

stated the results of some interesting experiments which had been made on milk of different breeds of cattle for the purpose of ascertaining the properties of the butter-globules contained therein. He remarked that, of English cheese, about 34 per cent. was water, while in American cheese the quantity was about six per cent. less. Our standard of excellence was a first-class Cheshire cheese.

The Complaint Against our Cheese

was that it was too dry, and this was true. He did not doubt that experiments would be turned in this direction, and that we would soon have curing rooms so constructed that in hot weather cheese would be improved both in taste and texture. He referred to and described the manufacture of butter from beef suet, which he said was now carried on in a number of different cities in the United States, and said that all he had tasted of it did not equal in flavor the best quality of the genuine article. He also adverted to another similar manufacture, namely.

The Making of Rancid Butter into Cheese.

He remarked on the gradual advance in the price of butter all over the world, but especially in England, where, during the past few years, Canadian had advanced from 100 to 136 shillings. The best butter sent to England from the Continent brought, he said, 160 shillings, and it was a question whether Canada could not make it profitable to improve her butter. The quantity of

Cheese Arriving in England.

from America during 1873, was 1,736,495 boxes, which, allowing 60 pounds to the box, amounted to 104,189,700 pounds. The quantity exported from New York city during that time was 1,569,570 boxes, or 94,174,200 pounds. From eight to ten millions of pounds of that went to other countries than Great Britain, and 20,000,000 pounds went to England from Canada. In 1872 the exports of American and Canadian cheese to England amounted to 73,691,040 pounds, showing an increase of 30,498,666 on the previous year. The receipts in New York city in 1873, were about 120,000,000 pounds, while in 1872 they were only about 92,964,200 pounds. England has taken more American cheese last year than all made in the United States in 1860, the amount produced that year being only 10,366,927 pounds. He also showed that the prices of good cheese were continually advancing, while cheese of poor quality was year by year becoming less marketable. Before concluding his address, which lasted nearly two hours, Mr. Willard exhibited an ingenious instrument for testing the acidity of curds before dipping. A hearty vote of thanks, moved by Hon. D. Reesor, seconded by Hon. Robert Reed, was tendered the lecturer for his able address.

SECOND DAY.

The Convention re-assembled at ten o'clock A. M., Mr. Yates in the chair.

Election of Officers:

The Chairman of the Committee on Nominations submitted the report recommending a number of gentlemen as office-bearers for 1874. After a slight amendment it was adopted, with the names as follows:—President, K. Graham; Vice-President, A. Oliver; Secretary, J. C. Hegler; Treasurer, T. B. Daly; Directors, J. Ballantyne, W. S. Yates, Lewis Richardson, Henry Ostrom, T. D. Miller, D. Vandewater, Allan McLean, George Morton, and Thomas Brown; Auditors, Charles H. Sorley, and Thomas Wills.

Coloring Cheese.

The next topic for discussion was "To what extent is it desirable to color cheese, and what annatto is best?"

Mr. E. Casswell, of Ingersoll, said he found that highly colored cheese was preferred in the London market, and pale in Manchester, though the highest price he obtained for highly colored was in the Manchester markets. His correspondents asked, as a general thing, for a well-colored cheese, but once in a while they asked for pale. In every order he ever got, of any extent, eight-tenths of the cheese asked for was to be well colored. He spoke of Nichol's and Mitchell's annatto as both being good.

Mr. Watkins considered coloring the cheese a necessary evil. It would be a great advantage if they could persuade the people of England to take pale cheese, but the greater portion of the cheese sold in that country would have to be colored. There were parts of England—Staffordshire and all through the Black Country, for instance—where the people had been in the habit of using white cheese for many years, and preferred it to colored. In his opinion, the sale of cheese depended to a much greater extent on its quality than on its color. If they colored at all they should make full colored cheese, but not color

too highly, as it was possible to over do the thing. From all he could learn Canada would be perfectly safe in making about one-fifth of her cheese pale. He was strongly of opinion that liquid annatos were much preferable to the cake or any other kind. By using the former they got a better mixture and a brighter color than if they used the latter. There would be no mistake made in choosing either Nichol's or Mitchell's annatto.

Hon. David Reesor remarked that almost everything, according to his experience, depended on the quality, but if they had a cheese of good quality, a good color would help to sell it. He was satisfied that annatto did not improve the flavor of cheese at all, and he was not aware that it injured it at all. It might, perhaps, be detrimental to the flavor to an infinitesimally small extent.

Mr. Burrell, of Little Falls, N. Y., said it was the impression where he lived that it was better to dispense, if possible, with the use of annatto. He thought, however, that to meet the demands of the market, about two-thirds or three-fourths of all the cheese manufactured should be colored. He considered annatto perfectly harmless. They used as a coloring matter in New York a liquid called annatto, which he thought the least objectionable they could employ. Cheese which had been colored with it had been kept two years, and the color had not faded.

Mr. Casswell said the reason coloring was liked in cheese was that it hid, to a great extent, its faults. The fading of cheese depended, to a great extent, on the state of the atmosphere in which it was kept, and cheese which decomposed easiest, was that which faded most quickly. He thought it would be difficult to educate the English up to liking white cheese as well as colored. When he first began the business in this country, however, Canadians would scarcely buy colored cheese, while to-day, as the result of their education, dealers could not sell white cheese on their counters. They might depend upon it that the more people got of colored cheese the better they would like it.

Mr. Walkins said he was always willing to pay as much for white cheese as for colored, provided the quality was as good. He asserted that there was no trouble in selling good white cheese in England as readily as colored.

Mr. Peter Frederick said he had tried experiments in one of his factories of making white cheese entirely, and had been able to sell it as well as he could colored. He believed by the united action of all the cheese factories, the system of coloring could be done away with.

After a little further discussion the matter dropped.

The Auditors' Report

was next presented, and showed the total receipts of the Association last year to have been \$1,317 71, including a balance of \$14 55 from the previous year; the disbursements were \$1,204 95, leaving a balance on hand of \$112 76.

The Convention then entered upon the discussion of the question as to the

Best Method of Marketing Cheese.

Mr. Casswell was of opinion that cheese should be marketed as early as possible. He was in favor of holding cheese fairs every two weeks, not oftener. By holding their summer cheese back until the fall they were virtually competing against themselves in the market; whereas, if they sent it to market early, they, to a certain extent, controlled the prices.

Mr. Burrell remarked that one reason why cheese should be marketed early, was that during June, July and August, it would ripen in this country in thirty or forty days. It was then in its best condition, and when in that condition it should be sent to market. They had increased the home consumption in New York by selling the cheese when it was that old. Another reason for selling early was, that the expense of holding cheese over beyond thirty or forty days, and the loss by shrinkage after that period amounted to a deduction of five or six per cent. from the manufacturer's profit.

Mr. Walkins observed that American cheese is just about as ripe when thirty days old as English when five months' old; and then it was to be recollected that the former was curing while on its way to England. He believed, from all he could learn, that this country had realized as much last year from cheese as any county in Canada, and that simply because it had marketed early. In England, the best dairies were never sent to market, but buyers went to the farms for them, and paid the highest prices for the cheese there.

Mr. Casswell said that it was customary to keep Saturday night's cheese for home consumption, but if they were to send better cheese to our own dealers the result would be to increase the consumption of it in the country.

Mr. Walkins explained that he was not opposed to markets, but he held that when cheese or butter was sold in the market it should not be by sample, but the whole quality to be sold, or a considerable proportion of it, should be sent to the market as in England.

The matter then dropped, and the Convention then adjourned till half-past one.

AFTERNOON SESSION.

Address by Prof. Arnold.

The Convention re-assembled at a quarter past two.

Professor Arnold, Secretary of the American Dairy-men's Association, Rochester, proceeded to address the Convention. He remarked that Canadian cheese excelled in its keeping qualities, and American in its flavor and texture. He suggested, as a means of posting factorymen as to the quality their goods should show, that buyers should go about among them more and discuss with them matters relating to cheese making. Another good idea would be to exhibit at dairymen's conventions samples of standard cheese. He also recommended the holding of cheese fairs. He went on to say that good cheese could not be made from bad milk, but less depended upon the quality of the milk than was generally supposed. The important thing was to have it free from objectionable taints and in a healthy condition. Tainted milk was generally identified with hot weather, which caused the cow to become fevered, but this was not the only cause of fever. Scarce or bad water and too rich food were also among the causes. In taint he did not mean to include the deviation from its natural flavor occasioned by the use of turnips or cabbage or other strong smelling or tasting foods that carry their odors or flavors into the milk. He only meant that peculiar smell which in its extreme development produced floating curds. To keep cows in good health he recommended the planting of shade trees in their pastures, and the supplying of them with plenty of good water. He asserted that not a drop of cream which had been taken from hay milk should ever be used in making cheese. Indeed it would be well if factories could entirely suspend the making of cheese for a time, while cattle were feeding on hay. Milk from cattle pastured on dry ground did not cure so easily as that from cattle pastured on moist ground, but would keep longer. Land in the cheese producing districts of Canada was of a dry nature, hence the reputation of the cheese for its keeping qualities as compared with that manufactured in the States. The cause of this dryness of soil was the continual ploughing it had undergone for a long time in its preparation for the growing of grain. Owing to this quality of the ground our cheese would not bear the same amount of acid as cheese manufactured in Herkimer County, N. Y., where the pastures were more moist.

A member asked if the cream which rises on milk at night could not be manufactured into cheese.

Prof. Arnold said that depended on the manner in which it was worked up. If the cream were put into the strainer before the the morning's milk was strained and washed through by the latter, and then the whole well stirred up when the rennet was put in, and only a very few minutes allowed for coagulation, it might be so used. He also said that the cream which was on the milk at the houses of patrons when it was called for could be used in that way. In reply to other questions he said that hard curd required less salting than the other, and that in order to get rid of the taint in impure milk, it was necessary to heat it above 60 degrees, but if the milk was liable to sour he would cool it down to 50 degrees. He considered that good cheese could be made from Saturday night's milk immediately it was brought in, by first heating it up to about 188 or perhaps 196, then using only a small quantity of rennet but a pretty strong acid and afterwards cooling it thoroughly and salting it pretty well. If milk was tainted it would be best to skim it because the taint would be chiefly in the cream. If the cheese made was naturally hard, however, and it was difficult to give it a good texture, as in Canada, skimming would be the worst thing that could be done. He was satisfied there would be no difficulty in keeping Saturday night's milk over until Monday if plenty of cold water was available.

A vote of thanks was then tendered to Prof. Arnold for his address.

The next business was the reception of an unimportant report from the Finance Committee, after which the contents of a

Question Drawer.

which had been open during the Convention, were taken out and answered.

This business over, a vote of thanks was passed to the Chairman, and the Convention, at five o'clock adjourned sine die.