The Dairy.

The Adulteration of Butter.

A short time ago, at a meeting of the Society of Medical Officers of Health, held at the Scottish Corporation Hall, London, under the presidency of Dr Hardwicke, a paper was read by Dr. C. Meymott Tidy upon "Butter and its Adulterations." Dr. Tidy said that butter was generally prepared from cream collected from time to time and allowed to get slightly sour. It was then churned, or, in other words, rapidly stirred. The best temperature for churning was from 50 to 55 degrees Fahrenheit, and hence most churns had an outside vessel either to warm or cool the apparatus as it appeared necessary Churning should not be too slow, or the flavor of the butter would be entirely destroyed, nor too fast, or the butter would be soft and frothy. Butter was also made from fresh cream and from entire milk. This should stand until it was sour, and then be churned at a higher temperature than cream - namely, 60 degrees. More butter was obtained from entire milk than from cream, but there was more work in the churning, and it took longer. Milk on an average yielded from 4 5 to 5 5 per cent. of butter, and it might be roughly stated that a cow yielded about one pound of butter daily It was next taken out of the churn and washed with water, so as to get out the adherent whey. That operation was important, as the butter would otherwise decompose more rapidly. It was then salted, about 4 per cent. of salt being a fair quantity to be added. The amount of stearine, olein and palmatine in the composition of butter was practically *nil*. The first adulteration of butter was water. Let them dry 100 grains of pure water in a weighed capsule for several hours at 220 degrees Fahrenheit, and from 5 to 8 per cent. of water would be produced. Water was incorporated with the butter chiefly when it was in a semi-solid state, and also by beating out and sprinkling. He had been able thus to incorporate 28 per cent. of water with butter. Out of 130 samples of butter purchased at different shops in Kent, seven contained from 7 to 9 per cent. of water twenty-one from 9 to 10 per cent., thirty-four from 10 to 13 per cent, forty-two from 14 to 17 per cent., 17 from 18 to 24 per cent., and 9 over 25 per cent Thus water might become a very serious adulteration of butter. It was his practice when analyzing butter in his capacity as public analyst to state in his certificate the amount of water if over 10 per cent., and to leave the magistrate to draw his own conclusion. The next adulteration was salt. To trace this they should incinerate the remainder of the 100 grains used for drying. In 19 specimens of undoubtedly pure butter, the average mount of salt traceable was 5·2 per cent., and out of 27 samples of butter indiscriminately purchased, he found that two contained less than 3 per cent. of salt, 2 between 3 and 4 per cent., 3 between 4 and 5 per cent, 4 between 5 and 6 per cent, 10 between 6 and 7 per cent., 2 between 7 and 8 per cent., one between 8 and 9 per cent., two 20 per cent., and one 17 per cent. Over 7 per cent. of salt he considered excessive. Adulteration was also introduced by the incorporation with butter of dripping, lard, suet, and other fats. These could not be mixed with butter when they were in a melted state, but only when they were cold, and hence the mixture was never perfect. The fats, unlike real butter, contained stearine, palmatine, &c., in considerable amount. To trace the presence of these fats let them note the melting and solidifying points Butter melted upon an average of 75 degrees and solidified at 63; dripping melted at 79·5, and solidified at 72·5; and suet melted at 82, and solidified at 75. Another test was the taste. The taste of real butter could be detected even when it had been most extensively mixed. Pure butter melted quickly on the tongue, and there was no sense of granulation, but when adulterated with other fats it melted far more slowly, and a peculiar granulated feeling in the mouth was produced as the last few grains disappeared. The odors of butter and of dripping were easily distinguishable, but the smell of lard when mixed with butter, was not so soon detected. Good butter was generally of a rich yellow color, entirely uniform, but when adulterated the color was very much paler, and it was marbled, owing to the imperfect admixture of other fats. He regarded streaky butter generally with suspicion. In good butter a uniform surface was produced by passing a clean knife rapidly over it, but impure butter had a granular appearance. Dr. Tidy concluded by describing other but more technical ways of detecting bad butter, such as the action of ether and the use of the microscope with polarized light. At the instance of Dr. Hardwicke, the society passed a cordial vote of thanks to Dr. Tidy for his interesting remarks on so important a subject A short discussion ensued, in which Dr. Stevenson, Dr. Berneys, and Dr. Tripe joined, and the general conclusions of the lecturer were confirmed Dr. Berneys observed that from 5 to 6 per cent. of water undoubtedly improved butter, and the addition of more than 7 per cent. of salt would render it uneatable. When in a butter of 1s per pound he found no less than 22¼ per cent. of salt and water he could not think it cheap at the price The meeting then terminated.—*N. B. Agriculturist.*

Going into Dairying.

We have before us several letters of inquiries in relation to going into the business of dairying. Advice is wanted about commencing the undertaking, and instruction as to how to proceed. The writers of these letters seem to think that the information asked for may be given in the space of a short newspaper article. They seem to be in ignorance of the fact that dairy farming requires a goodly amount of technical knowledge as well as a knowledge of general farming. Some of these letters come from farmers who acknowledged that they have not been successful in general farming, but who think that they may succeed in a specialty. Some come from parts of the country, where dairying has not been carried on to any considerable extent. The crop of letters on this subject is not in excess of that received in previous years In truth, editors of agricultural papers "may look out for" letters of enquiry respecting dairying about this time in the year. Is dairying profitable? Does it pay better than general farming? Would you advise me to go into the business?

The above are some of the questions usually asked. Now, in general terms, it may be said that dairying is profitable, and that it does pay better than general farming It may be further said that the most prosperous farming communities in the country are those engaged in dairy farming. It may be further said that the fertility of dairy farms has generally increased, while the fertility of farms devoted to grain productions has generally decreased. If anything additional was needed to show the prosperity of dairying, it may be said that the prices of dairy products have advanced, during the past ten years, more rapidly and more steadily than the prices of the ordinary product of the farm. The demand for butter and cheese has increased at home and has extended abroad. The latter product is now generally sold at home for cash, so that there are few losses from bad debts and commissions.

But to advise one to go into dairy farming, that is another thing. Success in this line of business is dependent on quite a number of things, a few of which we will mention. One must have a favorable situation in relation to location, soil and climate. The land must be naturally favorable to produce grass both for hay and pasturage. It must not be liable to drought. Pure water should be abundant and within easy reach. Facilities for cutting and storing ice are desirable, if not essential. Unless one has means to keep cows enough to supply a private dairy with milk, it is necessary for several farmers to unite in the production of it. Indeed, it is very rare for isolated farmers to succeed in dairying. There is no denying the fact that dairy farming is most profitable in neighborhoods where almost every man is a dairy farmer. One man learns from another. There is a sort of mutual inspiration. Children grow up with a knowledge of the business, and almost inherit a love of it.

Then the farmer must be adapted to dairying no less than the farm. He must understand how to breed cows for the dairy, or be such a judge of them that he can buy them judiciously. He should be a lover of cows, and have knowledge of the best ways of taking care of them. He must be a man of regular habits, who will feed and water his cows at stated times, no matter what else is neglected. A man who is in the habit of going to town two or three times a week and of returning at very uncertain hours, will not succeed with a dairy. Perfect punctuality is required The cows require it or they will not give milk. The cheese maker demands it or he will not receive the milk into the factory. The railroad conductor requires it, or he will not take the milk to the city to be sold. Unless a man can be at home, or provide a competent and trustworthy substitute, at stated hours, three hundred and sixty-five mornings and evenings in every year, he had better give up the idea of managing a dairy farm

But it is not enough that the farm and farmer are adapted to dairying. A like adaptation is required of the help in the house and out of the house. Not every good farm hand is a good milk-man, not every girl good at house work is a good milk-maid. As a rule, not one in ten of the men and women who seek work among the farmers can be trusted to milk and to take care of it. All of them must be trained to the business, and no amount of training will make many of them competent. Some despise the work altogether, and many never learn the art of drawing milk as it should be done. Competent and trustworthy men and women, suitable to be employed on a dairy farm, are hard to find. The nurseries and schools for this class of laborers have not been established very long, and the number that has gone out from them is not equal to the demand. Such are a few of the requirements for successful dairy farming. If you have them all, success is tolerably certain. If you are lacking in any one of them, failure is almost equally sure.—*Prairie Farmer.*

A Text for Dairymen.

We make large importations of foreign cheese of what may be called fancy brands. The high price at which it is retailed, viz.:—from forty cents to $1 per pound, certainly restricts the demand. There is little doubt that could cheese of similar character and quality be manufactured at home and sold at half the figures named, the consumption would be largely increased. These charges are now simply prohibitory to the great mass of the people. The taste for cheese has been gradually developing for the past decade, and the consumption of our native product is very much larger than it was a few years ago. When a taste for an article of food has become once established, a demand for variety begins to grow, and excellence of quality as well as new makes are called for. This is precisely our present position.

Factory cheese of greatly improved quality has now taken the place of the former coarse and ill-flavored irregular manufacture of farm dairies. An advanced public taste always demands renewed improvements, or it outruns the supply, gets ahead of its educators, and looks around for other sources from whence its requirements can be met. Undoubtedly this is the explanation of the fact that to-day we see imported cheeses in scores of shops where a few years ago we saw none. The taste is evidently growing for a diversity of cheese, and our dairymen must meet it. There is no question as to its being profitably met.

A striking instance in illustration of this point is given in a report of the Ayrshire Agricultural Association recently published. The ordinary cheese of that district in Scotland, known as the Dunlop cheese is a very good common article, selling at from $10 to $17.50 per 112 pounds. A successful manufacturer of Dunlop cheese changed his make to what is known as the Cheddar, a superior kind considerably imported into this country, and which sells at the Ayrshire cheese fairs at $19 to $20 per 112 pounds. The result of the change was an increase in the profits of his dairy of $5,000 in five years.

It is not possible that an American dairyman could fail of equal success, or that one of our factories which would turn out cheese of the quality and shape of the imported Cheddar or Stilton, could fail in selling its produce at prices very fairly remunerative for its enterprise. Thousands of people would like to eat Stilton cheese but cannot afford to pay sixty cents a pound for it, and many more would like to have upon their tables a shapely cheese of seven pounds weight, equal in flavor to the English Cheddar, if they could do so with a less expenditure than forty cents per pound. Surely there is an inducement in these prices, reduced one-third, to render the manufacture of such cheese desirable. Is it practicable to attempt a new departure in this direction?—*New York Tribune.*

JERSEY BUTTER DEFICIENT IN FLAVOR.—*The New England Farmer* in reference to the above subject, quotes Mr. Flint in saying that Jersey butter does not compare with first class Vermont butter in flavor. and that people judge more by the eye than the taste in purchasing. "There is none of the sweet, nutty flavor in Jersey butter that there is in Vermont butter. The high color is not owing to its richness, but to a peculiar yellow pigment secreted in the Jersey cows and carried off in the milk." *The Farmer* further says that Jersey butter is not as solid as that from common cows. "As a rule the higher the color, the greater the need for ice in the manufacture and sale of butter, from any cow or breed of cows."