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AMERICAN CHEESE

AND

CHEESE-MAKING.

Stewart

PHILADELPHIA:
J. B. LIPPINCOTT COMPANY.
1889.

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E.G.T. July 28

AMERICAN CHEESE AND CHEESE-MAKING.

THE art of cheese-making in America has undergone a radical change. Previous to the introduction of the factory system American cheese was pungent in flavour and decomposed rapidly. Consequently American cheese was not popular in foreign markets, and met with a very restricted sale. Since the factory system has been brought to a high condition of excellence, American cheese competes favourably, in even the English market, with the home-made Cheddar, Cheshire, and other popular kinds. The system practised in American factories is an improved Cheddar process, and prominent English experts have at times referred to the American system as being worthy of imitation in English dairies. Under the prevailing system the manufacture of cheese in America (the United Sates and Canada) increased more than 100 per cent., as the following figures will show:

	United States.	Canada.
Product of Cheese—		
In 1860	103,663,927 lb.	none.
" 1870	162,947,382 "	6,000,000 lb.
" 1880	199,022,984 "	15,000,000 "
Number of Factories—		
In 1851	1	none.
" 1860	37	"
" 1866	501	35
" 1870	946	75
" 1880	2532	105

Exports of Cheese—	United States.	Canada.
In 1830.....	10,000 lb.	none.
" 1850.....	15,000,000 "	"
" 1860.....	23,159,391 "	($600,000's worth imported from U. S.)
" 1870.....	49,755,842 lb.	12,000,000 lb.
" 1880.....	129,584,981 "	40,000,000 "

Since 1880 up to 1888 the manufacture and export of cheese from the United States has fallen off, but that from Canada has increased. The decrease in exports from the United States has been due to the too prevalent adulteration of cheese with oleo-margarine and lard oils, through which the quality has fallen off and an unfavourable reputation has been acquired, while Canadian cheese has been kept pure. In 1879 Canadian cheese carried off the Sweepstakes prize at the International Exhibition held in New York against the competition of both United States and English cheese. Since 1880 Canadian cheese of the best autumn makes has sold in England for more than the average English Cheddar.

The American system of cheese-making has been reduced by improved mechanism and association in the form of the factory method to the most economical point. This method of manufacture was a growth by necessity rather than a discovery. A large dairy was divided by the death of the owner, who left three sons. The sons united and manufactured their milk at the old dairy, and in time neighbours joined, and the first factory was established in 1851 under the management of the oldest of the three brothers. In course of time the business increased and became reduced to a most economical basis, while by the

employment of skilful operatives the quality of the product was gradually raised. The factories were gradually enlarged until the milk of 1200 cows could be worked up in the largest, and an average factory received the milk of about 400 cows. One Canadian factory makes 216,000 lb. of cheese yearly from the milk of 1300 cows.

The curing occupies about three months, the temperature of the curing-room being kept at 65° F. Gang presses are used, in which a large number of cheeses laid on their sides are pressed at once by turning one screw. A common test by which the ripeness of the curd for pressure is determined is by touching it with a hot iron, and when long strings are drawn from the curd by the iron, the curd is ripe.

Milk is brought to the factory twice daily, and is weighed and run into the vat from the delivery window. The milk is either bought by the factory, or is worked up at a stated charge, or the factory is managed on the co-operative plan in which the net proceeds are divided periodically. Under this factory system the quality of the cheese is uniform and as high as is secured in any well-managed private dairy. About one-fifth of the cheese produced in America is made in private dairies in which the same system prevails.

There are several other kinds of cheese made in both factories and private dairies, as Edam (the round Dutch cheese), a small cylindrical cheese similar to the English Wiltshire, weighing 10 to 14 lb.; a flat cheese called English dairy cheese, similar to the double Gloucester cheese and coloured as highly; a

few Stilton cheese; cream cheeses for immediate use; and very good imitations of the European Limburger, Schweizer, Neufchatel, Brié, Gouda, Camembert; and some other fancy makes to supply the French, German, and other immigrant population.

The cows used in the cheese dairies in the United States and Canada are mostly 'grade' shorthorns, or native cows improved by crosses of shorthorn, Devon, Ayrshire, and Dutch breeds. Jersey and Guernsey cows, and the best of the higher bred animals, are used for the highest class of cheese of the fancy kinds. The profitable exploitation of the dairy in America has raised the value of lands suitable for grazing cows to an average value of nearly $100 (£20) per acre for the fee simple, which is twice as much as that of grain farms. The cheese-dairy business prevails mostly in the states of New York, Pennsylvania, Ohio, Iowa, and Wisconsin, and in the province of Ontario, Canada. The cows are chiefly fed upon pasturage aided in the latter part of the summer by soiling crops, of which maize is almost universally chiefly depended upon. The cheese-making season begins in April and continues until November. See X. A. Willard's *Practical Dairy Husbandry* (1875), L. B. Arnold's *American Dairying* (1877), and Henry Stewart's *American Dairyman's Manual.*

CHEESE-PRESS.—The most common form is the *lever* press. A powerful steel coil or spring is sometimes substituted for the lever. In large factories the *gang* press is employed to press a large number of cheeses at one time by means of a powerful horizontal screw. The old method was by placing a heavy stone

(hence the name stoning cheese) on the lid of the chesset, or by hanging it by a ring fixed to its upper side from the end of a wooden beam which acted as a lever and passed over the lid of the cheese-press vat.

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