

2. That the membership of such organization shall consist of all persons who pay an annual fee of One Dollar, which will give to every member of the family all the rights of membership except that of voting.

3. That the officers consist of a President, Vice-President, Secretary-Treasurer, and a Committee of Management, consisting of five, all of whom must be members of the institute, and who are not at the time of their election in arrears for dues.

4. DUTIES OF OFFICERS.—It shall be the duty of the President to preside at all meetings when present. In his absence his place shall be filled by the Vice-President.

It shall be the duty of the Secretary-Treasurer to convene all meetings on the order of the Committee of Management; he shall keep minutes of all meetings; he shall be responsible for the custody of the books, papers, and other property of the institute, shall receive and hold all monies belonging to the institute, shall pay out the same on the order of the President, and render a proper financial statement yearly at such meeting as the Committee of Management shall designate, and he shall also keep a list of members and attend to all duties properly pertaining to his office.

It shall be the duty of the Committee of Management to supervise the practical work of the Institute in all its details.

5. The election of officers shall take place immediately after the adoption of these by-laws, and thereafter at the first meeting of the Institute held subsequent to the first day of January in each year, which shall be the annual meeting, and any vacancies occurring may be filled by election at the next ordinary meeting.

6. The annual fee shall be payable at the first meeting of each year.

7. No person shall be entitled to vote at any meeting except members not in arrears.

8. The meetings shall be held at the City of Hamilton, or at such other place as the Committee of Management shall designate.

9. These By-laws may be added to, amended or rescinded in part or in whole at any meeting of the Institute by the vote of two-thirds of the members present at such meeting.

### The Dairy.

Koumiss, an effervescing drink made from pure Jersey milk, without the use of any acid whatever, is being made in large quantities at the "Oaklands" Jersey dairy. This very palatable drink is much in favor with physicians, who prescribe it in cases of dyspepsia, indigestion, consumption, etc. We are glad indeed to know that a preparation of this nature is being made in our midst and by parties whom we know.

In speaking of milk tests and butter records the *London Live-Stock Journal* puts it well when it says: "What is wanted are cows that will give, not the 'largest amount of butter and milk regardless of cost, but the largest production in comparison to the food consumed, on a yield that will show the 'largest profit in its production.'" This has been our own view from the first, and hence the advisability of dairymen keeping exact milk records to determine just what each cow is doing composing the herd. Some will object that the adoption of this plan will entail much additional labor; but will it not prove labor of the most remunerative kind? Suppose a dairyman has one cow in his herd which will net him \$50 in the season, and another cow which gives him but half that sum, by keeping accurate records he will obtain this important information, which will prove to him, it may be, a full offset for the additional labor entailed. Without the records he might be sensible that a marked difference existed in the product of the two cows without being at all aware of the extent of the difference. No cow below the average should remain two years in the dairy.

It is the opinion in some quarters that a large trade in dairy cows could be carried on with Great Britain if the trade was properly managed. Last year something was done, but of a character likely to blast the trade at the outset. Some cows were sold, represented as near the calving, which did not come in for months. Trade carried on in this way can never succeed, nor should we desire that it may. There is a difficulty here that may prove an insuperable barrier to the establishment of a very large trade. It is not easy for the shipper to know to a certainty that the cows will calve at the time represented, as he must rely upon the statement of the original seller. How much it is to be deplored that many will sell the truth for gold, and their manhood along with it, and thus scatter wider the seeds of distrust that have produced a harvest of disturbing suspicions in all the avenues of trade. When men meet for barter, what a weight would be removed if every one knew that his neighbor never practised guile! It would remove almost every reef and hidden rock and treacherous shoal that now endanger the avenues of trade, and make it smooth sailing into the harbor of success. As things are, individuals very generally approach each other in barter in the attitude mentally of two prize fighters, each making feigned motions and watching the movements of his opponent with an eagle eye. If the history of barter were but truthfully delineated on canvas, who would look upon the hideous object? It is on the canvas of the ages all the same, and none can blot it out.

### The Possibilities of the Dairy Cow.

READ BY THE EDITOR AT THE CONVENTION OF THE WESTERN DAIRYMAN'S ASSOCIATION.

No man in this assembly will for a moment question the importance of the subject which forms the basis of this paper, but many even of the leaders in this vastly important interest may never have sufficiently considered it.

The possibilities of the dairy cow—who, after the prodigious feat of Mary Anne of St. Lambert, will take upon him to say what these are? Who shall be so rash as to plant the land-marks permanently or to draw the final boundary lines? We shall not hazard the attempt, but simply present to you as concisely as we can, the little basket of first fruits that we have been able to gather hastily on the outskirts of this almost unexplored vineyard. The first question that naturally meets us on the threshold of our argument is this, *can the standard of the average dairy cow be permanently raised?* and the second, an offshoot therefrom, if so, *how shall this be done?* To the first we give unhesitating answer, *it can.* To what extent? you ask. We reply about *one hundred per cent.* in the near future. In days more remote we cannot say how much more. The report from the Bureau of Industries for 1883 gives 2784 pounds of milk as the standard for the average cheese-producing cow of Ontario for the season, the average duration of which was 156 days. Mr. D. M. McPherson, of Lancaster, assures us that the standard of the dairy cow can be raised to 6,000 lbs. per season, and surely, owing to the vast extent of his dairying, and his experience in it, his opinion is of much worth. He tells us that the standard cow per season in the Glengarry section was formerly 2,000 lbs., but that since the farmers there have felt the gratifying impulse of the stirrings of the cheese industry, the standard has advanced to nearly 3,000 lbs. per season. Prof. Wilson stated at the opening of a class for agriculture in November in Edinburgh that in a few years the milk produce might be increased from 500 to 1,500 gallons a year. These are certainly

splendid possibilities: the very mention of them must create stirrings of impulse within the breast of every dairyman who hears them. And why should they be thought incredible? Man has been endowed with the power of modelling and remoulding, even in the animal creation, that is little less than divine. In this respect creative power alone is denied him. In the sense of originating out of vacuity evolution follows in the train of his efforts, such as must have astonished Darwin himself, but it is evolution that results from the plastic application of the powers of intelligence operating on matter, and not from any hidden inherent forces that even animated matter may possess.

Confront an ancient Briton of the Teeswater region of one thousand years ago as he roamed about through darkening forests, clad in the skin of a bullock not much bigger than himself, with one of those ponderous productions of the same land which weighs nearly two tons, and what would be his astonishment? We can fancy the man who would fight the sea-kings of the East running away from the gigantic spectre as some monstrous production of the angry gods. Present to an Ayrshire clansman of the same period a modern Ayrshire cow. In those old days he could himself swallow at a single draught the milk produce of his cow. The Ayrshire cow of to-day would give him all his desire at one milking, and satisfy the wants of his "guid wife and bairnies ten" and also leave a little for a "neebar's" sick child. The native cow of the prairie only suckles her offspring for a few months. By the moulding process referred to her progeny may in time be made to milk at least ten months in the year.

See the advance that has been made in other live-stock lines. In 1719 the average weight of horned cattle in London, England, has been given at 370 pounds at five years old—we presume the above was dead weight; at the present day, in the same market, the average dead weight at the same age (dressed), and from the same source, cannot be less than three times that amount. Why, then, should we not believe that the average dairy cow for the season will not be able to produce at least 5,000 pounds instead of 2,784 pounds, as at present? We say 5,000 pounds, as, though we do not doubt the correctness of Mr. McPherson's statement when he speaks of 6,000 pounds, we choose the lower average in the meantime as more likely to catch the ear of the average dairyman. If the standard is fixed so high as to shake the credulity of interested parties, all hope of reaching them by way of inciting to higher effort is lost. In this way we fancy the owner of Mary Anne almost wishing that that gigantic record had not been so high, since it has led grave thinkers on both sides of the ocean to shake the head as to the correctness of the record of this wonderful performance, unique in the history of dairy cows.

Taking 2,784 pounds, the figures given by Mr. Blue as the standard cheese factory cow of 1883, and the returns from these as he gives them, we have the handsome revenue of \$3,396,822.21, from cheese made in the factories alone. But suppose the standard cow the same season had given 5,000 pounds, the returns from the same 266 provincial factories would have been \$6,100,721.64, or a difference of \$2,703,839.43. To produce a similar sum from the 2,784 pounds per season cow the number of cows must be increased from 117,577 to 211,165; thus requiring an additional outlay of capital invested, additional cost of feed, and additional pay for attendance and milking. We cannot believe that the 19,797 patrons of cheese factories (the number in 1883) will allow such