

used for holding the milk, and all the dairy utensils, after being first washed thoroughly clean, should then be rinsed a first and second time with sweet milk: "a cruet, washed ever so clean with water, will cause vinegar to become dreggy, but if rinsed with a little of the same, will always appear limpid and clear"

"The main point is the *superintendence of the dairy*; for unless that can be confided to the mistress of the family, and she be in every respect competent to conduct it with judgment, regularity, and that persevering industry which is actuated by motives of self-interest, it will be only rarely found to afford any material profit. The making of butter and of cheese are also essentially different; for although every dairywoman ought to be well acquainted with the former, yet excepting in the United Kingdom and in Holland, no two districts in any other part of Europe manufacture cheese of a similar flavor. This extraordinary difference has been attributed to the nature of the pasture on which the cows are fed; and this, doubtless, must have some effect, for experiments have been made by experienced persons brought from places where they have regularly lived, and well acquainted with the mode of making the peculiar quality there known, and yet when moved to another spot, they have not succeeded."

Milk.—The chief component parts of milk are those, which, when separated, are known as forming butter and cheese; the residue of which is called whey. These are distinguished by scientific persons as the *butyraeous*, or oily substance producing cream, of which butter is composed; the *caseous* matter of which cheese is formed, and *serum* or whey:

Cream forming.....	4 5 parts,	} of 100
Cheese.....	3.5 do.	
Whey.....	92. do.	

This can only convey a general idea of the component parts, for they must necessarily vary according to the quality of the milk.

The analysis of skimmed cows' milk is stated by chemists to be:

Water.....	978.75 parts,	} of 1000.
Cheese with a trace of butter.....	37. do.	
Sugar of milk.....	35. do.	
Muriate of potash.....	1.70 do.	
Phosphate of potash.....	0.25 do.	
Lactic acid with acetate of potash.....	6. do.	
Earthy phosphates.....	0.30 do.	

"Instruments have been invented, called lactometers, for ascertaining the richness of milk in nearly the same manner as that employed for trying the strength of spirits. The difference in the quality of milk between particular cows may thus be determined, but it does not show whether the caseous or butyraeous matter predominates."

"The making of butter appears to have been known from the earliest history of the Island, for when invaded by Julius Cæsar it was a common food of the Islanders; but the art of making cheese they learned from their conquerors. It seems extraordinary, that a people in possession of large herds of Kine, could be ignorant of the art of making some sort of cheese from the sour curd with which they must have been acquainted; it is indeed described in many ancient authors; yet no mention is there made of the rennet with which it is now formed, nor is it known when the use of that article was first discovered."

"The mode of making cheese, though in the main points apparently the same, yet is subject to more variety of minor details in the practice, than that of anything formed of one material; and thus many different qualities are brought to market, each bearing some distinct character of its own. That many of those kinds, which are by connoisseurs thought indifferent, might, by other management be more nearly assimilated to the superior sorts, there can be little doubt; these peculiarities have, in many districts, attached a certain degree of value to their flavor, while in others it would seem to be imparted by the natural grasses on the soil. This applies more especially to Cheshire than to any other county; for although imitations of different districts have been, in some cases, successfully made in others, yet in no trial has cheese of true Cheshire flavor been produced when made from cows fed on other soils. Whether justly or not, it has been attributed to the abundance of saline particles in the earth, as evinced by the numerous salt springs which abound throughout a large portion of that county, and is so old a remark, that Fuller, in his "Worthies," when speaking of the county, says: "It doth afforde the best cheese for quantitie and qualitie, and yet the cows are not, as in other countries, housed in the winter. Some essayed in vain to make the like in other places, thought from thence they fetched their Kine, and daime maids; it seems they should have fetched their ground too, wherein is surelie some occult excellence in this kind, or else so good cheese will not be made." There must indeed be some truth in the observation, for it is well known that where the springs most abound, the cheese is ever esteemed, to be of superior quality. Whatever may be the foundation of the fact, the quality is, however, always better when the cows are pastured during the summer months.

"Although cheese may be made from the curd, which has been formed by the coagulation of the milk when it turns sour, yet when thus obtained it is hard and ill flavored; many have therefore been found to curdle it with "rennet," which is made from the gastric juice of animals, but more especially from that found in the maws or stomachs of sucking calves, that have been fed entirely on milk.

The preparation in Cheshire is as follows: "When the maw comes from the butcher, it is always found to contain a chyle or curd-like matter, which is frequently salted for present use; but when this chyle matter is taken out, and the skin cleaned from slime and every apparent impurity by wiping or gently washing, the skin is then filled nearly full of salt, and placing a layer of salt on the bottom of a mug, the skin is placed flat upon it. The mug is large enough to hold three skins in a course, each of which should be covered with salt; and when a sufficient number of skins are thus placed in the mug, it should be filled up with salt, and put with a cover over it, into a cool place till the approach of cheese making, in the following year. The skins are then all taken out, and laid for the brine to drain from them, and being spread upon a table, they are powdered on each side with fine salt, and are rolled smooth with a paste roller which presses in the salt; after that, a thin splint of wood is stuck across each of them, to keep them extended while they are hung up to dry.

"The maw skins are put into an open vessel, and for each skin pour three pints of spring water; let them stand 24 hours, then take out the skins and put them in other vessels; add for each, one pint of spring water and let them stand 24 hours as before. On taking the skins out the second time, gently stroke them down with the hand into the infusion; they are then done with. Mix these two infusions together; pass the liquor through a fine linen sieve, and add to the whole a quantity of salt rather more than is sufficient to saturate the water, that is, until a portion of salt remains undissolved at the bottom of the vessel. The next day, and also the summer through, the serum as it rises, is to be cleaned off, and fresh salt should be added. Somewhat less than a half pint of this preparation will generally be sufficient for 60 lbs. of cheese; but when for use, the whole should be well stirred up"

PRESERVING CLOVER SEED.—The unusual productiveness of seed in the clover crop of last season, induces me to seize this auspicious moment to offer to agriculturists, the following remarks, referring to the supposed deteriorating influence of age on clover seed:—

There is a general opinion that seed is not fit to sow which has been kept over one year, or, that its vegetative principle is less active. Acting on this opinion, a farmer will sell all his surplus seed at four or five dollars per bushel, and be constrained perhaps the following year, to supply his farm at the rate of \$8. and sometimes \$10. This often happens, as for the last twenty years in our country, we have not had two consecutive seasons favorable to clover seed: this error, therefore, so injurious to the farmer's interest, should be at once corrected.

The seed of the second year may be slower in sprouting than the first, I admit, this may be accounted for, in the increased hardness of the hull, a difficulty easily overcome by soaking the seed 24 hours previous to sowing, in a solution of salt-water of the temperature of 120 Fah. Then dry it with lime, plaster of Paris or ashes, and with a good season and soil, it must grow *and no mistake*.

Let the farmer then, while seed is plenty, attend carefully to its preservation. When brought from the mill, (if perfectly dry) put it away in one or two bushel sacks, suspend them from the joists of his granary, where the temperature is equal, and I will guarantee its fertility for ten years or more.

No agricultural paper to my knowledge has ever given a hint, on this subject, and should you deem these remarks of any value, you may give them a resting place in your admirable journal.—*Am. Far.*

MANGEL WURTZEL AND CARROTS.—Dr. Thompson, who was employed by the Royal Agricultural Society to superintend some experiments in feeding stock, states that after trying mangel wurtzel for four successive years, he came to the conclusion that cows fed on it gave quite as much milk, but *much less* butter and cream than when fed on carrots or turnips; that when ewes were fed on mangel wurtzel the lambs did not thrive, owing to the poor quality of the milk.

A few years ago we had occasion to feed three cows during winter with several kinds of vegetables. We fed mostly with potatoes, giving each cow about a peck per day. On changing from potatoes to the same quantity of sugar-beets, the milk decreased, and was evidently of poorer quality. The beets were increased to half a bushel to each cow per day, and this brought up the quantity of milk to what it had been with the peck of potatoes; but the quantity was still inferior, affording a less quantity of cream, and proportionately less butter, which was of a lighter color, of a less firm texture, and not so rich a flavor as that made while the cows ate potatoes. It is proper to say that about a quart of corn meal was given to each cow per day, through the whole trial.