

often in a bad condition, and the work at the factory is, from time to time, hurried and slighted. The best results are obtained, both as to quality and quantity of product, where the factory uses the milk of from 500 to 800 cows, and not above 1,000.

"2. *'Size of buildings.'*—Improvements are constantly making in buildings. The early factories were made rude and imperfect structures. The late erections are more substantially built, but very plain in style, with no pretensions to architectural beauty. This is a mistake. A competent architect should be employed, who should give designs for a handsome exterior, imposing, graceful and pleasing to the eye. The cost would not be very much more, but the value of such buildings would be greatly enhanced, and could be turned to good account in case they were abandoned for cheese making.

"In some of our establishments the manufacturing department and curing rooms are under one roof—in others they are separated. The system of marketing cheese in America is somewhat different from that in England. The cheese is not held for so great a length of time while curing. We try to send our cheese to market when it is from thirty to sixty days old. There are few curing rooms built with the design of holding cheese for the entire season.

"Without attempting to give model buildings, or those considered by some as the best, it will perhaps suffice to present two or three plans of those esteemed as among the first-class.

"The Fairfield and the Willow Grove send out cheese favourably known in the English markets. They have for several years received 'top prices' from English shippers.

"The Fairfield factory is located in Herkimer Co., N. Y., eight miles from Little Fal's, the largest country cheese market in America. It receives the milk of 1,000 cows. The manufacturing department and curing rooms ('dry house') are under one roof. The establishment is one hundred and forty-eight feet long by thirty-eight feet wide, and three stories high. The second and third stories are for curing-rooms. The manufacturing-room is forty by twenty-eight feet; press room, thirty-five by thirty-one feet. The boiler, five-horse power, stands in a separate room, and cost four hundred and fifty dollars. The manufacturing room is provided with double vats for cheese making. These vats are each sixteen feet long, three feet four inches wide, and eighteen inches deep, holding six hundred gallons.

"We may remark here that vats of this size and proportion are convenient for work, and are usually adopted at the factories. They are double—that is, the inner one of tin setting in a wooden vat, with spaces between the two at the sides

and bottom where the heat is applied, either steam or hot water.

"The Willow Grove factory is in Oneida county. The dry house sets upon high stone piers, and is one hundred by thirty feet, two stories. The manufacturing department is in a separate building, being thirty by twenty-eight feet, with press room twenty-six by fourteen feet. The factory has capacity for the milk of 1,000 cows.

"Wight's Whitesboro factory, in Oneida county, has also a high reputation in the English markets. It was erected for six hundred cows. Dry house one hundred and four by thirty feet, two stories. Directly opposite stands the manufacturing department, which is twenty-six by fifty feet.

"3. *'Cost of Buildings.'*—This, of course, varies in different localities, and must be regulated according to taste in architecture, cost of material, labour, &c. Factories in the State of New York cost from \$3,000 to \$10,000.

"4. *'Cost of Machinery.'*—The principal cost under this head will be for steam boiler, milk vats, presses and hoops. Steam boiler, with fixtures, say \$500; vats, \$100 each; screw presses, \$4 each. A factory for six hundred cows may be fitted up in good running order for from \$1,200 to \$1,500. Vats with heater attached, which will obviate having steam boiler, are sold (six hundred gallon size) for about \$200 each.

"5. *'Capital Invested.'*—If ground or factory site be added, this question is answered in Nos. 3 and 4. Sites for factories are often leased at small rentals, and for a series of years.

"6. *'Work People Employed.'*—A factory with six hundred to eight hundred cows will need five hands, and perhaps, when the curing rooms are full, more help. The manufacturer or head manager, if skilful, will command from \$800 to \$1,200 and board, for the cheese making season, nine months. The second man, who, perhaps, has worked at the business for a year or more, gets, say from \$35 to \$45 per month and board, and women from \$4 to \$5 per week and board.

"Women not unfrequently take charge of factories as head manufacturers at salaries as high as \$100 per month and board. Boys and girls, or young persons of immature age, are not usually employed. The head manufacturer at the factory is expected to 'take off his coat' and do a good day's work every day, seeing to the delivery of the milk, working at the curds, the presses, and with a sharp eye to see that all moves on in order and on time.

"*'Quantity of Milk Received.'*—This, of course, must depend on a variety of circumstances—goodness of cows, quality of pasturage, the season, time of commencing and closing operations.

"The Weeks factory, at Verona, Oneida

county, in 1867 had an average of 640 cows; length of season, 209 days; pounds of milk received 2,481,615; green cheese made, 261,904 pounds; cured cheese, 250,540 pounds; shrinkage, four and one-third per cent; pounds of milk to green cheese, nine and forty-eight one-hundredths; pounds of milk for cured cheese, nine and ninety-one one-hundredths.

"The gross receipts per cow (average for the season, exclusive of income from butter and cheese, made before the factory was opened, and after close,) varied from \$34 to \$78, the former being the poorest dairies and the latter the best.

"The cheese sales in 1867 were very low in America, the average at the Weeks factory being only \$14.40 per one hundred pounds. The receipts other years have been very much larger, but it is always well in estimates of this kind to keep on the medium side. Some of the factories in Herkimer county make an average of five hundred pounds to the cow, and at present prices for cheese (twenty cents,) this would give \$100. This would not be a fair estimate, however, for a novice to base dairy prospects upon.

"8. *'Distance (maximum and average) which the Milk is brought.'*—The average distance from which the milk is brought will not exceed one and a half miles, and perhaps in the old dairy districts in New York a little less. Four or five miles may be set down as the maximum, except in rare cases, as at the West, where we have reports of milk being carted eight miles and more, and yet, if cooled at the farm, arriving at the factory in good condition. Such a long distance is regarded as altogether too far to cart milk with profit, especially on our American roads, which for the most part are bad during a considerable portion of the year.

"The practice of cooling milk at the farm does not usually obtain among dairymen. Canning milk too warm and hauling it in this condition to the factory, results in great losses to the American dairymen. It is now several years since we commenced urging upon our dairymen the importance of cooling the milk at the farm and as soon as drawn from the cow, and, most especially, have we urged this principle since returning from a visit to European dairies.

"In 1866 the American Dairymen's Association employed the writer to go abroad and make a careful examination of European dairies, and to report upon their management. After an extended observation over the dairy districts of Great Britain, and an examination of the English methods, it was clear that in a matter of cleanliness, care of milk and of stock, management of pasturage, &c., the English were in advance of us; but, in machinery and appliances for manufac-