

buildings, poor plant and low-priced labor all meant inferior goods, and their market value would be measured accordingly. Curing-rooms, with a temperature in the fall varying from 50° to 70° would never make high class cheese. Cheese must be nursed through babyhood, youth and maturity if quality were sought for. The cost of making was down to a minimum and could not be much more reduced. Further reductions in the cost of manufacture must come from the farm where the milk is produced. In Wisconsin there was agitation in 1870 with the county society and now the State spent \$12,000 yearly on the propaganda. Then land sold for \$25 an acre and now for \$60. Then one farmer in Jefferson county had savings in the bank; in 1880 seventy were depositors. The speaker recalled the case of an old German who eleven years ago had nine cows, nine children and no money, and was selling butter at 12 cents per pound; now he was worth \$20,000 and owned sixty cows.

Mr. Daniel Derbyshire said the Eastern Dairy-men's Association had adopted a plan of instruction in local centres, levying assessments of \$10 per factory. If this were done all over Ontario they could get a fund of \$7,000 for dairy education. Such instruction was intended to reach farmers and to let the average farmer get better milk and more of it. The cheese interest could not go on with the present style of buildings, half of which were useless. Making cheese in cold fall weather with an overcoat and mitts could not be tolerated. The building must be reconstructed to suit requirements. In the Brockville district some farmers sent six thousand pounds of milk to the factory, and many realized sixty dollars per cow. The average was only twenty-five dollars. This difference resulted from improved blood, feed and shelter.

Prof. Robertson said Montreal exported cheese from the milk of 275,000 cows. Seventy-five thousand of these returned \$36 per cow, while two hundred thousand returned only \$20. The cost of maintaining a cow yearly is \$21. They could all figure the profit and loss on these cows. Ontario farmers could increase their income two and three quarter million dollars in one year by improving the yield of their cows.

Mr. Francis Malcolm, Innerkip, read a paper on "Practical Dairying." Improvement lay in the breeding, feeding and care of animals. To reach a good dairy animal we must keep in view a special purpose and raise heifers which will come into profit at twenty six months. His own herd last year consisted of twelve cows and five heifers, whose milk was sent to a cheese factory during the season of six months, aggregating a total of 103,000 pounds, an average of over six thousand per animal, and returned \$54 per cow. He noticed that after June twenty cows fell short of milk. He then fed a supplementary food consisting of bran, which maintained the yield of milk till the close of the season. No dairyman should be satisfied with less than 5,000 pounds of milk per season. Twenty pounds daily for ten months was 6,000 pounds, surely nothing extraordinary.

President Caswell requested James Cheesman to address the meeting. He said he wished the board would now start a competition among farmers by giving \$500 for five prizes; the first to the patron sending the largest cow average to a factory in Western Ontario; the second for the cheapest made milk from the smallest area of land; the third for cows milking not less than three hundred days, or 5,000 pounds of milk in that period; the fourth to patrons raising their own heifers, and milking not less than three hundred days; and the fifth for the best winter milk farm. Nothing would affect dairy farming so much as a rivalry of this sort. When known, it would induce a general cultivation of green fodder crops for use after the middle of June when the milk commenced to fail. Many farmers in all the dairy districts had cows giving to the factories in six months five thousand pounds of milk. We want competition to give these greater prominence and to increase the average.

Mr. D. Hoard was asked to give an address on "Odds and Ends." He said Theodore Louis was the greatest pig feeder in America, and told them the most economical use of buttermilk, by so feeding it as to finish pigs for the market at eight months old instead of eighteen months. It was not economical to feed pigs after attaining 250 to 300 pounds inside of nine months.

#### RESOLUTION FOR EDUCATION.

Moved by J. B. Lane, seconded by Wm. Symington, and unanimously resolved, "That the scheme for the further education of dairymen, as outlined in Prof. Robertson's address, be accepted as worthy of our endorsement, and that the directors of the association be instructed to take steps to secure the services of competent cheese instructors and milk inspectors."

Resolved, "That we invite the co-operation of the Dairy Department of the Ontario Agricultural College, and recommend that the patrons of each factory be urged to contribute \$10 each to a fund, to be administered for the foregoing purpose."

#### Ten Weeks Spent Amongst Montreal Dairymen.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Having heard of the excellent quality and of the high per cent of butter fat contained in the milk supply of the city of Montreal, I thought it would be of great advantage to me before going into the dairying business in the city of Toronto, to visit Montreal and investigate for myself why the milk supplied to the private customer in Montreal is so much better than that supplied in Toronto. We are aware many people in the large cities attribute many of the outbreaks of contagious diseases to the milk supplied to families, while every dairyman knows how very susceptible it is to taint, either from cows being allowed to drink of impure water, from keeping them in filthy stables or from not taking proper care in milking and handling the milk.

There is one reason why Montreal is supplied with better milk than Toronto, it is in the fact that the producer supplies the consumer directly, for if the customer finds any fault the producer is able to find the cause and remedy the evil. In Toronto the milk is almost wholly handled by dealers, whose we may suppose are not as careful as they might be in the management of it. One of the dairy farms which I visited deserves especial mention from the way in which they have their stables arranged, the manner in which they handle the milk and the method of delivering it to the customer.

The Blue Bonnets dairy is managed by Evans Brothers and Tunholm, three young men who started in the dairying business five years ago with less than two thousand dollars and who have now, I should judge, sixteen to eighteen thousand dollars to show for their five year's work. The farm of two hundred French acres which they occupy is not what a person would call a good farm. It is rather low land, and the greater part of it is covered with boulders so that they are not able to cultivate nearly half of it. These young men started in the old way of handling and delivering milk—that is, in taking it into the city in large cans and measuring it out to the customer at the door, thereby allowing all dust, dirt, &c., to blow into it. In this way they worked their custom up to about fifty gallons a day by the end of the third year. Seeing the disadvantage of this method they thought they would put enterprise into the business and so built new stables, started bottling their milk and are now selling two hundred gallons a day; one hundred and fifty is put up in quart bottles, and they are receiving for this eight cents a quart during seven months of the year and six cents for five months and satisfying their customers very well both as to quality and price. I think if our Ontario cities desire a better quality of milk they must pay a better price than they do at present.

The plan this firm has adopted of feeding their cows and handling their milk is the best I have seen. They were milking one hundred cows and were receiving one hundred and ninety seven gallons of milk a day. They feed their cows good clean feed, oats, pea meal, corn meal and bran wet with cold water and allowed to stand for a few hours, together with pure timothy hay. The milk test was the best in Montreal, having over five per cent of butter fat, while the average milk supply of Toronto is only 3.8 per cent. Their cows are average Canadian grades, the most of them coming from Ontario. The stables are built on a stone wall eight feet high; the basement is used for their manure, there being trap doors with hinges attached through which the manure is put into the basement, thus saving the urine, and adding thirty per cent to the value of the manure. The stables are fitted up with patent fastenings, thus keeping the cows much cleaner than the chain fastenings, while the mangers are made so that eighty cows can be watered at one time. Two thirds of their cows are not let

out during the winter months, as it is found that they milk and fatten better. They pick out forty of their best cows every year and breed them in November and December. They stop milking these in May when they are sent out to the tow ships to pasture for three months; freight, pasture and insurance not costing more than five dollars a head. In this way they have new milch cows at a time when such are scarce and prices consequently high. In the milking and handling of their milk they are very particular. Always before milking the cows the udder and teats are washed with damp cloth, the milk is strained as soon as milked and is then taken into the milk room where it is again strained and put through a cooler which allows the animal heat to escape and takes away any impurities which might be in it. It is again put through a strainer into a large can holding thirty gallons, thus making the milk all of the same quality. The bottles having been thoroughly washed with two changes of hot water and rinsed with cold, they are aired for some hours. The way the bottles are washed is very convenient, as six hundred bottles can be washed inside of an hour. There are also taps fastened on to the large can by which one man can fill one hundred gallons in an hour. The milk is drawn out of the large cans and put in crates holding twelve bottles each, these being conveniently handled, their delivery wagons being made for the purpose. They can put eighty gallons in crates into them without appearing to be a large load. Such is a description of one of the best dairies near Montreal. May success always attend their praiseworthy enterprise. I also visited several other farms, some of them being very well managed, while of others, the less said of them the better. Hoping this may prove interesting to the many readers of the LIVE-STOCK JOURNAL, I remain,

Yours truly,

ALEXANDER BRUCE.

Toronto, Jan. 13th, 1888.

#### Ontario Creameries' Association.

##### INSTRUCTOR'S REPORT.

##### To the Board of Directors:

GENTLEMEN,—Having accepted your appointment in the closing days of April to act as instructor to the Creameries' Association of Ontario, I lost no time in arranging the work of systematic visitation. Accordingly, I began work on May the 10th at Whitechurch, and continued the visits to Teeswater, Londesborough, Clinton, Brucefield, Seaford, Rossville, Galt, Ayrton, Walkerton, Blake, Parkhill, Wyncorn, Wanstead, Amulree, Crosshill, St. Jacobs, Breslau, Haysville, Holstein, Dromore, Deemerton, Eden Mills, Iroquois, Ventnor, Inkerman, Coss Bridge, Connaught, Beureuil, Embrun, Ameliasburgh, Belleville, Bethany, Oaklands, Owen Sound, Collingwood, Penetang, Chatsworth, Elmwood, Ailsa Craig, Kirkton, Armow, Ripley, Formosa, Picton, Cedarville, Essex Centre and London.

Though improvement is everywhere manifest in buildings, plant and general details of management, there are very few creameries entirely beyond criticism. The progress of the past season has been very satisfactory when viewed as a whole, very much having been done to raise the standard of the creamery business. Some of the creameries had entirely new buildings, many had been reconstructed and extended, with great gain both in general convenience and coolness. At one of these there was a complete cave for cold storage on a level with the work-room, and equally convenient for loading on delivering days.

The introduction of pure-bred dairy stock has made very encouraging progress during the year. In the east, central and north-western counties a large number of Jersey and Holstein bulls and heifers have been purchased, and also a sprinkling of Ayrshires. The long draught severely checked the operations of many of our creameries during the excessively hot weather. The experience of average years was this last year greatly aggravated in July and August: scarcely any food could be gathered from our pastures by the stock. The terrible shrinkage of food at this season of the year is a matter demanding your gravest consideration. The insufficiency of the food supply during the middle of the season has crippled the operations of the creamery. Unless we can show farmers a cheaper way of producing milk, the creamery industry will not develop very rapidly. It would be a generous and useful act for your board to institute some course of action to encourage the general