

at least its action is similar, and is directly opposite that of an alkali. The one neutralizes the other. Now, if annatto is cut with very strong lye, or a strong solution of potash, when it is added to the milk it neutralizes or destroys the effect of a large quantity of rennet. Hence, the annatto should always be cut with as weak a solution of potash or lye as will properly dissolve it. I am satisfied that if factories would act upon this suggestion many thousands of dollars would be saved throughout the dairy region.

UTILIZING WHEY.

The utilizing of the whey from factories has received considerable attention, and various suggestions have been made as to its value and most profitable employment. Its analysis shows that it is too valuable to be thrown away. Some contend that it can be turned to the most profit when fed to cows, while others stoutly affirm that more can be realized from it as food for hogs. While in England I was told by the dairy farmers, and it was confirmed by provision dealers of London, that a very superior quality of pork was made by feeding whey mingled with barley meal; that in fact no bacon was equal to it in the delicacy of its flavor, and that it sold for most money in the markets.

Of the solid constituents of whey, the sugar of milk is in the largest proportion, being very much in the same ratio that it is in the milk. Some effort, it would seem, ought to be made by the dairy associations, with a view of extracting this material and fitting it for commerce. The milk sugar that we find at the shops is imported from Switzerland, and is retailed at \$1.00 per pound. An estimate has been made of the annual yield of sugar from thirty factories averaging four hundred cows each, and it amounts to the enormous quantity of two millions of pounds, or 10,000 barrels; but suppose the price is put at only ten cents per pound, then a factory of a thousand cows, on the above estimate, would yield eight hundred pounds of sugar per day, which would amount to \$80, or \$2,400 per month.

When in London, I had some conversation with Prof. Voelcker, the great chemist of the Royal Agricultural Society, on this subject, and he was surprised that no effort had been made by the American factories to turn this constituent of the whey to account, since the large quantities of milk received at one point make it more feasible than when the milk was scattered over the country and worked up in family dairies.

Good milk contains from 8 to 9 per cent. of butter and caseine, and 5 per cent. of milk sugar. The analysis of whey shows that it yields 4½ per cent. of milk sugar, or half as much weight as the butter and caseine of the milk combined. In Switzerland milk sugar is made by allowing the whey to trickle down the sides of mountains in wooden gutters or troughs. Threads are placed in the gutters, upon which the sugar adheres as the watery portions of the whey pass off in evaporation.

It must be evident that the source of income from the dairy would be very much increased could some practical and inexpensive method be invented to take this article from the whey. Whether evaporating pans could be constructed, and heat used properly in securing this object, is a

question for inquiry. The dairy men of America could not afford to lose proper experience and good talent could not afford to lose it, even if it were a small loss to science.

I cannot see how to side many of these suggestions. They find the loss of the small Cheddar cheese fifteen and a half in the smaller.

The London would in part in fourteen and a description of scaleboards be abroad in this finest American truckle shapes would command from eight to

In closing rect from the trade must see and one under tors and various the other side lished abroad in the way of England seem country, and any infringement are divided and the grocer

The middle keep large stock and sell to small possibility he either for cash

The importance are for the middle and are well known and middlemen