

The Farming World

A Paper for Farmers and Stockmen

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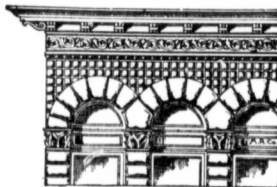
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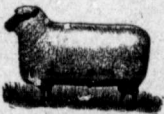
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The Farming World

For Farmers and Stockmen

Vol. XVIII.

NOVEMBER 6th, 1900.

No. 10

An English Opinion

The "Farming World," of Toronto, Canada, for September 4th issue, was a special number, and is just to hand. It gives particulars of the annual great fair at Toronto. It is a splendidly got up number, and creditable alike to its editor and printers. As a guide to Dominion farming, British readers would find this publication of the greatest service.

The Rural World, London, England.

The Slump in Hogs

THE sudden drop in the prices for bacon hogs last week came no doubt as a surprise to many farmers who had been counting upon the high values of the past few months being maintained for some time. But a glance at the market and the conditions affecting the export bacon trade must convince one that these high values could not have been maintained till the end of the year. In fact, some in the trade claim that the drop in prices should have come a month ago and that the high values during October, while benefiting the farmer, meant serious losses to the packers who will not be able to sell the product for nearly what it cost them. However this may be, we are not in a position to state. That the farmer has had good prices for several months back no one will dispute and if lower values follow he has perhaps no reason to complain.

A drop from \$5.75 as reported in last week's market report to \$4.75 per cwt. means a big slice off the profits from hog raising. But this should not discourage farmers who are in the business. The fat and the lean periods must come in all trades and people in business or in the production of any marketable article must be governed by the law of averages. Judged from this standard the prices for bacon hogs for 1900 will average high and it is upon this basis that profits must be fixed. But in doing so the farmers should, as we pointed out in dealing with this question in THE FARMING WORLD of June 12 last, endeavor to so arrange their supply of hogs as to have the largest deliveries during the summer months when prices are high and as few as possible to dispose of in the fall when prices invariably are lower.

There does not, however, appear to be much advancement in this direction. The deliveries of hogs on Toronto market on October 26 were 4,013, while on June 8, when choice bacon hogs sold for \$6.87½, per cwt. the deliveries were only 1,600. During July, August and September last, when the product from the high priced summer hogs was placed on the British market, our packers were not able to supply much more than 50 per cent. of the bacon the English trade could take. But

now, at the approach of the Christmas trade, when the markets are flooded with poultry and game of all kinds, and the demand for bacon falls off very materially, there is the largest supply of Canadian bacon to go forward and our farmers have the most hogs to sell. To remedy this the packer and the farmer must co-operate more than they do and regulate the supply more in keeping with the demand.

But the Canadian farmer is not the only producer who will suffer from this drop in values. Last week Danish bacon dropped 7s. per cwt. as compared with the week previous, which means a shrinkage of more than \$1 per cwt in the price the Danish farmer gets for his hogs.

Then prices are still better than they were at this time a year ago. On Oct. 28, 1899, select bacon hogs sold on Toronto market at \$4.37½ per cwt., and thick fats at \$4 per cwt. A great many cheese factory hogs are put upon the market at this season of the year, which has increased the supply very much and perhaps reduced values more than they would otherwise be.

The general conditions affecting the bacon trade, notwithstanding this lowering of values, are not at all discouraging. The supplies of bacon in England have been short as compared with last year. During the past few months the weekly killings in Denmark have been about 5,000 short as compared with corresponding weeks of last year. Then, as we have already stated, the Canadian supply has been short, so that prospects are good for a reaction in trade as soon as the Christmas season is over. And if values do not go any lower than they are at the present time, with the prospects of a rise towards the beginning of the year, the situation is on the whole a very hopeful one.

There has been a great improvement in the finishing of bacon hogs this year. There have been fewer skips and undersized hogs this summer than for some years back, showing that our farmers are learning better to breed and feed hogs for the bacon trade. All signs point to rapid advancement along many lines in connection with the export bacon trade in this country. The quality is improving and there is a growing demand for the Canadian article in Great Britain. If, as we have already pointed out, farmers can adjust their supply more in keeping with the demand, there is no reason why the business cannot be largely increased with better profits for all concerned.

Dr. Mills Returns

Dr. Mills, President of the Ontario Agricultural College, returned last week from Europe, looking exceptionally well. A short report of an interview, giving a brief account of his trip, appears in the Gazette Department this week. Dr. Mills has promised a special article for these columns later on, dealing more fully with European agriculture.

Keep More Sheep

We publish elsewhere in this issue an article by Mr. A. W. Smith, Maple Lodge, Ont., especially written for these columns, on the care and management of sheep, which should be carefully read by every sheep-raiser. Mr. Smith has had a wide and successful experience as a sheep-breeder, and his practical views on the subject are of value. The picture he draws of the manner in which many farmers care for and manage their flocks is only too true. The inevitable outcome of such management cannot but result in loss to the farmer and lead him to believe that there is no money in the business of sheep-raising. But there is a better way, as Mr. Smith points out, and one which, if carefully and thoughtfully carried out, cannot but bring profit and satisfaction to the farmer.

If there has been one thing emphasized in these columns more than another it is that farmers should keep more sheep. But don't keep sheep in the wrong way. There is a right and a very profitable way that involves little care if it is only followed in the proper manner. To expect to reap a profit from sheep-rearing without giving the flock some care and attention is about as foolish as to look for a grain crop from a field of thistles. Sheep can be made to pay on every Canadian farm, especially in the older provinces, if they are only handled properly. Every Ontario farmer, at least, should have a flock of sheep managed in the right way.

Canadian Breeders Warned

May Lose B.C. Trade Unless Special Efforts Are Made

The report of the Provincial Fair held at New Westminster, B.C. on October 2-5 as published by the *Rural Spirit*, an Oregon paper circulating widely in British Columbia and the neighboring States contains food for serious thought for breeders, more particularly of Shorthorn cattle, in Ontario and Manitoba. The following extracts from this report are worthy of careful attention by Canadian breeders:

The live stock show was next in point of excellence to the Oregon State fair. There were more Shorthorns in competition, but the Oregon cattle had no difficulty in winning.

The Jerseys were scarce, as were also the Ayrshires, Guernseys and Polled breeds. There was a very nice exhibit of sheep and our Oregon stock again took their share of the honors.

The swine exhibit was larger and more extensive than at any other fair. Some very fine specimens were on exhibition in all classes.

Some very fine Herefords were on exhibition.

The British Columbia people had their eyes opened by the Oregon stock. They show what feeding and grooming will do. They were completely surprised when they were left completely in the Shorthorn class. Mr. Ladner, who has always had a good thing of it, took one third prize and was shut out in the rest.

The Oregon Shorthorn cattle which are said to have taken all the prizes were bred in Ontario, sold to Americans, and exhibited as American cattle in British Columbia. This strong American competition at western shows means that breeders to the south of the line are making a determined effort to capture the Pacific province as a market for their pure-bred stock; and unless the breeders of Manitoba and eastern Canada are prepared to fit up first class herds of cattle and send them to the Calgary Exhibition and to the British Columbia Provincial Exhibition next year, and for several years to come, they will lose the British Columbia and far western trade, both for Shorthorns and all other kinds of pure-bred stock. This trade ought not to be allowed to slip away in this fashion. Every effort should be made by Canadian breeders not only to find new markets but to retain our own markets for their stock. Mr. Hodson during the past few years has accomplished a great deal towards opening up this western trade for eastern breeders and now that the markets are opened up, special care should be taken to retain them for Canadian pure-bred stock.

We learn on good authority that the C.P.R. is prepared to grant specially low freight rates in order to assist Mani-

toba and eastern breeders to exhibit at these western Canadian shows, and we would suggest that the Shorthorn Breeders Association take this matter up and see that a good exhibit of pure-bred cattle is made at Calgary and New Westminster next year. Ayrshires are destined to take a prominent place in British Columbia in the near future and it would be good policy for the Ayrshire Breeders' Association to take steps in the same direction and make a good display of typical Ayrshires at our western shows next season. The farmers there are looking for good stock such as eastern breeders can supply.

Canadian Cattle for the United States

To be Tested by American Inspectors

Following upon the announcement made last week that the United States authorities had decided to send veterinarians to Great Britain to test before shipment cattle destined for America comes one that has a much greater significance for Canadian breeders. Secretary Wilson has also decided to send United States inspectors to Canada to test all cattle purchased here for shipment to the United States. Since the removal of the quarantine regulations between Canada and the United States through the good offices of the Hon. Mr. Fisher, the certificates of Canadian veterinarians have been accepted at the ports of entry upon all cattle going into the United States from Canada.

This new change more especially in regard to the application of the tuberculin test is not likely to put any serious hinderance in the way of shipping cattle to the south of the line. Canadian cattle on the whole are very free from disease and breeders are not afraid to have their stock tested so long as a proper test is conducted, which we have no reason to doubt will be the case under this new regulation. We must confess, however, that we fail to see the necessity for a change from the present method even from the American breeders point of view. Canadian veterinarians are just as competent and as well qualified to perform the test as those to the south of the line. In fact a large number practising in the United States, have received their training at the Ontario Veterinary College, an institution that ranks high in the various states of the Union. But this is perhaps irrelevant to the question. The change has been decided upon and we will have to submit. It will be more a matter of convenience than anything else. If only one or two inspectors are appointed for Canada, considerable delay may be caused by having to bring an inspector from a long distance to make these tests. And if a number of shipments are to be made in a short time it might be difficult for one inspector to get around to all of them on time.

Dr. Saunders Returns

Some Interesting Notes on his European Trip

Dr. Saunders, Director of the Dominion Experimental Farm, returned on Oct. 29 from an extended visit to Europe. While away he visited Paris in connection with his official duties as one of the commissioners for the exhibition, the special work assigned being the bringing together of the agriculture and fruit products of the Dominion. During his absence he spent some time in other parts of France and Great Britain, inquiring into the progress of agriculture and horticulture in those countries, and visited as many of the agricultural schools and experiments stations in both countries as was practicable. He expresses himself as much pleased with the excellent display made by Canada at the Paris Exposition, particularly in agricultural

products and fruit. The exhibits of grain were quite imposing, and had been most artistically arranged by Mr. W. H. Hay, of the Experimental Farm staff, who visited Paris early in the year for that purpose.

The agricultural products of the Dominion, as shown by Mr. Hay in our Exhibition Number last Sept., are displayed in provincial groups, by a series of trophies; also, very effectually, in a general way by a grand central trophy placed in the middle of the first half of the Canadian Court. This central trophy is built up with a large series of glass containers of different sizes, showing excellent samples of clean grain from all the principal grain-growing districts in Canada, including a most excellent display from the Experimental Farms. With these were associated a first-class showing of fine sheaves of grain in the straw, also representing the many grain producing sections of the Dominion. This important part of the exhibit attracted much attention and was very much admired.

The fruit display, a part of which was in the Canadian Pavilion, and the other and larger part in the Horticultural Hall, has been the subject of most favorable comment. The large collection of about 1,200 glass jars of pears, apples, plums, peaches, cherries and small fruits, which were put up in antiseptic fluids, has been a great success. The fruit has preserved its form and character, and, to a very large extent, its natural appearance, and has been a source of constant wonder to visitors. That such magnificent specimens of fruit could be grown in Canada, many could scarcely credit. The exhibit, however, speaks for itself and was a constant advertisement as to the genial character of our summer climate and the capabilities of the country to produce fruits of the finest and most luscious quality.

The show of fresh fruit, including a large variety of our best sorts of winter apples, the growth of 1899, was continued all through the summer and up to the close of the Exhibition, and awakened much interest. This constant exhibit was made possible by the cold storage arrangements perfected under the direction of the Hon. Sydney Fisher, Minister of Agriculture, by Prof. J. W. Robertson. This cold storage plant, which was placed under the Canadian building, worked admirably and rendered most efficient service, not only in preserving the more perishable of the food products brought together by Prof. Robertson, of which there was an admirable exhibit, but also rendered possible the preservation, in perfect condition, the fine display of fresh fruit brought together by Dr. Saunders. The crispness, juiciness and high flavor of these fruits, shown so long past their normal season, deserved and received the most favorable comment.

The arrangement of the fruits, fresh and preserved, in the Horticultural Hall, which was made by Mr. Robert Hamilton, of Grenville, assisted by Mr. Hay, was most effective, and to the assiduous attention given to this collection by Mr. Hamilton and by Mr. H. S. Knowlton of Knowlton, Que., a large measure of our success in obtaining awards may be attributed. The specimens on exhibition were examined from day to day by these gentlemen, and as soon as any of them showed signs of deterioration or shrivelling from exposure in a heated atmosphere fresh specimens were brought from the cold-storage chamber to replace them. At the time of Dr. Saunders' first arrival in Paris our best winter apples were represented by eighteen varieties, all in good condition. When he was leaving, however, on the 6th of October, the number of varieties shown was reduced to eight or nine sorts. Prior to this, on October 4, the large collection of fresh fruits made under instruction of the Minister of Agriculture in different parts of the Dominion, and forwarded by cold storage, arrived in Paris. These came in splendid order, and with the help of the second supply, since received, will ensure a large and varied exhibit of Canadian fruit to the close of the exhibition.

Mr. A. McD. Allan, of Goderich, Ont., who has lately arrived at Paris to assist especially in promoting the fruit trade, had, before Dr. Saunders left, made several large sales of fruit to wholesale dealers in Great Britain and

different parts of Europe and was negotiating further business in this direction. A careful study of the conditions in which our Canadian fruits have reached the Paris Exposition under different methods of packing, has been made by Dr. Saunders, and he hopes to be able to put the information gained to practical value in furtherance of the fruit-growing interests of this country.

The more important food products of Canada, of which a large collection was put together by Prof. Robertson, have been arranged and looked after by Mr. W. Mackinnon, of the Commissioner's Branch of the Department of Agriculture, who has rendered very efficient service.

Dr. Saunders speaks highly of the character of the mineral, fishery, and forestry exhibits which attracted much attention. He visited Normandy for the purpose of gathering information especially in regard to forestry which he hopes to utilize to good advantage in Canada.

While in England, Scotland and Wales, many of the stations were visited by the Director, where experimental work in connection with agriculture is conducted, and the progress made in this direction noted. The meetings of the British Association, held at Bradford, England, early in September, were also attended, where opportunities were afforded of explaining the nature and progress of experimental agriculture in Canada.

Some new varieties of cereals were secured, both in England and from the exhibits of foreign countries at the Paris Exposition, for test in Canada. Many new sorts of trees, shrubs and plants have also been obtained for trial at the Experimental Farms.

The Care and Management of Sheep

By A. W. Smith, Maple Lodge, Ont.

Under this heading I would like to say a few words. First, upon the selection of the flock. It matters very little what the breed may be, for in our glorious Canadian climate any breed that has thrived in other places will also do well here. So the breed selected, from which we take our flock, is simply a matter of taste, and the ability of the individual to bring out the best is seen in the animals he selects. If he fancies a black face, he will be more likely to succeed with them; or, if the long-wool breeds have a greater fascination for him, then his success will more likely be with them. For my own part, I think the Leicester the best sheep on earth, as a Yankee would express it, and breed them.

But, having decided on the breed he wishes to handle, there are a few rules of management the shepherd should have conspicuously before him, and from which he should not allow himself to drift—not in the least. And, standing out prominently above all others—after he has looked to the healthiness and robustness of his selection—is uniformity. I would nail that term high up, and in a most conspicuous place. For there is nothing in the management of sheep or of any other animal or commodity which has so much to do with profit or loss than uniformity, or the reverse. There is scarcely any farmer but knows the difficulty in making a bargain or sale of stock when a few culls or inferior animals have to be tacked on to the good ones in order to sell them at all, and what a drag they are to the good ones, and how much easier it would be to sell the good ones without the inferior ones. I have always believed it better to sell the good, even lots to the best advantage, and do the best possible with the poor ones by themselves; or, better still, get rid of the trash as quickly as possible, so that the loss on them will be as small as it can be, and then hold the good, even lots for profit. If the quality be good, and they are in condition and appearance taking to the eye, a practical result of good breeding and attention, then, with the highest price being paid, which he will surely get, he will have the deserved satisfaction of success.

HOW TO SECURE UNIFORMITY.

A few words as to how to secure this very desirable uniformity. First, the breeder must select his flock of ewes to that end, avoiding those that are under size or not strong and vigorous looking, and just as rigidly reject those that are abnormally large. Begin your uniformity with the size of your ewes, and let them be on the large size rather than the small, but alike as to size, strength of bone, quality of bone and general appearance, as far as possible. Having done this, you have made a good commencement, but only that and nothing more. The next step, and a very important one, is the selection of a ram. He must be a good one, and pure, or practically pure-bred, and of the same breed as your ewe flock, unless you are going to cross for some special purpose, and do not intend to keep the progeny for use in your breeding flock. For some purposes the crossing of breeds answers well, but never for a breeding flock. The ram must conform with the ewes in type, and let him be evenly proportioned, and not abnormally developed in some parts of the body and equally deficient in others, but as good as you can get all around. There is one opinion I have with regard to a sire that I would like to mention specially. He should be good in the hind quarters when young, because the male animal develops the fore quarters with age much more than the hind quarters. The only way you can keep your flock uniform and maintain a high excellence is by the constant use of a first class ram, all your selection of ewes is for nothing if you use an inferior ram. I have heard many men say "Oh! I have only grade ewes you know, and just raise lambs for the butcher, and of course cannot afford to pay any more than a similar price for a ram." But I say he cannot afford to use anything else than a good one—the best available. Nowhere does the best blood and the best animal tell to better advantage than when taken to the block, and even in the days of greatest depression in farm products, the best has returned a profit to the producer. No effort or money should be spared in placing a good ram at the head of your flock, and when necessary replacing him with a better one if possible.

CARE OF THE FLOCK.

Then having the breeding flock complete, comes the care of the flock in order to ensure the profit to which the farmer is entitled. Men have said to me when I urged for humane reasons, the better care of their flocks: "Well if I have to pamper and nurse my sheep to make them pay me, I will get out of the business, for I have no time to fool away with them, and there is not money enough in the business to pay for stuffing them all the year round," and I agree with them if the profit be measured by the present returns from their flocks.

I shall now draw a picture of how he probably had been treating his flocks. In the beginning of winter and often a good while after winter had begun the sheep were to be seen in the fields, either scraping the snow away from the ground, looking for a bite of grass or a weed, or else huddled in a corner of the field anxiously looking for relief from the owner. This relief came after a long while and the sheep were driven to the barnyard, when they were turned in among a lot of cattle and pigs and colts perhaps, to be hooked or kicked or chased, and kept in constant terror—the sheep is a timid animal naturally—and all the time taking their chance of getting a bite to eat from among all the rest. While for shelter they perhaps had opening to the yard a small pen with cracks and openings all the way up and down and around the walls, built one could imagine to let in the greatest number of drafts possible. The door just wide enough for two ewes heavy with lamb to wedge themselves solidly between the jambs, and inside, the ceiling so low that when you went into the pen you were doubled up so you looked enough unlike a human being to scare the sheep into a stampede for the door, which is always conducive to some dead lambs. After a while the lambs began to come, a lot of weak ones among them, consequently a lot of dead ones, and for some reason the ewes did not seem to have much milk, and

the wool on the older ones seemed to get kind of loose and a lot of it got rubbed off by the sheep trying to relieve themselves from the annoyance of the innumerable ticks and lice with which they were infested. In fact he had not very good luck so far with either the ewes or lambs. Then he thought if the grass would only come, that might "freshen them up a bit," and as soon as the snow was gone they went to the fields where the grass was hoped to be, picked some stubs of last season's grass and a few early weeds, and refused the poor quality of straw at the stack or pen. Some more lambs died, and a few of the weakest of the old ewes dropped off. Then the farmer was quite sure sheep did not pay, and turned them on the road.

After a while he wet them in the creek or river and a few days later cut some of the wool still remaining on them, leaving lots of tags around the neck and legs and belly, and taking several pieces of the skin with the wool.

After the harvest is off the sheep are taken from the road or a bare pasture which had all the stock of other kinds to eat the grass that grew on it, and turned into the stubble field; and the man who attends to his sheep in the way described, generally lets the burrs grow to maturity also. The sheep and lambs get the full benefit, of course. And after a while when a buyer comes along, he sees a few lambs with their wool twisted and contorted with burrs, the tails will probably be long also—we feel sure, and honestly so, too, that he cannot give near the top price for these lambs, and if he buys them at all these three or four little fellows will have to be kept out as they are of no use to him in any case, and besides he cannot give quite as much for these ram lambs as if they were wethers, in fact he is not anxious to buy them at any price. Then, convinced that there is no money in the flock, the cheapest kind of a ram he can get—no matter how mean—will do him, perhaps one of these same long-tailed ram lambs closely related to most of the ewes will do, and he can sell him to the butcher a little later.

THE BEST FOR PROFIT-MAKING.

But the object of this paper is to point out that this kind of profit need not fall to the lot of the intelligent shepherd. Beginning when the other man began—in the early winter, if you have a roughage on the pastures, or if a quantity of rape uncut, sheep will do very well if an opportunity be given them to go under shelter in case of very disagreeable weather, and if a little grain (only a little) be given them along with what they gather from under the snow. But in bad weather all sheep should have a chance to go under shelter. Then when taken to the sheds for winter, see that their shelter is good. It need not be expensive. It should have a good roof, and the east, west and north sides double boarded and tar-papered between, or otherwise made close, so no drafts can injure the sheep, for sheep can stand any amount of cold better than a drafty pen. The south side can be left open or with doors so wide as to be practically open, and have good sized yards for the sheep to use exclusively, with no other stock to molest them, and try and have the racks arranged so as not to cover the backs of the sheep with chaff or dirt every time they are fed. It injures the value of the fleece. Then with plenty of pea-straw which we can grow so abundantly in this province, a feed of clover hay once a day, and a few roots, which they always should have, or some other succulent food, sheep will require nothing more except salt and water, and a little regular attention, until they begin to lamb. Of course a little grain, say one-half pound per day each to the ewes, and double that amount to the lambs you are wintering will bring them through much stronger and in better flesh, and be more profitable as well, than they otherwise would be.

I need not point out the necessity of careful attention at lambing time, with the probable keeping of the lambs from young ewes having twins by giving the lambs a little milk in addition to that taken from the dam. There should be the most liberal feeding of the ewes after lambing. To have the lambs do the best—and it will pay you—a small pen should be arranged into which the lambs can go,

but not the ewes, and in which a little ground grain and oil cake, if handy, is put a little at a time and often, which the lambs very soon learn to eat readily, and will grow much faster than without it. If the lambs are intended for mutton be sure and castrate the rams while young. It is easier on them then than later, and the tails also should be cut at about 14 or 15 days old.

Do not let the ewes get to the fields until there is grass enough for them to get a reasonably full bite, and dock them carefully before they go. Wash them thoroughly, if you wash them at all, and shear them carefully. How much more pleasing it is to see a flock of sheep neatly shorn than those with all the tags, and ragged and scarred with the shearers. Roll up the wool carefully and neatly, leaving out any tags and dirt, and you will be sure of the best prices.

About two weeks later dip every one of them, lambs and ewes, thoroughly in some good sheep dip. We use McDougal's. Do not miss any for a very few ticks left will be sufficient to produce a full colony to annoy the sheep the next winter. About the middle of June have a piece of ground prepared and sow it with rape, which will be ready for the lambs in August. It is really surprising how lambs will grow and get fat while feeding on the luxuriant growth you will have from that patch of rape. 3 or 4 acres will feed 30 or 40 lambs nicely, and with a good season far more. If you put the rape in drills the same as roots you can clean the ground thoroughly, and the droppings from the lambs will make a grand coating of manure. In connection with the rape you should always have a field of pasture for the lambs to run on. They do much better and it prevents loss from bloating, scouring or other causes.

About Sept. 1 I would recommend that you wash every lamb carefully with soft water and soap. It loosens out the tangles in the wool, adds luster to it, and adds 50 per cent. to the appearance of the lambs. I would not consider the washing so necessary with pure-bred downs as with long wools or crosses.

Then about December 1 you will have a flock of lambs beautiful to look at, fat and heavy, for which you are sure to get the very highest price, and which a buyer will not leave with you if it is possible to buy them. And if you have given the lambs the attention of trimming them a little, and squaring their tails off neatly, and leave no burrs around the fences—attention requiring very little time—you will reap abundant satisfaction from the flock as well as a substantial profit.

From the ewe flock remove all ewes too old to be profitable, and any that, from any causes, have dropped below your standard. If a ewe has failed to breed last season do not discard her on that account if you think well of her, she will probably bring you the best and strongest lambs you will have next year. Then breed them in October or November to the first-class ram you have already selected, and go on to renewed success and pleasure in your flock.

Sir John Bennett Lawes

Lessons from His Work on Soils, Crops
and Manures

By W. J. Thompson, B.S.A.

By the death of Sir John Bennett Lawes in August of this year agriculturists throughout the world have lost their greatest benefactor. Mr. Lawes was born at Rothamsted in 1814. In 1834 he began his experiments in agricultural chemistry on his now world-famous Rothamsted Farm. In 1843 Dr. J. Henry Gilbert, a young chemist, became associated with him. These two enthusiastic farmers have up to the present year worked together in showing to the farming world the greatest secrets of nature in developing its food resources.

To quote from the reports of the Royal Agricultural Society, of which Society he was the guiding spirit in

advancing agricultural education and research, the following evidences of his work over a period of fifty years are put on record:

1. The excellent effect produced upon the turnip crop by dressing it with phosphates. At once grasping the importance of this discovery, Mr. Lawes, as he was then, obtained in 1842 a patent for the manufacture of superphosphate, and thus laid the foundation of a great industry.

2. Experiments were commenced in 1857 and conducted for several years in succession to determine whether plants assimilate free or uncombined nitrogen, and also various collateral points. The conclusion arrived at was that our agricultural plants do not themselves directly assimilate the free nitrogen of the air by their leaves. Further experiments relating to certain aspects of the subject were commenced in 1898 and are still in progress. The results have shown that when a soil growing leguminous plants (clover, peas, etc.) is infected with appropriate organisms there is a development of the so-called leguminous nodules on the roots of the plants, and, coincidentally increased growth and gain of nitrogen.

3. Amongst the field experiments there is, perhaps, nothing of more universal interest than the field—known as Broadbalk Field—in which wheat has been grown for fifty-seven years in succession, without manure, with farmyard manure and with various artificial manures. The results show that, unlike leguminous crops such as beans or clover, wheat may be successfully grown for years in succession on ordinary arable land, provided suitable manures be applied, and the land be kept clean. Even without manure, the average product over forty-six years, 1852-1897, was nearly thirteen bushels per acre, or more than the average yield of the whole of the United States of America, including their rich prairie lands—in fact, about the average yield per acre of the wheat lands of the whole world. Mineral manures alone give very little increase, nitrogenous manures alone considerably more than mineral manures alone, but the mixture of the two considerably more than either separately. In one case, indeed, the average product by mixed mineral and nitrogenous manure was more than that by the annual application of farmyard manure; and in seven out of the ten cases in which such mixtures were used the average yield per acre was from over two to over eight bushels more than the average yield of the United Kingdom (which is rather less than twenty-eight bushels of 60 lbs. per bushel) under ordinary rotation. It is related that a visitor from America, talking to Sir John Lawes in Broadbalk Field, said: "Americans have learnt more from this field than from any other agricultural experiment in the world."

4. Another field experiment of singular interest is that relating to the mixed herbage of permanent meadow, for which seven acres of old grass land were set apart in Rothamsted Park in 1856. Of the twenty plots into which this land is divided, two have been left without manure from the commencement, two have received ordinary farmyard manure continuously, whilst the remainder have each received a different description of artificial or chemical manure, the same being, except in special cases, applied year after year on the same plot. No one can inspect this field during the growing season without being impressed by the striking evidence it affords of the influence of different manurial drainings. Repeated analyses have shown how greatly both the botanical constitution and the chemical composition of the mixed herbage vary according to the description of manure applied.

Telephones for Farmers

Wisconsin has a statute which is likely to encourage experiment in municipal ownership of a telephone business. The act, passed last winter, authorizes any municipality to issue negotiable bonds, on the petition of a majority of the freeholders, for the establishment and maintenance

of a telephone system. Few knew what motive was behind this action; but since it was taken a farmer's telephone company has been incorporated, with a capital of \$500,000. This company is offering to establish a telephone plant in any town on a guarantee of 100 subscribers at \$12 a year, taking its pay in township bonds drawing five per cent. interest and running twenty years, five per cent. of the principal to be appropriated yearly to a sinking fund. It is assumed that the income of the lines will pay the operating expenses, maintenance, interest and sinking fund. When the bonds mature the plant is to become the unincumbered property of the township. It is not stated that any towns have yet taken up with this proposition, but the scheme is a tempting one, unless there are conditions not set forth in the statement of the case before us. A cheap telephone system in a country town would be a great promoter of sociability and contentment in the winter season.

Canadian Fruit in England

Last week the Department of Agriculture received a cablegram stating that the shipment of grapes made some ten days ago by the "Manchester Commerce" arrived in most excellent condition. They were carried in chambers ventilated by electric fans. In a letter recently received by the Hon. Mr. Fisher, from a Liverpool merchant to whom a specimen box of the pears was shipped by the "Manchester Commerce," he says: "Judging by the sample, it could not possibly arrive in a state better suited to the requirements of the market, and this result of your efforts must be very gratifying. The quality and size of the fruit itself leave nothing to be desired, and if your instructions are followed in regard to packing and transport the success of the trade is assured. In order to see how long the fruit would remain good after coming out of the cold chamber, some of the pears have been kept, and now, ten days later, show no signs as yet of the slightest deterioration in condition."

In regard to this last-named shipment, the Liverpool *Journal of Commerce* says: "A recent shipment of fruit by the 'Manchester Commerce' arrived in this country in the pink of condition, and samples have for the past week been exhibited at the offices of the Canadian Pacific Railway. There passers-by were astonished to read that all the fruit exhibited, which included some of the finest peaches imaginable, was grown in the open air, and some were so carried away by the exceptional appearance of the fruit as to be induced to enter and attempt to purchase what were only exhibited as samples."

These statements as to the condition in which the recent experimental shipment of Ontario fruit have arrived in Great Britain must be very gratifying to those endeavoring to develop the English market for our tender fruits. The splendid condition in which these shipments have arrived opens up the way for a largely increased trade in this line. If the arrangements in the way of cold storage facilities and ventilation on board the steamships were to be perfect and if the fruit is carefully picked, packed and handled in other ways, there is no reason why a large trade should not be worked up another year in sending Ontario tender fruits to Great Britain. It may take a little time and a little judicious advertising to develop the market, but if the demand is once created there should be little difficulty in maintaining a steady and ever-increasing trade in Canadian fruits.

Butter-Fat and Churning Temperature

Churning consists in bringing the fat globules of milk or cream together under such conditions that they will adhere and form butter. When the temperature is too high the fat has little consistency and the small particles

of butter formed are so easily formed up again that the separation is not efficient. Under such conditions also the butter is soft and of poor quality.

If the temperature should be above the melting point of the fat it will be impossible to obtain butter by any amount of churning. On the other hand, when the temperature is too low the fat globules are hard and do not readily adhere to each other, and under this condition also churning is difficult.

The most favorable temperature will depend upon the melting point or consistency of the fat, and as this is subject to considerable variation it is impossible to fix a temperature which will give the best results under all conditions.

The consistency of the fat in milk is affected by the breed of cow, by the feed which she receives and by the period of lactation. As a rule, cream from Holstein or Shorthorn cows should be churned at a lower temperature than that from Jersey cows. When succulent feed is given the temperature should always be lower than when dry feed is given. As the period of lactation advances the fat becomes harder and the temperature of churning should be raised.

The amount of fat in cream is another factor which affects the temperature of churning, it being practical to churn rich cream at a lower temperature than poor cream. Generally a low temperature gives a firmer and better quality of butter and a good rule to follow is to churn at as low a temperature as possible and have the churning completed in from 30 to 50 minutes. This temperature may vary, under different conditions, from 40° F. to over 60° F., and should be determined experimentally by every buttermaker for the cream which he handles.—S. M. Babcock, *Wisconsin Experiment Station*.

Improving Dairy Cattle

The winter dairy is especially the place to improve cows. One has them more closely under the eye, and can study them better than at any other time of the year. The method of feeding, too, is more of a business that can be watched than it can in the summer, when cows are on pasture. For the improvement of any animal is a matter to be studied well before much can be done in any satisfactory manner. There is much difference of opinion in regard to this work in the dairy. Some think the way to improve one's cows is to buy as good a purebred bull as one can afford, and mate it with the cows, and so at a single jump get right into a very valuable herd. This is a wholly mistaken idea. It is true that like produces like in the breeding of animals—to some extent—but if this is all one has to depend upon for improvement there would be simply none made. I once saw a miserable little calf in a pen on exhibition at a fair; it was thin, rough, and had the most woe-begone look one could think of, and on the front of the stall was a notice that this was a calf bought from a noted breeder of Jersey cattle, some of whose stock were in pens close by. I talked with the owner of the calf, and got to know all about it. He was one who thought blood would tell, as the saying goes, without any help. He informed me that the calf when it arrived at his place was turned out with some other calves into a poor pasture, where all it had to live on was weeds and briars, and it never got a mouthful of grain food for the several months he had had it, and the result, as he said, was the fact that it was poorer now than it was when he got it. And he insisted that he was swindled, and was going to get even with the man who sold him the calf by exhibiting it close to his stock on exhibition. I bought that calf for the 40 dollars this man paid for it and it made a cow for which a purchaser paid me gladly 500 dollars when she had a second calf, and was making 2 lbs. of butter a day. But she did not do this on her pedigree alone, we may be sure, although this helped to make her food more effective for butter-making, and it is an excellent thing to have about a dairy. Cows must be trained. As it was once said: "A man's

great-grandfather gives him his character and disposition, so it is with the lower animals, whose disposition and abilities will be inherited if they are cultivated during these generations back. And as few dairymen can afford to pay others who do this scientific and exacting work for years in the improvement of their cows the prices they exact for their skill and time spent, by buying cows, they must do the next best thing—go to work on the same lines themselves, and improve their stock by good feeding first, and selection of the best calves reared. If it is possible to make a start by the help of some pure-bred animal at reasonable cost, so much the better, but let us begin and do what we can anyhow as far as we can, and all of us may do much if we try in the right way. I have been trying the past sixteen years to improve the common cows of this locality, and have succeeded better than I thought. I began with a small common cow, which when fresh milked four quarts a day when I got her. I don't think she ever smelled any grain food of any kind, but lived on the range in the woods in the summer and on the corn-stalks in the field in the winter. Two months' good feeding on good hay and fodder, cut and wet and mixed with corn meal and bran, started the little thing to grow, as well as to double her yield of milk and make 4 lb. of butter in a week. She was bred to a Jersey bull, and her calf, a heifer, was weaned at birth, never sucked the dam, and was fed after the fourth day on skimmed milk warmed to the temperature of fresh milk, which it drank without any trouble. The calf was fed a little corn and oatmeal when a month old, and every day after got a regular ration, increasing as it got older, until when it came in at two years old it was getting four quarts a day. Her calf was weaned at birth, as she was, and got the fresh milk for four days, when she got the warmed skimmed milk, just as her dam had when a calf. The young cow got good hay and fodder, cut and wetted and mixed with mixed corn-meal and bran, which was gradually increased as long as the milk and butter increased, at intervals of a week, until she was eating all she would, which was a heaped bushel basket twice a day, and 10 lbs. of the mixed corn-meal and bran. She kept on increasing in milk and butter until in three months I had got her up to 8 lbs. of butter a week, and when she went on to pasture, which was clover mostly, with some timothy and orchard and red-top grass and the regular feed, increased to 10 lbs. a week. This cow I kept 10 years, when she was sold for forty dollars, having cost me thirteen. As few people here can afford to pay that price for a cow, the usual price I have got for my spare cows has been twenty five dollars, and there are always several buyers for them at this price. The cows I now have in milking of this family, all descended from the little cow mentioned, are milking from ten to twelve quarts at a milking, when fresh; and none giving less than 10 lbs. of butter a week.

And so far I have not had a heifer calf which, when reared, has begun her milking with less than 8 lbs. of butter a week. Of course now, after some years, there is a good deal of Jersey blood in them, but this is a part of my method to improve the blood, then improve the animal by feeding. As an example of the result of education, as well as breeding from trained cows, the cows which are coming now, and for a few years back, need no weaning, for they drink from the pail from the first mouthful, given six hours after they are born, without any fuss or trouble, as soon as they get their nose to the milk. This is a very convincing proof to me that training is hereditary, and by breeding in the right way, trained cows, their habits become inherited, not only as to appetite and ability to digest food and to turn it into milk and butter, but as to docility and ease of discipline, and even to disregard of the natural way of feeding of a new-born calf.—*Prof. Henry Stewart.*

Our next Farm Implement Department will appear on November 20. We have several special illustrated articles of interest for that number which will make it of more value than usual. Any items intended for that department should reach us early next week.

Warm Poultry Houses a Necessity

Several people who last summer thought they had a poultry house warm enough for any weather now have ample proof in the frozen combs of their flock that they were mistaken. These people would better go into the poultry house some cold day (the colder the better), and decide what changes and additions are necessary in order to make it as warm as it needs to be. They will thereby be better prepared to fit it up in proper shape for another winter. When a man is at work at his poultry house in his shirt sleeves on a balmy fall day and views the winter blizzard from that standpoint, it loses a good deal of its power and liveliness.

There is one thing which the owner of the house will find out while seated among his flock of shivering hens and fixing in his memory the betterments which are to be a part of the duties of the future. He will not discover that anything which was done in the house with a view to making it a comfortable winter home for the hens was wasted time or labor. When building it he may have been undecided about some work or expense which went into it. He may have been tempted to save a little on some of the items, but he will not be glad that he didn't do it. He will know that there is not a board or a sash or a pound of paper in the building which should have been left out of it. He has finished a term in the school of experience and paid his tuition.

Whoever provides himself with a well-built poultry house will fully appreciate the luxury of it when the mercury drops to 20 degrees below zero. To go into the poultry house at such a time and find the nesting boxes full of laying hens gives one something of the feeling of a conqueror. He has fought a winning fight with the forces of winter and has his foot on the neck of Jack Frost. He feels that he has accomplished something worth bragging about and his acquaintances have occasion to know that he feels that way.

Of course, money can be wasted on the poultry house, but no attempt should be made to escape any reasonable expense which will contribute to its warmth. In this northern climate a house which is walled in with but one thickness of boards, however close-fitting they may be, is not warm enough for laying hens. If lined or covered on the outside with building paper it will answer for a moderate winter, but even in a house of this kind the combs of Plymouth Rocks will become frosted when mercury drops to 20 degrees below zero. An inside lining of boards and paper with a dead air space between the two walls is the least that can be done if one wants to be secure against freezing temperature. No kind of care or feeding will lead to any good results unless the poultry house is built in a manner which gives comfort to the fowls. It is the best to make it right in the first place.—*Farmers' Tribune.*

CORRESPONDENCE

Would Reach the Average Farmer

Editor THE FARMING WORLD:

I think that those auction sales will be a great benefit to both sellers and buyers, but I think that a fair share of the best stock should be put in the sales and sold for what they will bring. Once there is confidence established in the minds of those who want to buy pure bred stock, I should think that there would be no difficulty in selling all stock offered; and it would likely be the means of reaching more of the average farmers, particularly those living at no great distance from where these sales are held.

Teviotdale, Ont.

W. H. MALLETT.

Of Personal Interest to Every Farmer Education in Poultry Raising

Editor THE FARMING WORLD :

Annual auction Sales of thoroughbred stock would be of untold benefit to the farmers, and particularly in the outlying districts. The writer has seen great good done in this way by introducing good pure bred males, and the County Council of Lanark supported a resolution of this kind a year ago for a sale at Carleton Place. These sales ought to be well advertised, and every farmer ought to take a personal interest in them. Movements of this kind, and supporting Farmers' Institutes would elevate the agriculturists of this vast Dominion to a position of wealth and affluence commensurate with their high and noble calling.

W. J. ANDERSON,

Vice-Pres., Lanark Co. Farmers' Institute.
Smith's Falls, Ont.

Selecting the Ram

Editor THE FARMING WORLD :

As the time is come when the sheep-breeder is about to mate his ewes we presume he has or is taking great pains in securing a good sire suitable for his ewes. There are farmers and breeders who have to send to other breeders in order to get fresh blood into their stock. As we receive many orders from a distance, let me give a word of advice to those sending for rams, etc., so that the breeder may have a chance to please you. Last year we had one correspondent, after getting prices, writing as follows: "Enclosed please find cheque for ram lamb. We have a flock of very high grade Shrops. and wish to increase size." We sent him a compact, heavy boned and heavy bodied lamb with close, well-covered fleece. About a month ago he wrote me, saying he never had such lambs, and realized a high price for them from the butcher. I could relate many similar instances. Then we get many orders after this fashion: "Enclosed find cheque, please send good lamb." We always send a good lamb, but if we knew the particulars we might send a better ram for that particular flock. If a customer cannot describe minutely the kind of ram he wants he had better describe his flock and state what points he wishes to improve upon or keep prominent.

But I am off the subject I started to write about. No breeder can secure too good a ram for his flock, if the flock is worth having and whether he be a large or small breeder. If two or three small breeders would join together and buy a real good ram it would be better than using a common one. Having then secured as good a ram as can be procured, the breeder's particular attention should be turned towards his ewes and the pasture for them.

I will give our plan and if any person has a better one please send it to THE FARMING WORLD that we may all be benefited. I choose after haying the best timothy sod we have and keep it for our ewes at mating time. Then one week or ten days before we turn the ram with the ewes we turn the ewes into the pasture and begin to feed a few oats morning and evening. We generally have two fields and every three or four days change them from one to the other, giving salt and water at will. This year the pasture being good we feed 30 lbs. oats to 70 ewes morning and evening, put the rams in over night, giving them what oats and a little bran they will eat up clean. If the pasture should be poor I would feed more oats. After the season is over we give the ewes as large a run as possible, feeding a few oats once a day.

Perhaps I have written enough for this time. If this finds a place in the columns of THE FARMING WORLD instead of a place in the waste paper basket, I may give our methods of caring for ewes and lambs at and after lambing time at a future date.

J. H. JULL.

Mt. Vernon, Ont., Oct. 30, 1900.

Editor THE FARMING WORLD :

Your favor of 24th, asking my opinion of an article in THE FARMING WORLD, by R. C. Allan, also my opinion as to the advisability of trying to advance the subjects recommended in the same number of your journal.

In the first place, we all know how much good has been done in the country by the travelling dairy, and other instruction which has been received along that line. Now, I believe that poultry occupies equally as important a place in the country as dairying, and anything that can be done to educate our young people, especially our farmers' daughters, would be quite advisable, as it is to them we must look if we are ever to make the progress in poultry that we have done in dairying. We should feel very grateful to our Dairy Commissioner for providing us with cold storage so that we can get our poultry to the British market in proper condition, and for establishing poultry-fattening stations in different parts of the Dominion.

But where are the chickens to come from to supply these fattening stations? It is quite evident that the farmers must meet the demand, and in most cases the women on the farm attend the poultry. Therefore, if any way could be devised by which a short course of training could be given to our young people at our Dominion and Ontario Experimental Farms and other places, where they could be instructed in the raising of poultry to supply these fattening stations, it would be of very great benefit to our country. It would also greatly increase our poultry trade with Britain, as it would then be possible to supply that market with first-class fowl, whereas the fowls which are now raised are so inferior and so few that it is necessary to buy many inferior birds to supply the demand.

MRS J. YULL.

Carleton Place, Ont., Oct. 31, 1900.

Fattening a Prize-Winning Steer

Editor THE FARMING WORLD :

In looking over Mr. T.'s statement in THE FARMING WORLD of Oct. 23, I notice he pays a good deal of attention to breeding, which, of course, is of great importance, but I think the attention of our farmers should be called to the manner in which their young stock are taken care of. I often find, in driving through the country (as in my business I do a great deal of), that there is really no care taken of the calves. As soon as they can shift for themselves they are turned out, and in most cases are taken up in the fall a mere framework with a hide thrown over. Even through the winter they look half starved, with their backs humped up and hair on end. How can farmers expect to make prime cattle in two or two and a half years of such stock? Calf flesh once lost can never be regained. The following is the feed ration of the yearling steer shown by me at the Industrial Fair last September, and which won second place in one of the fat cattle sections:

He was calved on Sept. 17, 1898, and was weaned on March 31, 1899. I fed him a mixture of bran and oil cake (2 of bran and 1 of oil cake in weight), at noon of each day about 2 quarts, and morning and evening 2 quarts of chopped (not rolled) oats for 5 months. Then I left off the mixture, and fed at the rate of 3 quarts of oats each meal until I found he wanted more, when it was increased to 4 quarts 3 times per day, giving him at the same time as an appetizer any apple parings or a few roots every day. He had free access to water at all times, and the run of yard at night. His manger was always filled with lucerne or timothy hay alternately.

J. H. DINGLE.

Hamilton, Ont., Oct. 29, 1900.

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 2,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

A. P. WESTERVELT, Secretary,
Parliament Buildings, Toronto, Ont.

An Interesting Feature of the Approaching Provincial Winter Fair.

The Provincial Winter Fair, to be held at Guelph, December 11, 12, 13 and 14, will have very many interesting and instructive features all tending to bring before those present the latest, best and most economical methods of breeding, feeding, preparing for market, and disposing of, the various kinds of live stock raised on a farm.

In view of the future importance of shipping dressed poultry to the markets of Great Britain, special attention should be directed to the competition, at the Winter Fair, in killing and dressing chickens in the style called for in those markets. This competition is strictly to be confined to farmers, farmers' wives, their sons and daughters, all hucksters being excluded. The killing and drawing must be done along the lines approved of by Prof. Robertson in the pamphlet on "Chicken Fattening," issued from Ottawa, which can be procured on application.

Each competitor will be given four chickens to kill, pluck, and dress, and the prizes will be awarded, with consideration of the speed and efficiency shown. Moulding boards will be provided, and the birds must be prepared for packing in crates. The entry fee for this competition is only 25 cents, and all applications for entry must be received on or before December 3.

Heavy Cattle Shipments from Medicine Hat.

Medicine Hat is situated in one of the very best cattle-growing districts of the Northwest Territories. It is essentially a stock-growing district, and not a grain-growing one. Mr. J. H. Bray,

the secretary for the local Ranchers' Association, and Government stock inspector for the Medicine Hat district, writes under date of October 15: "We are now making some very heavy stock shipments. The cattle are in excellent condition. We have hardly a case of mange in any of the herds. We have had a couple of weeks of bad weather, commencing with the fall equinox, but now the weather is glorious Indian Summer, and the town is intensely busy. The corporation last week commenced the new water-works, and builders are all very busy finishing up work. We have six new stores in course of erection, fine brick blocks, besides a lot of private residences." Medicine Hat is one of the prettiest and most progressive towns in the Northwest. It is supported by the railroad and ranching interests, principally by the latter. It is destined in the near future to be one of Canada's prettiest and most progressive towns, surrounded, as it is, by an exceedingly good country. It will for all time to come be supported by the great stock interests which surround it on all sides; in fact, Medicine Hat may be said to be the heart of one of the largest and most promising stock-growing sections in Canada. Many large ranchers make this beautiful town their home, the family residing in splendidly-appointed houses, surrounded in many cases by handsome grounds, while the herds which support these homes are sometimes located from 60 to 100 miles away. The families of the ranchers living in town attend good schools. At the end of the schooling period, and when the schools close, many of these young people find a most enjoyable holiday in the open plains among the fine herds which pasture on the splendid country adjacent to this town.

Annual Meeting of the Ontario Agricultural and Experimental Union.

The annual meeting of the Ontario Agricultural and Experimental Union will be held at the Ontario Agricultural College, Guelph, Ontario, December 10 and 11, 1900, commencing Monday afternoon at 1.30 o'clock. Summary of reports of co-operative experiments conducted by upwards of 3,000 farmers, fruit growers and poultry men will be presented and discussed.

Addresses will be delivered by some of the best Canadian and American authorities on agriculture and domestic science. The meeting will be made of interest to stockmen, dairymen, poultry men and fruit men, and to all persons engaged in mixed farming or in household affairs. All are welcome. Excursion rates on all railroads to Guelph and return. For particulars apply to the secretary.

C. A. ZAVITZ,
O.A.C., Guelph,
Secretary.
H. R. ROSS,
Gilead, Ont.,
President

Auction Sales of Live Stock by the Dairymen's Association of British Columbia.

Wise men may come from the East, but the men of the West are usually the first to avail themselves of improved methods. Early in August Mr. G. H. Hadwen, Secretary of the Dairymen's Association of British Columbia, commenced a correspondence with Mr. A. P. Westervelt, Managing Director of the Dominion Cattle, Sheep and Swine Breeders' Associations, and with Mr. F. W. Hodson, Dominion Live Stock Commissioner, and, in this correspondence Mr. Hadwen, acting for the Government of British Columbia, and for the association which he represented, asked Mr. Westervelt and Mr. Hodson to assist him in procuring a shipment of live stock and forward it to New Westminster, B.C., where it was sold at auction on October 4 and 5, together with a number of animals contributed by local breeders. The animals in this shipment were carefully selected by Mr. Westervelt, the Hon. Mr. Dryden, and other officers of the live stock associations, and were forwarded by Mr. Westervelt in care of Lester Higgins, who has been regularly employed by the Dominion live stock associations to take charge of this and other important shipments from On-

tario eastward or westward, as the case may be. The animals duly arrived at their destination in first-rate condition, and were sold at a satisfactory advance above cost.

Mr. Hadwen's order was as follows: Ayrshires—2 yearling bulls, 3 heifers in calf.

Jerseys—1 yearling bull, 3 heifers in calf and 1 three-year-old cow.

Shorthorns—2 heifers in calf, 4 yearling bulls.

Berkshires—2 boars and 3 sows under 6 months.

Yorkshires—2 boars and 4 sows under 8 months.

Prices realized were as follows:

Sow, farrowed May 2, 1900, sold for \$26.

YORKSHIRES.

Boar, farrowed February 26, 1900, sold for \$13.

Boar, farrowed February 26, 1900, sold for \$15.

Sow, farrowed February 26, 1900, sold for \$15.

Sow, farrowed February 26, 1900, sold for \$15.

Sow, farrowed February 26, 1900, sold for \$15.

SUMMARY.

	Cost.	Sold for.
Jerseys.....	\$440	\$372
Ayrshires.....	330	366
Shorthorns.....	560	775
Berkshires.....	75	112
Yorkshires.....	75	70
	\$1,480	\$1,695

JERSEYS.
Bull calf, 3 months old, at foot of dam, which won second prize at Toronto show, sold for \$18.

Bull calf, 11 months old, which won first in Toronto, sold for \$53.

Cow, three years old, a second-prize winner in Toronto, sold for \$80.

Heifer in calf, calved March 2, 1899, a prizewinner in Toronto last year and this year, sold for \$59.

Heifer in calf, calved December 29, 1898, exhibited at Toronto, sold for \$62.

Heifer in calf, calved February 18, 1899, shown at Toronto, sold for \$100.

AYRSHIRES.

Bull, calved March 8, 1898, exceedingly well bred, dam and sire imported, of good quality, sold for \$55.

Bull calf, very good quality, directly descended from imported stock, of a good milking family of show cattle, sold for \$50.

Heifer in calf, calved July 26, 1898, out of imported parents, sold for \$80.

Heifer in calf, calved December 23, 1898, by an imported sire, the dam being a Guy cow, sold for \$90.

Heifer in calf, calved July 23, 1898, whose sire was an imported bull, and dam a Guy cow, sold for \$91.

SHORTHORNS.

Bull, calved May 11, 1899, sold for \$105.

Bull, calved September 27, 1899, sold for \$110.

Bull, calved November 29, 1899, sold for \$120.

Bull, calved July 1, 1899, sold for \$130.

Heifer in calf, calved April 15, 1898, sold for \$135.

Heifer in calf, calved May 10, 1898, sold for \$175.

BERKSHIRES.

Boar pig, farrowed May 2, 1900, sold for \$25.

Sow, farrowed May 2, 1900, sold for \$20.

Sow, farrowed May 2, 1900, sold for \$18.50.

Sow, farrowed May 2, 1900, sold for \$22.50.

The Shorthorns that were bred in British Columbia and sold at this sale brought from \$60 to \$80 apiece for young animals. A pair of young Shorthorns brought in from the United States sold for \$350. Altogether the venture was very satisfactory to the Western people, so much so that they are now negotiating with Mr. Westervelt for a second shipment. This was the first attempt at anything of this sort in British Columbia, and the authorities in the West did not know what sort of cattle the British Columbia farmers and ranchers were prepared to buy. Hereafter the Western associations will be likely to import dairy Shorthorns only, except when they receive special orders for some other sort. Dealing especially with this sale Mr. Lester Higgins writes as follows:

"I have visited several of the best ranching and farming parts of British Columbia. Chilliwack is an especially fine valley. In talking to the stock-breeders out here, and considering the way the Jerseys sold, I do not think that this is a good place to send them; those sent out were all bought by private families for home use. Many of the people claim that Jerseys do not do well here on account of the nights being so cold. Rain falls about six months in the year. The people prefer dairy Shorthorns. I have been out driving all day, and visited parties who bought Shorthorn heifers from Hon. Mr. Dryden. One gave birth to a bull calf soon after the owner got her home. All the parties are well pleased with the result of their first sale; and in fact every person whom I met is in favor of these sales being continued. Some parties I met were willing to pay as high as \$65 per pair for Oxford Down shearing ewes in lamb, if they were good and close-woolled, but open-woolled sheep do not do well in this climate."

The information that we here pub-

lish will give the Ontario breeders an idea of the prices they are likely to obtain from the British Columbia farmers and ranchers. Mr. Bosworth, Freight Traffic Manager of the C.P.R., has recently made a substantial reduction in the freight rates between Ontario and British Columbia on carloads of purebred stock for breeding purposes. The rate now from any point in Ontario to New Westminster or Vancouver is \$150 per car for the ordinary stock or box car, and \$225 for a long palace horse car.

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.

Man wanted for a farm. No. 606. a

Married man required for a farm in Minnesota. No. 607. a

Wanted on farm near Columbus, Ohio, thoroughly honest, sober, reliable married man, to take general charge under owner's supervision. Will supply house, cow, garden, wood etc. No. 608. a

Married man, without children, wanted on a farm, on a yearly engagement. Would also employ wife. No. 605. b

Domestic Situation Wanted.

Experienced woman, 38 years of age, and fond of children, wants a housekeeper's place on a farm. Wages asked, \$10 a month. Good references. No. 451. b

Situation Wanted.

Married man wants a situation as farm manager, or would work a place on shares. Has thorough knowledge of farm work and of care of stock and does not use tobacco or drink. No. 452. a

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

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to Secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to us he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

South Ontario Women's Institute.

The following is portion of a letter received by the Superintendent from Mrs. Anderson, Secretary of South Ontario Women's Institute:—

"Our Institute held a meeting at Ashburn on Thursday afternoon of last week. This is not the first meeting we have had this season. There was a fair attendance, about 30, and I think there would have been a great many more only the meeting was not sufficiently advertised, and, consequently, quite a number of the people around Ashburn knew nothing about the meeting. Our next regular meeting is to be held at Raglan or Myrtle.

We have invested in the following books which I think will be of great assistance to us: "Chemistry of Cooking and Cleaning," "Vegetable Gardening," "Flowers and how to Grow Them," "Early Training of Children," "Dust Pits Dangerous," "American Kitchen Magazine." The Whitby branch of the Institute is to meet at the Ladies' College next Saturday to hear Mrs. Joy. Dr. Hare has kindly invited us.

Mr. Purvis' Subjects.

The following are the subjects on which Mr. Purvis, Maxville, will address the Farmers' Institutes in Division 9B. This list was not received in time for insertion in the regular announcement last week:

"Care of Milk from Cow to Factory"; "Care of Milk for Cheese Factory and Creamery"; "Cream Separators"; "The Value of the Dairy By-products, Whey, Butter-milk and Skim-milk"; "Some Needs of the Dairy Market, and How to Fill Them." Evening subjects: "Success"; "Give the Boys a Chance."

President Mills Returns From His Trip to Britain.

President Mills of the O. A. College returned from Europe on Oct. 25, after a three and a half months' trip spent in Ireland, Scotland, England, France and Switzerland. In Ireland he spent some time near Peltigo, in the county of Fermanagh, looking up relatives, where his father and mother were born and lived till the time of their immigration to Canada. He expressed himself as very much pleased

with the general appearance and fertility of the country. He was surprised to find such a large number of Shorthorn grade cattle all over the northern part of the island instead of the smaller special dairy cattle which he had expected to see.

IRISH SELL THEIR CATTLE AS STOCKERS

Large numbers of Shorthorn crosses are bred in the country and kept till they are from one and a half to two years of age, when they are sold to Scottish and English farmers, to be fed for the great markets of the United Kingdom. The most discouraging feature which he saw in Irish agriculture was the smallness of the holdings, varying from five to fifty acres, with a very large proportion of them under twenty-five acres. From Ireland he passed over to the south of Scotland, where he spent some time amongst the Biggars and other large farmers in Kircudbright. There he found entirely different conditions. Instead of small holdings, such as in Ireland, there were farmers renting from 300 to 2,000 acres each, conducting business on a large scale, feeding cattle bought in Ireland and sheep gathered in the Highlands of Scotland, most of them well-to-do and many living like princes. One thing especially which struck President Mills in this connection was the very high prices which farmers get for their stock compared with what our Canadian farmers get for theirs. From the south Mr. Mills went north, visiting the chief places of interest, and at length made his way to Tarves, Aberdeenshire, the home of Wm. Duthie, the most eminent and successful Shorthorn breeder in the world. Mr. Duthie, W. S. Marr of the same neighborhood, and Mr. Deane Willis, of Bapton Manor, in the south of England, possess nearly all the Cruickshank cattle in Great Britain, and have the three finest herds of that breed at present in existence.

HIGH PRICES REALIZED FOR STOCK.

Mr. Duthie and Mr. Marr have a joint sale of their surplus stock every fall, at which they receive very high prices from breeders in Great Britain, the Argentine Republic, Canada, and the United States.

Mr. Mills found on Deane Willis' extensive farm, in the south of England, a large herd of most excellent animals, very similar to the herds of Mr. Duthie and Mr. Marr. Mr. Willis had just then sold a cow and young bull for 1,600 guineas to a Mr. Kelly of the United States. Messrs. Duthie, Marr and Willis are constantly interchanging animals by lending to one another, but refuse to dispose of any of their best beasts to anyone in Great Britain. If any of the very best are sold it is to some one in the foreign market. Mr. Mills also visited some of the best Aberdeen-Angus herds in the north of Scotland, especially those of W. S. Ferguson, near Perth, and of

the Earl of Strathmore, near Glamis. He also saw in Scotland some fine flocks of Shropshire, Cheviot and Leicester sheep, especially that of Mr. Buttar in Perthshire, which of late has been pressing those of the best English Shropshire breeders for the first places in the show rings of the United Kingdom.

In England he found a greater variety of stock—a larger number of breeders—than in Ireland or Scotland, much of it good and some only commonplace. Mr. Mills also visited all the agricultural schools and colleges as well as the Universities of the old country and found several of the former doing good work and adapted to educate the large, wealthy farmers and farm agents or factors rather than the rank and file engaged in agricultural pursuits.

After a very interesting tour through England he spent a week in France and eight days in Switzerland.

SMALL HOLDINGS IN FRANCE.

In France he observed that there were very few fences and hedges. The land is divided up into small holdings, as in Ireland, generally without fences separating them one from another, and the cultivators live not on their respective holdings but in villages, because of the educational, religious and social advantages which accrue to those who live in town or village. In Switzerland the thing which most impressed him was the most extraordinary thrift and economy of the people, living in cottages on their separate plots of well-tilled ground, from the fertile valley all the way up even the steep sides of hills and mountains.

His view of the Paris Exhibition is that, from an artistic standpoint, it perhaps surpasses anything that has yet been held. But in extent and other respects he does not think that it is quite equal to the World's Fair in Chicago. Financially it is a great failure, and will probably prove a serious injury rather than a benefit to the city in which it was held. He considered the Canadian exhibit a very creditable one, and thought that it would assist materially in extending the trade of the Dominion with European countries.

CANADIANS IN FAVOR IN GREAT BRITAIN.

Mr. and Mrs. Mills then returned to London, which they considered far superior to any other city which they visited. They met many friends and were particularly struck with the hospitality of the people, such as they never experienced anywhere else. They found everywhere a keen interest in Canada and Canadians; a friendly feeling towards us and a desire to increase the trade between the Dominion and the old country, the people willing to use Canadian goods in preference to all others, provided that they were equally good and delivered in satisfactory condition.

Locating an Orchard.

The selection of an orchard site is not governed by any arbitrary rule. All farms do not afford the best soils and exposures for orchards. The owners of such as do not are unfortunate, yet they should not feel discouraged to the extent of not planting trees and caring for them afterwards.

EXPOSURE.

Some kinds of soils and surface presentations are preferable to others, as they are better adapted to this fruit and require less expense in preparation and in the after care and treatment of the orchard. The most intelligent and experienced orchardists often differ as to the best location and exposure of an orchard, some preferring a northern slope, others an eastern, and yet others recommend a southern or even a western as best. We think, however, that the advantages preponderate in favor of a gentle eastern or north-eastern slope, as orchards located on such sites suffer less in both soil and tree from the effects of heat and drought. An orchard with such an exposure will maintain its vigor and longevity better than if inclined to the west or southwest. This is especially true in States south of the New England group, where the summers are long, hot, and dry, and where it is probable that the greatest injury to trees results from these causes. But, as stated above, all farms do not afford these most favorable sites, especially near the home, which is the most desirable location for the family orchard. Thus the planter will often be forced to forego such a location and take his chances where the natural conditions are not so favorable. If possible, the site should be elevated above its immediate surroundings, thus giving a free circulation of air; and it will also be of great aid in guarding against late spring frosts, so fatal to young fruit at the blooming season.

SOILS.

Apple trees will thrive and do well on almost any soil well prepared, but the different kinds of soil may require different treatment and after care.

Loamy Soil.—A loamy soil is naturally rich in plant food, hence will need little, if any, manuring in its preparation. But it should be deeply stirred and thoroughly broken up by subsoiling. This loamy soil is what may be termed free soil, as it seldom becomes compacted, even by abusive treatment.

Clay Soil.—A clay soil is the most difficult to prepare, and often requires manuring as well as thorough plowing, replotting, and sub-soiling. It should be also frequently stirred during the summer months, and especially as soon after each rainfall as is practical, to prevent it from baking and becoming

compacted. This becomes even more important in seasons of long and continued droughts.

Sandy Soil.—Sandy soils are generally lacking in necessary plant food. They also have the objection of losing such fertilizers as may be added, by the leaching of the rainfall.

Effects of Several Soils.—The wood growth on loamy soils will be strong and vigorous, but may not be sufficiently mature to withstand the freezing of the more rigorous winters. Clay lands are not so apt to produce such vigorous growth, and orchard trees on such lands will be harder as to winter killing than are most other soils. With a free subsoil underlying it, a loamy clay soil will probably yield the best results, especially if it be well prepared by thorough culture and subsoiling before planting the trees. Timber lands or lands on which forests have formerly grown, if having the proper exposure and drainage, are preferable for orchard sites. Such lands contain all the elements of plant food necessary to insure a good and sufficient wood growth and fruitfulness. Fruit grown on such lands will rank first class in size, quantity, and appearance.

DRAINAGE.

All orchard lands should be thoroughly surface, drained and sub drained. No orchard can endure for a great length of time with stagnant water either on the surface or within the soil. All surplus water from excessive rainfall or from other causes should be promptly removed by either surface or subdrainage.

If the natural formation of the land does not afford such prompt drainage it must be provided artificially. Surface ditches or furrows between the rows of trees may afford temporary drainage, but they are objectionable on other accounts that will be apparent; for an orchard thus drained will be bad to get over in its necessary care and in gathering and handling the fruit. Subdrainage is far better on these accounts; besides, it is much more thorough, especially if supplied with well laid tile.

A thorough breaking up of the subsoil will afford temporary drainage in a stiff clay soil, but in a few years the soil will again become compacted, when it will require stirring. But in all cases the planter should be the judge of the special requirements of his soil and location as to drainage, etc.

USE OF FERTILIZERS AND OF CLOVER.

The soil constituting the proposed orchard site should be carefully studied, and if found to be lacking in essential elements of fertility naturally to maintain a fairly vigorous wood growth, fertilizers should be added before plowing, that they may become thoroughly incorporated with the soil in preparing the land for planting.

BARNYARD MANURE AND WOOD ASHES.

Scientists and practical orchardists are generally agreed on the great value of well-rotted barnyard manure as the best for an apple orchard. It not only supplies humus, but it contains a large per cent. of other necessary nutritive elements for maintaining health, vigor, and fruitfulness of tree and development of qualities for a fine fruit product. But as the stock of this sort of manure is not always sufficient for the general demand, other agents have to be resorted to; and next in value and in a concentrated form are unleached wood ashes, which will supply to a great extent the necessary element of plant growth. It is maintained by some authorities that 1 ton of unleached wood ashes contains as much plant nutriment as 5 tons of ordinary barn manure, and whenever obtainable ashes should be used in preference to any other fertilizer.

MANUFACTURED FERTILIZERS.

There are many kinds of manufactured fertilizers, some of which are valuable for special soils, but to determine just which brand to use is a difficult question to decide without knowing what elements are lacking in the soil. The three elements most commonly deficient in soil are nitrogen, potash, and phosphoric acid, and chemical fertilizers that contain the largest per cent. of these substances will be the most economical and beneficial.

A fertilizer containing $1\frac{1}{2}$ to 2 per cent. of nitrogen, 1 to 9 per cent. of available phosphoric acid, 10 to 12 per cent. of potash, will give excellent results when applied to orchard land in quantity ranging from 400 to 600 pounds per acre.

GROWING OF CLOVERS.

Western prairie lands are generally sufficiently fertile for an orchard growth and need no enriching until the trees begin to show signs of weakness in vigor from crop bearing, and, even then, may be invigorated by use of crops of red or crimson clover grown among the trees, allowing the crop to fall and decay upon the ground each year. By this treatment a large amount of decaying vegetable matter will accumulate upon the land, rich in plant food and forming a moist protection from hot summer sun and deep freezing during winter, a condition conducive to health and vigor in trees. All lands lacking in humus can have this element restored to a great extent by such treatment, and orchards which have been treated thus with red clover maintain greater longevity, fruitfulness, and greater excellence in fruit product, besides, such treatment dispenses with the costly necessity of using special fertilizers.

(To be continued.)

When writing to advertisers please mention **The FARMING WORLD.**

The Farm Home

A Boy of His Word.

You may sing of the heroes of yore,
You may speak of the deeds they have done,
Of the foes they have slain by the score,
Of the glorious battles they've won;
You may seek to eternize their fame,
And it may be with goodly success;
But it is not the warrior's name
That my heart and my spirit would bless,
Though oft at their mention my soul has been
stirred,
Yet dearer to me is the boy of his word.

You may speak of the great ones of earth,
Of prelates, of princes, of kings;
I doubt not there's something of worth
In the bosom of all human things;
But dearer to me than the whole
Pageantry, splendor and pride,
Is the boy with frank, honest soul,
Who never his word has belied,
Yes, prized above all that this earth can
afford,
Though lowly and poor, is the boy of his
word. —Ex.

What is Domestic Science?

In its scope domestic science is bringing its knowledge as far as organized, to cover all the operations of life, of the home, that which pertains to the material wants of mankind. Of the problems it attempts to solve those concerning the food and nutrition are, at present, the most important. Domestic science makes the home the focal point of all the sciences, elevates home-making to a profession, and by intelligent effort divests house-labor of the element of drudgery.

As well expect a man to be fully equipped for the practice of law or medicine as look for a woman's being born fully endowed with the absolute wisdom required, to use and expend the sustenance to the very best advantage, without preparation. Intelligent students no longer call cooking lessons a "huge joke," any more than they "poke fun" at scientific farming.

The function of the home has always been to furnish rest, inspiration and rest, to its inmates and to conserve and strengthen peace and order in the social fabric. It is a strong saving feature in any democratic form of government and in our own national life; the preservation of the home makes life worth living. As long as there are women, there will be homes of some kind. If these homes are to exert the recreating force which society has a right to expect they must ally themselves with those industrial, social and moral forces which make for prosperity, harmony and righteousness in the community.

The inadequacy of the home to the demands made upon it is due to several causes, one of which is the failure of woman to bring her best powers and choicest knowledge to bear upon the problems of the home. The breakdown of the home is threatened by the

lack of training for our girls. An argument against special training in home science is that it is unwise to take time from the so-called broader culture of the girls and give to that which an ordinary woman of good sense can easily learn when she has need of it, by the aid of a good cook book. Those who use this argument forget that cooking is but a part of home making. Domestic science proposes to avail itself of all the aid the new science of teaching can give and to use the methods which have made the public schools such a powerful factor in the education of the people, and prove to the girl that the province of the home is not unworthy of her best thought and skill—*American Kitchen Magazine*.

Hints by May Manton.

Child's Yoke Apron, No. 3612.

The apron that completely covers the gown serves a purpose that no other does, and is specially to be commended for the hours of really vigorous play, or the clay modelling which is such an important element in modern training.

The pretty little design illustrated is stylish and tasteful at the same time that it serves all practical ends. The yoke is neatly fitted, to it is attached the skirt portion, which is finished with a hem and three tucks. Under the arms are attached sashes, five and

full, large enough to draw over those of the gown without effort, and are one-seamed. The fulness at the wrists is drawn in and attached to bands to the lower edge of which the cuffs are joined, then rolled back over the sleeves. At the neck is a narrow standing collar or band, which, with the cuffs, is finished with a narrow frill.

As shown the material is dimity, showing a tiny design in blue, but gingham, lawn and percale are equally suitable.

To make this apron for a child of 4 years of age $3\frac{1}{2}$ yards of material, 32 inches wide, will be required.

The pattern No. 3612 is cut in sizes for children of 2, 4 and 6 years of age.

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

Food Value of Fruit.

In recent years the growing of fruits has assumed great commercial importance in many regions of the United States, especially in the South and on the Pacific coast. The amount of fruit consumed in the average household has undoubtedly increased with the greater production and facilities for shipping and marketing.

Many stations have reported analyses of fruits and made extended studies of the different methods of growing fruit trees, their soil requirements, enemies, etc.

The stone fruits constitute an important group, and have been studied for a number of years by the California and Oregon stations. Fresh peaches, apricots, cherries, prunes and plums are general favorites, while enormous quantities of these fruits are canned, dried or preserved in some way. It is interesting to compare the composition of these fruits, fresh and dried, with each other and with some of the staple articles of diet.

It must not be forgotten, however, that fruits are valuable for other reasons than the nutrients which they furnish. They contain acids and other bodies which are believed by physiologists to have a beneficial effect on the system and, doubtless, very often stimulate the appetite for other food. They are also useful in counteracting a tendency to constipation. Another point—and one entirely apart from food value—should not be overlooked. That is, fruits add very materially to the attractiveness of the diet. It is not easy to estimate their value from this standpoint, since often the appearance of food has a value which cannot be measured in dollars and cents.—*C. F. Langworthy*.



3612 Child's Yoke Apron.
2, 4 and 6 years.

a half inches in width, which are finished to match the skirt, and are tied at the centre back, keeping its fulness in place. The sleeves are simple and

Some Valuable Recipes.

Graham or Rye Muffins.—Mix thoroughly one cup sifted rye meal or Graham meal, one cup sifted white flour, one-half level teaspoon salt, one rounded teaspoon sugar and two level teaspoons baking powder. Stir in one cup milk, one well-beaten egg and one tablespoon melted butter, then beat vigorously and if too stiff add a little more milk. Meal varies in its thickening quality, and tastes differ as to the desired consistency. Bake in greased muffin pans about 20 minutes.

Graham Gems.—Two cups of whole-wheat meal; one-half teaspoon salt; one tablespoon sugar; two eggs, beaten separately; one cup milk; one cup water. Mix flour, salt and sugar. Add the milk to the beaten yolks, then the water, and stir this into the dry mixture. Add the whites, beaten stiff, and bake in hissing hot gem-pans 30 minutes.

Chocolate Cake.—One and one-half cups sugar, one-half cup butter, two cups flour, one-half cup of milk, one-half teaspoon soda, one teaspoon cream tartar, three eggs, five tablespoons sugar in addition to the one and one-half cups, four squares chocolate, three tablespoons boiling water. Cut the chocolate in pieces and dissolve with the sugar and water over a teakettle. Cream the butter and sugar, add beaten eggs, then the hot chocolate, one-half teaspoon vanilla and a little of the flour, then the milk and cream and the rest of flour with the soda of tartar.

Cheese Cakes.—Put two quarts of milk in a basin near the fire, and stir in it two tablespoonfuls of prepared rennet, or two junket tablets, let it stand an hour, then break it up with a spoon, and let it stand half an hour longer, and pour it in a colander to drain. When dry put it into a basin, and rub it fine with the back of a wooden spoon; stir to a cream half a pound of butter and three quarters of a pound of powdered sugar, add a third of a nutmeg grated, a saltspoonful of powdered cinnamon, a wine-glass of brandy and one of wine, and a little grated lemon peel; beat six eggs very light, add them to the curd and bake in a puff paste crust.

Cranberry Relish.—Five pounds of cranberries washed and picked over; three pounds of raisins seeded, the peel of five large oranges, all put through a meat chopper and cut fine. Then add the juice of the oranges and three pounds of granulated sugar. Mix well and let it boil up quickly, then set back and let it simmer three hours. Excellent with meat. This is a variation of an English recipe, which called for green gooseberries in place of cranberries. Green grapes may also be used in the same manner.

Cooking Under Water.

A curious method of cooking was adopted by an Englishman who wagered that he could cook a plum pudding ten feet under water in the river Thames. The bet was promptly taken for such a proceeding seemed impossible. The pudding was placed in a tin case in the middle of a sack of lime. This was sunk ten feet beneath the surface of the river and in two hours the pudding was ready and a little overcooked.

Determining the Age of Eggs.

The following method for determining the age of eggs is practised in the markets of Paris, according to the *Baeker-und Konditor-Zeitung*: "About six ounces of common cooking salt is put into a large glass, which is then filled with water. When the salt is in solution an egg is dropped into the glass. If the egg is only one day old it immediately sinks to the bottom; if any older it does not reach the bottom of the glass. If three days old it sinks only just below the surface. From five days upward it floats; the older it is the more it protrudes out of the water."—*Translation made for the Literary Digest.*

The Hands.

No greater indication of refinement and gentility can be given by women than the possession of clean, well-kept hands. With a little care and attention the hands may always be in good condition. The use of coarse, strong soap is responsible for the rough, dry skin of many people's hands, and should be avoided. Too frequent washing is also injurious, and hard water should never be used. Tepid water and a little powdered borax added will keep the hands smooth and white, and prevent chapping. Fruit, vegetable, or milk stains may be removed by rubbing with lemon and glycerine. Redness and burning of the hands is caused by defective circulation, and can be removed only by special treatment. The restoration of the general health is of course necessary, and protection from the cold must be given. Soaking in warm borax water at night before retiring, and then rubbing with a mixture of almond oil, oat meal, and alcohol will increase the circulation and prove beneficial. An excellent lotion for chapped hands is made by simmering one drachm of quince seed in half a pint of water for ten minutes, and mixing with equal parts of glycerine, solution of borax and olive oil, with the addition of a few drops of rose water.

The nails should be kept clean by the frequent use of the nail brush with soft water and good soap. After the hands are well dried the skin should be gently pushed back from the base

of the nails with the fingers or a soft wooden stick. If grown out of shape the skin may be carefully cut away with a pair of sharp manicure scissors. The nails should be very carefully trimmed once a week. After putting the hands in soapy water while engaged in housework they should be rinsed well, dried on a soft towel, and anointed with a little almond cream or something similar. Hands thus cared for will be white and smooth.—*Elisa R. Parker.*

The Tryst.

Potato was deep in the dark underground,
Tomato above in the light,
The little tomato was ruddy and round,
The little potato was white.

And redder and redder she rounded above,
And paler and paler he grew;
And neither suspected a mutual love,
Till they met in a Brunswick stew.

John B. Tabb.

Periods of Infection.

According to an exhaustive series of observations, the following are the periods during which the infection of various diseases may be communicated: Scarlet fever, six weeks from the commencement of the fever. If, however, the squamous, or skin-peeling condition, continues, there is still danger. Chicken-pox, three weeks from the beginning of the disease. Diphtheria, six weeks from commencement, if the sore throat has entirely disappeared; the danger of infection remains during the continuance of throat trouble. Small-pox generally about six weeks—certainly if all scabs have fallen. Measles, three weeks if cough and rash have disappeared. Mumps, three weeks, or less if there is no swelling. Typhus, four weeks after beginning, at which time the fever will have ceased, or death have supervened in most cases. Typhoid, six weeks; the cessation of fever and return toward strength in both typhus and typhoid diseases marking the close of the contagious epoch. Whooping-cough, when the cough has disappeared, commonly six weeks in patients otherwise in good health. The period of infection may be somewhat shortened by care and proper treatment, but children attending school should not in any case return to their classes in shorter periods than those above named, and even then a certificate of safety from a physician should be exacted. These facts are authoritatively declared by the Pennsylvania State Health Board chiefly for the guidance of schools and other public institutions. Their observance in the home may prevent suffering, possibly death, of relatives and acquaintances.

"My boy, are you breaking the Sabbath by going fishing?" "Nope, ain't going to break it. Goin' to use the whole day."

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Managing Director, . . . D. T. McAINSH
Editor, . . . J. W. WHEATON

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QUESTIONS AND ANSWERS

To Dry a Cow.

A.G.H. writes: "I have a nice young cow due to calve about the end of the year. She gives a couple of gallons of milk per day and shows no sign of falling in the flow. How much longer should I milk her so as not to injure her flow of milk after calving?"

While some might advocate milking a cow up to the time of calving, we believe it to be the better plan to give a cow of this kind a couple of months' rest. But with some persistent milkers it may be difficult to dry them when desirable. It should not be difficult at this season, when winter is approaching, by feeding dry feed, such as straw or hay for a week or two to dry off a cow. Milk once a day for a week or two, then only twice a week, and so gradually cease milking altogether. If the milk flow does not stop then a little more time will have to be taken in the drying. Should the cow in spite of all this continue to give a large flow it would be better to keep on milking up to calving. Really few milkers have to be so treated.

Manitoba Grain Standards.

The Western Grain Standards Board met at Winnipeg Oct. 29 and adopted the following changes in the grain standards:

"That it is the opinion of this Board that the methods of handling Manitoba wheat would be best served by making the following changes in

the schedule of grades, viz: 'That the grades of 2 hard and 1 northern be consolidated under the name of 1 northern, and having the qualifications of 1 northern, with not less than 60 per cent. of hard wheat.

"That the name of No. 2 northern be changed to No. 1 Manitoba spring, the grade not having less than 45 per cent. of hard wheat, and to weigh not less than 58 pounds per bushel, and that any wheat not good enough to grade No. 1 Manitoba spring be graded No. 2 Manitoba spring, in the discretion of the inspector."

In connection with the grading of dried wheat, the following resolution was passed: "That in cases when 'tough' wheat has been dried, the inspector be instructed to inspect out of terminal elevators wheat so dried, on a clear certificate, when he considers it equal to the standard of such grade. This is to apply to commercial grades only."

Third Class in Sod—Edward Rich, Mariposa, 1st prize, \$7; Frank Lane, Mariposa, 2nd prize, \$6; John J. Wiley, Mariposa, 3rd prize, \$4.

Boys under 18 years of age—Heber Cornish, Mariposa, 1st prize, \$8; W. J. Graham, Ops., 2nd prize, \$6; James Scuse, Mariposa, 3rd prize, \$5.

Boys under 16 years of age—John L. Willicott, Mariposa, 1st prize, \$7; Walter Graham, Ops., 2nd prize, \$6; James Webster, Mariposa, 3rd prize, \$5.

The annual meeting of the Plowman's Association was held the same evening at Mr. Graham's residence, when the following officers were appointed for next year: President, Mr. W. B. Graham, Ops., re-elected; vice-president, Mr. John Dames, Mariposa; sec.-treas., Mr. Wm. Lownsbrough, Lindsay, re-elected; auditors, Messrs. Wm. Channon and W. Jordan, re-elected.

Shorthorns on Top.

At the milking trial at the British Dairy Farmers' Association's annual show a Shorthorn cow topped the list. She was looked upon as a milking machine pure and simple, and may be taken as an example of what can be accomplished by breeding along definite lines for milking purposes. She showed none of the beef-making qualities, and in appearance seemed to be a very delicately-constituted cow, without any flesh. Her milk yield was about 70 lbs. per day, from which 2 lbs. 10 3/4 ozs. of butter were obtained and the total number of points gained 144.1. This cow was in the non-pedigree class. The winner in the pedigree Shorthorn class gave 50 lbs. of milk per day, with a butter

Victoria County Plowing Match.

The annual plowing matches of the County of Victoria Plowman's Association were held on Oct. 19 on the farm of Mr. W. B. Graham, lot 24, 1st con., Ops., about four and a half miles from Lindsay, and north of the Oakwood road. The following is the list of prize winners:

First Class in Sod—Charles Rich, Mariposa, 1st prize, \$10; Herb. Graham, Ops., 2nd prize, \$8; Alfred Rich, Mariposa, 3rd prize, \$6.

Second Class in Sod—Robert Love, Mariposa, 1st prize, \$10; Fred Dames, Mariposa, 2nd prize, \$8; Thos. Davis, Mariposa, 3rd prize, \$6.



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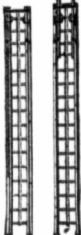
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yield of 1 lb. 1 3/4 oz and a total of 91 points. The first prize Jersey gave 40 lbs. per day after being in milk 257 days. In the Jersey butter test the first cow gave 2 lbs. 2 1/2 ozs. butter per day, after being in milk 157 days.

Coming from England.

J. D. Ellis, the noted stock breeder of Walsingham, England, will act as judge at the Chicago International Live Stock Exposition. General Manager Skinner has received a letter from him with assurance that he will be here to act in an official capacity. Mr. Ellis is a man of international repute, whose best cattle are famous on the London market. It is expected that a large number of English cattle raisers will embrace the opportunity afforded by the Exposition to gain an idea of American methods. The Exposition has been well advertised from the Highlands of Scotland to Land's End.—Exchange.

Canada and Pan-American.

It certainly is high time for something to occur to bring the people of

the United States and of the Dominion of Canada into closer communion. During the progress of the Toronto Fair there was a large attendance from Buffalo, Rochester, and other cities of Western New York. Next year the Canadians will have an opportunity to reciprocate by attending the Pan-American at Buffalo.

Doubtless few people of the United States realize what an extensive country lies to the north of the imaginary line separating the United States from Canada. Few have ever thought that this country has a larger area than the United States, even including its latest acquisitions, Porto Rico and the Philippines. Some idea, too, can be gained of the vast wealth in timber lands which Canada possesses when it is stated that about 38 per cent. of this great area is covered with forests, while not more than 25 per cent. of the area of the United States is thus covered.—*Sioux City Daily Tribune.*

Fall Pruning.

Pruning is sometimes necessary, and it should be done carefully and with judgment, but too often a person is employed to do the work who is behind in both qualifications. As to whether fall or spring is the best time there is a disagreement among fruit growers. One thing we have found out, however: when it is necessary to remove a limb of considerable size—an inch or over in diameter—the best time is September and October. Wounds made at that season, though they may not heal over as quickly as at some other times, will never decay. Owing no doubt to the ripe condition of the wood, the cut surface dries and becomes as hard as bone. We have tested this for many years and know it to be so.

In all pruning particular care should be used to make smooth cuts. No stubs should be left sticking out. It is surprising to observe in passing along the road how frequently this important rule is disregarded, and that, too, by persons who profess to understand the business.

Another important point is the removal of all dead and decaying limbs. Another is to cut off one—the least desirable one, of course—of the branches of every fork, in order to prevent the tree from splitting when loaded with fruit.

To recapitulate: (1) Make smooth cuts. (2) Leave no stubs. (3) Remove all dead and decaying limbs. (4) Cut off one of the branches of every fork. And see that the balance of the head of the tree is preserved. *National Stockman and Farmer.*

Fall Bulbs.

The lilies, tulips, hyacinths, crown imperials, crocuses, scillaes, etc., which are planted in September, October and November, are usually termed fall bulbs, in distinction from the gladiolus and a number of others which must be

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planted in the spring. The fall bulbs are also termed hardy bulbs, as they stand the winter in the open ground with little protection—frequently none at all.

Any good garden soil, in which water will not stand after a rain, is suitable for bulbs. If not thought to be rich enough it should be dug deeply and a portion of perfectly decayed manure thoroughly mixed with the soil. The depth to plant is about five inches for lilies and hyacinths; four for tulips and three for crocuses.

A good plan after planting, is to put on the surface a covering of coarse manure, three inches or so in depth. This retains the warmth so that the root-forming process on which successful bloom depends goes on all winter. This covering may be removed in the spring, or lightly dug into the ground.

Controlling Sex in Sheep.

Experiments in controlling the sex among sheep have reached such a stage in France that the experimenters have reached the conclusion that this can be done to an appreciable extent. The rule seems to be that to produce the most males in a flock the ewes must be bred to rams over four years old, the average of observance in such cases being fifty-five males to thirty-five females. When yearling rams were used with ewes ranging from two to four years, the average was thirty-five males to seventy-six females. Yearling rams, it has also been found in experiments carried on in this country, but without the careful observation exercised in France, nearly always produce an excess of females, and the older rams, particularly those above four years, an excess of males.—*Field and Farm.*

Telling the Horses' Age by the Teeth.

The horse has twenty-four temporary teeth. The male has forty permanent teeth; the female thirty-six or forty. The smaller number is more usual in females, due to the lack of tusks. The temporary teeth consist of twelve incisors and twelve molars; their centre front teeth, two above and two below, are called pinchers; the next four are called intermediate or lateral, and the next four corner teeth. The permanent teeth consist of twelve incisors, four tusks and twenty-four molars. The dental star is a yellowish ring appearing next the enamel on the table or crown of the tooth. The following table shows approximately the changes of the teeth with age:

- Three to ten days: Temporary pinchers and three molars cut.
- Forty to sixty days: Temporary intermediate or laterals cut.
- Six to nine months: Temporary corner teeth cut.
- Nineteen to twenty-five months: Leveling of temporary corner teeth.
- Two and one-half to three years: Pinchers replaced by permanent teeth.

- Three and one-half to four years: Intermediates or laterals replaced.
- Four to four and one-half years: Tusks cut.
- Four and one-half to five years: Corner teeth replaced.
- Five to six years: Leveling of lower pinchers.
- Seven years: Leveling of permanent intermediates.
- Eight years: Dental star and notches in pinchers.
- Nine years: Dental star in intermediates.
- Ten years: Dental star in corner teeth.



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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Horses.

The exhibition of horses at Paris has resulted in many sales being made. For instance the Duke of Portland in England has of late purchased from the Imperial Austrian stud half a dozen representatives of the Leipzani breed, one of the rarest in its purity in Europe. The Emperor of Austria presented the Duke with a pair of mares of this sort and later the purchase described was consummated. A peculiarity of these Leipzani horses is that at birth they are dark iron grey but get lighter with age until at five or six years they are milk-white. They make excellent carriage horses, having extreme quality with fair bone, good size, and a degree of beauty not common.

A Territorial Horse Breeders' Association has been formed as a result of a meeting called at the instance of the Northwest Territorial Government at Calgary. Messrs. Bolyea and Peterson, of the Territorial Department of Agriculture, were largely instrumental in effecting the organization and addressed the meeting at length on the advantage to be gained by such an association. The objects of the association, in brief, will be to advocate lower transportation rates, regular annual horse fairs and to bring the possibilities of the Canadian Northwest as a source of re-mount supply more fully to the notice of the British War Office.

Mr. George Gould commissioned a New York horse dealer, in August, to get him a team of coach horses. Last week he was shown a well-matched pair of handsome French coach horses, raised in this country. They stood 16½ hands high, and weighed 1,400 pounds—the finest pair of horses in New York. In twenty minutes the dealer had Mr. Gould's check for \$10,000.

Cattle.

The annual sale of the Collynie and Uppermill Shorthorn bull calves of Tillycairn early last month was a notable one this year. Owing to the influence of the general election and the foot-and-mouth disease restriction which prevents any stock from Great Britain from being imported into Ireland or the Argentine, it was expected that the Tillycairn sale would not be marked by the buoyancy of other years. But in spite of these drawbacks the sale was of the most sensational character, and all previous records for prices and averages for bull calves were broken. The nineteen bull calves from Mr. Duthie's realized an average of £150 8s. 5d. with a highest price of 355 gs, while the thirteen Marr bull calves averaged £126 3s. 2d. with a highest price 230 gs. The previous record for best averages in respect of bull calves was that of Mr. Duthie's last year, of £123 18s. The previous record for highest bull calf was 330gs. at Tillycairn sale two years ago by Mr. Duthie.

At the combination of the Shorthorn sale at Kansas City, on Oct. 18:20 there was a most notable gathering of Shorthorn breeders. The auction was distinguished rather for its steadily-maintained range of living prices, rather than for any sensational figures. The cattle were contributed from many different herds and represented almost every conceivable combination of blood. The highest price bull was Knight's Valentine, 157068, calved Sept. 1, 1899, which sold to T. P. Babst, Dover, Kansas, for \$1,000. The highest price cow was Missie of Brownland, red, calved Nov. 26, 1893, sold to M. A. Sowe, Topeka, Kansas, for \$950. 100 females sold for \$32,210 an average of \$322.10 each and 44 males sold for \$13,075, an average of \$297.16 each. The 144 head sold for \$45,285 or an average of \$314.48 each. As compared with W. D. Flatt's sale at Chicago

last August prices were only about one-half as high. Mr. Flatt's highest price cow sold for \$2,600, and his highest price bull for \$1,550. His average for 50 animals was \$793.60 each. At the Hereford sale which followed the Shorthorn sale the yearling bull Columbus 17th, sold for \$5,050. Another one sold for \$1,030. But we will have further particulars next issue.

The Government of Japan is buying Ayrshire cattle. The Japanese Minister of Agriculture, M. Wada, recently bought 15 cows and a few bulls of that breed in Scotland and shipped them via the P. & O. line to their new home in the Island Empire. Surely he could have bought them just as cheaply and as good from Canadian breeders, while the transportation charges would have been very much smaller.

Mr. F. A. Parker, New Germany, N.S., has purchased a pure-bred Guernsey from Mr. Clarence Dimock, of Windsor.

The bulls brought over in this last importation are young and not in high condition, but Messrs. Pettit write that they have been doing exceedingly well since our visit to their place some few weeks ago. Brave Amaranth is the first bull in the catalogue and is a very fair one, dark red in color and got by Count Amaranth, a bull bred by Mr. Duthie and imported last season by Messrs. Cargill. He was selected for use in their herd, but we understand they have allowed a long price to get him away from them. Next comes Cornforth, got by the Marr bull Spicy King on Shepherd Clara foundation, followed by County Duke, a Claret also by Count Amaranth; Pure Gold, a Brawith Bud by Cypress, a bull by William of Orange; Scotland's Pride, a Clipper by Star of Morning; Scottish Hero, a filly by Scottish Prince; Scottish Pride, a Roan Lady by same sire and others we might mention from which purchasers can make a selection. The females are all young cows or heifers in calf, and with very few exceptions are offered to the trade. The cattle are now recovering from their ocean voyage, and those who need something along this line will do well to write Messrs. Pettit for their catalogue and examine the breeding of their cattle. Several cattle have been recently brought over from this herd to the States, and anyone dealing with this firm may rest assured of fair and honorable treatment.—*Breeders' Gazette.*

Sheep.

The order of the Argentine Republic prohibiting the importation of cattle, sheep and swine from the United Kingdom is a matter of serious import to Lincolnshire ram breeders and has already affected the trade. The order has already stopped the demand, and rams—well-bred animals which under ordinary circumstances would have made an average of from eight to twelve guineas—now have to be sold at what is termed butchers' prices. This means little more than giving them away. But there is a far more important issue involved. It is doubtful whether the rams now on the sea will be allowed to land.—*English Rural World.*

Capt. Robson, Robt. Robson and Graham Walker, of Ilderton, Ont., recently shipped 25 pure-bred Lincoln rams to Geo. Harding & Son, Waukesha, Wis.

Henry Arkell, Arkell, Ont., recently shipped 30 yearling rams to Calgary, N.W.T.

Mr. John Rawlings, Ravenswood, Ont., writes: "I have sold out all my ewes for the fall and would like my advt. changed to state that I have still for sale a few choice stud ram lambs, and one shearing, also a deck load of good ranch lamb rams registered. I have sold this week to Wm. Hints, Fremont, Ohio, 17 head of shearing ewes and a choice pair of ewe lambs."



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Offers Free Treatment to all Who Desire a Cure.

To heal the sick! To bring back health and strength to the pale cheeks of men and women suffering from that terrible disease, Consumption, is the life work of that Eminent Scientist and benefactor of the human race, Dr. T. Slocum. Dr. Slocum has made this disease a life study, and no man in the medical world stands higher as an authority on all lung diseases than the man whose name heads this article. Dr. Slocum says, no matter how many discouragements you have met with his cure is swift, certain and permanent. To prove the truth of his statement the doctor is willing that every victim of Consumption shall have a free trial of his famous remedies. Here is his offer:

You or your sick friends can have a FREE course of Treatment. Simply write to THE T. A. SLOCUM CHEMICAL CO., Limited, 170 King St. West, Toronto, giving post office and express office address, and the free medicine (The Slocum Cure) will be promptly sent.

When writing for them always mention this paper. Persons in Canada, send Slocum's free offer in American papers will please send for samples to the Toronto laboratories.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Nov. 5, 1900.

The change to cooler weather has already produced a healthier feeling in whole-sale circles. Money kept steady at 5 per cent. on call and 5 to 5½ on time. There is a great demand in the American Northwest for money to handle the grain crop, and it is reported that quite a lot of Canadian money has found its way there.

Wheat.

The wheat situation shows little improvement. As reported last week, there is likely to be ample supplies to last till next harvest, which makes the prospects of higher values very slim. The Argentine crop is receiving some attention, but as it will not be harvested till February, any estimates of yield can only be guess work. The outlook at present is for a good crop. At Chicago the market has fluctuated. On Friday western prices were weak and lower. There is not much doing in the export line, and very little Manitoba wheat seems to be going forward. Eastern millers are reported to be laying in all the Manitoba wheat they can get.

No. 1 Manitoba hard is quoted at \$2 to \$2c. above Fort William, being 2c. lower than at week ago. Prices here are about the same at 64c. for red and white north and west, and goose at 63c. west. Spring wheat is quoted at 65 to 68c. east. On Toronto farmers' market red and white bring 68 to 69c., spring 69c. and goose wheat 67c. per bushel.

Oats and Barley.

The oat market has firmed up a little and there is a better inquiry for export at Montreal. Oats are steady here at 25c. east for No. 1 white, and 23½c. north and west for No. 2 white. On farmers' market they bring 28 to 29c. per bush.

Barley is dull, with quotations on the Toronto farmers' market, 42 to 46½c. per bush.

Peas and Corn.

The market for peas is steady, though cable reports are weak. Quotations here are 59c. east, 58c. middle freights and 57c. west, and on farmers' market 59c. per bush.

General indications in the corn situation are unchanged, though prices are lower on this side. American No. 3 yellow is quoted at 47c., Toronto, and Canadian new yellow at 35½ to 36c. west.

Bran and Shorts.

Ontario bran is quoted at Montreal at \$14.50 to \$15, and shorts at \$16 to \$17 in car lots. City mills here quote bran at \$13.50 and shorts at \$16 in car lots, f.o.b. Toronto. Car lots are quoted at points west of here at \$13 for shorts and \$11.50 for bran.

Eggs and Poultry.

Our exports of eggs keep on growing. They are now 35,515 cases greater than for the same period of 1899. The market keeps steady under a good export demand. Cables show an upward tendency in prices. Canadian eggs were quoted at Liverpool last week at 7s. 6d. to 8s. 3d. per 120. Quotations at Montreal are 15½ to 16c. in large lots, with an upward tendency in prices. Here offerings have been large and prices are weaker at 17c. for fresh-gathered in round lots; on Toronto farmers' market eggs, new laid, bring 18 to 21c. per doz.

The dressed poultry trade will soon be in full swing. The outlook is good for fair prices. A great many new firms are now engaged in the export trade, which should keep the market clear. The bad weather has injured trade lately, and prices have dropped. Supplies have been large here, especially

turkeys, which sold as low as 6c. per lb. last week, though regular prices are about 8½c., with 5 to 5½c. per lb. for geese. Chickens sold at from 25 to 40c., and ducks at 55c. per pair in large lots. On Toronto farmers' market chickens bring 30 to 50c., and ducks 35 to 60c. per pair, and turkeys 8 to 9c. and geese 5 to 5½c. per lb.

Potatoes.

Carloads are quoted at Montreal at 37 to 37½c. per bag. Quotations here are 27 to 30c. per bag for car lots on track and on farmers' market 30 to 35c. per bag.

Hay and Straw.

There is not much change in the general tone of the hay market. Farmers seem to be too busy with other work to haul it out. Quite a lot of hay has been taken at points east for American points at \$8.50 for No. 2 baled hay. Choice No. 2 is quoted at Montreal at \$9, and clover at \$7.50 to \$8, while No. 1 quality is very scarce. There have been some enquiries from Belgium and France for Canadian hay, which would indicate that the supply is short at these places. Quotations here are \$9 to \$9.50 for car lots on track. On Toronto farmers' market hay brings \$14 to \$15; sheaf straw, \$10.50 to \$12.00 and loose straw, \$6 per ton.

Seeds.

It is reported that the English crop of clover seed for 1900 is about one-fourth of that for 1899 estimated at 2,000 tons as against 7,500 tons last year and 10,000 tons the year previous. At Montreal prices are nominal at \$5.50 to \$6.50 for alskie, \$5.50 to \$6.50 for red clover and \$1.50 to \$1.75 for timothy per bushel. On Toronto farmers' market alskie brings \$6.60 to \$7.30, red clover, \$5.75 to \$6.25, and timothy, \$1.40 to \$1.80 per bushel.

Fruit.

Exports of apples from Canadian and American ports are away below those of last year. The figures up to Oct. 27 were 311,975 bbls., as against 429,454 bbls. for the same period last year, and 1,081,751 bbls. in the big year of 1896. Prices are advancing and account sales have been satisfactory. Some 1,200 bbls. of spies are reported sold at points west of here at \$1.85 f.o.b., which means over \$2.20 per bbl. laid down at Montreal, and even higher prices are reported. These prices are away ahead of what was expected a month or two ago. Many farmers evidently sold too soon. On Toronto farmers' market apples bring 75c. to \$1 per bbl., and \$1.25 to \$1.50 for choice fruit.

Cheese.

The cheese market is still weak. Exports

from Montreal and Portland so far this season show an increase of 256,978 boxes over the same period last year. The total shipments up to the present time from Canada and the United States show an increase of over 330,000 boxes. Then the October make has been much larger than usual and stock on this side are about the same as at this time last year. This condition of affairs, coupled with the fact that English dealers seem determined not to pay the prices asked for their winter stock, is having a depressing effect upon prices, which have dropped fully 1 cent in the last two weeks, quotations at Montreal being 108 to 11c. for finest westerns, and 10 to 10½c. for finest easterns. But stocks are light in Great Britain, and there is no doubt that all the cheese on hand will be wanted so that a reaction may be looked for later on. Quite a few factories are reported to have changed from cheese to butter-making at the end of the month. From 10 to 10½c. have been the ruling prices at the local markets with very little business doing.

Butter.

The butter market continues to grow stronger. Stocks are light and the way clear for a good trade in winter butter. But English buyers are not buying Canadian very largely. There is a demand from the lower provinces and the West. Choice Canadian is quoted at London at 104s. to 106s., and fine 98s. to 101s., with stocks reported light. The *Trade Bulletin's* summary of the situation is as follows: "The receipts are less than half those of a year ago, but quite a few factories that were making cheese a week or ten days ago have been making butter; and it is expected the supply of the fresh-made article will soon show a material increase. Whilst the market has kept firm during the past week, no activity has been displayed either for the home or export trade. A few lots have been shipped from this city to Brockville and other western points, but now that additional factories are going into butter-making, country sections should be able to supply their own wants. What Canadian shippers will have to watch narrowly from this out is the Australian and New Zealand supplies, which our London correspondent in his cable to-day says are liberal. There is evidently no disposition on the part of English buyers to take hold of Canadian butter at present prices to any extent. We have just heard of a very fine lot of Ontario Township creamery being placed at 20c., and a fancy lot at 21c.; both lots it is said being for the local trade. A poor lot of S. plember creamery sold at 19½c., but it was mottled and slightly off flavor, and taken for local use. Creamery is in good demand at 23 to 24c. for prints, and 21 to 22c. for tubs and boxes. Dairy butter in large lots is worth

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EDWARD STILL, Manager in England. HON. G. W. ROSS, LL.D., M.P.P., President. ERNEST HEATON, Manager in Canada.

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 2. To arrange freight contracts and effect insurances upon shipments.
 3. To give attention, through its agents at ports of shipment, to the proper stowage and prompt transportation of such consignments.
 4. To have goods inspected when claims are made by consignees, either for damage in transit, or for alleged non-compliance with contract, and to report thereon.
 5. To investigate any complaints and report.
 6. To consignors making small shipments under the auspices of the Association can, by co-operation through the Association, receive all the advantages which can usually be commanded by large shippers only.

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who desire the protection of the Association are requested to write at once to the Head Office of the Association, at Toronto, for list of apple receivers, list of sailing dates and instructions for grading and packing of fruit for export.

17 to 18; Oa Toronto farmers' market pound rolls bring 19 to 23c. each.

Cattle.

There is not much change in the cattle situation though a better tone was noticeable at most of the American markets early in the week to be followed on Friday by a more quiet feeling. Prime steers sold at \$5.90 at Chicago on Friday. Cable quotations for American cattle on that day were 11 3/4c. to 12 1/2c. per lb. at London and 11c. to 11 3/4c. at Liverpool. At Toronto cattle market on Friday there was only a moderate supply consisting of 719 cattle, 1,580 hogs, 669 sheep and lambs and a few calves. The quality of the fat cattle was only medium. Trade for these was a little slow, especially for medium quality in the butchers' class, though prices for exporters were a shade higher. Few exporters are coming forward but enough to supply the demand. The demand for feeding steers was not quite so brisk as the buyers in the city are pretty filled up.

Export Cattle.—Choice lets are worth \$4.30 to \$4.60 and light ones \$4 to \$4.25 per cwt. Heavy export bulls sold at \$4 and light ones at \$3.12 1/2 to \$3.35 per cwt. Loads of good butchers' and exporters' mixed sold at \$3.90 to \$4.10 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters', and weighing 1,000 to 1,100 lbs. each, sold for \$4.20 to \$4.40; good cattle, \$3.50 to \$3.75; medium, \$3 to \$3.40; and inferior to common, \$2.50 to \$3 per cwt.

Feeders.—Heavy, well-bred steers weighing 1,000 to 1,150 lbs. each sold at \$3.60 to \$3.90, and poorer quality of the same weight at \$3.40 to \$3.60 per cwt. Short-keep steers 1,100 to 1,200 lbs. each in good condition, and requiring finishing for export sold at \$4 to \$4.15. Light steers 800 to 900 each sold at \$3 to \$3.25 per cwt., and feeding bulls for the byres 1,100 to 1,600 lbs. each at \$3 to \$3.25 per cwt.

Stockers.—Yearling steers 500 to 700 in weight sold at \$2.25 to \$3, and off colors and these of inferior quality \$1.75 to \$2 per cwt. Yearling stock bulls 600 to 900 each sold at \$2 to \$2.25 per cwt.

Milk cows.—These sold on Friday at \$30 to \$50 each.

Calves.—On Friday at Buffalo calves were in full demand and steady at \$8 to \$8.25 per cwt. for choice to extra, and \$7.50 to \$8 for good to choice. At Toronto market these sold at \$3 to \$10 each.

Sheep and Lambs.

There were 16 loads of Canadian lambs at Buffalo on Friday which were in good demand and sold at \$5.35 to \$5.45 per cwt. At Toronto market the same day prices were somewhat easy at \$3.25 to \$3.50 for ewes and \$2.50 to \$2.75 per cwt. for bucks. Spring lambs sold at from \$2.50 to \$3 each or \$3.50 to \$3.75 per cwt.

Hogs.

The regular fall slump in hogs has come though not perhaps as early as usual. Select bacon hogs 160 to 200 lbs. each sold on Friday at \$4.75 and light fats at \$4.25 per cwt. Uncured car lots sold at \$4.60 to \$4.70 per cwt. The same condition prevails at Montreal, where prices have dropped to \$5 per cwt. The *Trade Bulletin's* London cable of November 1 re Canadian bacon reads this: "The market is dull, weak and lower, with sales reported at a drop of 4%. Quotations range from 52s. to 56s. Of course, a few tip-top brands bring more money."

Horses.

Prices at Grand's last week were only fair, as weather was not favorable on day of sale. There is a good demand for general purpose horses, which are quoted at \$80 to \$140, and heavy drafts, \$200 to \$300 per pair. Grand's sale of trotters comes off on Nov. 14. Seagram's thoroughbred sale on Nov. 21, and Hendrie's on Dec. 5, at the Repository in this city.

Apple Market Report.

"Bow Park,"
Bramford, Nov. 2, 1900.

Messrs. Simons, Shuttleworth & Co. cables: "The market opened weak, and advanced a little during the day, but closed with a weaker tendency. The following quotations are for sound, well-packed parcels. Only the choicest fruit touched our top quotations. Baldwins, Seeks, Ben Davis, Golden Russets, Greenings, 11s. 6d. to 13s.; Spies, 20-oz. Pippins, Snows, 12s. to 14s.; Kings, 16s. to 18s.; Canada Reds, Phoenix, 10s. to 12s.; Cranberry Pippins, 13s. to 15s.; Tolman Sweets, 8s. to 10s. Lower grades and conditions, 1s. to 3s. below the above quotations."

Messrs. Garcia, Jacobs & Co., London, cables: "Market remains steady for good sound fruit. Supplies of Canadian fruit have been light on this market. Fancy, sound stock—Baldwins, 13s. to 15s. 6d.; Greenings, 14s. to 16s.; Spies, 15s. to 17s.; fair to choice, 1s. to 2s.; less common grades and lower conditions, 3s. to 4s. below our quotations." J. M. SHUTTLEWORTH.

"The Newriches have no children, have they?"

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West Lome, Ontario, Can., Dec. 14, 1898.

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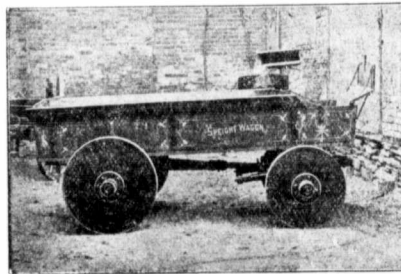
"Dear Sirs:—A year ago I had a valuable horse which got lame. I took him to the Veterinary Surgeon who pronounced it the Spavin and gave me little hope, although he applied a sharp blister. This made matters only worse and the horse became so lame that it could not stand up. After trying everything in my power I went to a neighbor and told him about the case. He gave me one of your bottles and I studied it carefully and being resolved to do the utmost in favor of my beast, went to the nearest drug store and got a bottle of your Spavin Cure and applied it strictly according to directions. Before the first bottle was used I noticed an improvement, and when the seventh bottle was about half used, my horse was completely cured and without leaving a blemish on him. After ceasing treatment I gave the horse good care and did some light work with him, wishing to see if it had effected a cure. I then started to work the horse hard and to my entire satisfaction he never showed any more lameness through the whole summer. I can recommend Kendall's Spavin Cure not only as an excellent, but as a sure remedy, to any one that it may concern." Yours truly, SAMUEL THITTEN.

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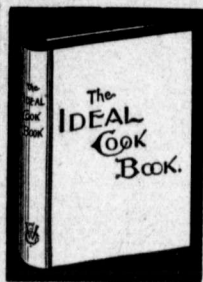
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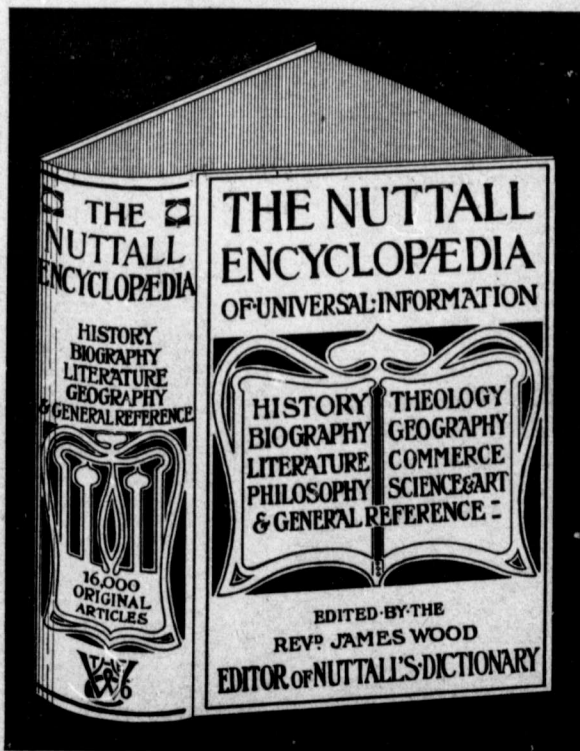
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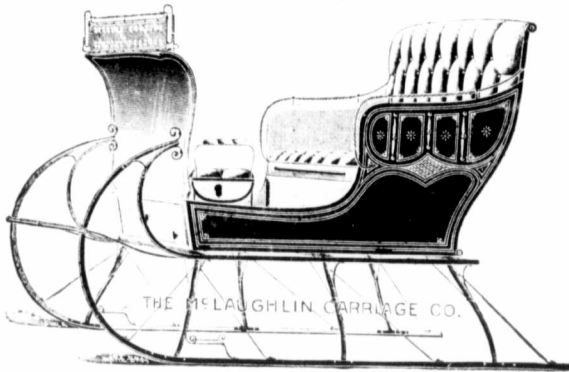
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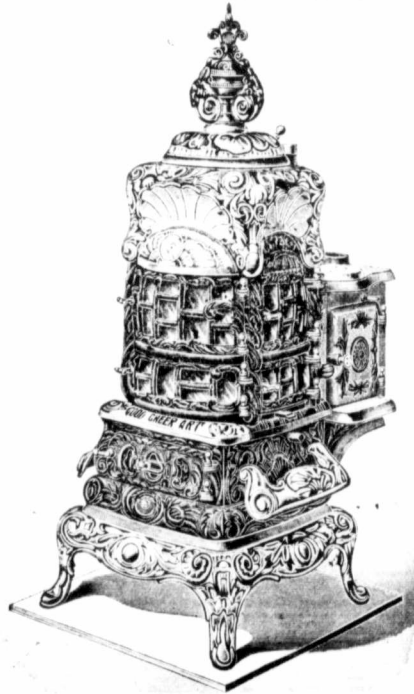
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