

cleanliness and promptness in all dairy operations depends upon the proneness of the milk constituents, like those of all other organic bodies, to undergo the putrefactive process very rapidly when in the moist state; and the oil of milk, like all other oils, has a remarkable power of absorbing those volatile oils upon which the *smell* of bodies so often depends. Want of cleanliness initiates the putrefactive process, which, when once set up, cannot be arrested, and the prevalence of bad smells, whether in the cow house, or the pasture, or the dairy, will necessarily communicate the disagreeable qualities to the milk, the cream, the butter, and the cheese. The neatest, cleanliest dairy-woman with the best eye for spying out specks of dirt, the greatest delicacy of the smelling sense, and the most active, willing hands will, in ninety-nine cases out of a hundred, be most successful. It is on this principle that prizes are now so often given for the best dairies and to the best dairywomen.

VARIETIES OF CHEESE.

In a previous article and the present, we have indicated sufficiently fully the chemical nature of the constituents of cheese, and the leading points to be observed in its manufacture. It is well known, however, that the *flavor* and general character of cheese made in different regions often differ very widely. This depends upon details of manufacture; we, therefore, now proceed to describe the modes of manufacture adopted in different localities.

THE FACTORY SYSTEM OF CHEESE-MAKING ADAPTED TO NOVA SCOTIA.

The factory system of cheesemaking, which originated a few years ago, is being actively carried out in Canada. Some 50 or 100 farmers (fewer or more according to the size of farms) join together in erecting a factory, and appoint two or three hands to make the cheese. Each farmer sends his milk to the factory every morning or evening, and receives back his proportion of cheese. By this method the cheese is made on the great scale more perfectly, at less labour and expense, and the farmers and their families are spared all the care and trouble. We earnestly commend this system to the attention of the farmers of this Province. We enquired carefully into the system in Canada last fall, and we see no reason why it should not be carried out in our rich agricultural districts with quite as much prospect of success as in Canada.

DISHONEST FARMERS THE ONLY DIFFICULTY.

We could find only one rock upon which those cheese factories were likely to split, and it is one that equally affects every other branch of manufacture or trade, viz., the dishonesty of the farmers

themselves. As the cheese return depends upon the quantity by measure of milk sent in by each farmer, some of the more unscrupulous partners pumped into their cans a good deal of milk from the cow with the iron tail.

HOW THE DIFFICULTY IS TO BE OVERCOME.

But this difficulty could be pretty well mastered if the manager of the factory had full power to reject milk that was found deficient. A certain standard of richness could be fixed upon, and by means of the Lactometer or other simple modes of analysis, a check sufficient to protect the company's interests might be interposed. The prospective Manager of such a concern should, in fact, go to a college where chemistry is taught, and practice the examination and analysis of milk for a month or two before entering upon his duties, or samples of suspected milk might be sent for analysis to a competent person, and defaulters prosecuted for fraud. Energetic measures would no doubt overcome this form of dishonesty as readily as any other.

We this month give the method of manufacturing AYRSHIRE, or, as it is often called DUNLOP CHEESE. The description is a very full and thoroughly reliable one from Mr. Sturrock's Report of the Agriculture of Ayrshire, for which the Highland and Agricultural Society of Scotland voted a premium of thirty sovereigns.

MANUFACTURE OF AYRSHIRE OR DUNLOP CHEESE.

Reserving the very small holdings under forty, an average-sized dairy farm may be set down as between 100 and 120 imp. acres, in Cunningham and Kyle at least, but in Carrick the same will be 50 acres, or more, larger. Such a sized farm usually keeps a milking stock of from 18 to 22 cows, turning out one cheese daily of more or less weight during the season. A large number of the stocks run between 20 and 30 cows; some few comprise from 30 to 40 or even more, but by much the greater proportion range within 14 to 20. Too many cows on a farm is no profit. A less number, and the more abundant pasturage consequent, always pays better in the long run; besides, the money shut up in overplus stock may be put to other (and paying) uses. Somewhere about five o'clock, A. M., the morning milking of the cows takes place. The milk is carried direct in the "luggies" as drawn from the cows, and emptied through a very fine wire-cloth sieve (the "milsey"), or else through a thin canvas cloth, into a large "milk-boyen" or tub standing in the contiguous dairy-room. The cows being milked, are guided by the byre boy to the field or fields on which they may be for the time grazing. The fields generally are not more than about

6, 8, or 10 acres, in extent each—few exceeding 10 or 12 acres, although they are much larger on the green-cropping along the coast, and commonly in Carrick. Leaving the cows to refill their udders at leisure as best they may, return we to the dairy-room.

The cream of the previous evening's milk is skimmed off, and the remainder being warmed in a vessel in the boiler to about or fully 100°, is then added through the sieve, along with the cold cream, to morning's meal already in the tub, and raising the whole when added to an uniform temperature of from 86° to 88°.—Milk as it comes from the cow is about 96°. After stirring in the "rennet," the milk takes about 30 minutes—seldom less, sometimes more—to properly "thicken" or coagulate. The milk of cows feeding on upland clayish pastures must be thickened at a higher heat than that from cows grazing on more fertile low-lying farms; and during very cold weather, or towards the end of the season, the temperature is always slightly increased. Thermometers are hardly ever used by any of the "Dunlop-makers." The proper warmth is determined by the feel of the fingers or hand, and it is wonderful how near they hit upon, and regularly keep to, that precise degree of heat at which they are accustomed to thicken. Most of the cheese-makers are the wives and daughters of the farmers, only a few of the larger farms, or gentlemen—or bachelor-farmers, engaging bred dairy-women; for in Ayrshire, unlike England, every process connected with the milk, the butter, or the cheese, is conducted by women, and rightly, too; and although most of the "gudewives" and their "doughters" may be much more at home in fingering a cow's paps than the keyboard of a piano, they are not on that account any the less better women, less lovable, or less thoroughly useful members of society.—Rennet, as made in Ayrshire, is simply the strained liquid in which the cut-up salted stomachs of calves (popularly "yearnins") have been immersed for a few days, the water being usually boiled and allowed to cool again to milk heat ere the "yearnin" is put in to steep. The stomach is emptied of its contents, and being cleaned and mixed with a handful or two of salt, is put back again, and being likewise well rubbed outside, the stomachs are then hung up to dry in the kitchen, and where they often hang for a year or more before using. It takes about one gill of rennet, more or less, according to its strength, to properly thicken the day's milk of about 20 cows.

The breaking of the thickened fluid comes next in course. This is effected, generally, by passing the arm and outspread palm, softly and steadily, in all directions through the coagulated milk.—After a short time allowed for the curd