DAIRY.

Dairymen's Association of Western Ontario.

[CONTINUED FROM LAST ISSUE.]

TUESDAY EVENING.

Mayor Spencer, of London, addressed the Convention and gave the members a hearty welcome to the city of London. He said he was sure he was giving expression to the feelings of the citizens by so doing; also he would thank the Association for the assistance which the dairymen has given to build up the city of London. The cheese market held now in this city is one of the largest markets in the Dominion, and no doubt the increase in dairying was the cause of the establishment of the new packing house adjacent to this city, which, he hoped, would be a benefit to the city and the surrounding country, and also profitable for the company.

Mr. Masuret, President of the Board of Trade, addressed the Convention, and in the name of the Board of Trade gave them a hearty welcome; and, as he was a merchant in the city, he hoped the Association would take hold of the butter question and work up the butter trade of the province as successfully as they had done the cheese industry.

GOOD NEWS FOR THE FARMERS.

Mr. Pattullo, Woodstock, read an excellent paper on road-making. The standard of the civilization of a people may be fairly judged from the state of their roads. We are ahead of some people in some things, but as to our roads we are in a state of barbarism. Perhaps our system of statute labor has something to do with it, the want of skill in many of the pathmasters, the want of system in doing the work; what one pathmaster does this year may be undone by another pathmaster next year, etc. Why have they such good roads in England and Scotland? They make the roads properly at first, and they keep them good by attending to the repairing as it is needed. With good roads farmers would save much in getting their produce to the market; there would not be so many lame and blemished horses, nor so many broken vehicles. It would be a great saving to the farmer if he had good roads, which would prevent these and many other losses.

Mr. E. Casswell addressed the meeting shortly, and read some extracts of an address delivered by the Dairy Commissioner in London, England, on Canada as a food producing country.

Mr. J. S. Pearce read a good paper on "The Future Cheesemaker and His Requirements," which we will give to our readers at an early date.

Mr. C. E. Chadwick addressed the Convention shortly, as one of the pioneers of the dairy work, and who had acted as secretary of the Association since its formation. He was glad to hear such words of encouragement and cheer from the Minister of Agriculture, telling us the government would financially support the dairy interests of the province as they had done in the past.

Ex-Governor Hoard, after telling a good story of Old Uncle Joe's trip to New York, said he had rather a rough time in getting to London, but was glad he got here, though suffering some from the effects of the storm and cold. Last year had been one of the most important in dairy history. It had been a year of experimental work—of investigation into dairy facts and dairy truth such as had never been seen before, and they had made some progress in solving some of the difficult problems connected with their work. He was glad Canada was keeping pace with them. Dairy students in the States and Canada are one in their ideas and purposes of education and progress. They may build up tariff walls, but they can't collect anything from an idea, so we can exchange ideas and help each other in spite of the walls of separation which politics may build. We have all been struggling to get good milk and honest milk for our factories and creameries. In April, 1891, Hoard's creameries started to pay for milk according to the quality or amount of butter fat which it contained, according to the Babcock test. In one month there was an increase in the richness of the milk and in the return of profits to the patrons. The Babcock test clears away the moral hazard question in the dairy business. Every patron is paid for what he brings, and, consequently, they become more honest with themselves, with the cow, with the creamery, and with their neighbors, which must be a benefit to all. From April to November the increase was one-third of a pound of butter fat in every 100 lbs. of milk, and the December milk was 25 per cent. richer than it ever had been before. A prominent dairyman had said the Babcock test beats the Bible in making patrons honest. He said, "I have been quoting Scripture to my patrons for years, but could not by that means improve the milk, but when I got the Babcock tester the improvement came at once without much talk."

C. C. James, Deputy Minister of Agriculture, addressed the Convention on "The Dairyman as a Manufacturer." In the barbarous age when people lived by the chase and hunt alone, it required twenty square miles to sustain one man; a little further down the ages we find 140 to the square mile, and as we come down to our own day, England has an average of 541 to the square mile, and, in some manufacturing districts, 6,000 to the mile; in Middlesex, England, there are 10,000 to the mile. In these large centres of population they must be provided with food from outside areas. The agriculturists are the providers of food and raw material for clothing, and in this sense were manufacturers in the broadest sense. Business principles bring success. 1st. Capital properly invested. 2nd. Machinery the right kind. 3rd. Proper selecting of raw material. 4th. Intelligent and proper management. Now, capital is not used to pay dividends; dividends should be paid from the earnings. Capital and machinery should be in use all the year round, to make profits. Now, many farmers have their capital and machines idle a good part of the year, in the form of idle horses and idle cows, that are not earning anything to pay their dividends. Machinery is always being changed and improved to meet the requirements of the markets and increase the profits. Is the farmer doing this as he might do? We fear not. Manufacturers always seek the cleverest and best educated hands to handle machines and material to produce the best article, as the competion is severe. Are the farmers studying their business in this way? Let there be no waste; the manufacturer uses up a'l his refuse and waste material, and makes money out of it in some way; instead of calling them waste products now, they call them bye products, and utilize them for some pur pose. Are farmers doing this as they might do? These things and many others, have to be studied and practised in order to succeed.

Prof. Saunders, Director of the Dominion Experimental Farms, said it was only lately that he received a notice to be at the Dairymen's Convention, and on account of Prof. Robertson not being home from England he was here in his absence. Prof. Robertson's visit to England was for various reasons. He went to address the provision trade in England, to help to remove any prejudice which the English people may have against our products. We had a considerable quantity of both cheese and butter to dispose of, which was made at our experimental stations, and he wanted to see these put upon the market and disposed of at different points, to show the trade the quality of our goods and show them that Canada was a great and good dairy country. The preparation which the government is making for an exhibit at the World's Fair will be something grand in our dairy products. We have made the largest cheese that has ever been made, for this exhibition—9 feet high and 7 feet wide, and weighs 11 tons. Besides this we have 1,160 square feet of table room for our other exhibits of cheese. We have about 200 cheese made in 1891, 1,000 cheese made in 1892, and will make a considerable number in 1893, so that we expect a grand display of our cheese industry, and a good many prizes as well. Prof. S. gave some good advice about the selection of seeds, proper cultivation of the soil, etc., etc.

Dr. VanSlyke, Geneva, N. Y., said:—What is it that gives value to milk for cheesemaking? Some say it is bulk, or weight; some say there is good cheese milk, but not good for making butter, and some milk good for making butter, but not so good for cheesemaking. We made about fifty experiments to find out the facts about this question, at different factories in different districts, and also a number at our station at Geneva which could not be done at the factories, as we made a complete analysis of the milk, the whey and the cheese made. To test milk and pay for it according to its value in butter fat the Doctor said: Is it fair, is it practicable, is it rapid, is it simple, and is it accurate? 1st. He said all their experiments went to show it was fair to every one to be paid according to the Babcock test of butter fat. 2nd. It is practicable. Yes, it is. With due care any ordinary person can very soon learn to make tests. It requires care and attention to take the samples properly and make tests, but there is nothing complicated about it. 3rd. It is rapid. A patron's milk when properly sampled and put into a jar, one sample each day, can be tested once or twice a week, with perfect accuracy, in say fifteen minutes, and according to the size of the machine, from four samples up to thirty at once. Butter and casein are the two elements which cheesemakers have to deal with. There is some albumen in the milk, but it does not concern the cheesemaker in everyday work. No. 1 samples, with 3 per cent. of butter fat, contained 2 per cent. of casein. No. 2 samples, with 4 per cent. of butter fat, contained 2.67 per cent. casein, or the same proportion of caseine to butter fat that the 3 per cent. milk had. All the experiments made with milk between 3 and 4 per cent. butter fat showed the same results. The Babcock test is the only remedy yet proposed to do away with gross injustice in paying for milk by bulk or weight. The average butter fat tests for six months, May to October, were 3.69 per cent. The average quantity of cheese made for every pound of butter fat was about 2.75 pounds. The amount of fat lost in the whey in manufacturing the cheese during the six months was 0.30 per cent., the average from 0.29 per cent. to 0.35 per cent. Reasons why the present method should be discarded: It is not business-like; it is not honest; it takes money out of one man's pocket and puts it into another's; it discourages the production of good milk. Reasons for adopting this new method: Because paying for fat is just to all concerned in the business; it will improve the quality of the milk; it will cause more care to be taken in the breeding and feeding of cows; it removes all temptation to do wrong to neighbors and factorymen. Improved milk improves the quality of the cheese, and, consequently, increases honest profits in the business.

A very interesting discussion followed. A good many questions were asked from the floor. We hope this will not be the last time the Doctor will visit our convention. We are only voicing the convention when we say his address and report of the experiments which he had made in testing milk and making cheese was perhaps of most benefit to the cheesemakers of any of the addresses given. The scientific and practical facts were given in a clear and instructive manner, which the convention listened to with the greatest attention.

Mr. E. Casswell, agent for the Canadian Packing Co., recently established in London, read a paper on "Breeding and Feeding Hogs." The demand for fine singed side bacon has increased, and dairy fed hogs make the finest bacon. He advised farmers to go in for more hogs; long and lean, tender and young is what is wanted to suit the trade.

The Hon. Mr. Ballantyne, confirmed Mr. Casswell's statement, saying that Canadian bacon sold in England for 20s. per cwt. more than American.

Ex-Governor Hoard showed two diagrams of two wonderful cows—Pauline Paul (Holstein) and Matilda (Jersey.) Pauline, in one year, produced 1,100 lbs. of butter; Matilda, over 900 lbs. in one year. He pointed out the long, round shape of their udders, and their enormous digestive powers, which could digest food enough to produce such quantities of butter. The cow's needs should be studied, if we expect her to give us large returns. We must feed her with material which she can convert into butter fat and casein, or, in other words, out of which she can make milk. If cows could talk, how they would cry out for a better breed of dairymen—men who were educated in the dairy business. After giving some good advice to the farmers, he closed with one remark, which is not universally believed, viz.: "The general purpose cow is a fraud; she stands between many a farmer and success in dairying; the sooner they get quit of her the better." He also gave some rather startling figures from the annual report of his home creamery, showing the price paid per 100 lbs. of milk according to quality. The price ranged all the way from 88c., the lowest, to $1.25, the highest price paid per 100 lbs.—37c. of difference; a good many patrons ranged about 96c. to $1.00 per 100 lbs. milk. He hoped the farmers of Ontario would soon become so rich that the cry would cease coming across the border, that their young men were emigrating to the States. Ontario had resources which, if properly developed, would make her second to none.

Care of Milk.

BY C. C. MACDONALD, SUP. EXP. DAIRYING.

The care of milk is such a broad subject that I will not take up the time of this convention with anything but the most important details pertaining thereto.

There have been some attempts made in the past few years by some of the farmers of Canada to furnish better milk to the cheese and butter factories than was done even ten years ago, and the result of those attempts is noted by the increased make and sale of Canadian cheese, and the higher rank it takes in the foreign markets.

The more we educate the farmers and induce them to perform their part of the dairy work thoroughly, the better cheese and greater quantity we may expect to make, and consequently bring more wealth to the country.

Milk at its best is a very perishable compound, and very susceptible to any contamination foreign to itself, and therefore should be protected at all times from anything that would injure its quality in any way. A farmer's wife would not put flour near the Kerosene can, or anything else that would contaminate it and render it unfit to make good bread. Neither should the farmer expose the milk from his dairy to any foul odors, such as those of the pig-sty, the barnyard, or the cow or horse stable, or those arising from dead carcasses, or to the certainty of contamination by conveying whey from the cheese factory in the milk cans,—all these going to render the cheese or butter maker's raw material (milk) unfit to manufacture the proper article of food for the masses to consume.

In my travels last year I visited one cheese factory which sold the last two months' make for one-eighth of a cent a pound more than any other factory in that neighborhood. I learned afterwards that the patrons of that factory did not carry whey home in their milk cans, while the patrons of all the other cheese factories round about, almost without any exception, did carry the whey home in the milk cans. This means that the patrons of this one factory received more money for the whey by the increased price for their cheese than they could possibly make out of it by feeding it at home.

There is another matter to be considered here, and that is the increased make of cheese from untainted milk compared with that which has been tainted by sour whey or other impurities already mentioned. It has been proved that one-eighth more cheese can be made from pure, wholesome milk than from tainted milk; therefore, carelessness, with regard to the milk results, is a loss not only to the individual himself, but to the other patrons of the factory as well.

Now, the first and most important matter to be considered in the care of milk is absolute cleanliness from beginning to end—cleanliness in the stable and milking yard, in milking, with the milk pails, with the strainers, with the milk cans, and with the wagon in which the milk is conveyed to the factory.

One man of whom I know came to a factory with milk drawn in a cart which had been used only an hour before carting manure to the field. This I took as a wilful mistake, and scolded the man for so doing, but he did not seem to feel that he had done anything wrong.

Everything that is used for handling milk should be scrupulously clean. This point cannot be too