of these fine Watches, carefully packed in wooden box, post-paid, Free. Or we will send the Watch for three new subscribers and one dollar in cash. Or any subscriber whose subscription is paid up may have one for \$2.00. Your money back if you are not satisfied.†

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