

to drink the milk" (Todd's Cyclopaedia, article Smell). It was not the butter and casein that led the kid to prefer the milk, but its odorous properties. Nature hath implanted in animals the organs of smell and taste, and these have their corresponding qualities in the odorous and sapid properties of the food they consume. And milk is no exception from this natural law, its quality and value depending as much if not more upon its odorous and sapid properties than its butter and cheese; for however essentially necessary the latter may be, it is only when accompanied with the former that they possess their real value, giving richness of quality to the natural dietetic beverage. Now, what are these odorous and sapid properties, chemically speaking, upon which the value of milk so much depends? Again, we are all familiar with the difference between the odorous and sapid properties of milk, when the cows are fed upon grass, turnips, grains, hay, or oil-cake and barley-straw, &c.; but we do not know what those differences chemically are, although this is the kind of knowledge farmers stand most in need of, from the laboratory of the chemist.

The practice of the cow involves the conversion of the food she consumes into milk; and when we consider the diversity in the quality of the former, and the comparative uniformity in that of the latter, there must of necessity be a corresponding diversity in the process. But, as has been already shown, this uniformity is more apparent than real, there being a corresponding difference in the colour, smell, taste, and consistency of milk to that of the food; and it is more than probable that this harmonizes with the health of the cow and calf, and the normal quality of the milk, in all cases where the difference in the quality of the food is natural—the opposite being true when it is unnatural. Now we have here normal and abnormal food, processes, and milk; but as yet we are not sufficiently versed in physiology to distinguish the one from the other, so as to choose what is natural, and shun unnatural food—unhealthy cows, calves, and bad milk.

Again, as to the richness of the evening milk, how is this accomplished? Can we by any artificial means so coax the cow as to make her give as rich milk in the morning as in the evening? One reason why the morning milk or that secreted during the night is thinner, may be traceable to the abstraction of more of the food to the reparation of the body. So far, this suggests an equilibrium of forces, or a more equitable distribution of the works of tear and wear, and reparation. But how is this to be effected? If the reparation is greater in poor cows than in fat ones, the milk of the former will be thinner. Query, is this the case? Has Mr. Forsall, who fattens his milch cows, done anything to the solution

of the problem relative to an equilibrium of forces? What reply does his churn and his cheese-vat give?—*Farmer's Magazine*.

TREATMENT OF MILCH COWS.—A dairyman noted for the large amount of cheese yielded by his cows, told the editor of the *Dairy Farmer* that one of the secrets of his success in this respect was the careful manner in which he treated his herd. His cows were driven to the stable leisurely. No dogs were used for the purpose of driving the cows, and persons in his employ who were caught striking or in any way abusing a cow, were discharged on the instant. Let the cows have an abundance of food, and take their time in coming to the barn, especially in hot weather; milk clean and regularly; and from fifty to a hundred lbs. more cheese can be made per cow, than when the animals are dogged out of the fields night and morning.—*Boston Cultivator*

TEN RULES TO BE OBSERVED IN MAKING BUTTER.

In making good butter, there are several nice operations to be gone through with which require an eye to cleanliness, forethought, and some little experience.

1. On milking clean, fast, yet gently, regularly twice a day, depends the success of the dairyman.—Bad milkers should not be tolerated in a herd; better pay double the price for good ones.

2. Straining is quite simple, but it should be borne in mind that two pans, about half full each, will produce a greater amount of cream than the same milk if in but one pan; the reason of this is the greater surface.

3. Scalding is quite an important feature in the way of making butter in cool weather; the cream rises much quicker, the milk keeps sweeter much longer, the butter is of a better color, and churns in one-half the time.

4. Skimming should always be done before the milk becomes loppered; otherwise much of the cream turns into whey and is lost.

5. Churning, whether by hand or otherwise, should occupy forty to fifty minutes.

6. Washing in cold soft water is one of the preserving qualities of butter, and should be continued until it shows no color of the milk by the use of the ladle; very hard water is highly charged with lime, and must in a measure impart to it alkaline properties.

7. Salting is necessarily done with the best kind of ground salt; the quantity varies according to the state in which the butter is taken from the churn—if soft, more; if hard, less; always taking the taste for the surest guide.

8. First working, after about twenty-four hours, is for the purpose of giving the butter greater compactness.