

The cost of an octagonal vat, including a steam boiler for heating the dipping solution, has ranged from \$1,500 to \$1,800. With one exception these figures represent contract jobs and in most cases include corrals for holding the cattle before and after dipping.

An unusual feature of one vat is that the dipping fluid was heated with spring water warmed by an extinct geyser. A 2-inch pipe leading from the spring extends around the vat a few inches from the bottom,

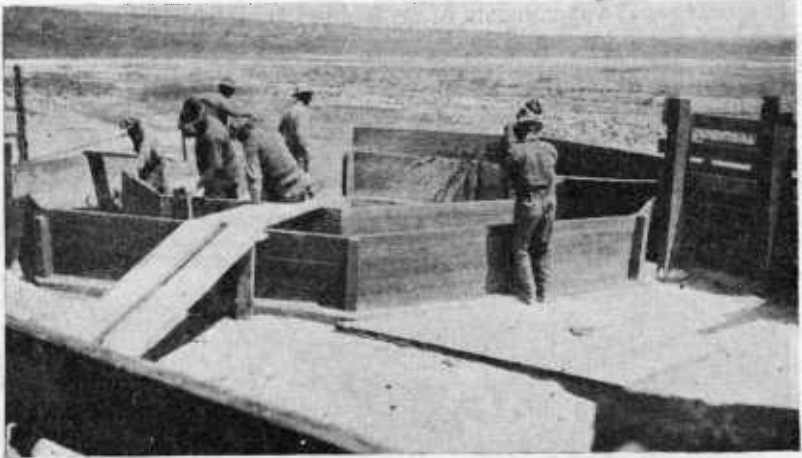


FIGURE 14.—An octagonal dipping vat in operation. The attendants need only to keep the animals moving while they are in the vat

carrying water with a temperature of 128° F. This temperature is sufficient to maintain the dipping fluid at the desired uniform temperature of 102°. This method of heating the fluid saved the cost of a heating plant and the cost of fuel for heating the fluid during each operation.

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CHEESE Production Is Still Largely Confined to a Few Areas in U. S.

Cheese production in the United States, like the production of many other agricultural products, is very largely confined to certain definite areas. In these areas it appears that the climate, soil, and other natural advantages, including the inclinations of the agricultural producers, are especially favorable to cheese production. Originally the cheese industry was localized in New York, Wisconsin, and Ohio. New York became famous for the flat and twin styles of American Cheddar cheese which to-day are referred to as "State Flats" and "State Twins" in many of the country's leading cheese markets. The Swiss-cheese industry has been extensively developed in Green County, Wis., and in parts of Ohio, with the result that Monroe, Wis., is known far and wide as the "Swiss cheese capital" of the United States. Brick and Limburger cheese factories were located in Dodge County, Wis., whereas the eastern, southwestern, and northwestern counties of that State produced principally an American Cheddar type of cheese. In recent years production of various Italian varieties of cheese has developed in California, whereas New York has continued to be the leading State in production of cream and Neufchatel cheese.

Generally speaking, the production area of the so-called foreign types of cheese, especially Swiss, Limburger, and the Italian varieties, has always been more limited than has the American Cheddar cheese territory, principally because of the factor of nationality and the methods of production. Consumers of these cheeses desire a flavor in the domestic product which is closely comparable to that of the imported variety. For that reason, cheesemakers are commonly employed who have knowledge of the methods of manufacture used in a foreign country that produces a particular type of cheese. The manufacturing processes of certain foreign types of cheese are often complicated and the makers must be naturally adapted or have the ability and patience to produce the particular type of cheese. For these reasons the production of most foreign types of cheese has in the past been limited largely to communities where the people were chiefly of one nationality.

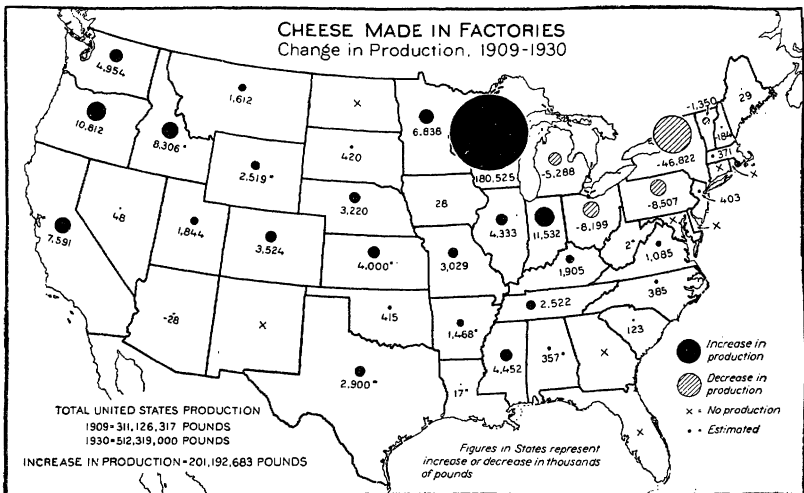


FIGURE 15.—Increases and decreases in manufacture of cheese in different States

Shift in Producing Areas

The rapid growth of the large industrial centers in the East brought about an increased demand for milk for fluid consumption, and as producers were able to realize a greater return from milk sold for fluid use than for milk delivered to the cheese factory, a shift occurred in the cheese-producing areas. The migration of cheese producers from New York and other Eastern States to the Middle West further contributed to this movement. New York became less important and Wisconsin gained in importance as a cheese-producing State. Dairymen on the Pacific coast realized that because of abundant pasturage and forage crops, favorable climatic conditions, and higher transportation costs on cheese shipped from the East and Middle West, there was an opportunity for cheese production in the West; consequently California and Oregon became important cheese-producing States toward the close of the nineteenth century.

With the trend of cheese production away from the territory around the large cities (fig. 15), decreases in production occurred in New York,

Pennsylvania, and other Eastern States. Michigan became less important as a cheese State as the automobile industry developed and the manufacturing cities in the eastern part of the State required the milk from the cheese areas for market-milk purposes. In Wisconsin, also, cheese production shifted toward the northern part of the State and away from the large cities at the foot of Lake Michigan. On the Pacific coast, the cheese industry expanded rapidly in California during the period 1910-1920, but since 1920 production has barely held steady, because rapidly increasing quantities of fluid milk were needed for city consumption.

Another shift in cheese production that occurred during the last four years, and one of prime importance in so far as the industry as a whole is concerned, was in the South and Southwest. The diversification of farm crops, the eradication of the cattle tick, and the ravages of insect pests in cotton were among the factors that contributed to the pro-

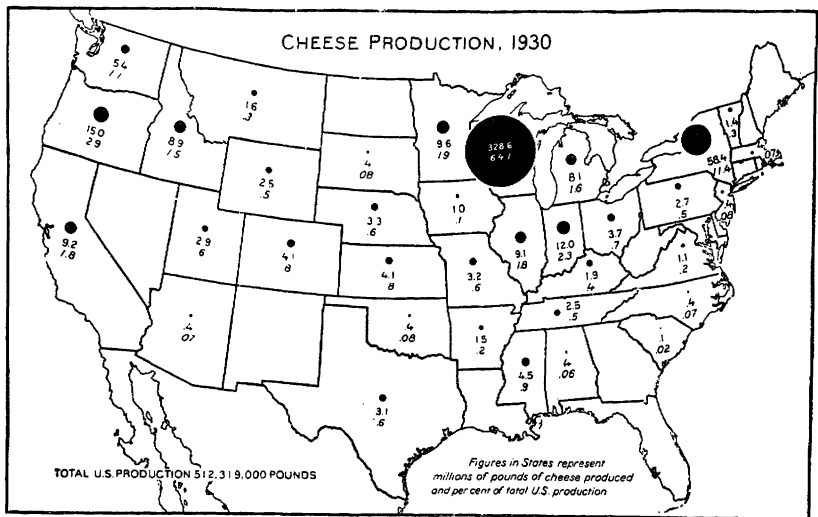


FIGURE 16.—Manufacture of cheese in different States in 1930

duction of nearly 24,000,000 pounds of cheese in 1930 in 19 States of the South and Southwest. As late as 1927 cheese production in southern territory was of minor consequence. The home market in the South has enabled the southern producer to compete quite successfully with the northern producer, with the result that much of the Wisconsin cheese that was formerly consumed in the South, especially during the cotton-picking season, must now find other markets.

Wisconsin and New York Still Lead

Despite recent changes in the cheese-producing areas, Wisconsin and New York are still the leading cheese-producing States. (Fig. 16.) The former State continues as the leading producer of American Cheddar, Swiss, Brick, and Limburger, whereas the latter not only ranks second in American Cheddar cheese production, but also is the principal producer of Cream and Neufchatel cheese. The Italian varieties are produced chiefly in California.

Per capita consumption of cheese in 1930 reached the high point of 4.7 pounds, which exceeded the previous high record of 4.6 pounds reached in 1929. An almost steady gain in per capita cheese consumption is registered since 1917 when, because of war conditions, total cheese consumption declined very materially because many potential consumers were abroad, engaged in war activities. Therefore the decline in per capita consumption from over 3.5 pounds in 1914 to 2.9 pounds in 1917, was not truly representative.

The increase in per capita consumption of cheese during the last 20 years may be attributed to a number of factors, among which are more extensive advertising of the food value and use of cheese, the adjustment of cheese quality to meet consumer demand, more convenient packaging, and the increased use of cheese in the various so-called cheese specialities. Among the more important new developments in the manufacture and marketing of cheese during the last two decades must be mentioned the production of process cheese about 11 years ago, the development of artificially refrigerated curing rooms and with it more scientific curing methods, and the invention of means for marketing natural cheese in packages more convenient to the retailer.

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CHESTNUT Lands Planted to Pine Stands Become Valuable in Northeast Before the chestnut blight spread through the forests, magnificent pure stands of chestnut were frequent in the Northeastern States.

Little chestnut now remains, save dead trees and young sprouts which are persistently put forth, only to succumb to the disease. Rehabilitation of such blight-killed areas is an important forestry problem, especially where other valuable species to seed in the spaces left by the chestnut are lacking.

Studies made by the Northeastern Forest Experiment Station in cooperation with the Massachusetts State College show that although natural replacement is adequate on these blight-killed areas, the best way to restore them to full growing capacity is to plant the bare spots with a high-grade timber species such as northern white pine. Since 1924 three permanent sample plots have been maintained on typical blight-killed chestnut land at Sunderland, Mass. Two plots are located where northern white pine was planted in 1919 when the dead chestnut trees were removed. On the third plot no planting has been done and the dead chestnut trees are still standing.

In 1929, 10 years after planting, the plots clearly showed the advantages of artificial over natural replacement. All the plots are now entirely covered with young growth—the planted plots have approximately 1,000 trees an acre, and the natural plot 810 trees to the acre. But the present stand on the planted areas is composed almost exclusively of the commercially valuable northern white pine, while on the naturally restocked area more than 50 per cent of the trees are of such commercially valueless species as red maple, moosewood, and witch-hazel. In effect, on the planted plots potential brush land of low value has been converted in less than a decade into a young stand of high economic importance.

However, in converting cut-over chestnut areas to conifer stands, the sprout growth is a serious obstacle. The competition for soil nutri-