

The heads shrink after being put together, and fail to press. The timber for hoops was too brittle. It was said that lumber was becoming scarce. If box manufacturers would send to Canada for lumber, they could have the finest in the world, and enough to last half a century.

A gentleman from Corland (name not announced) had been in favour of sawed hoops for boxes. He was satisfied that a sawed hoop is better than when it is cut. Timber is not generally steamed enough, they check and split. Sawed boxes do not split.

The question was now laid on the table.

The next subject taken up for discussion was—the best stock for dairy purposes." Mr. S. S. Whitman, of Little Falls, the first speaker, alluded to the difficulty of procuring good cows. Inferior beasts might be obtained, but the better sort did not so readily change owners. Farmers might be induced to part with any unruly cow, especially if she was a real kicker, or milked so hard that it would make a man shed tears to think of milking her, or she might have some other defect—cows of this kind may be bought. But propose to buy the man's best cows, and you will hear another story; that cow is not exactly for sale; there will be some excuse. He must consult his wife, or the boys, or the girls, or something of the kind.

We especially commend the remainder of Mr. Whitmore's admirable remarks to our Canadian readers—He said:—

"This is not all; there is a real difficulty in finding and purchasing just the right kind of cows. Let a man go out in any of the counties of this State, and undertake to buy cows that come up to a desirable standard, say from 1 to 7 years of age, with udder and teats all right, with marks indicating a good milker, with fair size and good appearance, and coming in about the right time, we will say in April, and he will find it a slow business; and, as I indicated before, there are but few of these cows bought, more generally they are culls or second rate cows at best.

And there is another trouble to encounter. I refer to the injury the cow sustains by reason of transportation, and of their uneasiness on account of being in a strange herd and on a strange farm. This is so well understood by dairymen, that they do not expect that a cow will come up to her real standard the first season after purchase.

The above remarks have been made to show that a man will be very fortunate if he keeps his dairy up to a fair standard by purchasing his cows, saying nothing about the great losses that many dairymen have had by introducing into their herds that disease which has prevailed so extensively in some towns in Herkimer, Oneida and Lewis counties particularly, I mean abortion.

And now what is the remedy for this uncertainty, for this unpleasant and often unprofitable business of purchasing cows? All of you will have already anticipated my answer, and I scarcely need to say, raise your calves. When I say that, I have only introduced a subject of great importance, I had almost said the greatest importance to dairymen, and I'm only sorry that I am not able to present it in a way that will make an impression equal to its importance. When I say raise your own calves and fill up the complement of your dairy from them, I do not mean that you, in a hap-hazard way, raise anything you happen to have, and that by chance. I mean much more than this. I mean nothing less than the best you can procure. I do not claim that because you lavish a large sum of money in purchase of stock you will thereby be surely the gainer, but let not a few dollars, or a few hundred, deter you from obtaining the best results. For the purpose of raising good stock, the best breed and most perfect animals of both sexes should be employed in propagation. I know of no way that a dairy can be so easily improved as by obtaining a bull of deserved reputation, as of a milking family forming a regular character or type for a succession of generations, (if I may so express myself,) and then raise your calves from cows that have proved your best milkers, or from their progeny, remembering that ancestral influence is of practical importance, and the man who expects to improve his dairy must give it proper attention, for the law of hereditary transmission will show itself by marks that cannot be misunderstood. First fix upon a point you wish to attain, and then use the means resolutely and judiciously to reach it.

In February, 1853, this same subject was before the Farmers' Club of Little Falls. At that time but few calves were raised, but some dairymen began to

see the bad policy of depending on purchasing cows to fill up their dairies. At that meeting Mr. R. D. Brown of Fairfield stated, that out of thirty-five half blood Durham heifers raised by him, only three had been turned off as bad milkers—all of the others proved to be superior milkers, and he kept them till they were completely worn out, having turned one off the year before, at the age of eighteen years, and he thought she yielded 500 pounds of cheese, even at that age. In raising these calves he made a selection out of seventy cows. By attention to breeding, Mr. Fish of Herkimer county, has improved the milking qualities of his cows so that he has succeeded in producing 834 pounds of cheese as an average per cow.

At a meeting of the Club of a more recent date, Harris Lewis stated that from a superior cow in his dairy he had scarcely failed out of six or eight of her calves he had raised, of having cows of like superiority. Alonzo Reed made a similar statement relative to the calves of a choice cow of his dairy. I might multiply facts of this kind if it was necessary, but it is not, for every observing dairyman present has known of cases of the same kind.

In 1859, a choice cow was estimated at \$30, and according to the estimate of Mr. Brown, a heifer at two years old had cost \$35. His items were as follows: Calf at four days old, \$1 25; two months, say to the first of June, \$1 50; the next five months to November 1, \$3 75; to April 1, \$8 00; the second year, the first seven months, \$7 00; the following five months, \$11—making \$35 at the end of two years. I will add that in the next three years she will more than pay the expense of raising, so that the farmer, instead of paying \$50 for a cow at five years old, has a cow already at his stable, kind and peaceable, that has paid all her expense; in other words, has balanced her account, and is ready to go on for the next ten years at a large profit to her owner.

All dairymen know that a good cow is much better than a poor one, but all do not appreciate the difference. To illustrate this difference, I cannot do better than give an extract from an essay by Mr. Reed, in March 1859. The whole of it is valuable, as all his essays were. He gives the statistics of the yield and profit of five of the best cows in his dairy, and also of the five poorest in 1857. They were obtained by measuring, and recording the amount of each cow's milk on the first day of each month, and are approximately correct.

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| Five best cows Cr. by average of 554 gallons milk each, which realized in butter and cheese 11½ cts. per gallon..... | \$63 75 |
| Dr. to 2½ tons hay, at \$8..... | \$20 00 |
| " 30 weeks in pastures, at 2s..... | 7 50 |
| " 200 ground feed in spring at 12s..... | 3 00 |
| " 10 per cent. interest on cost of cow, at \$45..... | 4 50 |
| | <hr/> 31 00 |

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|---|--------------|
| By balance in favour of cow..... | \$28 70 |
| Five poorest cows Dr. to cost of keeping as above..... | \$35 00 |
| By an average 243 gallons of milk each as above at 11½ cts..... | 27 95 |
| | <hr/> \$7 05 |

This is an average amount realized per gallon for the whole season; thus making a difference of \$178 80 for the season between the two lots of cows. It is needless to add that these cows were kept only one season.

Each breed has its advocates. As we do not go beyond (at this time) the milking qualities, the question turns upon the quantity and quality of the milk, including hardiness and ease of keeping. For all these qualities, some of our native cows (I use the term by way of distinction,) have proved the equals of foreign breeds of later importation. Probably in the hands of a judicious breeder, much of the early importation from different parts of Europe, would have proved equal if not superior to the best late importations. But they have become so befuddled by all kinds of cross-breeding, that it is difficult to detect the original type except by superior milking qualities; and when we find this it should be improved upon by the best means within our reach.

In 1350, a French historian says, that in a certain seige the besieged could only receive their supply of butter from Holland, which had been famous for its dairy products for 500 years, and the Hollanders, in bringing their cows to America, would undoubtedly bring their best stock, as it involved a cost of several hundred dollars, and a voyage, at that time, of some six months. This stock of cows was scattered along the North River, and along the Mohawk, as far west as Palatine, and off south in Schoharie county, where, it is said, that traces of the same Dutch breed may be found to this day. Other breeds have their superior qualities, and earnest advocates, and when

the dairyman finds the desirable qualities in any of them, let him not fail to avail himself of their advantages.

I have endeavoured to show that it is neither safe nor profitable to depend on purchasing cows at random for filling up dairies.

That calves can be raised with better results as to cost and quality.

That care should be strictly observed in breeding for the dairy in the selection of the bull as well as the cow, so that the good qualities of the one may not be counteracted by the bad ones of the other, and by this means we may be quite sure of superior milkers.

That good cows are cheaper than poor ones, the best way you can fix it.

This subject might be extended to an indefinite length, but I have a multitude of facts to prove my position, and hope my few remarks will provoke discussion here and elsewhere till this subject shall receive the practical attention it so loudly demands.

Mr. ELLISON read an interesting statement given by Nicholas Smith of Herkimer county, relative to the production of milk from cows.

The next subject taken up was "The manufacture of butter with cheese at factories." The first speaker upon the subject was Mr. Johnson of Oswego county. He proved by illustration that butter should be manufactured with cheese at factories. The Oswego factories have been complained of as making skim cheese. There was no ground for the accusation. Their factories during the past year had made one pound of cheese from 9-13 pounds of milk. Had Oneida county factories done better than that?

Mr. CLARK, from Lewis county, said their factories had made into butter the cream which rose upon their vats during the night. He did not think the idea a good one. It did not have as good flavour as butter made in other ways. The speaker was able to make good cheese at his factory from partially skimmed milk.

Mr. ELLISON did not believe in skim cheese. He had seen that kind in Liverpool, and thought very little of it. To make cheese in this manner, would be to reduce its value in the market.

Mr. SLACHTON of Orange county gave his ideas on skim milk and butter. Some four years ago, people in his vicinity had tried the skim milk plan with success. Between this plan and others, he thought each one should intelligently choose for themselves.

Col. MILLER of Lewis county would like to ask Mr. Clark what his factory cheese sold at last year.

Mr. Clark replied they sold at 18 cents during the first part of the season, and 16 cents during the latter part of the season.

A gentleman said the skim cheese was best for the southern market, and full milk cheese cannot compete with skim cheese.

Mr. COMSTOCK said it was a misnomer to call the cheese under consideration skim cheese.

Mr. E. G. BAGO, of Oneida, rose to protest against the custom of extracting a particle of the butter quality from milk before making cheese. It was possible to hold every particle of the butter quality in manufacturing. Those who cannot do this, he would advise to skim; but for the good of the dairyman, he protested against the skimming system. Cold water is not good in the manufacturing of cheese. The animal warmth of the milk must be evolved gradually, and this could be done by the application of salt in sufficient quantity, and then gently but constantly stirring it.

Mr. WALKER, of Oswego, followed, saying his experience was that great loss was sustained by taking off any cream before manufacturing. It was his opinion that the process of manufacturing skim cheese was damaging to the interests of dairymen.

On motion the question was laid upon the table.

The question of making butter from whey was then taken up, and the discussion opened by Mr. RIGGS, of Lewis county. Mr. Riggs gave his experience in making butter from whey, showing that the latter article can easily and profitably be used for the purpose of making butter. He said the butter he had made he sold in New York for forty cents per pound, and was in as good demand as butter made from pure cream. Mr. R. gave the following explanation of the process:

After separating the whey from the curd, place it in a tin vat and add a liquid acid. One gallon to the whey of 50 gallons of milk, if the whey is sweet, but less quantity if changed. After this apply heat until it indicates a temperature of from 200° to 212 degrees Fahrenheit. When the cream rises and is skimmed off and placed in a cool place, let it stand till the next day. Then it is churned at a temperature ranging from 56 to 68 degrees, depending on the weather, and it is worked over and salted in the usual manner of