

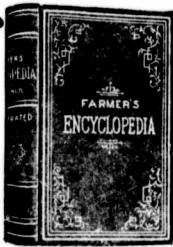
# THE Farming World

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A PAPER FOR FARMERS AND STOCKMEN

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The De Laval machine at Buffalo WAS run by the employees of Model Dairy only.

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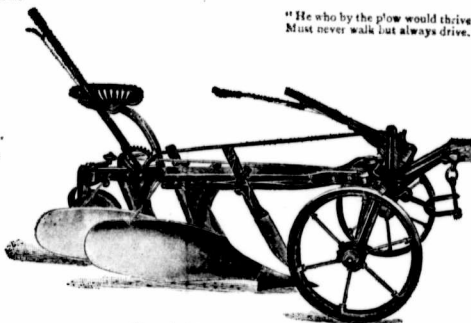
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# The Farming World

For Farmers and Stockmen

Vol. XV

JANUARY 14th, 1902.

No. 2

## The Dairy Industry.

**T**HE dairy industry is paramount just now and will be for a week or two longer. The dairy conventions held this month, the Eastern at Whitby last week, and the Western at Woodstock this week, are among the most important gatherings of Canadian farmers. Though dairymen are more directly concerned in the proceedings, the topics discussed are not without interest to the whole community. The authoritative statement made by the Hon. Sydney Fisher at Whitby last week that Canadian cheese was not of as good quality as a few years ago and was gradually losing ground in Great Britain, should be taken as a serious warning by our dairymen. There is nothing to be gained by mincing matters or trying to make ourselves believe that our cheese still holds the commanding position in the British markets that it once did. The duty of every dairyman is clear. The situation is not hopeless or beyond recovery. But some radical changes will have to be made in the methods of conducting the business. With better milk, better factories, better curing rooms, and better transportation facilities, the industry can quickly be placed on a much better footing than ever before. But there must be no delay in effecting these improvements.

Elsewhere will be found a full report of the Eastern Dairymen's Convention at Whitby. It will bear careful and thoughtful perusal by every farmer and dairyman.

## Industrial Fair By-law Carried.

NEW BUILDINGS FOR 1902. — A DOMINION EXHIBITION.

Friends of the Industrial Exhibition, throughout the Dominion, will be glad to learn that on Monday of last week, the by-law, to raise \$133,500 for new buildings, was endorsed by the citizens of Toronto, by a handsome majority. This sum will put the Exhibition on a much better footing. In fact had the by-law been defeated the reactionary effect upon the prestige and drawing powers of the Exhibition outside of the city, would have been all but disastrous. With a new manufacturers' building, a new art building and a new dairy building, for which purposes the money was voted, the Exhibition will be in a position to do better service for the city and the country at large.

No department of the Exhibition needs new accommodation more

than the dairy, and we are pleased indeed to be able to inform the dairymen of Canada, that beginning with 1902, they will have a dairy building and equipment quite in keeping with the important place which that industry occupies in the country to-day. Over \$14,000 of the amount voted will be appropriated for this purpose which should be sufficient if properly expended to erect commodious quarters for the dairy products and dairy appliance displays as well as provide for the butter-making competitions which have become such important features of recent exhibitions.

It is earnestly to be hoped, however, that in locating the new buildings, some regard will be had to the future development of the Exhibition. At last year's Exhibition several public men, and among them, Sir Wilfrid Laurier, expressed a desire to see a Dominion Exhibition where all the products of the different provinces could be gathered together in one grand display. There could be no better place for such an exhibition than in Toronto, in conjunction with the Industrial Fair, and the committee in charge of the plans for locating and erecting these new buildings, should see to it that nothing is done that would interfere with the grounds being utilized for a Dominion-wide exposition in the near future. There is room for a very great improvement in the lay out of the grounds, even for Toronto's Annual Fair. The main entrance to the grounds is not a very enticing one. It lands the visitor in the midst of a lot of small frame buildings, which must create a wrong impression as to the extent and magnitude of the Exhibition at the very beginning of his tour of the grounds. If these buildings were moved, or perhaps better, the main entrance carried farther down toward the lake, a very great improvement could be made in the whole general appearance of the grounds. And if in connection with this the street railway could get over the railroad either by a bridge or other means, it would add very greatly to the convenience of visitors in getting to and from the city. This is only one way in which improvement could be made. There are other ways, and it is to be hoped that a move will be made along the line of rearranging the grounds both from an artistic and utility point of view for exhibition purposes. No other city on this continent has grounds so beautifully situated for exhibition and park purposes as Toronto has in the Industrial Fair

grounds. And with the expenditure for these new buildings should come some rearrangement of the grounds and buildings along the lines we have indicated.

That a Dominion Exhibition is practicable and would be of very great value in advertising Canada and her products abroad is pretty well agreed. At the annual meeting of the Canadian Manufacturers Association, held a few months back at Montreal, a resolution was passed strongly recommending the holding of a Dominion Exhibition, as being in the best interests of the manufacturers of Canada. And more than that it was recommended that Toronto would be the best place to hold such an exhibition. Moreover the Montreal section of the Association strongly endorsed the proposition, so that little or no opposition should come from that city should Toronto make a bid for a great national exposition. The time therefore seems ripe for an active movement along this line on the part of the management of the Industrial Fair and the city council. Had \$75,000 more been added to the sum voted there would have been greater opportunity for rearranging and fitting up the grounds for the purposes of a national exposition.

We are safe in stating that should an effort be made to widen the scope of the Industrial into a Dominion affair, it would receive the hearty support of the agricultural and live stock interests of the country. At last year's Fair there were exhibits of live stock from four of the provinces of the Dominion. It would therefore require but little extra effort to secure exhibits from the remaining provinces and agricultural displays from all parts of the Dominion.

In many ways a Dominion Exhibition could be made of very great advantage to all sections of the community. In some lines of manufactures a permanent exhibit might be made so that visitors to the city could inspect it at any time during the year. In a similar way if separate buildings were erected by the provinces, these could be used for permanent displays of the agricultural and other products of the various sections of the Dominion. This would be of great advantage to the provinces looking for settlers. The whole scheme when looked at from a national point of view admits of development along many lines, and we hope to see some definite step taken in the near future. In the meantime these columns are open for the discussion of the question of a Dominion-wide exposition.

## Cheese and Butter Exports

The Gazette in its report of the export trade of Montreal for the season of 1901, says:

"The cheese market this season has certainly been of a most peculiar character, and various powerful influences have co-operated to make it so. In the first place prices all along have ruled considerably below those of the preceding year, and this condition was all the more curious in view of the fact

witnessed during August, September and October.

The figures given in Table 1 are the results of several years' exports.

Referring to the butter trade, the Gazette says:

"The butter season, in contrast to that in cheese, was a satisfactory one, as not only did prices average on a profitable basis, but our exports to Great Britain had a

TABLE NO. 1—CHEESE EXPORTS.

Year.	Quantity, lbs.	Cost price, per box.	Spot price, per box.	Cost value.	Spot value.
1901.....	1,791,613	\$7.00	\$7.35	\$12,541,291	\$13,168,355
1900.....	2,477,000	8.00	8.25	19,590,000	20,477,500
1899.....	1,890,496	7.75	8.00	14,698,000	15,171,998
1898.....	1,900,000	6.35	6.00	12,065,000	12,540,000
1897.....	2,102,985	6.75	7.00	14,195,000	14,720,800
1896.....	1,720,237	6.75	7.00	11,605,000	12,081,000

that exports from the North American continent from week to week, since the opening of the manufacturing season, have shown an average decrease of over 11 per cent. The difference in value has ranged all the way from  $\frac{1}{2}$  up to 2 cents per pound, the most striking decline this year, compared with last, being recorded during the months of August, September and October. On the whole, therefore farmers this season have had to be content with \$1.00 per box less than last year, and as a result of it their aggregate return from cheese this season has fallen off fully \$4,000,000. Decreased consumption of cheese in Britain has been unquestionably the chief influence in bringing this about, for in no other way can the remarkable stagnation in the trade be accounted for. Such, in fact, was the actual decrease in the sales of cheese on the other side that several London importing firms had to succumb to the inevitable, and their goods were forced on the market, causing the acute decline

in cheese. In fact, the return to the farmers this season from this branch of dairying shows an increase of over \$2,000,000, and it has now become a very live question whether Canadian dairymen should not adopt some system which would compel our farmers to turn more milk into butter, and curtail the output of cheese. One suggestion that has been made by a leading exporter here is that in every group, say, seven factories, the dairymen should place one creamery, and the group guarantee that the farmers who sent their milk to this creamery would receive as much for it as the patrons of the cheese factories. The opportunities for expansion in the export butter trade are practically unlimited, for if every cheese factory in Canada was turned into the manufacture of butter the output would not be sufficient to overstock the British market."

The return from butter this year compared with previous seasons is as follows:—

TABLE NO. 2—BUTTER EXPORTS.

Year.	Quantity, Pkgs.	Cost Price, Per Pkg.	Spot Price, Per Pkg.	Spot Value.	Cost Value.
1901.....	410,000	\$14.70	\$15.20	\$6,242,200	\$6,027,000
1900.....	350,000	14.00	14.25	3,995,000	3,940,000
1899.....	451,050	13.30	13.55	6,111,000	5,998,000
1898.....	270,000	12.25	12.50	4,375,000	3,307,500
1897.....	220,000	12.00	12.25	3,752,000	2,697,000
1896.....	157,321	12.25	12.50	1,928,000	1,890,000

## Ice and Ice Houses

This is the season of the year when the farmer should give some attention to storing ice for next summer's use. But how few farmers make any attempt to do so. And yet how valuable a little ice is during the hot summer months, and especially so to the dairyman and the grower of small fruits.

An ice-house should be built of wood, and white is the least objectionable of all colors. The frame should be ceiled up on the inside at least a foot from the outside, and the space filled with sawdust. Sawdust should not be put between the outside and the ice as it will become damp and rot the frame, and in a year or two the building

will be of no use. A roof that will shed rain and keep out the sun's rays is enough. The air above the ice should be dry and to be so must be kept in circulation. Two small open windows on shady sides will accomplish this. A ground floor is the best floor for an ice-house, provided it has a natural elevation or is filled in enough to keep surface water away from the sides and to prevent water from rising to the ice from beneath the surface. A thin coating of oat chaff or sawdust on the floor is all that is necessary.

In filling an ice-house the first layer should receive a good deal of attention. The ice should be cut

true and packed level and close. Fill in six or eight inches between the sides and the ice, packing firmly, so the cakes cannot move, and then level off the surface with an adz, filling all cracks. Sprinkle on water and freeze all solid. It pays to handle ice in the cake out, as it is dry to handle, and can be packed better. If air holes are left the air will, as it gets cold, settle to the bottom and warmer air will follow. There should be no movement of air, a perfect expulsion of all air, and the nearer one comes to it the less will be the loss by melting. The second layer should be packed smooth side down and the long side of the cake out, so as to make as few cracks at the side as possible. Adz off the pack sides and fill cracks with fine cold dry powdery snow that will run down and fill air spaces. Pour on water and freeze solid; keep on till full. Sawdust is the best material for packing, and the drier the better, but do not make the mistake of throwing away the old, unless rotten, for new. The new is liable to ferment and heat some, while the old has the fire all taken out of it, and is the best for several years. The bottom must be absolutely air tight and have no drains or air passages under it. A covering six inches deep of sawdust on the bottom and sides, with the layers solidly frozen, makes all airtight, and there will be no melting. The covering on the top should be two feet thick, and kept dry at the surface. In the warning days of spring the surface should be tramped over and all air-holes filled to keep all airtight.

## To Consolidate Rural Schools.

The generosity of Sir Wm. Macdonald to agriculture is seemingly not exhausted by his munificent gift to the Ontario Agriculture College as announced in last week's issue. He is now considering the advisability of appropriating a large sum of money for the purpose of consolidating school sections in the country, with a view to experimenting in grade schools in rural districts. This plan of having grade schools in rural districts has been tried with considerable success in some of the Western States, and Sir Wm. Macdonald has been greatly interested in its growth and has expressed a desire to grant a sufficient sum to give the plan a fair trial in Ontario. Prof. Robertson and the Hon. Mr. Harcourt, Minister of Education, have had several conferences on the subject, and it is expected that the experiment will be made this year and one or more consolidated school sections put in operation.

The plan involves the discontinuing of the old small school house, and the erection of a large one containing as many rooms or grades as the number of the sections united. The advantages of the system are those which a grade school would have over a single room in which, one teacher would



Professor J. W. Robertson.

Who planned Sir William Macdonald's gifts to Agriculture.

assume to teach half a dozen forms or grades. Under the consolidated system, there would be better buildings with better lighting, heating, ventilation equipment, and division of labor than in a one room school. Where the scheme is in operation in the Western States,

the children are taken to and from school under contract, just as mail carriers contract for the carrying of the mail. It indirectly brings better roads. The system is spreading in the United States and in no case where it has been tried has it been abandoned.

## Our Western Letter

Value of Farm Products—Immigration—Labor Problem—  
New Railway.

Winnipeg, Jan. 8th, 1902.

The year which has just passed away is one which will be remembered with good reason, in the years to come. It has been in every sense of the word a remarkable year to the people of the West and especially to the people of Manitoba. It found them lamenting the poorest crop that they had ever harvested, it left them rejoicing over the most bountiful. The wheat crop of 1900 yielded only nine bushels per acre or 13,000,000 bushels in all of an inferior grade. With great difficulty they were able to pull through the financial embarrassment which naturally resulted from the loss of half the expected crop. But good has sprung from evil in this instance; the thousands of acres of grain plowed down during the summer of 1900 were that much more than usual prepared for the crop of 1901. The lightened labors of harvest and threshing resulted in a remarkable increase in the area of fall plowing and these combined with the increase in breaking due partly to immigration resulted in a remarkably increased area in wheat this year. This in-

crease was most opportune, coinciding as it did with a favorable season for that and all other crops. The enormous wheat crop of the West is due to the favorable season, but none the less it is true that had every acre sown in 1900 been harvested, there would have been less wheat because less acres, in 1901.

The value of the field and other farm produce of the 36,000 farmers of Manitoba is enormous, when reduced to figures it is almost beyond belief. The grain crops alone are valued at upwards of thirty-seven millions of dollars. Root crops give another million and a quarter; cattle, sheep and hogs upward of three millions; butter and cheese over one million; eggs and poultry one million; hides, wool, seneca root, calf and sheep skins, a quarter of a million; hay, at least seven millions; total upwards of fifty million dollars, \$50,000,000, and a conservative estimate at that. This does not represent the quantity sold but the quantity and value produced. We have no gold mines to boast of, and our output of silver is nil, but it will keep the gold and silver mines of all Canada

busy to purchase the products of the soil of Manitoba.

Production in the Northwest Territories is an unknown quantity; they have as yet no system of crop statistics and all figures are more or less guess work. The Commissioner of Agriculture announces that the system followed in Manitoba will be shortly introduced in the Territories. The absence of such statistics makes it an utter impossibility to form an estimate for the Territories, but it is thought to be about one-fourth or one-third the value of Manitoba's products.

The year has been marked by an enormous immigration, accompanied by large investments in lands, both by our own people and residents of the United States. Land values have shown a strong upward tendency in consequence of these heavy purchases. The C. P. R. and the Provincial Government have both raised the price of their lands by fifty cents or one dollar per acre. The C. P. R. and the Canada Northwestern Land Co. have sold over 950,000 acres \$3,400,000. There have been sales by private individuals and companies other than those mentioned which will doubtless bring the total up to the \$5,000,000 mark.

Unprecedented scarcity of labor has marked the past year. Wages have been high but even this special inducement has been unable to procure the hands needed in all departments of labor. In the city as well as in the country this state of affairs has existed. Taking advantage of these circumstances there have been several strikes, the most serious being the trackmen's. The roadbed of the C. P. R. had to take care of itself for several months until the company, finding themselves unable to replace the strikers, acceded to their demands. The carpenters on the other hand lost their strike, but succeeded in greatly retarding building operations in Winnipeg, a great loss to the city. Another notable development of the year is the car shortage referred to last week. This still continues, and owing to the long haul by the all rail route is likely to continue. The result of this crisis is bound to be beneficial. Already the C. P. R. are taking up the question, so long mooted, of double tracking the line between here and Port Arthur, and improving the elevators at that port. We are told that the whole continent is suffering from a similar shortage of transportation facilities but that does not lessen our loss or relieve our anxieties to any appreciable extent.

Perhaps the most notable event of the year has been the completion of the Canadian Northern line between Winnipeg and the Lake, which was accomplished on the last day of the year. The bearing of this event upon the prosperity of the West will be the subject of a subsequent letter. Suffice to say here that our people hail the event with profound satisfaction, and will not forget that it was coincident with the "big year" 1901.

## Dairymen in Session

### Report of the Whitby Convention—Practical Pointers for Dairymen.

The 25th annual convention of the Eastern Ontario Dairymen's Association opened on Wednesday last at Whitby under most favorable auspices. The opening sessions were more largely attended than at any previous gathering of the Association, and the convention throughout was a distinct success both as regards the attendance, the addresses delivered and the keen interest manifested in the proceedings by everyone present. The evening sessions were specially noteworthy, many people of the town taking advantage of the opportunity to listen to so many talented and distinguished speakers on agricultural topics.

The opening address of President Derbyshire was specially optimistic in its character, though the faults of the year were not glossed over. He referred to the progress made during 1901. 2,494,686 boxes of cheese were made, valued at \$17,000,000. Prices for cheese had not been so high as in 1900 and more poor cheese was made than formerly. The large, well-managed factories, however, never made better goods. The faulty goods were found in the small, poorly equipped factory. Never in the history of Canada had we made as fine quality of creamery butter. In 1901 we made 670,893 packages valued at about \$8,000,000. The cheese and butter made therefore would equal \$25,000,000. Quite a number of the factories have been greatly improved and a larger number is likely to be in better shape next season. He strongly commended the action of the Hon. Mr. Fisher in providing improved facilities for conveying cheese and butter to England and hoped to see the system greatly extended. Refrigerator cars, however, are wanted to carry cheese to Montreal the same as for butter. Thousands of fancy cheese are greatly injured in transit from the factory to the consumer. The very best facilities should be provided for this purpose and he hoped all dairymen would combine to get it. The dairymen themselves must improve their methods. Better factories and better curing rooms are wanted. In fact, everyone interested from the patron to the manufacturer must bend his energies along the line of improvement. A change was made in the work of instruction last year. Two instructors were detailed to do nothing but instruct the makers and patrons in the best methods of making cheese and caring for milk for cheesemaking purposes. These instructors did not do any milk testing. This work had been very successful and he would like to see it extended this year.

#### PROFIT IN DAIRYING.

An address in which the keenest interest was shown was that given

by Mr. Joseph E. Gould of Uxbridge, who gave the results of his dairy herd for 1901. He kept 52 head of cattle, 31 of which were milch cows, on a farm of 110 acres. He raised on his farm the feed for all these cows excepting that he exchanged oats for bran as he considered the latter a more profitable feed at present values. He had a silo and fed ensilage largely in summer. He raised last year 225 tons of ensilage on seventeen acres. The total milk received from the herd of 31 cows was 146,730 lbs., making 6,968 lbs. of butter. And all of them did not milk during the whole of the year. Some of the cows averaged 7,817, 8,484 and 9,359 pounds of milk in the year. He separated the milk at home and supplied the cream to a creamery. The total cash revenue from butter was \$1,200 and he realized \$100 from the sale of pigs fed mostly on the by-products of the dairy.

#### DAIRY CHEMISTRY.

Dairy chemistry and its practical application to cheese-making was the subject of a valuable address by Prof. Harcourt of the Ontario Agricultural College. Five lots of cheese made from the one vat of milk were cured in cold storage. The first lot was put in immediately from the hoops, the second a week later and so on. The normal heat of the curing room was 65 degrees and of the cold storage 40 degrees. At the end of four months three experts scoring the cheese placed the quality in the order in which they entered cold storage, the weight being increased as well. Bad flavor did not develop in cold storage. Scientists were rather divided as to what caused the ripening of cheese. It would not be necessary to have a cold storage at every factory. A central cold storage where a group of factories could take their cheese when made would serve the purpose. The market to-day demanded a milder cheese and cold storage curing would enable the factorymen to provide it.

Messrs. Ruddick and Woodward of the Dairy Commissioners's staff approved of curing cheese at low temperatures. It would, however, take four times as long to cure cheese at 40 degrees as at 65 degrees, but this need not be a disadvantage.

#### CREAMERY LEAKS.

This formed the subject of a very valuable paper by J. W. Hart, superintendent of the Kingston Dairy School. A large amount of time and money is being lost in the dairy business and self-preservation has made it necessary to reduce the waste. Directly we begin to lower the cost of making butter and patrons begin to realize the highest

value for skim milk we hasten the time when the butter industry will stand on the same footing as that of cheese. It is in the small creamery with unsuitable buildings, etc., where there are the largest proportional wastes. The only way to stop leaks in some factories is to close up the business. Cause of creamery leaks may be set down largely to false ideas of economy and to incompetence and inexperience on the part of the management. In a cooperative creamery there may be leaks because it is nobody's business to look after them. The largest leak, perhaps, in creameries is inefficient skimming through inferior separators, over-feeding, separating at too low temperatures, the bowl not running steadily or at too low speed. In churning wastes result from imperfect ripening of the cream, churning at improper temperatures and using foul and leaky churns. Buildings and machinery should be arranged with a view to economic labor. Cement floors are better than wooden ones. Refrigerators are often too large and not well built, causing the waste of large quantities of ice. There may also be wastes in the management of an engine and kind of fuel used, etc. Then bad faucets, vats, etc., are often responsible for many leaks. Thoroughness should be the keynote and by following the best methods success is assured.

#### FACTORY BUILDINGS

Mr. J. A. Ruddick, Chief Dairy Expert, Ottawa, gave a most pointed address on the improvement of factory buildings. A great many factory buildings were of a make-shift character and built with a view to permanency. Farmers were now improving their farm buildings and they should see that their factory buildings were made up-to-date. Farmers should consider factory a part of the farm equipment. One chief defect was bad drainage. In Denmark there is a law which compels proper drainage and sanitary conditions in every factory. Often the surroundings were not good. He strongly recommended cement floors as being good and advisable for every factory to have. In New Zealand every cheese factory and creamery has cement floors. If properly built they are the best. Can be put in at a cost of 10 cents per foot. The total cost for an average factory would be about \$225. It would cost \$150 for a wooden floor, which would wear out in a few years, while the cement floor if well put down, would last a lifetime. In building curing rooms too much value should not be put upon dead air space in the wall. It space were filled with some non-conducting material to prevent the air from circulating the temperature in the curing room could be better controlled. Planing mill shavings were the best for filling walls as they were dry. Saw dust was good if it were dry. No wet or damp substance should be put in a wall. Water proof paper should be used

in making walls. Cement floors were cooler than wooden ones in curing rooms. Windows and doors should be secure. Put windows in solid and make room for ventilation by some other source. There should be double doors in every case in connection with a curing room or the temperature cannot be controlled. Stone or brick buildings are rather expensive. A brick or stone wall should be insulated as well as a board one.

#### MINISTERS OF AGRICULTURE SPEAK.

The chief addresses at the first evening session were made by the Hon. Mr. Fisher and Hon. Mr. Dryden, Dominion and Provincial Ministers of Agriculture. Mr. Dryden's address, which was largely an address of welcome to the dairymen, gave some sound advice to the consumer and producer. The former was trying to get the very best for his money, while the latter was endeavoring to get most money for what he had to sell. These two classes should mingle more together. This is an age of development and men were beginning to bring the highest attainments to bear on all questions. The skilled scientist is being sought for in every industry. People were looking for something accurate and certain. A man's education must be of such a kind as would bring out practical results. The school of experience was a good one, but a very dear one. The scientist experiments and finds out things and is thus able to help the farmer and the dairymen.

Mr. Fisher's address dealt largely with facilities for carrying our products to the consumer and the present standing of the cheese industry. He quoted statistics to show the progress of the industry during 1901. He stated that the condition of the cheese trade was anything but satisfactory. The returns from cheese exports last year had dropped off nearly \$4,000,000. From one-third to one-half of this decrease was due to less cheese being made, while fully one-half was due to Canadian cheese being less sought for in Great Britain because of its inferior quality. Unless something is soon done to remedy matters we will soon lose our position in the British market. He traced the growth of the cheese industry; as soon as cooperation was adopted we soon secured a first place, but we are losing to-day what we won. Canadian cheese now commands fairly good prices, though not so good as a year ago. But our cheese averages fully 4 cents per lb. less than English cheddar cheese. Many reports which he is constantly receiving from England show that our cheese is not up to the mark. One of the chief faults was heated cheese. Canadian exporters also state that our cheese is not as good as formerly. A great deal of the heated cheese was caused in the holds of the vessels in which they were carried. Last year he had asked the steamship owners to put in cooling facilities for ventilating the holds of vessels for carrying

cheese and apples. Ships thus fitted carried cheese and apples in good condition, while on ordinary ships sailing the same day the cheese were injured. He was now endeavoring to get all the ships sailing from Montreal to put in ventilating apparatus next season and believed there would be twenty ships so fitted. Better cars would have to be used for carrying cheese from the factory to the sea board. He was willing to arrange with the railways for refrigerator cars for carrying cheese on a similar basis as for those used for carrying butter. In the factories there was no adequate provision for curing cheese at a proper temperature. The majority of factories have not the facilities for making cheese in hot weather. Factories should cooperate and erect properly insulated curing rooms and cold storage to put cheese in when made. This cannot be done except by cooperation. The cost would be considerable, perhaps, but the outlay could be paid for in one season by the saving in quality and shrinkage. Such a plan would help to sell our cheese and to regain our prestige in the English market.

Mr. Andrew Pattullo, M. P. P., delivered an interesting and stirring address in which he showed the value of the educational work now being done along agricultural lines. The dairy industry had been the standby of this country for years. With one exception there never had been a time when dairymen could not make a profit from cheese. Other addresses were delivered by Mayor Ross and Messrs. Hoyle, M. P. P., and Ross, M. P. for North and South Ontario.

#### CHEESE MAKING.

Thursday was the big day of the convention and the keenest interest was taken in the proceedings. The morning session opened with an address by Instructor Publow on Cheese-making. He pointed out that while cold storage and better transportation facilities were important and necessary, it will not cure all the evils. We must have good milk sent to the factory in a sweet condition. If the maker does not get sweet milk he cannot get the proper acidity in the milk. He described the process of making cheese from good milk. Use sufficient rennet to coagulate the milk in 25 minutes at 86 degrees. Cut when it splits clear over finger. Cut carefully in uniform cubes. Stir as soon as cut, the agitator being preferable for this purpose. Stir gently and begin to cook quietly. Cook according to the fermentation in the milk. If curd shrinks quickly cook quickly, and if it shrinks slowly cook slowly. Maker should use his own judgment as to the temperature to cook to. Amount of acidity in curd will depend largely upon the amount of moisture left in the curd. Pile curd in a way that temperature and moisture will be retained. Keep at 96 degrees till  $1\frac{1}{2}$  inches are reached on iron and then grind. Expose to the atmosphere immediately after milling.

Keep piling and stirring alternately till curd is mellow and has flavor of newly made butter. Curd should not be salted till the particles of curd when squeezed in the hand will stay squeezed. Salt evenly with some good dairy salt. When salt has well dissolved put to press. Put same amount in each hoop, keeping centre heaped up. Bandage after one-half or one hour's pressing. It would be an advantage to press cheese two days in hot weather.

In the discussion which followed it was shown that high piling carries off more fat. The chief fault to-day was too much moisture. Rich milk gives more moisture. Cheese should break down when about one month old. Mr. Ruddick pointed out that not all the faults were due to moisture. A great many Western Ontario cheese were dry and harsh in texture. Complaints as to heated cheese were more numerous than any other. Weak and opened bodied cheese were common in the fall. He advised the cooling of the milk by the patron to a lower temperature than was formerly recommended.

Mr. H. S. Foster, president of District of Bedford Dairymen's Association, Quebec, gave a short address, in which he strongly emphasized the necessity of more uniformity in the cheese made in a district. Small factories should unite into larger ones. Would like to see Ontario lead in this matter.

#### CURING CHEESE.

Dr. L. J. Vanslyke of the State Experiment Station, Geneva, N. Y., dealt with the subject of curing cheese in a very exhaustive way, and though he contributed very little that is new to the data we have already on the problem of curing cheese, yet his address was very valuable in that it confirmed in a striking manner what is already known on this subject. At the Geneva station there were six curing rooms in which the temperature could be kept as desired, with an even moisture content of about 75 per cent. Conditions of curing were less in weight, chemical changes in the cheese, and commercial quality. Loss of weight was due to evaporation of water. The loss of fat in curing was exceptional and would not occur if proper temperature were used. There was little loss of fat in curing at a temperature below 75 degrees. He showed that as cheese grows older moisture content becomes more uniform. The loss of moisture decreases with the diminution of temperature. The loss in weight in curing is the greatest the first week, the amount being equal to two weeks following. As cheese grows older the weekly loss of moisture grows less. Increase in size of cheese means less loss of moisture in the curing room. Some of the conclusions to be drawn from his experiments were: Water is money when put in the right place and of the right quality; dairymen should hold less moisture in green cheese and cure

so as to retain the moisture rather than have too much moisture in the green cheese to start with; the better curing gives better rind; during a season there was a loss of five pounds in every 100 pounds of cheese in curing in the average factory. This can be reduced by from 1½ to 2½ pounds by proper curing facilities, which would mean a saving of \$400 or \$500.

All the factors in cheese-curing are not positively known. There are supposed to be three enzyme or cheese-curing ferments. The one discovered by Drs. Babcock and Russell of Wisconsin, another produced by bacterial action in the udder, and a third the pepsin ferments in rennet. He was of the opinion that the last named ferment played a much more important part than any yet assigned to it. Whether the development of flavor in cheese ripening is due to bacterial or enzyme action cannot be answered satisfactorily. The flavors due to these two sources are distinct. Cheese ripens more rapidly with increase in temperature. It ripens more rapidly in the early stages of curing. Enzymes are weakened by the product of their own making. Cheese ripen quicker when water content in atmosphere is high. Salt retards ripening, due perhaps to its retarding enzyme action.

In dealing with his experiments from a commercial point of view, Dr. Vanslyke gave the record of score of cheese by experts. Cheese cured at 80 degrees gave lowest score in flavor and texture. Cheese cured from 65 to 80 degrees gave the highest scoring when one month old, when there was a gradual decline. At 60 degrees flavor remained uniform during five months. Cheese cured above 65 degrees acquires more or less strong flavor, but when cured below that there was always a better and milder flavor.

#### BACTERIOLOGY.

Dr. Connell, Queen's University, Kingston, read a valuable paper on this subject in relation to milk and dairying. Milk formed the best of foods for bacterial growth. Some bacteria such as the lactic germs, were essential in cheese and butter making. The lactic acid germ was the dominant micro-organism in good milk. Bacteria are in the milk ducts as well as in the surrounding air. The milk duct was the chief source of the lactic germ. Milk cans and pails are great sources of infection, especially if the whey is returned. High temperature is favorable to bacterial growth while a low temperature, 60 degrees or under, is not so favorable. Better to ripen milk at the factory than allow the farmer to do so. By using starter or pure culture maker has control of the ripening. A number of bacteria, while they produce acid in milk, also produce gases and putrifying compounds. They are common at all seasons both winter and summer. Lack of cleanliness in milking, and clean utensils, milking with

wetted hands were the chief sources of bacterial infection.

Mr. Ruddick advised the more general adoption of cooling milk. Aeration tends to hasten souring unless it is accompanied by lower temperature. There was too much overripe milk and cooling at the farm would help the maker. Milk therefore must be cooled as well as aerated to get the best results.

#### INSTRUCTOR'S REP. PTS.

Two brief but valuable reports on the work of instruction, already referred to in the president's address, were presented by Messrs. Publow and Zuleit, who were engaged in this work. Mr. Zuleit stated he had 90 factories, 50 of which were visited every two weeks. It was not necessary to spend a day in each when the maker and everything were running right. In one or two instances he spent a week at one place in order to straighten out a difficulty. As aids to making he advised the use of pure cultures to control flavor, fermentation tests to detect bad flavors and acidometers to keep track of the acidity. All factories should be brought under the Association and he would urge the Government to provide funds to carry on this work of instruction more thoroughly.

Mr. Publow stated that being relieved of the milk testing enabled him to do better work than ever before. He visited 150 factories, made 231 calls. Seventy of the factories applied for instruction. May and June cheese were better than before. July's and August's had a lot of weak quality. Only 25 factories had means for controlling temperature in curing, two of which had sub-earth ducts, and 23 used ice. He classed the 150 factories as follows: 50 first-class, 50 second-class, 40 third-class, and 10 totally unfit to make cheese in. The defects in cheese were about equally divided between poor factories, unskilled makers and bad milk. All the factories should be grouped and a competent man placed over each group.

#### PERMANENT PASTURES AND HAY MIXTURES.

Dr. Fletcher, Dominion Entomologist, dealt with this subject in a very practical and thorough manner. The lack of knowledge of the best grasses to grow was very common among farmers. Over 400 different grasses have been tested at the Central Experimental Farm, Ottawa, during the past 14 years, nearly all of which were of value as cattle food. Twelve lbs. of timothy and eight lbs. of clover formed a good hay mixture. Mammoth red clover was the best to grow with timothy as it matured about the same time. The common red was too early for timothy. Must have plants in a mixture that will mature about the same time to get the best feeding value in a hay crop. The Mammoth red, though coarse in the stalk, was as good as the common variety. Orchard grass should be cut when it has made its greatest growth, when the seeds

are formed, but not drawn off the stem. Permanent pasture mixtures were important. A variety in a mixture gave variety in the food of the animal. The permanent pasture mixture recommended by the Ottawa Farm was as follows: Timothy 6 lbs., common red and mammoth red clovers 2 lbs. each, meadow fescue 4 lbs., orchard grass 2 lbs., Kentucky blue grass or Canada June grass 1 lb., lucerne 2 lbs., alsike 2 lbs. The common or red clover was a valuable clover crop. June grass should never be missed from any permanent pasture mixture. Awnless Bromes grass was the one for the Canadian West, where it grew most luxuriantly, and was most valuable as a food. Scotch grass can be easily taken out. Its roots do not go down deeply, and consequently shallow plowing with working alter will get rid of it. Indian corn should be sown wherever it can be grown. Where it can't be grown millet forms a very good substitute.

#### IMPROVING A DAIRY HERD.

Prof. Dean, in an interesting way, gave an instructive address on this topic. The cow must be taken care of and should be fed so as to get the very best results. With feeding stuffs so high as they are at the present time the dairyman must study to feed his cows in the most economical way. The dairyman could save one-half a cent per day per cow by feeding bran and shorts instead of oats and peas at present prices. He gave an instructive account of the manner in which the dairy herd at the college had been developed so as to give an average of 8,114 lbs. of milk per cow, showing 3.54 per cent. of fat, and making 326 lbs. of butter each. The college herd of 30 cows and heifers had yielded milk to the value of \$1,600 during the past year. He gave particulars of experiments in feeding calves, and showed how calves four months old had made an average gain of 50 lbs. in five weeks on skim milk and bran and oats at a cost of 1.85 cents per lb. of gain. He also urged the keeping of milk at a temperature of not higher than 70 degrees, and at 60 degrees if possible. Aeration of milk without cooling and keeping cool was of no advantage. Washing curds under certain special conditions was undoubtedly a benefit, but as generally done it was a useless and often a hurtful practice. It was a popular error to suppose that there was any difference in the effects of a light or dark room in the curing of cheese. Cheese must be properly made from well cared-for milk, and be cured slowly in cold storage, in order to get the best results. The time was coming when a central cold storage plant would have to be provided for curing and storing cheese.

#### AN INTERESTING EVENING

The evening session on Thursday, though not so practical in the nature of the addresses delivered, was one of the most valuable of the convention. Stirring and vigorous addresses were delivered by C. C.



James, Deputy Minister of Agriculture, Dr. Fletcher, Prof. Dean and G. C. Creelman, Superintendent of Farmers' Institutes. Mr. James' address dealt with the problems in agriculture. About \$100,000,000 were invested in agriculture in this Province. The interests of agriculture should therefore stand first and foremost. This is the great economic problem of the country, and the men who can solve it are deserving of the thanks of all classes. Years ago there were great heaps of waste material in connection with our great manufacturing processes, but to-day that waste material was being utilized by being turned into what are called by-products, which were proving of great profit. Wherever there is waste there are problems to solve. This showed the need of a closer study of the economics of agriculture, as in that business there was more waste than in any industry. The three great problems facing agriculturists were those of production, preservation and transportation. In the matter of transportation we had to com-

pete with the carrying trade of the world, even with our distant sister colony of Australia. He also stated that the man who would be a great benefactor to his fellows is the person who could solve the question of the preservation of dairy and other agricultural products. He put strong emphasis on the importance of the study of the problems of agricultural production, in the matter of soil, seed culture and harvesting, as well as the matter of feeding and care of live stock, the growing of fruit or the manufacture and handling of dairy and other farm produce.

Dr. Fletcher's address was on flowers, and incidentally he pointed out the good work the maker might do by beautifying the factory and surroundings with flowers. Prof. Dean pointed out that the Ontario Agricultural College was never on a stronger footing than to-day. There were now about 400 regular and special students at the College. Mr. Creelman urged cheese and butter-makers to get closer to their patrons.

(Concluded on page 43.)

## Correspondence

### Good Money in Hogs.

Editor The Farming World:  
Having read the letter of Mr. E. L. Holdsworth in your issue of Dec. 10th, also one by Mr. Isaac Cross, in the issue of Dec. 24th, re the Bacon Hog, I thought I would give you my experience during the past summer, and I think I will be able to show that there is money to be made with the too often much-abused bacon hog.

On April 2nd last three sows farrowed 33 pigs, of which they raised 28 good, thrifty ones. Two of the sows were Berkshires, the other a cross-bred white sow. They were mated with a pure Tamworth boar. I allowed pigs to suckle until five weeks old, when they were weaned.

I fed them shorts mixed with buttermilk, and swill from the house, until I had fed them eleven hundred pounds of shorts; after which they were fed a mixture of ground barley, rye and oats, until the pigs were about five months old, when about half of their feed was peas and the balance barley, oats and wheat. I fed them three times a day at first, until the clover was high enough to cut, after which I cut clover for them at noon, and led them only morning and evening with meal. This ration was continued until about the middle of July, when they were turned into the orchard, about two acres, half of which was natural grass, the other half rape.

On Sept. 26th I sold to Mr. E. J. Strangeway, at Beeton, eleven of the hogs for one hundred and forty dollars, and on Oct. 10th nine hogs for one hundred and sixteen dollars and twenty cents; on Oct. 17th four hogs for fifty dol-

lars; and killed two hogs for our own use, the remaining two were kept for brood sows. The following table will show value of the twenty-eight hogs and also the cost of production:

28 pigs, 5 wks., at \$2 ea...	\$ 56.00
11 cwt. shorts, 80c. pr. cwt.	8.80
7 tons meal, \$20 per ton...	140.00

Total.....	\$204.80
24 hogs sold .....	\$306.20
2 hogs killed .....	24.00
2 do. kept for sows .....	24.00

Total .....	\$353.20
Cost .....	204.80

Profit .....

Profit ... ..\$148.40  
I have not charged up anything for pasture or clover, but the profits show a good price for both, and also for attendance.

I valued the meal at the market price at the time of feeding.

E. Marchant.

Lloydtown, Ont.,  
January 6, 1902.

### Navicular Diseases in Horses.

Editor The Farming World:

Can you, or any of your readers, give me any positive information as to whether navicular disease is hereditary? If a valuable mare contracts this disease and thus becomes unfit for use in the city, is there any sound reason why she should not be put at light work on a farm and have colts raised from her? I know that many veterinary surgeons say that colts should not be raised from such a mare, but I am not prepared to accept the mere ipse dixit of even a V.S. What proof is there that navicular disease is hereditary? Its nature

seems to render it unlikely that it is so. Am I right in supposing that the trouble is caused by the straining of a tendon, due to improper shoeing, over-driving on hard roads, or other artificial conditions in the cities? If veterinary surgeons wore hard shoes, so shaped that the whole weight of their bodies had to be supported by the toes and sides of the soles, the heels and centres of the soles seldom touching the ground, and they were then compelled to run long distances on hard roads, they, too, would probably develop navicular disease, but I do not know that it would descend to the little vets. Chinese women have had their feet bound for centuries, and yet "unsound" feet have not become hereditary. Why are horses different from men? True, the colt of a navicular high-stepping carriage-horse may develop the same disease, but is not this probably the result of being exposed to the same unnatural conditions as brought about the mother's trouble? Just so the daughter of a Chinese woman is likely to have small feet because she is subjected to the same conditions as her mother.

Have any of your readers known of cases where colts of navicular mares have developed the disease when not exposed to hard city conditions? What proof, in fact, is there that the disease is really hereditary at all?

Quebec.

Note.—In connection with the above, it might be well to note that the horse's foot and the human foot are different anatomically. The spongy, or sensitive, frog in the horse's foot is destined by nature to take a certain amount of compression and to protect the sensitive structure above it, and particularly the navicular joint, from injury. Under the present system of shoeing horses with toe and heel caulks on the ground surface of the foot, and in driving on the hard pavements of city streets, the frog of the foot is thrown entirely out of use and under certain conditions, such as compressions, strains, bruises of the frog, does not protect the part and injury is the result. Where horse-shoeing is unknown, as on the prairies, navicular diseases are unknown. The pathological changes resulting from navicular diseases may be irremovable. A good, well-bred mare, however, even if suffering from navicular diseases, might prove a successful breeder. There is no danger of navicular diseases in themselves being inherited, though certain conformations of the foot, which make some horses more susceptible to such diseases, might be. For instance, a horse with a sloping pastern is not so susceptible to navicular disease as one with an upright pastern.

Our correspondent wishes to have the opinion of horse-breeders and others on the points raised, and we gladly open these columns for such discussion.—Editor.

# The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially Representing the Farmers' Interests

Edited by JAMES FOWLER

## Sugar Beetlets

Heavy clay soils are the least adapted to the growth of the sugar beet.

But if the necessary means are employed even they may be rendered suitable.

The means consist mainly in the systematic employment of lime to modify the heavy nature of the clay soil and to render it readily workable.

If this be done, sugar beet cultivation may be profitably carried on even on the heaviest clays.

There is no kind of soil, with the exception of the driest drift sand, on which the sugar beet may not be successfully cultivated.

But we must understand what are the measures necessary to make it thrive.

Sugar beets require a warm soil and a warm sub-soil.

A cold soil is the greatest enemy of the sugar beet, for it diminishes the quantity and injures the quality of the crop.

Judicious drainage is absolutely necessary where there is stagnant moisture in the sub-soil.

Where there is water standing in the hollows of the fields there is need of drainage.

Where there is stagnant moisture in the sub-soil thorough drainage must be carried out or the crop will be a failure.

A clay soil when it is saturated with the moisture of winter forms heavy clods and is only capable of tillage late in the spring, almost too late for the successful cultivation of the sugar beet.

## Galt

A By-law voting \$4,000, for the purchase of a site for the North American Sugar Company, was carried by a large majority.

## Wiarton.

The By-law granting a bonus of \$25,000 to the Wiarton Beet Sugar Company, was carried almost unanimously, scarcely a vote being polled against it.

## Sandwich.

A By-law granting exemption from taxes to a beet sugar company at this place was defeated.

## New Company

The Cargill Sugar Co., of Cargill, Ont., has been incorporated with a capital stock of \$500,000.

## Walkerton.

Since the incorporation of a sugar company at Cargill, the Walkerton Beet Sugar Co., have renewed their efforts to push their project along and are determined that 1903 will see a factory built. They realize that if once the Cargill factory gets the start of them, it will be more difficult to secure the acreage and capital for a second factory within such a few miles of each other, and they are determined to keep to the front. Several canvassers for acreage are now out and several more will be engaged.

## Lindsay.

The report of the deputation appointed to look into the sugar industry in Michigan was received with great enthusiasm and has started the ball rolling here for a sugar factory, and the project is being taken up with great energy. A sub-committee has been appointed to take all necessary steps to further the success of the enterprise. Messrs. Channon and Ellis have been engaged to canvass for acreage and they are now holding meetings in different parts of the county, and though the meetings are well attended the signing of contracts goes on rather slowly. The farmer not being well versed in the growing of sugar beets, will need time to consider and study the subject, but will eventually go into the growing of the beets.

As a location Lindsay possesses many advantages, plenty of water, limestone, etc., and will be able to bring in a great quantity of beets by water. No trouble is anticipated in getting a sufficient supply to run a factory of 600 tons capacity.

## Peterboro

Although the proposition to bonus a sugar factory to the extent of \$50,000 was endorsed at a large meeting held some time ago, no headway is being made. After mature consideration it is felt that the bonus asked is too large, and that the people would like to see something more substantial behind it before going any further into the matter or going to the expense of submitting a by-law. As the feeling is at present a bonus would not carry, and it would require a great deal of hard work to get the project up to the point of enthusiasm. Another thing, it is now too late to build a factory for this year's campaign and there is a tendency to wait and see the results of the factories now under construction. A deputation will be sent to Michigan to examine the project there and report. Mr. Moody of London, Ont., is the promoter of the scheme.

Beets grown in this district during the past season under the supervision of the Ontario Government heads the list in quality of any of the experiments in the Province.

## What He Learned.

Mr. Johnston Ellis of Ops, who was sent to Michigan to investigate the beet sugar industry for the Lindsay people, upon his return says:

"We found the farmers about where we were ourselves 35 years ago. That was before we got into mixed farming. We grew hardly any wheat and the land was being played out so that the crop failed. A good many farmers saw hard times then and had to borrow money. But since that they have got into raising clover and peas and stock and they are making money now on the same land as they used to lose it on.

"That is where the Michigan farmer was when this beet industry was started there three or four years ago. A man who knows told me that 75 per cent. of the farms were mortgaged there a while ago. Since they began growing beets the percentage has gone down to 25. Sugar beets have been a great thing for that state.

"We met one farmer who said he had grown 50 acres and cleared \$2,000 after paying even for his own labor. He had contracted for 300 acres on the same basis for the next year. That means \$12,000 profit—quite a fortune. We met only one man who was a little sour on beets. He said they took a lot of work and he didn't believe in the way they tested them for sugar. His neighbor's got a higher rating than he. His neighbor told us that he was too lazy to hoe the beets. We noticed that in the sugar beet section the farmers on the road looked prosperous. They drove good horses, fine rigs and new harnesses. We were told they were buying pianos and other home luxuries.

"They get \$4.50 a ton for the beets. We could not get so much for they say there is nearly a cent a pound of duty on the sugar in their favor. We could count on \$4.00 at least, but could make it up in tonnage. Their land is not as strong as ours. They get 14 tons to the acre on an average. I should say our land will grow 19 just as well.

"They say that clover sod makes a good seed bed for the beets. Prof. Shuttleworth said sod was not the proper thing but they get the best results off clover sod. They plow it nine or ten inches deep in the fall. In the spring they give it four or five strokes with the disc harrows, rolling it after each stroke. That

gives them about five inches of pulverized earth. Then they go at it again, 'for,' said one man, 'when you think you have it about right give it another stroke, it will pay you.'

"They can grow three crops of beets on that soil. The second is the best, but the third is all right. Now that shows the beets are not very hard on the land. Why here a third crop of potatoes is no good, and a second is not much. They plant the beets in rows 20 inches apart and thin them out seven inches apart in the rows. They say a lot more horse work can be done on them than when the rows are closer together. They take a lot of work, but too women can easily be got from the cities, to hoe beets. But that is on big plots. Any farmer here who handles his work right can cultivate five acres with his own ordinary help.

"I would not advise our farmers to change their methods or drop their present system, to grow sugar beets. They are making money now and are pursuing a successful line of agriculture. But no farmer can make a mistake by adding the sugar beet to his list of crops. He can grow five to ten acres to the hundred and likely get better returns than for almost any other crop and improve his land. That is the way I shall present it to the men I talk to."

**Deep Plowing.**

In regard to this question the farmer needs to use all the judgment at his command, before he does the work, and no certain rule can be given without knowing the locality or even the individual field.

We have some fields in this vicinity where the humus question should by all means be considered or you can tell to a row where the deep plowing was done regardless of the crops.

We have other fields where we may set the plow as deep as the team can pull it, for fall plowing, and we can depend on good results. And in a few, very few cases, an ordinary team can not turn it so deep in the spring, but good results will follow, thus leaving it where we have claimed all the time it actually stood. Good judgment must be the guide. As a rule our best Michigan beet soil will be improved by turning it over about two inches deeper than usual, and our clay soils as we call them which are only a clay loam—as a rule, may be turned any depth so long as the frost is given a chance to do its refining work, as is so often noticed in the "clay" brought up from some of our deep ditches which grows such luxuriant crops.

Our deep black prairie soils are practically the same often for several feet in depth and while they yield abundant crops from being plowed three to five inches deep, yet will do just as well if turned

over a foot deep and in many cases run on for years if necessary. Any  
startle the owner by the big crop. way, if you want typical beets,  
Break up the crust your plow has long, slim beets.—Thissell.

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**Builders of Complete Machinery for Beet, Cane and  
Glucose Sugar Houses and Refineries.**

# The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep and Swine Breeders' Association, 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 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, on the 15th of each month in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the gazette, are required to notify the undersigned by letter on or before the 15th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue, he data will be published in the most condensed form.

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

## PARM 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 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 farmers, 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.

## Situations Wanted.

Wanted a position by a married man as foreman on a stock farm. Good references. No. 967. a.

Wanted—A position by a married man with three children, on a dairy farm; capable of taking full charge, experienced in the care of stock, farm machinery, etc. Can supply good references. No. 968. a.

Wanted—A position on a dairy farm as butter maker, capable of taking full charge or doing general farm work. No. 969. a.

Wanted—A position as house-keeper, by a widow, who understands all kinds of farm work and is a good milkmaid. Good references. No. 966. b.

## Help Wanted.

Servant girl wanted to do general house work on a farm. Must give references as to character. Good wages to commence at once. No. 876. a.

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

## Butter Making.

By Miss Alice Hollingworth, Beatrice, Muskoka.

Perhaps you are expecting me to tell you how to manage a model dairy; but before I do that I want to see the model farmer who will supply his wife with the proper appliances to work with.

I find that, with very few exceptions, the kitchen is used for a dairy in the winter, even by those who have a dairy for the summer, but who lack the means of heating it when cold weather comes.

This is very unfortunate for the butter industry, but since it is so, I think it best to deal with the difficulties which kitchen dairying presents.

The greatest of these, I think, is to obtain a good flavored cream from milk that is set in the kitchen cupboard, where, in addition to the various odors of the food, you are pretty sure to find the all-pervading fumes of tobacco.

The most common plan is, I believe, to set the milk in shallow pans. Some think to mend matters by deep setting, which is an improvement if the cans are placed in ice water, but if they are left standing under the stairs or in any odd corner, their use will result in a greater loss of butter fat than when shallow pans are employed. Ice water is just as necessary in summer as in winter.

The Cream Separator the Best Method.—The very best method is to use the cream separator. I can speak from experience in this matter. We began with the shallow pan, then adopted deep setting in creamers, and are now using a separator. We have tested the merits of each method by using the Babcock tester. Let me remark here, that it will pay every farmer who follows dairying to have a Babcock tester. It is easily worked, and will not only tell you whether or not your cows are paying for their board, but will show you how much is lost by careless handling of the milk and cream. I often hear people argue that, when the skim milk is fed to calves and butter-milk to the pigs, there is no loss. But you will need much better prices for beef and bacon before you can make any profit out of feeding them on butter fat, especially when you can get flax meal at one-third of its cost, which will do the calves just as much good.

To return to the separator, the separating is done as quickly as possible after milking; the milk is fed fresh and warm to the calves, and, even if no flax meal is used, the purity and freshness of the milk makes it a more valuable food for the calves than the richer skim milk which has been standing twenty-four hours or more to be

## Live Stock Meetings

The annual meeting of the following associations will be held at the Palmer House, Toronto, this month:

Dominion Cattle Breeders' Association, Jan. 23rd at 1:30 p. m.

Dominion Sheep Breeders' Association, Jan. 24th, at 9:30 a. m.

Dominion Swine Breeders' Association, Jan. 24th at 1:30 p. m.

Board of Provincial Winter Fair, appointed at above meetings, Jan. 24th at 7:35 p. m.

## 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 the Superintendent he will be put in direct communication with the Institution that has carried on the work.

H. C. CUFFMAN,  
Superintendent Farmers' Institutes.

## A Simple Method of Disposing of House Sewage for Farm Homes.

In answer to a number of enquiries regarding an article which appeared under the above heading in The Farming World of December 10th last, we wish to state that both the glazed and field tiles should be four inches in diameter, and allowing thirteen tiles to the cubic foot of water to be discharged the number of tiles required will be easily found.

The system has the endorsement of the Provincial Board of Health. It has been very thoroughly tested, will not be affected by the frost, as might be supposed, and if the tiles are placed under a garden most valuable results will be obtained in the production of fruit, vegetables or flowers.

come sour and germ-laden, and then warmed up in the "calf-pan," which may be distinguished from other pans by the layer of burnt milk on the bottom. A separator is a profitable investment under any circumstances, but most particularly so when the kitchen and dairy are one. In collecting cream from day to day, be sure to stir the whole mass well every time fresh cream is added. Neglect of this causes uneven color and curd in butter. If you are only getting a little milk, it is better to churn at least once a week, in preference to waiting till you have a full churning.

Butter butter is the result of keeping cream too long from cows that have been milking a long time. The bitterness is due to the development of a germ—a yeast plant.

To obtain the best results in ripening winter cream, it should be pasteurized and have a starter added, but unless this is done with more care than is usually exercised in the kitchen dairy, it had better be left undone.

**Pasteurizing to Purify the Cream.**—It is very easy to give the cream a flat, cooked taste. However, if your cream is tainted with any objectionable flavor it is well to know that this can be removed by pasteurizing, which is simply setting the cream can in hot water, which must not exceed a temperature of 180 degrees F. Stir the cream constantly (to prevent cooking), till it is heated to 160 degrees F., then remove to a cool place. This process practically destroys all the bacteria or germ life in the cream, including the lactic acid germs, which are necessary to cause ripening. These are supplied by a "starter," which is a ferment used to hasten the ripening of cream.

**How the Starter is Obtained.**—It may be made by putting good, fresh milk in a self-sealer in a warm place, till it sours; but this is not always successful. I heard Mr. Stonehouse, instructor at the Ontario Agricultural College, say that he had tried every day for two weeks and failed to get a good starter in this way. It is better, when first beginning, to get the pure culture, which is in the form of a white powder, and can be bought from the dairy supply companies. Once you get a good starter you may keep on using it without change (so long as it remains good) by adding it to the fresh milk just as you add a cupful of old yeast to the fresh batter when you want more yeast. Milk that is used for a starter, should have 25 per cent. of water added, then be pasteurized in the same way as cream.

Cool it down rapidly to 80 degrees F., add a small quantity of the previously made starter, stir thoroughly, cover and leave undisturbed till required for use, when two or three inches should be removed from the top (the top layer contains bacteria injurious to the cream), the whole stirred till it is

smooth and without lumps, and then about 10 per cent. of this added to the cream, which has been allowed to cool down to 70 degrees F. after pasteurizing. Stir well and put the cream where it will maintain a temperature of about 55 degrees F. until it is ready for churning, which should be in twenty-four hours. Never mix sweet and ripened cream together just before churning. The ripe cream churns more rapidly, and, consequently, when the butter comes much of the sweet cream is still unchurned, and passes off with the buttermilk.

**The Right Temperature for Churning.**—In regard to the right temperature for churning, that is a question each of you must decide for yourselves. There are several points to consider: The temperature of your room, the period of lactation, the season of the year, the food and breed of the cows and the condition of the cream. Cream from fresh cows churns at a lower temperature than that from cows that have been milking a long time. Cows fed on a succulent food, like roots and silage, will give a more rapidly churning cream than if fed on timothy hay and dry corn stalks. Over-ripe cream should be churned at a lower temperature than if it had been taken at the right time. Poor, thin cream requires a higher temperature than rich cream. Milk of Ayrshire cows is, perhaps, the hardest to churn. The fat globules in their milk are very minute and slow to collect. For this reason their milk is much better adapted for cheese than butter. Much of the butter at the O. A. C. dairy is churned at 57 degrees F. or lower. We keep Ayrshire cows, and in winter I always churn at 67 degrees F. and get it in good, firm granules at that.

Scald the churn well before using. Have a strainer of fine perforated tin, with ears or rests, so that it will fit the top of the churn, and pour the cream through it. It will retain the lumps and curd, which can be removed from the strainer much more easily than from the butter.

**Have a Modern Labor Saving Churn.**—A word as to the kind of churn to use. I have been so accustomed to seeing the barrel churn in the backwoods of Muskoka that I never doubted but that the old, upright dash churn had long since become a relic of antiquity in the older and wealthier parts of Ontario. It is with amazement that I learn that where 100-acre farms will command from \$5,000 to \$8,000 each, where the farmers have all modern improvements in labor-saving machinery, the wives are still pounding away with the primitive dash churn. I know there are women who will make good butter with the old-fashioned appliances, but is not this reason enough why they should be rewarded with the improvements that require less labor? It certainly requires less energy to turn the handle of a barrel churn than to

use the dasher, and it is so much easier and better to wash the butter while it is in loose granules in the churn than after it is in the bowl. If the cream is in proper condition it should not take more than 20 or 30 minutes to churn. Long churning is caused by the temperature being too low, the cream being poor in fat, the cream having been kept too long, the cows being poorly fed, or having been milked a long time. About two quarts of water at 50 degrees or 55 degrees F. should be added when the butter breaks, if it is soft and has churned quickly, but if it has been long churning and breaks in fine granules, do not add the water till the granules are almost large enough to stop the churning, which is when they are the size of a grain of wheat or a little larger. The object in using the water is to thin the buttermilk, so that the butter will rise to the surface, and allow the buttermilk to drain off more freely.

Set the cream strainer on the pail and let the buttermilk run through it, to retain any particles of butter that leave the churn. In washing use the same quantity of water as of cream. About 50 degrees F. is the best temperature in ordinary cases. Strain into the churn, fasten the cover on, and revolve rapidly, to prevent massing, about a dozen times.

**Working and Salting the Butter.**—While the water is draining off scald and then cool the butter-worker. This is a triangular, sloping table, with a lever attached, which may be bought for \$2.50 or made quite easily at home, and is so much superior to the old-time bowl and ladle that any woman who has once used it will never be without it. In using the lever press gently, and avoid a sliding or chopping motion, as this spoils the grain of the butter. Salt according to the taste of those who are going to eat the butter. I like  $\frac{1}{2}$  oz. to the pound, but some of our customers say it is not enough.

The cream strainer makes a good sieve for sifting the salt on the butter, which should always be done while the butter is in loose granules, to ensure thorough mixing. If the butter is not too soft, once working is sufficient, unless it is to be kept for a long period, when it is better to give it a second working.

**Parchment Paper Often Used Carelessly.**—I believe the use of the pound mould and parchment paper is pretty general, but, judging by the rough, warty appearance of the paper on butter that I see in the stores, I do not think it is generally known that the paper should be well soaked in water to make it wrap neatly. Do not put salt in the water; it spoils the appearance of the paper, and is not necessary. In conclusion, let me say that the object of the superintendent in sending me here is not for the sake of what I may teach you, but to encourage the farmers' wives to come out and talk over their work. Each

one of you must have learned something by your own experience that will be of value to your neighbor, and it will be better for yourselves and everybody else when you meet together and discuss your common interests the same as the farmers or the sensible people of any other profession. Above all, let me urge you to send your sons and daughters to the O. A. C. Dairy School. The instruction given, which is of the highest order, is perfectly free; the only expense entailed being board and railway fares, and this is repaid a hundred times in the useful knowledge gained. I have met people who think they know everything about butter. Prof. Dean and his staff of instructors freely admit that they have still much to learn.

It is this spirit of being able to see the room for progress and improvement that we need to infuse among butter-makers throughout the country.

## DISCUSSION.

Q.—What kind of deep setting is best?

A.—By Miss Hollingworth: The creamer with a zinc box in a wooden frame, the zinc being made to form two cylinders, through which the movable milk cylinders with glass and taps at the bottom are slid, and can be taken out when repairs are necessary.

Q.—When should a starter be added to the cream?

A.—Twenty-four hours before churning.

Q.—How long should milk be kept in deep setting in winter?

A.—Twenty-four to thirty-six hours.

Q.—How long will it take a herd of 8 or 10 cows to pay for a separator?

A.—We realized \$8 per month extra profit over what we had done without the separator. If I remember rightly we had eight cows milking at the time.

Q.—What is the cause of butter being like granulated sugar and not collecting?

A.—The cream was poor in butter fat, and perhaps too cold. Have a richer cream.

Q.—What is the cost of a Babcock tester?

A.—\$1 and upwards.

Q.—Will not buttermilk do as well as sour milk as a starter?

A.—Yes, if it is perfectly good. Too often it has developed injurious bacteria.

Q.—Does freezing injure cream?

A.—I think not. Prof. Dean says he has inquired among creamery men who receive frozen cream and they say it makes no difference.

Q.—Why is there considerable butter left in the buttermilk sometimes?

A.—This is the result if the temperature is too high, if sweet and sour cream are mixed just before churning, or if the churn is filled too full. A churn should not be filled more than one-third of its capacity.

Q.—Would you recommend pasteurizing on the farm?

A.—For winter butter, yes, if it is properly done; if not, it is better left alone.

Q.—Would it be worth while having a butter worker for three or four cows?

A.—Yes, if you have only one cow have a butter worker.

Q.—Would you recommend investing money in modern appliances if there is a creamery near.

A.—No, send the milk to the creamery; the farmer's wife has plenty of work without it.

Q.—Can pure cream be obtained without the use of a separator?

A.—I think so, but the chances are against it.

By Mr. Woolley: I say not; examine the dirt in a separator bowl after using, to prove it.

Q.—How should cream be warmed for churning?

A.—By setting the cream can in hot water and stirring.

Q.—What about butter color?

A.—It depends on where the butter is to be consumed. Canadians want it colored; the English want it white. They use color at the O. A. C. dairy.

Is not whole milk better than skim milk for a starter?

A.—Not if the skim milk is fresh from the separator. The fat in the whole milk is no help to the starter, and is wasted if you don't use all your starter.

Q.—What do you think about using soap on dairy utensils?

A.—It should never be done; you may use soda, but for wooden utensils the best thing is to dip a wet brush in salt and scrub well.

Q.—What are the main points to observe in putting up a dairy building?

A.—Construct it so that the temperature can be controlled; have good drainage, a perfectly tight floor so that no milk can get under, and a building erected that can be easily cleaned in every part.

Q.—Is it possible to wash the flavor out of butter?

A.—Yes, a finely flavored butter is injured by too much washing. It is not so easy, however, to wash out a bad flavor.

Q.—What quantity of salt do you use?

A.—For my taste I like  $\frac{1}{4}$  oz. per pound, but that is not enough to satisfy the general public. My experience is it is best to almost double this. Don't deprive your customers of salt if they want it.

Q.—When should starter be added to the cream?

A.—Twenty-four hours before churning.

Q.—What would you do with a woman who does not want modern dairy utensils?

A.—Send her to the Dairy School. When she has once known the pleasure and satisfaction of working in a properly furnished dairy she will not submit to the makeshift dairies we have on the farms.

Q.—When is cream ready for churning?

A.—When it is pleasantly acid to the taste; of a smooth syrup-like

consistency, and presents a somewhat oily, shining surface.

Q.—I know a man who is milking 20 cows and cannot get butter from his cream. What is the matter?

A.—The physical condition of one or more cows may be causing the trouble. More likely they have all been milking a long time and the milk contains viscid substance which prevents churning. In this case add a pail of water, same temperature as the cream, churn a few minutes then let stand till the cream rises to the top; draw off the water and there will be no trouble about getting butter. With slow churning cream it is especially necessary to avoid a large churning. The churn should not be half full at any time, and if there is trouble with the cream only fill it one-third. Don't keep the cream a long time (if not getting much milk) waiting for a full churning. See that it is well ripened. Don't trust to your finger for temperature. Use a thermometer. If 60 degrees won't do try it higher.

Q.—What is the price and capacity of a hand separator?

A.—There are many different makes of separators on the market. The price runs from \$73 to \$125, and the capacity from 250 to 400 pounds per hour.

Q.—What is the best way to aerate milk?

A.—A. P. Purvis, Maxville: Anything that thoroughly exposes the milk to the air will do the work. You can do it by dipping; and a common sap bucket with a rigid bail soldered on and a number of small holes made in the bottom makes a very good aerator. The secret is, to use the aerator night and morning and do the work thoroughly.

Q.—What effect will frozen cream have on the butter?

A.—T. G. Raynor, Roschall: It affects the flavor and is hard to churn.

Q.—Why does butter take so long to gather after the cream breaks?

A.—Cream from stripped cows and bad handling of the cream will make this.

Q.—Which will make the most cheese, milk testing 3 per cent. B. F. and 8 per cent. solids or milk testing 4 per cent. B. F. and 8 per cent. solids?

A.—Miss Maddock, Guelph: The 4 per cent. milk will give a larger quantity and better quality of cheese.

Q.—How long should cheese stay in the airing room before shipping?

A.—After careful experiments at the College it has been proven that cheese will cure best at temperature of 65 degrees F., and in order to have a mellow, well-kept cheese it ought to be kept at that temperature at least two weeks. When cheese is shipped and put in cold storage when it is not a week old (as the custom in many factories) it has not had time to become mellow and consequently the grade is much lower in quality.

(To be continued.)

# The Farm Home

## The Wind.

**I am the Wind—the wonderful!**  
The Wind of God am I;  
And over the earth and under the stars  
On my windy wings I fly;  
**I flutter the folds of every flag,**  
And out of my parted lips  
**Breathes the breath that shall waft**  
to every port  
The home-desiring ships.

**This morning I filled those lips**  
with spice  
From a grove in green Ceylon;  
**This evening the long blue fields of**  
ice  
Shall waft that fragrance on;  
**Last night I harried a mountain**  
pine  
On a high Sierra's crest,  
**To-night I will lull where the soft**  
stars shine  
The baby oriole's nest.

**I push and shoulder the heaving**  
fleet  
Till the snowy canvas rips;  
**Then—hardly she knows it—in kis-**  
ses sweet  
**I melt on a maiden's lips;**  
**To-day I am North and to-day I**  
am South,  
And to-morrow out of the West  
**I will gather a rose with a rosey**  
mouth,  
For dim old Asia's breast;

And none can call me an English  
wind,  
And none a wind of France,  
**For from pole to pole, like the**  
human soul,  
I range—the Lord's free lance!  
**They have mapped the earth and**  
charted the sea,  
And bound them to man's con-  
trol;  
But I am the Wind, and the Wind  
is free,  
The Wind and the human soul.  
—Grace Fuller Channing, in Bos-  
ton Journal.

## Farming World Helpmates

BY M. E. GRAHAM.

*"What education should a girl receive who expects to become a successful helpmate for the up-to-date farmer?"*

**Andrew Carnegie says,**—



*"There are even greater opportunities for young men today than when I landed in New York's port."*

Are you ambitious for business success? Then prepare for it. Plenty of good hints for those fitted to fill them. Take our

**Home Correspondence Business Course**  
and without leaving your studies fit yourself for something bigger.

Shorthand Course prepares for positions in offices, courts, newspapers, etc. All needing competent help. Good salaries.

Lessons "Why Study Shorthand?" Free. "Why Study Shorthand?" The Home Correspondence School, Temple Building, Toronto

### FIRST PRIZE ANSWER

Give her a liberal education. Develop her thinking and reasoning powers in the fields of literature, mathematics and natural science. Train her to take proper exercise, to keep her body in normal shape and strength. She should understand the principles of sanitary science in regard to cleanliness and ventilation. She must have an intelligent, practical knowledge of all branches of farm-house work, bread and butter making, cooking, especially of meat and vegetables, washing, ironing, sweeping, dusting, cleaning, all in accordance with the rules of hygiene, also sewing, including dress-making. She should also understand gardening (vegetable and flower), fruit-culture and poultry-raising.

Hannah J. Starr.

(This is certainly worthy of first place in the second set of answers, and though it does not give any set rules as to where the education is to be obtained nor as to how long she takes obtaining it. Yet the ground is covered and the writer has kept strictly to the one hundred word limit. There are some excellent points brought out which were overlooked by other writers. And I care not if the girl is raised on a farm or in the city, whether she be college trained, or never saw the inside of a school house, if she is educated as above she must be a successful helpmate for the farmer, who is sufficiently up-to-date to love such a girl.)

### A BOOK LOVER—SECOND PRIZE

(This is awarded second place, and I must say that there is quite a number of answers which contain almost identical ideas. And most of the writers have recognized the fact that a farmer's wife requires not only as good an education as does the wife of any other man but she must also be educated in other lines, such as dairying and poultry raising.)

Such a girl should have a fair rudimentary education, and be fond of good books, fitted to elevate and enlighten the mind.

She should also have a thorough training in the principles of domestic economy, including the economic and hygienic value of foods, fuel, and clothing, home sanitation, and the care and training of children, with a knowledge of good plain cooking.

Also a knowledge of everything connected with the dairy: the cutting and making of all kinds of garments for herself and family, and a wise expenditure in the buying of suitable material for the same. Such an education should make a suitable helpmate.

Mrs. J. S. McTavish,

North Bruce.

### A SICK NURSE—THIRD PRIZE

The girl who would be a true helpmate must have a good com-

mon school education, and should have a thorough knowledge of house-keeping in all its branches, must understand how to cook all kinds of meats and vegetables, bake good bread and cake, to care for milk and make good butter, cut, fit and make any garment intended for every day wear, she should also have a fairly good musical education some knowledge of medicine and know how to nurse the sick.

Mrs. Wm. Budd,

Sveaborg.

(While I like your idea that she be able to nurse the sick, I believe the up-to-date farmer does not require a wife to bake cake. Wholesome food is necessary. Some cakes produce illness.)

### FOURTH PRIZE

What are the best qualities and training that would fit a young woman for a farmer's wife?

First then, she should be healthy and have a well developed figure, with a good measure of will, energy and intelligence. A gentle and kind disposition that her interiors may love and obey her and her equals esteem her. A liberal education to fit her for the various departments under her charge.

A dairy course is important, she would there learn method, system, cleanliness, neatness, a why and wherefore for all her work. A cookery course would not be out of place, for well, and good cooked food is wealth, health and happiness to the family who has it. Neatness and cleanliness in person and home should be a constant study and a daily duty, it means health and length of days, besides the pleasure and praise from all her friends.

J. Larden.

Cache Bay.

(This also covers the ground, although the question has been altered. Do the up-to-date farmers of Cache Bay keep their wives out of the poultry house. In deciding this question I have given no points for neatness, spelling, grammar, or anything but the ideas. Sometime a person without schooling may be educated and have good thoughts.)

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W. H. SHAW, Principal  
Yonge and Gerrard Sts., Toronto.

### To Cure a Child of Croup.

Wring flannel cloths out of hot water and apply them to the throat, changing them frequently. Make a tent over the crib by means of sheets over a screen or umbrella; then place a small tea kettle over an alcohol lamp near the crib and let the child inhale the moist vapor which may be conducted inside the tent, care being taken that the child does not come close enough to the hot steam to get burnt. If the attack is severe you may give ten drops of syrup of ipecac every fifteen minutes until vomiting results. It would be best to keep the patient indoors for a day or two after the attack.—Emelyn Lincoln Coolidge, M. D., in the *January Ladies' Home Journal*.

### Mrs. Ralston's Fashion Chat.

A Word as to What Well-dressed Women are Wearing Now and What They Will Wear.

As to the muffs—they are simply enormous—perfect "grammie" muffs of our great-great-grandmothers.

The three-quarter-length coat, which is really the new coat of the winter, is seen with many cloth suits and promises to be quite popular.

Suits of corduroy, which is an inexpensive and most durable material are much liked, and very much worn, by young matrons and girls. These suits answer for all but extremely formal occasions.

So many blouses and shirt-waists are worn that the belt is an important adjunct—in fact, it is attention to just such little details that makes the well-dressed woman combined with that excellent habit—neatness.

Belts are worn in every imaginable form—that is, as to the sorts and kinds of materials. But many of the new models show belts to match the trimmings of the gowns. In size they are either very narrow or very wide. Some fasten in the back, being laced together with ribbons through round loops of steel.

Only vegetable oils—and  
no coarse animal fats—  
are used in making

**"Baby's  
Own  
Soap"**

PURE, FRAGRANT, CLEANSING.

Doctors recommend it  
for Nursery and Toilet use

Beware of Imitations.

Albert Oilet Soap Mfrs., Montreal

Just a few words as to hats, which were never prettier, with a simplicity of shape and coloring that is very restful and charming. The low, flat trimming is still the best, and the hats themselves are tilted a wee bit, but the tilt must not be too marked. All sorts of beavers and soft silky felts are worn. Of course velvet is worn too, but only with one's best frock. Ostrich leathers are becoming luxurious nowadays, so they are kept more strictly for picture hats.—Virginia Louis Ralston, in the *January Ladies' Home Journal*.

### Hints by May Manton.

LADIES' ETON JACKET NO. 3600.

The serviceable, snug-fitting Eton jacket that means just sufficient warmth for early fall can be relied upon as certain to retain its popularity and to renew its hold. The model illustrated is eminently practicable and so simple as to be easily made. In broadcloth, diagonal and cheviot it will be used as an all-round wrap, but is entirely suitable to various suiting materials. As illustrated, it is in Yale blue camel's hair cheviot, and makes part of a smart early fall suit. The back is seamless, but a perfect fit is ensured by the under-arm gores and single darts. In the model the collar and revers are self-faced and stitched, but silk upon both, or for the revers only, can be used and



3600 Ladies' Eton Jacket.  
32 to 40 inches.

makes a good effect. The two-seamed sleeves are snug, with only slight fullness at the shoulders. The jacket is lined throughout with satin in a paler, but harmonizing shade of blue. The closing is effected with buttons and button-holes, the former affording an opportunity for richness and beauty if the wearer be so minded. When rolled open the jacket reveals the entire front of the waist, so making a more dressy effect, at the same time that it means less warmth.

To make this jacket in the medium size  $1\frac{1}{4}$  yards of material 50 inches, or 2 yards 44 inches, or  $2\frac{1}{2}$

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Send 50c. by Express Order, Post Office Order or Postage Stamps, and we will forward, post-paid the following 15 pieces of music. Or sent free for two new subscriptions to THE FARMING WORLD.

### Instrumental

Bon-Ton Gavotte ..... Latest Society Dance  
Dancing in the Barn Schottische ..... C. E. Pratt  
Yale ..... Society Two-Step ..... Chas. L. Van Dier  
Princess Bonnie Waltzes ..... Willard Spencer  
Dance of the Brownies ..... Effie E. Kamman  
Manhattan Beach March ..... Sousa  
Semper Fidelis March ..... Sousa  
Washington Post March ..... Sousa  
Gendron Bicycle ..... Two-Step ..... Sousa  
Liberty-Bell March ..... Sousa  
Katus on Parade ..... Kerry Mills

### Vocal

When the Girl you Love is Many Miles  
Away ..... Cohen & Kruppen  
The Wearing of the Green ..... Dion Boucicault  
Ben Bolt ..... Favorite English Ballad  
I Love You if the Others Don't ..... G. H. Standford

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yards 32 inches wide, will be required.

The pattern No. 3600 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure.

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

### "Don'ts" for Young House keepers

Don't put butter in your refrigerator with the wrappings on.

Don't use butter for frying purposes. It decomposes and is unwholesome.

Don't keep custards in the cellar in an open vessel. They are liable to become poisonous.

Don't pour boiling water over china packed in a pan. It will crack by the sudden contraction and expansion.

Don't moisten your food with the idea of saving your teeth. It spoils the teeth and you will soon lose them.

Don't use steel knives for cutting fish, oysters, sweetbreads or brains. The steel blackens and gives an unpleasant flavor.

Don't scrub your refrigerator with warm water. When necessary sponge it out quickly with two ounces of formaldehyde in two quarts of cold water.

Don't put tablecloths and napkins that are fruit-stained into hot soapsuds; it sets or fixes the stains. Remove the stains first with dilute oxalic acid, washing quickly in cold water.—Mrs. S. T. Rorer, in the *January Ladies' Home Journal*.

"Mr. Anderson," said the doctor, "I fear your wife's mind is gone!" "That doesn't surprise me," replied Mr. Anderson; "she has been giving me a piece of it every day for two years."



# The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

Publisher, . . . D. T. MCANINER.  
Editor, . . . J. W. WHEATON, B.A.

The Farming World is a paper for farmers and stockmen, published weekly, with illustrations. The subscription price is one dollar a year, payable in advance.

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Discontinuances.—Following the general desire of our readers, non-subscribers' copy of THE FARMING WORLD is discontinued until notice to that effect is given. All arrears must be paid.

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Advertising Rates on application.

Letters should be addressed to:

THE FARMING WORLD,  
CONFEDERATION LIFE BUILDING,  
TORONTO.

## QUESTIONS AND ANSWERS

FOR SHEEP BREEDERS.

Mr. Geo. H. Katzenmeier, Rodney, Ont., writes: "Please answer in your next issue the following: (1) I have a lot of sheep due to lamb by March 15th, and I intend to put them in warm pens at lambing time. Would it be advisable to shear the sheep before March 1st? By keeping the pens warm enough for the lambs would it be too warm for the sheep with their fleeces on? (2) Do you think it would injure the sheep to shear them when they are heavy in lamb if they are handled carefully? (3) Is there any danger of the sheep catching cold at that time of the year if they are kept warm and dry?"

If you think wise, please have this subject discussed through your valuable paper.

Answered by Prof. G. E. Day, Ontario Agricultural College, Guelph, Ont.

We have occasionally shorn ewes shortly before lambing without bad results, but I would prefer to postpone the shearing until afterwards. I do not think that the ewes would suffer any injury through not being shorn, as, after the first few days, the pen would not need to be very warm. There might be some danger of catching cold through early shearing, though I do not think there is any very serious danger if due care is exercised. Unless the ewes are intended for show purposes, I would prefer not to shear until after lambing.

Note.—The questions asked by subscriber are practical ones, and we would be glad to have the experience of sheep breeders on the points raised.—Editor.

## Enforcing the Fruit Marks Act

As promised some weeks ago, the Dominion authorities are taking active measures to enforce the Fruit Marks Act. At Colborne, a few days ago, W. A. Mackinnon, Chief of the Fruit Department, and Inspectors Lick and Carey entered action against several fruit dealers and packers for violations of the act, and secured convictions in every case. The minimum penalties were imposed on first offenses, but a serious warning was given that in dealing with future fraudulent packing severe penalties would be demanded. The frauds for which convictions were secured were chiefly in having the contents of the barrel inferior to the quality of fruit represented on the top. It is imperative that every barrel should show the initials and full surname of the packer.

After the adjournment of the Court a public meeting was held at which Mr. Mackinnon and the inspectors discussed the terms and working of the act. Those present expressed general satisfaction with the working of the act, with some difference of opinion as to the best system of grading the fruit, and of indicating the grade in conjunction with the name of the dealer.

## Holstein-Friesian Meeting.

The 19th annual meeting of the Holstein-Friesian Association of Canada will be held at the Palmer House, Toronto, on Feb. 4th, 1902, at 1 p. m. The executive committee will meet at 10 a. m. the same day. Mr. M. Richardson, Caledonia, gives notice that he will move that the registration fee for imported animals be raised. Everyone interested in the "blacks and whites" is invited to be present and members are reminded that the annual fee for 1902 is due on Feb. 1st. Reduced railway rates will be given on the certificate plan.

## Shorthorn Meeting.

As already announced the annual meeting of the Dominion Shorthorn Breeders' Association will take place at Richmond Hall, 27 Richmond St. West, Toronto, on Tuesday, Feb. 4th, at 11 a. m. Reduced railway rates will be given on the certificate plan.

## Still Buying Horses.

Colonel Dent is still buying horses for the British army in South Africa. A lot of 43 were secured here a few days ago and the Colonel was in Listowel last week making further purchases. On the 28th of the month 800 horses will be shipped to the front from St. John, N. B. From May 20th to December 31st, 1901, Colonel Dent purchased 7,556 Canadian horses. In 1900 from May 28th to September 20th 3,738 horses were shipped, making a total of 11,304 for the two periods. The large in-

## CONSTIPATION INDIGESTION TORPID LIVER

These are the great curses which afflict three-quarters of the present generation. Sufferers from either one or all of them must always feel miserable, and sooner or later become chronic invalids, useless to themselves and a burden and nuisance to friends and family. There is one sure, safe and absolute cure which you can test without any expense. Our remedy is Egyptian Regulator Tea, a trial package of which we will send you free, and prepaid on request. Unless you find our claims are true, we must be the losers by this liberal offer. Shall we send you the trial package, and lead you to perfect health and happiness? Address:

THE EGYPTIAN DRUG CO., New York.

## Catarrh and Consumption

Have spent nearly 50 years in the treatment of the above named troubles and I have effected more permanent cures than any specialist in the history of medicine. As I must soon retire from active life, I will, from this time on, send the means of treatment and cure as used in my practice, free and post-paid, to every sufferer of this paper who suffers from these loathsome, will positively give prompt relief and cure in the worst cases. This is my sincere offer which anyone is free to accept. Address: PROF. F. W. LAWRENCE, 114 West 32d St., New York.

## Poultry and Eggs.

Advertisements under this head one cent a word. Cash must accompany all orders under \$2.00. No display type or cuts allowed. Each initial and number counts as one word.

BROWN Leghorns, Prolific early layers; Strain won at Pan-American. Stock for sale.—Minorcas, Barred Rocks, Chicks Strains, Eggs in season. JOHN PETTIT, Fruitland, Ont.

FORTY MAMMOTH bronze turkeys for sale, of good quality and size, have a fine ton at head of flock bred from Imp. Leg. and also some fine hens, have one that won 1st prize three years in succession, and one at West Darham and Darlington Fall Fair I won 1st and 2nd on turkeys. Chicks now will crate safe and ensure safe delivery for \$1.50 for toms and \$2.00 for hens. Samuel Snowden, Box 305, Bowmanville.

ALL Prize-Winning Strains—Bronze Turkeys, sired by Imported Tom, that won second at Pan American; Navarino Turkey and Pekin Ducks. A ELLIOTT, Pond Mills, Ont. London Exp.

FOR SALE—Mammoth Bronze Turkeys of extra quality and bone. Tom's \$2.00, hen's \$2.00. Also some White Wyandottes and Barred Rock Cockerels. Satisfaction guaranteed. Sam. Snowden, Box 305, Bowmanville, Ontario.

## FOR IMMEDIATE SALE.

Ten pair English Ring Neck Pheasants and a number of Barred Rock Cockerels.  
R. M. LEE,  
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Our market reports are reliable and up-to-date. They are written especially for The Farming World and are of inestimable value to every farmer.

Tell your neighbor about THE FARMING WORLD. It will pay you and help him. Sample copy free. Write us.

Increase in purchases during 1901 is very gratifying and shows something of the importance of this trade to the country. As farmers become more familiar with the style and type of horse required it will be easier to secure suitable remounts. A permanent remount depot established in Canada would do much to encourage better breeding methods in raising army remounts.

### Eastern Good Roads Convention

About the end of this month a convention under the auspices of Eastern Ontario Good Roads Convention will be held at Ottawa. The advisability of having good roads will not be discussed but how good roads may be secured. A number of speakers from a distance will be present. The convention will last a couple of days.

### Chicago Live Stock Trade.

That Chicago is the Mecca of the American live stock trade goes without saying. The record for 1901 shows increases in the receipts of stock of 15,000 cars, or over a million more animals. The total valuation is over \$300,000,000. The increases show 241,000 animals in cattle, 160,000 in hogs, and 488,000 in sheep.

### Where the Mounted Rifle Horses Came From.

The following memo of 996 horses purchased by Walter Harland Smith for the Second Contingent Canadian Mounted Rifles during December, 1901, will be found of interest. It shows the number of horses purchased in each district.

Ontario.	
Co. Essex .....	7 horses
" Kent .....	62 "
" Lambton .....	51 "
" Elgin .....	9 "
" Huron .....	32 "
" Perth .....	19 "
" Oxford .....	24 "
" Norfolk .....	15 "
" Brant .....	9 "
" Wentworth .....	34 "
" Welland .....	15 "
" Waterloo .....	12 "
" Haldimand .....	15 "
" Halton .....	22 "
" Peel .....	43 "
" Wellington .....	12 "
" Cardwell .....	12 "
" Simcoe .....	40 "
" West York .....	36 "
" North York .....	22 "
" Ontario .....	64 "
" West Durham .....	28 "
" Northumberland .....	40 "
" Hastings .....	17 "
" Frontenac .....	30 "
" Lennox .....	15 "
Ottawa District .....	100 "
	785
Manitoba .....	80 "
Quebec .....	31 "
Nova Scotia .....	100 "
Total .....	996 horses

### Toronto Poultry Show.

The annual show of the Toronto Poultry, Pigeon and Pet Stock Association, was held at the Pavilion, this city, last week. There was a very fine display of poultry in which the small or fancy fowls played only a very small part. Out of a total entry of 1,390, or 120 more than a year ago there were

only some 90 entries of Bantams, and about 200 of pigeons, the rest of the entries being made up of the utility breeds of fowl. The management of the Toronto show are to be commended for their encouragement of exhibits of the farmers' fowl. And that these efforts are being appreciated is shown by the fact that fully two-thirds of the entries were from outside of the city. While nearly all the utility breeds made large and useful displays, the palm must be given to the White Leghorn class. There was an excellent display of this breed, and the judges had some difficulty in placing the awards, so keen was the competition. A great many breeds were shown that carried off prizes at the Pan-American, while many of the Ontario winners were on hand.

The Toronto Association is fortunate in being able to offer several handsome trophies for competition with several classes. The Hon. George A. Cox offered a very handsome cup for the best display of White Leghorns, which had considerable to do in bringing out the fine display of this well-known egg-laying fowl. J. Wixon, Ingersoll, and Wolfe & Mason, Toronto, were strong competitors for this cup, which was finally awarded to the former. The Earl of Minto's cup, for the best 10 birds in the Light Brahma class, was won by Picnart & Cullen, Drumbo, Ont. The city of Toronto, Black Minorca Cup, went to Robt. Durston, Toronto, and as this is the third time in succession that he has won it, it now becomes his property.

The judges were Thomas Rice, Whitby, J. Bennett, T. A. Duff, J. Dorst, and C. F. Wagner, of this city, and were selected with a view to their being able to give expert decisions in the various classes in which they judged. Taking the show all through it was a good one and was more of a purely farmers' show, perhaps, than the "Ontario" held at Guelph last month in that the proportion of fancy fowl to the utility breeds on exhibition was very much less.

### Of Interest to Turkey Raisers.

Mr. W. J. Bell, Secretary, has kindly sent us the following report of the Turkey Club meeting at Guelph in December:

The annual meeting of the Turkey Club of Canada was held in the Council Chamber, Guelph, on Tuesday, Dec. 10th, and continued on the 11th. In the absence of the president on Tuesday, Mr. Anderson was appointed chairman. As Tuesday was the only day at Prof. Harrison's disposal the regular business was dispensed with, and the professor gave an address on blackhead in turkeys. He stated this malady was first discovered at the Rhode Island experiment station in 1893, but it was only of late years that it has appeared in Canada, the first specimen having been sent to him through The Farming World about two years

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are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of



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### SECOND ANNUAL ONTARIO

## PROVINCIAL AUCTION SALES

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### PURE BRED CATTLE AND SWINE

Will be conducted under the auspices of  
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AT

Ottawa, Ont., Feb. 12th, 1902

AND AT

Guelph, Ont., Feb. 26th, 1902

### Selected Stock

Nothing but good representatives of each breed will be allowed to enter and be put up for sale. Orders to buy may be placed with the Secretary, and will be honorably discharged.

#### REDUCED PASSENGER RATES

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A grand opportunity for anyone wishing to procure registered stock. For copy of rules, catalogue and full particulars, apply to

A. W. SMITH, President  
Maple Lodge, Ont.

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

ago. This year he has received five or six affected birds. He says that the black-head is not always present, and that the best indication of the disease is diarrhoea, although all diarrhoea is not black-head. As it is difficult to diagnose correctly, he advises the slaughter of the first cases, and examining the liver, which will have spots all over the surface, lemon to deep ochre in color. If fine in marking, starry or crossed, it is very indicative of the disease. As disease advances, the spots enlarge and become greenish. The liver is also about twice its natural size. There is no living tissue where those yellow spots are, but nature in trying to repair sometimes causes them to be covered with reddish spots. Mr. Anderson asked if birds affected with tuberculosis would not show similar spots on liver. Prof. Harrison replied it would be on tissue surrounding the liver. (The disease is caused by low form of animal life similar to malaria in the human family, and we have tried to cure by the same agency, viz., quinine in doses of one grain, but it did not help as birds were too far gone, in fact had a job to keep some of them alive for any length of time, the disease being very far advanced. Breeders should start earlier to cure sick birds, as nature will help to throw off the disease which enters the birds at a very young stage. As a preventative, never let birds be put where others suffering from diarrhoea have frequented, the germs being picked up in the droppings. The ground should also be dusted with fresh lime. A hindrance to the finding of a cure is the lack of co-operation between the department and owners. The latter seem to think their names will be published, and refrain from sending sick birds, but such is not the case, and the professor will be glad to have sick birds sent to him at any time. Mr. Miller, of Aylmer, asked, was the disease contagious. Prof. Harrison replied both infectious and contagious.

The club tendered the professor a hearty vote of thanks for his address.

Mr. Miller, who proposes to raise between four and five hundred turkeys in incubators and brooders on a five acre lot, asked the opinion of the members as to probable success of his venture. The general opinion was that he could not succeed on such limited range. Mr. Brown, of Durham, had turkeys do very well in small area, but found they did twenty-five per cent. better with unlimited range. He found by giving regular feeds at night they would always come home. He also called attention to disease breaking out in such a large flock as Mr. Miller proposed to raise.

Mr. Anderson does not approve of hens (chicken) as mothers. He finds the turkey hen best, and to fatten would not confine in a pen. In this respect he has had experience covering thirty years and has

won the firsts on dressed turkeys at fat stock show a number of times.

Mr. Jas. B. Mitchell, Waterloo, has same idea as Mr. Miller, only he intends to let them run over 400 acres. His land is near Lindsay and is used for grazing purposes. He has a man manage it for him, who has 300 acres alongside, and this man claims he can pasture thirty head of cattle more on his ranch by raising 200 turkeys than Mr. Mitchell's 400 acres will carry. The turkeys keep the grasshoppers down and prevent them eating so much grass.

Mr. A. E. Silverwood, of Lindsay, manager for Dundas, Flavell & Co., stated that turkey breeders should sell their large, young gobblers for export, and retain the hens for the home market. The latter are not wanted for export, and the former sell for a discount on the home market, especially through the winter. Mr. Silverwood purchased \$160 worth of large young gobblers for the farmers in Lindsay district to improve their flocks in size, and the results have been highly satisfactory. The statements sent in by exhibitors as to how they raised their turkeys were read by the secretary and some valuable points were brought out, which will prove of no benefit except to those who were present, on account of no reporter being on hand. These statements will appear in these columns from month to month until all are given. They contain a lot of useful, practical information.

The constitution and by-laws were adopted as printed in August Review, except that section 5 of constitution is struck out and section 2 of same is made to read, "Each applicant who pays the annual fee of \$1.00 shall be admitted, and no member shall be entitled to vote unless his membership fee for the current year has been paid. Any member who joins after the first day in October in any year and who has paid his membership fee, shall not be called upon to pay anything further until the annual meeting in the year succeeding that in which he becomes a member. Life membership shall be ten dollars. In section 4, the annual meeting is to be held on Wednesday of Winter Fair week.

Officers for 1902.—President, W. H. Beattie, Wilton Grove; Vice-President, A. Thompson, Allan's Corners, Que.; Secretary-Treasurer, W. J. Bell, Angus; Executive Committee, W. E. Wright, Glanworth; T. Brown, Durham, President, Vice-President and Secretary. Club's choice of judge at Industrial, Mr. Jas. Anderson, Guelph; Western, W. J. Bell, Angus; Central, A. Thompson, Allan's Corners, Que.

What is the best prescription for a poet? A composing draught.

What is the difference between a spendthrift and a pillow? One is hard up and the other is soft down.

## HORSEMEN! THE ONLY GENUINE IS GOMBAULT'S CAUSTIC BALSAM.

Use genuine without the expense of  
Dr. Lawrence Williams' Co.  
Sole Agents for the U.S. & CANADA  
CLEVELAND, O.

The Safest, Best BISTET ever used. Takes the place of all liniments for mild or severe action. Removes all Bruises or Blisters from Horses and Cattle. **SUPERIDES ALL CAUTERY or FIRING.** Impossible to produce scurf or blains. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.  
THE LAWRENCE WILLIAMS CO., Toronto, Ont.

## Dairymen in Session.

(Continued from page 33)

### CLOSING SESSION.

At the closing session addresses were delivered by Prof. Dean on the silo, in which he advocated concrete structures in preference to wooden ones. He spoke highly of corn as a cattle food, but said it should be fed in conjunction with bran, oats, peas or a little oil cake. He also read a paper in regard to moisture and salt in butter. Butter made from pasteurized milk contained less moisture than that made from raw milk. Butter washed at 40 degrees contained 7 per cent. more moisture than at 55 degrees. There was little difference in moisture in salted and unsalted butter.

Mr. J. A. Ruddick read a paper on pasteurizing as related to butter-making. From his experience in New Zealand and Canada he had come to the conclusion that it would be a good thing if all creameries adopted pasteurizing for export butter. The persistent flavor of turnips could not, however, be got rid of by pasteurizing.

Instructors Bensley, Lowry, Howey, Purvis, Ward and Robb presented their annual reports. One of the chief defects mentioned by them in the process of making was the use of too much starter and the overripening of the milk.

The auditors' report showed that the receipts had been \$8,536.77 and the expenditure \$8,308.60, leaving a balance on hand of \$228.17.

### OFFICERS FOR 1902

President, D. Derbyshire, Brockville; First Vice-President, John McTavish, Vancamp; Second Vice-President, I. L. Gallagher, Wilton; Third Vice-President, John Echlin, Carleton Place. Directors—Division No. 1, Ed. Kidd, M. P., North Gower; division No. 2, William Eager, Morrisburg; division No. 3, John R. Dargavel, Elgin; division No. 4, James Whitton, Wellman's Corners; division No. 5, T. B. Carlow, Warkworth; division No. 6, Henry Wade, Toronto. Secretary, P. G. Murphy, Elgin; Treasurer, P. R. Daly, Foxboro'; Auditors, Morden Bird, Stirling; F. W. Benton, Belleville.

Why is flirting like plate-powder?  
Because it brightens the spoons.

## 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.

Mr. Robert Davis, Todmorden, Ont., has recently sold his celebrated Clydesdale stallion, the winner of so many prizes at the Industrial Exposition to Mr. Clarke, of Gleichen, Alberta.

#### Cattle.

W. C. Edwards & Co., Limited, Rockland, Ont., write:—

"We are glad to advise you that the Marr Missic cow recently purchased by us at the great International Live Stock Show and sale at Chicago, calved last night, giving us a grand dark roan heifer calf, which we regard as a further great acquisition to our Shorthorn herd."

Mr. H. C. Graham, Ailsa Craig, Ont., writes:

"The Shorthorns that we are offering for sale in this issue are of good quality, and are descended from heavy milking cows. The two year old heifer we had at the Provincial Dairy Show, at Guelph was just 17 days in milk at the commencement of the test, and was therefore not nearly at her best, but made a creditable showing, giving in the 48 hours, 65 lbs. 10 oz. of milk testing 4.1, 3.65 and 5.6 per ct. butter fat in the three tests which would be 10½ lbs. butter in 7 days, a fair showing for a two year old. We have other cows that we consider better dairy cows than her, but they were not milking at the time of the show.

"One of them has since given us a fine bull calf

A few weeks ago we announced in these columns that Mr. A. C. Hallman, New Dundee, Ont., had sold his farm. We are pleased, however, to be able to state that Mr. Hallman has purchased another farm and will continue the breeding of high class Holsteins and Tamworths in a more energetic way perhaps than before. The farm is situated one mile east of Breslau, Waterloo Co., on the main line of the G. T. R., being also on the leading road between Guelph and Berlin. It is close to such market towns, noted as great manufacturing centres as Galt, Preston, and Hespeler. It is ten miles west from Guelph, which will give visitors to the O. A. C., a grand opportunity to visit the farm and take a business trip to Spring Brook, (which is likely to be the name of the new farm and which has become so familiar to stockmen.) This name is also very appropriate as there is a nice stream running through the farm. The buildings are well suited for breeding purposes and the land well adapted for stock and grain. The

farm contains 160 acres and will therefore give Mr. Hallman much more room to run his stock. With this increased accommodation and very fine location he should be able to serve his many customers better than ever before, and to surpass any work done previously at Spring Brook. All lines of breeding pure-bred stock as before will be carried on. Mr. Hallman expects to move to his new farm some time about the end of March.

Through the efforts of Mr. F. W. Hodson, Dominion Live Stock Commissioner, a car load of very fine Ayrshire and Shorthorn cattle has been purchased in Ontario for Hon. Dr. Borden's farm in Nova Scotia. A fine lot of Shorthorns has also been forwarded from Ontario to C. W. Peterson, Deputy Commissioner of Agriculture, at Regina. Another car lot of pure bred stock has been sent to the Live Stock Association, of British Columbia, and Mr. C. W. Hadwin, of that province who has already purchased a number of Ontario stockers, will send forward over one thousand more in a few days. His shipments of stockers to date amount to about 4,000 stockers.

#### Sheep.

The Council of the Shropshire Sheep-breeders' Association, in the course of their report presented at the annual meeting, stated that the shipments of Shropshire sheep made in 1901 had increased over those made in 1900 by 126, the largest number being 364 to North America, 228 to Australia, Tasmania, and New Zealand, 161 to Russia, 104 to South America, 104 to Germany and France, and 29 to South Africa. The trade in sheep had unfortunately been affected by the closing of South American ports, but the increase in the demand from Australia and Tasmania had somewhat counteracted the deficiency. The council recommended that a sum not exceeding £80 be set apart in 1902 for the purpose of promoting the interests of Shropshire sheep breeders, and asked for full direction as to the means to be adopted to further the object in view, i.e., making more widely known the special attributes of the breed. This was agreed to

by the members. It may be mentioned that the numerical strength of the society is 250 life members and 210 annual members, whilst the statement of accounts shows the total worth of the society to be £1,273 11s. 4d.—Mark Lane Express.

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Young bulls of prime quality; also a few females in calf to an imp. bull.

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Reinforced by a recent importation of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leaving Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at Toronto, London and Ottawa.

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Young Bulls and Heifers for sale, bred from high-class imported stock.

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Manager for W. W. Ogilvie Co.,

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Two Young Bulls by imp. "Precious Stone" and imp. "Blue Ribbon" for sale. Can spare a few more Oxford females.

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BRETHOUR & SAUNDERS,

Barford, Ontario

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

# Market Review and Forecast

Office of The Farming World,  
Confederation Life Building,  
Toronto, Jan. 13th, 1902.  
Though business in wholesale lines has not been what might be called active, a fair seasonable trade is doing and the prospects for another good year in general trade continue bright. Money keeps steady under a good demand for call and time loans, which is a good indication of expansion in trade.

## Wheat.

There is nothing new or exciting in the wheat situation excepting it be that a strong bullish sentiment has sprung up in the speculative market and \$1 per bushel is frequently spoken of in some circles as likely to be realized before the last half of the crop is disposed of. Enthusiasts along this line claim that the market is in a condition just now that the bearish element has little or no influence, and that it is susceptible to any bullish turn. Legitimate dealers on the other hand, however, consider present values high enough for wheat and too high for corn. A report of serious damage to the growing crop might give the market a lift upwards at very short notice. Reports of the growing crop in the States, however, continue favorable. Western States farmers are holding grain, especially wheat, and selling live stock. The British market continues active and cables last week were firm and higher. There is a dullness in the flour market in some of the leading American centres, notably New York, which may influence wheat somewhat. It is safe to conclude, however, that present values will be maintained for a time if they do not go higher. Considerable is doing in Manitoba wheat and quotations at Fort William for January shipment last week were: No. 1 hard 74 $\frac{1}{2}$ c to 74 $\frac{3}{8}$ c, No. 1 Northern 71c and No. 2 68c. There is a good demand here and the market is firm at 75 $\frac{1}{2}$ c to 77c for red and white, and 68c for goose, middle freights, and 75 $\frac{1}{2}$ c for spring east. On Toronto farmers' market red and white bring 76c to 81c, goose 67 $\frac{1}{2}$ c, and spring file 74c per bushel.

## Oats and Barley.

The oat market has ruled somewhat irregular during the week. A fair demand and easier market is reported here, quotations being 41c to 42c for cars of No. 2 white. On Toronto farmers' market oats bring 47 $\frac{1}{2}$ c to 49c per bushel.

There is considerable inquiry in the country for feed barley. Malt-ing barley is very scarce. Prices here are a shade lower than a week ago at 52c to 56c as to quality and point of shipment. On the farmers' market malt barley brings 54c to 63c per bushel.

## Peas and Corn.

The pea market keeps steady and

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firm, and quotations here are 84 $\frac{1}{2}$ c middle freights. On the farmers' market here small peas bring 78c per bushel.

Corn keeps firm. Canadian yellow is quoted at Montreal at 71c to 72c per bushel in car lots. It is quoted here at 58c west.

## Bran and Shorts.

Though feed is scarce the high prices have curtailed consumption and prices are lower. Ontario bran sells at Montreal at \$20.50 and shorts at \$22 in car lots Montreal. City mills here quote bran at \$20 and shorts at \$22 in car lots f. o. b. Toronto.

## Potatoes and Beans.

The market rules steady. Car lots of potatoes are quoted at Montreal at 80c to 82c per bag. Prices here for car lots are 68c to 70c on track. On Toronto farmers' market potatoes bring 75c to 85c per bag.

In beans car lots of primes are quoted at Montreal at \$1.35 to \$1.40 and in jobbing lots at \$1.40 to \$1.50 per bushel.

## Hay and Straw.

The hay market continues steady. Some large orders for hay for South Africa were placed last week at Belleville. Deliveries are becoming more liberal in the country and the market is, if anything, a shade easier. Baled hay has been selling at country points east at from \$8.25 to \$8.50 in car lots. The demand here keeps good at \$9.50 for No. 1 and \$8 to \$8.50 for No. 2 baled hay in car lots. On Toronto farmers' market timothy brings \$11 to \$12, clover \$7.50 to \$9, and sheaf straw \$8.50 to \$9 per ton.

## Eggs and Poultry.

The egg market keeps firm and Montreal quotations are 3c to 4c

higher for selected fresh and new-laid stock at Montreal. The demand here is very strong for both new laid and lined stock. Case lots of new laid sell for 30c and fresh at 23c per dozen. On Toronto farmers' market new laid bring 25c to 45c per dozen.

At some recent auction sales in England Canadian turkeys sold at 5 $\frac{1}{2}$ d to 6 $\frac{1}{2}$ d and chickens at 3 $\frac{1}{2}$ d to 4d per lb. Choice lines of dressed turkeys, chickens and geese are in good demand at Montreal, where choice turkeys sell for 12c, chickens 12c, geese 7c to 7 $\frac{1}{2}$ c, and ducks at 9c to 10c per lb. in large lots. The there being neither a large supply market here is on the dull side, nor good demand. In jobbing lots dressed turkeys sell for 9c to 10c and geese 8c to 9c per lb., and ducks 60c to 90c and chickens 20c to 50c per pair. On Toronto farmers' market live and dressed chickens bring 45c to 70c and ducks 75c to \$1.00 per pair, and young turkeys 9c to 11c and geese 8c to 9c per lb.

Until further notice the Canadian Produce Co., Toronto, will pay 5c per lb. for spring chickens, 2 $\frac{1}{2}$ c per lb. for hens (including last year's birds), and 5c for ducklings. Crates supplied free and express paid up to 50c per 100 lbs. of birds. These prices are for live weight.

## Seeds

The prices for seeds seem to be on the upward grade. Wholesale prices at Montreal are \$8.50 to \$10 per cwt. for red clover, \$10.75 to \$12.75 for alsike, and \$6 to \$6.50 per cwt. for timothy. On Toronto farmers' market alsike sells for \$7 to \$8.50, red clover \$5 to \$5.40 and timothy \$2.50 to \$3.25 per bushel.

## Cheese.

The British market keeps gradually going upward. Finest Cana-

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dian Septembers were quoted last week at 51s to 52s. Though things are not particularly active on this side some business is doing on cable orders, which are gradually coming up to the limits of Canadian holders. Finest Westerns are quoted at Montreal at 10½¢ to 10¾¢ and Easterns at 10¢. Stocks are being steadily reduced and the market is healthier than for some time past.

**Butter**

The English butter market keeps quiet and firm. Choice Canadian creamery is quoted at 107s to 110s. There is very little Canadian going forward, however, as creameries can do better by selling at home. In regard to last week's trade the Trade Bulletin says:

"Stocks are light and the make is being reduced; and under a good local and export demand the market has a firm tone, with business reported at 20½¢ to 21¢ for choice to fresh fancy creamery, the latter being very scarce. Two very good factories were bought yesterday in the country at equal to 20¢ laid down here, and to-day a choice factory was placed at equal to 20½¢ laid down here. Some good useful creameries have changed hands at 19½¢ to 20¢. Dairy butter does not seem to be wanted. What few lots of selected Western are offering, bring 17½¢ to 18¢, while poor stock has sold at 15¢ down to 13½¢. A car lot of Manitoba creamery and dairy is reported on the way to this market."

The demand here for creamery is good at 20¢ to 22¢ for prints and 19¢ to 20¢ for solids. Choice dairy is also in demand at 17¢ for lb. rolls, 16¢ to 17¢ for large rolls and 16¢ per lb. for tubs in jobbing lots. On Toronto farmers' market lb. rolls bring 16¢ to 19¢ and crocks 15¢ to 18¢ per lb.

**Cattle.**

The live stock trade continues active, especially at American centres. New York market was 10¢ to 15¢ higher on Friday for prime steers and cables were also higher. The prospects are that strictly fine grain fed steers will go higher from this on; at least that is the conclusion of some American dealers. Receipts were not large on Toronto cattle market on Friday, 68 car loads in all, made up of 831 cattle, 1,800 hogs, 913 sheep and lambs and a few calves. The quality of the fat cattle offered was generally medium. Trade was fairly good at quotations.

Export Cattle—Choice loads of these are worth from \$4.70 to \$5.25 per cwt., and light ones \$4.25 to \$4.65 per cwt. Heavy export bulls sold at \$4.00 to \$4.50 and light ones at \$3.40 to \$3.65 per cwt., choice export cows sold at \$3.50 to \$4.00 per cwt.

Butchers' Cattle—Choice picked lots of these, equal in quality to the best exporters, weighing 1,150 to 1,260 lbs. each, sold at \$4.25 to \$4.50 per cwt., good cattle at \$3.85 to \$4.15, medium at \$3.40 to \$3.65 and inferior to common at \$2.75 to \$3.25 per cwt.

Feeders—Heavy, well-bred steers from 1,100 to 1,200 lbs. each, sold at \$3.75 to \$4.00, and other quality at \$3.25 to \$3.50 per cwt. Light steers, 900 to 1,000 lbs. each sold at \$3.25 to \$3.50 per cwt.

Stockers—Yearling steers weighing 500 to 800 lbs. each sold at \$2.75 to \$3.00, and off colors and those of inferior quality at \$2.00 to \$2.50 per cwt.

Calves—These are in steady demand at Buffalo. Good to choice veals bring \$8.00 to \$8.25 per cwt. At Toronto market ordinary calves bring \$2 to \$10 each.

Milch cows and springers sold at \$30 to \$50 each.

**Sheep and Lambs.**

Prices were a shade easier on Friday at \$3.25 to \$3.50 per cwt. for ewes and \$2.50 to \$2.75 for bucks. Spring lambs were firmer at \$3.75 to \$4.00 each and \$4 to \$4.50 per cwt. Very few Canada lambs are going to Buffalo and the market there is reported strong and active. The best Canada ewes and wethers would sell there at about \$5.75 to \$5.80. Fat Canadian ewes sell at about \$4.00 per cwt.

**Hogs.**

There was a large run of hogs on Friday for this season of the year and lower prices are said to be coming in the near future. If they should come they will likely be only temporary. Select bacon hogs 160 to 200 lbs. each sold at \$6.75 and lights and fats at \$6.50 per cwt. Unculled car lots sold at about \$6.60 per cwt.

For the week ending Jan. 18th, the Wm. Davies Co., Toronto, will pay \$6.62½ per cwt. for select bacon hogs, \$6.37½ for lights and \$6.37½ for fats.

The Trade Bulletin's London cable of Jan. 9 re Canadian bacon reads thus:

"The market is steady under light stocks, and prices have advanced 1s. No. 1 Canadian sides 48s to 51s per cwt.

**Horses.**

Things are still quiet in horses. The rejected remounts sold at Grand's Repository last week went at little more than half of what they cost in the country. The average cost was about \$120 each, while they sold at prices ranging from \$40 to \$80 each.

**Legislature in Session.**

The fifth session of the ninth Parliament of Ontario opened last week with the usual ceremonies. The Speech from the Throne was very congratulatory in its character and dealt largely with the prosperity of the people and the great development that is now taking place in the resources of the Province. The agricultural interests were referred to in flattering terms, the progress among the agricul-

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tural classes being especially noticeable. The splendid stand which Ontario took at the Pan-American was referred to. The improvement in the Ontario Agricultural College, the development of the sugar beet industry, the opening up of New Ontario are favorably commented upon. No new legislation relating definitely to agriculture was foreshadowed, but if it is needed we presume it will come as the Legislature proceeds.

**Sore Mouth in Cattle**

PRESS BULLETIN KANSAS EXPERIMENT STATION

During the dry weather of the past summer, and in the early fall, a disease new to most cattle-men made its appearance in different parts of the State, but with the coming of the cool, moist weather of autumn generally disappeared. The disease was a sore mouth of cattle, and was popularly called "black tongue." The disease attacks cattle of all ages, cows as well as young cattle, and appears to be contagious, although it does not spread rapidly, and in some instances only one or two cases could occur among a large number of cattle. In other instances, a dozen young cattle running together would be attacked by the disease. The first symptom usually noticed is inability or disinclination to eat. There is also a profuse discharge of saliva, that drips from the mouth, often frothy, due to the working of the jaws and tongue. Raw, depressed sores appear on the inside of the lips and cheeks, as well as on the tongue, gums, and pad of the upper jaw. In most cases the tissue seemed to slough out and the sores were covered in the centre by black-colored, dead tissue, hence the popular term, "black tongue." The edges of the sore were raw and inflamed and often contained a little pus or matter. In some cases the sores were so extensive that the teeth are reported to have dropped out, and in other cases the tongue was swollen so severely that it protruded from the mouth. Associated with the soreness of the mouth there was an inflammation of the front feet. The feet were hot to the touch and tender to walk upon, and the ani-

mals appeared so stiff in the fore legs they could move with difficulty. There is a fever associated with the disease, the temperature rising, in most cases, to 105 degrees F. In cows the milk flow is lessened, and all animals fall away rapidly in flesh, because of the inability to eat.

**Treatment.**—Sick animals should be isolated from the well and fed on soft, nutritious foods, such as mash, gruel, etc. If left in pastures they may starve, because of the inability to eat. The month should be swabbed out two or three times daily with a saturated (all water will dissolve) solution of borax, applied with a sponge or soft cloth. A solution of a tablespoonful of alum dissolved in a pint of water is also excellent.

Practically all cases make a good recovery if they are cared for and carefully fed. The greatest loss is due to the falling away in flesh. Milk from cows affected should not be used for food or fed to calves.

At the present time, December 1, the disease seems to have disappeared, and it is hoped may not reappear. The disease is not serious and is not the contagious "foot and mouth disease" of Europe. N. S. Mayo.

#### A Splendid Exhibit

Among the prize winners at the Poultry Show was C. J. Daniels, River St., Toronto, winner of the silver medal and incubator valued at \$24.00. Mr. Daniels should be commended for his splendid exhibit of incubators, brooders, bone cutters and a hundred other poultry appliances which are necessary to raise poultry in paying quantities.

#### A Concern With Backbone

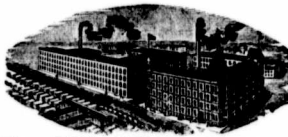
The many friends of The Copp Bros. Co., of Hamilton, will be glad to know that with the closing of the year, they have succeeded in discharging their liabilities, both direct and indirect, in full.

It is not quite eight months, since the proprietors succeeded in rescuing their estate from the hands of the liquidator. Enormous sacrifices have been necessary in order to wind up the business in so short a time. The above results have been brought about however, without discounting any customers' paper, or disposing of any of the company's property, with the exception of the foundry plant. The surplus will be a decidedly handsome one.

The Copp Bros. are more than pleased to be able to demonstrate to the public, the perfect solvency of the business at the time of the crisis and the company are also glad to take this opportunity of thanking heartily, the large number of friends, who, during the past months, have extended kindly sympathy and interest.

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