

and beautiful, and porcelain is fashionable, but lead is the old fashioned and useful medium, retaining the heat of the hot water from the scalding process in winter, and slowly conducting the heat after the cooling from evaporation after the same scalding in summer. The desirable temperature in churning cream is  $54^{\circ}$  to  $55^{\circ}$ , a degree of heat preservable only in summer by early churning, and in winter by raising the temperature by scalding the churn before that process, with boiling water, heating the cream at the fire before placing it in the churn, or by adding boiling water to the mass in the churn.

Besides the matter we have alluded to as being present in milk, and consequently in its products, we must not omit the aroma of the food consumed by the cow. In the case of turnips this is very distinct, and sometimes very disagreeable,—causing even pastry to partake of the undesirable flavor. In the spring of the year milk will even have a bitter taste, from the vigor and freshness of the herbs consumed by the cows at that season; but the change from the insipidity of the milk and butter produced by hay-fed animals in winter is so great that even that is agreeable.

The writer then alludes to the manufacture of cheese in the several districts, and remarks—

#### THE DAIRY

Is, perhaps, of all other appliances, the one on which success most depends. It should be apart from all household operations, from open grates, and from dung-heaps, and should have as much as possible the means of an equable temperature. As, however, it is much easier to keep a cold building warm, than to cool a hot one, it is desirable that it should be as much as possible shielded from the sun's rays. It should have its side to the north, its ends to the east, and should, if possible, be let into the earth a few feet, but not so deep as to interfere with the drainage. If covered by a large tree it would be all the better. Around it should be either a hollow wall, or peat earth should be walled round its exterior; or, as another alternative, and possibly the best but most expensive, it should be surrounded by a verandah. It should also have a double roof, and abundant top and side ventilation,—either of which should admit of being closed. It is necessary to have in it a pump, the floor sloping, and on the highest part a perforated pipe should be connected with the pump, to allow of the cleansing of the floor with cold spring water when necessary. The bowls should either be earthenware or glass dishes, placed upon wooden tables—fir, maple, or sycamore are the best. Leaden bowls may be used, placed on frames, and surrounding the dairy. Slates are the best for the floors, and a lining for the walls of white pottery is not only elegant but useful; a pipe connected with the boiler attached to the kitchen fire is a great advantage, with a stop-cock, so as to regulate the heat of the room in winter. The scalding and churning rooms should be distant from the milk-house, and the latter should be kept as free as

possible from all kinds of foreign matter. An outer verandah is useful for drying the dishes and pails, and therefore desirable when the dairy is sufficiently extensive to render the expense of its erection judicious.

Following the order already indicated of describing, first, the butter-making, and then the cheese,—the latter being perhaps of more commercial importance,—and taking, first the systems adopted in the most celebrated dairy district of the kingdom, and slightly alluding to the peculiarities of some systems pursued abroad, brings us to

#### THE AYRSHIRE DAIRY SYSTEM.

A district celebrated in Scotland, and in the north,—and justly so,—for the manufacture of *Dunlop cheese*. These cheeses are from two to four stones in weight, and hence, to make one large cheese at a meal requires a dairy of at least fourteen cows. In this case a cheese is made night and morning, but, if a smaller dairy is kept, the night's milk is reserved till morning, the cream skimmed off, and both being warmed, so as to make the whole mass  $90^{\circ}$  to  $95^{\circ}$ . Following the course of the large dairies, however,—those where the cheese is made in the greatest perfection, namely, from new milk as it comes from the cow,—a large cheese-tub is placed in the dairy, and upon this is placed a framework of wood, denominated a ladder. Over the whole is placed a thin linen strainer, and the milk, if sufficiently warm, viz., at least  $85^{\circ}$ , is strained through this cloth into the tub. If, however, it should not be of that heat, it is placed in a deep tin or copper vessel, and inserted in a furnace of hot water, until it attains the requisite degree of heat,—for all the success of the cheese-making from the rich milk of the Ayrshire cows depends upon this precaution. If the cheese is made from milk of a less heat than this, the curd does not contract properly and some is wasted in the whey—nor is the cheese so compact; whereas if it is much hotter than  $90^{\circ}$ , except in winter, when it cools down considerably in the very operation of making, the cheese will ferment and the casein run through its various stages of decay.

The next process is that of adding the rennet. This consists of the stomach of calves, at least one year old, steeped in salt and water, in the ratio of three to the gallon, and, in the best-managed dairies at least, a lemon is added to take off the bad flavor. This stands for some two months, and is called *yrning*. A tablespoonful of this solution is added to each hundred quarts of milk, and the whole is covered by a woollen cloth to prevent the escape of the heat.

When the curd is sufficiently firm for breaking, usually about a quarter of an hour after the rennet has been added, it is cut in all directions—a knife with three blades being preferred, as expediting the process—so as to have the curd in cubic pieces. It then begins to sink, and as much of the liquor (whey) is taken out as can conveniently be removed in a wooden