

sure for half an hour; at this time the curd is broken a little by the hand, and thrown upon a lead cooler, until it is brought down to the desired temperature. The after management of the cheese resembles that of the Cheshire. A little salt, $1\frac{1}{2}$ lbs. per cwt., or thereabouts, is added to the crumbled curd, and it is mingled and broken by the curd mill.

The striking circumstance connected with all these methods of making cheese is that neither in the curd, nor the butter, if any, one in the bacon made by the consumption of the whey are all the contents of the milk, according to the analysis of the chemist, returned to the farmer. Mr. Harrison, of Frocester Court, Gloucestershire, has thus called attention to this important fact:—"The quantity of bacon fatted from the whey shows that there must be an immense quantity of valuable food left in it. But even allowing the whey to be worth £2 per cow, this is no half of what its contents would be worth could they be extracted and prepared in the form of cheese and butter for human food. There is here a broad margin for experimental inquiry and improvement. On this point I have worked out the following from the records of our dairy. I take a single year, when the yield of milk was 31,700 gallons, weighing 321,000 lbs., and containing therein, by analysis, 12,480 lbs. of casein, and 11,556 lbs. of butter; now the dairy produce was of cheese 25,424 lbs., and of butter 3466 lbs.; and these contained, by analysis, 9765 lbs. of casein, and 8,366 lbs. of butter; leaving 2715 lbs of casein, or 22 per cent., and 3190 lbs. of butter, or 27.6 per cent. unaccounted for.

"Such a calculation is of course only approximate. For instance, instead of taking the double Gloucester analysis for the cheese that was made, it would have been more correct to take the Cheddar analysis, as we endeavoured to make the cheese much richer than in the former years. This would reduce considerably the large apparent loss of butter.

"The chief point is to see clearly that there is an enormous quantity of casein and butter which we do not extract from the milk. Can no means be devised for extracting them more thoroughly? I have no doubt the application of heat on the Cheddar system will do much, but a maker of this cheese was astonished to see the quantity of curd that resulted from boiling a small quantity of his clear-looking whey. I believe that the loss results from the system of minutely dividing the curd after it is set, and that it comprises some of the richest of the casein and butter. It is well known how much a successful result depends upon the gentleness with which this operation is performed."

The enormous loss which analysis indicates in the case of Mr. Harrison's dairy is probably, as he says, beyond the truth; but the truth itself must be bad enough; and the subject is one which much needs investigation by the agricul-

tural chemist. It is satisfactory, therefore, to learn that Dr. Voelcker, the chemist of the Agricultural Society of England, has been some months engaged upon it. He gave the main results of his research in a recent lecture in Hanover square, and we look with great interest to its appearance in the next number of the Society's Journal.

Veterinary.

Epidemic among Dairy Stock in Britain

(From the *Mark Lane Express*, Feb. 23)

The new number of *The Veterinarian*, February that is, has the following among other FACTS AND OBSERVATIONS of the month—"During the past few weeks *Exanthemata Epizootica* has prevailed to a very serious extent in the dairies of the metropolis and the surrounding districts. Many cows have died, or far greater number have been disposed of, in consequence of the great reduction of price, in consequence of coming affected with mammitis, ulceration of the feet, &c., as sequelæ of the malady. The purveyors of milk have been put to great strait to find a sufficiently supply for their daily customers, and healthy cows from the country have been purchased by them at fully twenty per cent. above their ordinary value."

Significantly enough Mr. John Gamgee, Principal of the New Veterinary College, Edinburgh, has just taken up the same subject. On only Wednesday last he delivered a public lecture in Edinburgh on the present trade in unwholesome meat and milk, a full report of which is given in the *Edinburgh Veterinary Review* for this month. The Northern chemist is able personally to corroborate the alarming character of the cattle disease as it is raging in the dairies of the metropolis: he has recently visited London, where the complaints amongst the cow-keepers are tenfold. Few I am told, are paying their way; some are thriving, but entirely by the system of sending diseased cows to the butchers, or by keeping a very few cows, and 'drawing in' their milk. By this is meant purchasing from the dealer who receive largely from the country. In London one of these dealers; and disease exists amongst the cows to such an extent, that he said, although nothing can be more profitable than cow-keeping if the cows retain their health, we now lose seriously, and keep up our trade by buying from all sources. Constantly, they come out London, have the lung and apthomas existed for many years past; they prevailed only now, and about a month ago, epizootic broke out; it has spread north, and is at present time in Edinburgh."

It is satisfactory to see the Profession in London the evil now so alarmingly on the increase;