

once sang "Take us the foxes, the little foxes that spoil the vines" &c., and it would be an excellent motto for cheese makers if we simply changed "foxes" into "faults," and "vines" into "cheese," better still: "let us discover the little faults that spoil our cheese."

Milk should be left uncovered when first put into the can, in order to cool somewhat before starting on the road to the factory; and consequently, milk drawers should not be allowed to start too early. After milk is cooled to about the temperature of the surrounding atmosphere, there is nothing gained by leaving it uncovered, and if water or ice is used to cool it down to a low temperature, care should be taken, if the air surrounding it is not very pure, to cover it as soon as it is as cool as the atmosphere; for, as soon as the milk becomes cooler than the air about it, the impurities in the air, together with its moisture, are condensed upon the cooler surface of the milk, and the milk consequently partakes of all the bad odors with which the atmosphere may be tainted.

Arrived at the factory, great care should be taken when heating up the milk not to stir it too much: just enough to keep the cream from rising, and not enough to churn it, as is often done to such an extent that the butter gathers in lumps as large as beans at the side of the vat, to the great damage of the quality of the cheese, and loss in average yield. Now in regard to rennet, there is more cheese spoiled by the improper use of rennet than by any other means.

It is a great advantage to use the "Extract of Rennet" in every factory where the cheese maker does not know how to prepare, or is too negligent to take the proper care in preparing, the liquid from rennets; but the cost of rennets is not more than one fourth of the cost of the extract, and it will pay well to prepare rennet according to the following directions.

Have two rennet jars, of stone or glass, and these should hold from 15 to 20 gallons each, and, at least one week before the factory opens, take of the rennets what quantity you think will be required for ten days use, estimating one good rennet to be sufficient for 400 pounds of cheese, and put them in jar No. 1, throw in an ounce of salt for each rennet and fill up the jar  $\frac{3}{4}$  full of pure water, blood-warm. Leave the jar in a warm place; rub the rennets thoroughly with the hands several times the first day; and the next day, add salt enough that there will be some left undissolved in the bottom of the jar; and then set it in a cool place.

Take especial pains, when rubbing the rennets, to notice if any are of a greenish color, and if so throw all such out, and replace with new ones; for one such tainted rennet is enough to injure the whole batch seriously, and spoil the cheese; for it is not reasonable to suppose, that a clean-flavored, long keeping cheese, can be produced if extract of carrion be introduced with the rennets, and tainted rennets are nothing more of less than such, and if wooden rennet tubs are used the taint will soon be just as bad.

The above may seem superfluous language to use in this place; but in the majority of the factories I have visited in the past years of my experience, the rennet liquid had the same abominable stench of decayed meat, and I am surprised that cheese containing it keeps as long and sells as well as it really does.

After the rennet has been prepared as above directed, one week, take jar No. 2 and prepare another batch in the same way, observing the same care, and follow this plan throughout the season; always using the oldest; thus the cheese maker has always the liquid rennet of uniform strength, and by preparing it in this way, will save seventy-five per cent on the cost of rennet, as compared with the use of imported extract.

I have taken up some space in this description, for I consider this the most mischievous of all the "little foxes that spoil our vines."

When the milk is all right, just so much rennet should be used as will secure the commencement of the thickening of the milk in 20 minutes, if set at 80° F; in 15 minutes, if set at 85°; or in ten minutes if set at 90°; for the same amount of rennet that requires 20 minutes in milk at 80°, will bring it in ten minutes at 90°. When the milk is not right, the judgment and skill of the cheese-maker must guide him. Care should now be taken to cut the curd at the proper time; for if cut too soft the whey will be milky, and if left until too hard, the curd will knot together, and there will be great difficulty in making a fine curd.

In applying the heat, use great care, and do not let the curd stick to the bottom of the vat and scald; as this is another very mischievous little fox, and he will get the start of the cheese maker just while some pretty girl is passing by, or there is something else to attract his attention for just a minute. I wish to bear on the points that are generally neglected, because there has not been importance enough attached to them in the past.

I will pass on to where the curd is salted, and, as the cheese maker says, *ready to put to press*. Take the thermometer, and try the temperature of the curd, and see that it goes to press as near 75 degrees as possible.

If put to press much warmer than that, it will mould so perfect 7 tight, that the gases cannot escape except by huffing, and cracking the cheese; and if much cooler, it will not mould sufficiently to be firm when cured.

I have often had my attention called by cheese makers to what was to them a mystery, and that was, that cheeses out of the same batch would be very different in appearance on the shelves, and it was owing no doubt to the fact that they put part of the curd to press too warm, then Mr. A, comes in, and stops and talks, while the cheese makers stand and listen, and the curd gets cold. No wonder they are not of the same quality. I lay down this positive rule. No cheese-makers should allow visitors in the factory in working hours: *loungeurs*, at no time.

When the cheeses are taken from the press, handle them carefully and put them on clean smooth shelves, and take care that the temperature of the curing room is kept down as low as 70°; though 60°, is still better if you want a mild and full flavored cheese. If the temperature of the curing room is kept as low as 65° the change on the curd need not be very high, and the whey may be drawn off sweet and this gives a better flavored cheese than can be produced where the curd must be soured sufficient to stand in a curing room, where the temperature varies all way from 70° to 98°, as is actually the case in some instances.

Why, I have seen cheese in curing rooms so hot that the fat was actually running out of them and standing in pools on the floor under the tables.

Now this can easily be avoided by making an under ground passage, and connecting it with the curing room by means of a box passage; when, by putting a good ventilator in the roof, and keeping the door shut, you may have an abundance of cool fresh air, just such as is needed for the cheese, and all at a very small expense. This question of keeping the curing room cool, is a very important one; for no matter how good a cheese may be up to the time of going into the curing room, it is easy to spoil it there, and I have seen as much as five cents per pound loss on cheeses that had no other fault, only they showed the effects of the heat in the process of curing. Let us now strive to correct our faults, and let "*excelsior*" be our motto, and by taking advantage of all our natural advantages, such as climate, feed, cows, and nearness to market, go on and gain the high reputation for our cheese that is within our reach.

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