MARKETING MELLORINE IN SEVEN TRADE AREAS

Marketing Research Report No. 296

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Marketing Research Division

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PREFACE

This report presents case studies, in seven markets, of the marketing of mellorine, a frozen dessert made with fats other than milk fat. The United States Department of Agriculture's Dairy Research and Marketing Advisory Committee recommended such a study, to cover the "marketing practices, marketing organization, production and distribution costs, and legislation." The results give increased understanding of the competitive relationships among the various frozen desserts being sold in States in which mellorine is legal.

The work was done by the staff of the University of Kansas Bureau of Business Research, under contract with the U. S. Department of Agriculture. Paul E. Malone, director, and Horace W. Harding, assistant director, of the Bureau of Business Research supervised the research on which the report is based. Participating in the interviews for the case studies and in the writing of the contractor's report were Frank P. Dobyns, Fred Durr, Demetrius Moutsanides, Edward G. Nelson, and Bertram L. Trillich, Jr. Louis F. Herrmann, Head, Dairy Section, Market Organization and Costs Branch, Marketing Research Division, Agricultural Marketing Service, represented the Department in negotiating and supervising the contract, and adapted the contractor's report for publication.

The study is one of many conducted by the Agricultural Marketing Service to provide better understanding of the marketing of farm products, as a basis for improved marketing in all phases of agriculture.

Washington, D. C. December 1958

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SUMMARY

The place of frozen dessert made with fats other than milk fat (mellorine) in the frozen dessert industry was studied closely in seven market areas, to gain a better understanding of the competition between these products and frozen dairy products. One of the principal conclusions from the study is that competition among frozen desserts seemed to be secondary to the competition among frozen dessert manufacturers. Manufacturers of mellorine also made ice cream and sherbet, and some made ice milk. Manufacturers' decisions as to which products they would make and the promotional, pricing, and distribution policies they would follow were aimed largely at getting or holding the largest attainable volume of total sales of frozen desserts. Whether this meant rising or falling sales of mellorine was secondary.

In all areas visited save one, mellorine had its inception in the plant of an independent processor whose business was large enough initially to enable him to produce and promote the product effectively. Following this introduction, other manufacturers felt compelled to make their own brands of mellorine, although many of these did not like to handle a "nondairy" product.

Ice milk and low-butterfat ice cream were frequently used in competing for customers who might be most price-conscious. Consumer demand for frozen desserts seemed to be successfully directed to ice milk and ice cream when price differences were relatively low, or when advertising and other promotion stressed either these products or the brand names of manufacturers rather than specific products.

Competition among firms in the frozen dessert industry was influenced noticeably by size of the firm. The trading areas served by single plants, whether owned locally or by national concerns, often covered most of a State. A diversity of products was sold by some companies so the emphasis tended toward advertising the name of each firm or its brands, rather than specific products.

Marketing practices, like advertising reflected interfirm competition and the economics of large size. Large-scale outlets were important, and the larger manufacturers could offer concessions to large retailers. Supplying cabinets, offering a sliding scale of discounts for larger volume purchases, and even ownership of supermarkets were devices used by manufacturers to assure preferential treatment of their product in retail outlets. Sole-supply contracts, lasting a year, lessened the number of opportunities for shifting outlets. In most of these practices, the larger firms seemed to be at some advantage.

A range of prices for mellorine and ice cream prevailed in most markets at the time the studies were made (winter and spring of 1957). Prevailing retail prices for mellorine ranged mostly from 59 to 69 cents a half gallon. Ice cream prices were usually 10 to 30 cents a half gallon higher, although

it was not uncommon for the highest price of mellorine in an area to be about the same as the lowest price of ice cream. In a hypothetical case comparing a 10-percent butterfat ice cream and a 10-percent mellorine, the difference in cost would be 26 cents a gallon, or 13 cents a half gallon. This would be with butterfat costing 81 cents a pound and vegetable fat $22\frac{1}{2}$ cents, and both ice cream and mellorine weighing $4\frac{1}{2}$ pounds per gallon.

There was little evidence that factors other than price, promotion, and the marketing strategy of frozen dessert manufacturers had an important effect on sales of mellorine in the areas studied. There appeared to be no significant correlation between income levels in an area and mellorine production and sales in that area. The fact that an area imported milk did not seem to affect materially the relationship between mellorine and ice cream sales. Nor did legalization of mellorine by a State necessarily indicate a consumer demand for mellorine or a manufacturer's desire to produce this product.

The areas in which studies were made were: Dallas-Fort Worth, Tex.; Tulsa, Okla.; Little Rock, Ark.; St. Louis, Mo.; Portland-Corvallis, Ore.; Springfield, Ill.; and Charleston, S. Car.

MARKETING MELLORINE IN SEVEN TRADE AREAS

INTRODUCTION

The marketing of frozen dessert made with fats other than milk fat is carried on in several parts of the United States. Statistics of the marketing of this product (commonly known as mellorine) show such wide variation that one obviously must make a close study of individual situations to gain an understanding of the factors involved. The product is essentially local--ordinarily at least to the State in which it is made--in both manufacture and sale. What is important in marketing mellorine in one area is sometimes insignificant in another. In only 12 States do the legal standards for the composition of frozen desserts permit the use of fats other than milk fat, and there are differences among the laws of these 12 States.

To obtain an insight into the marketing of mellorine and its relationship to the entire frozen dessert industry, trained observers visited several selected market areas in the course of this study. The areas visited were: Dallas-Fort Worth, Tex.; Portland-Corvallis, Oreg.; Tulsa, Okla.; Little Rock, Ark.; St. Louis, Mo.; Charleston, S. Car.; and Springfield, Ill. Between Dec. 5, 1956, and May 25, 1957, the observers interviewed officials of all, or nearly all, firms manufacturing frozen desserts, and a number of public officials and others concerned with the marketing of such products in each area. The results are discussed in this report, with each area treated as a separate case.

It was known at the start of the study that mellorine had reached a substantially higher level of sales in some of the States to be visited than in others. Detailed information about the history of the product in each market area might explain the relationships between mellorine and other frozen desserts. High or low sales of mellorine might be attributable to differences in merchandising methods, quality of product, choices of channels of distribution, price policies, methods of introduction or promotion of the product, general economic activity in the marketing area, or other causes not readily apparent.

DALLAS-FORT WORTH

Economic and Marketing Background

The Dallas and Fort Worth metropolitan areas, adjacent to each other, are the center of a 72-county area in north Texas, integrated by natural characteristics of soil, climate, rainfall, agriculture, industry, and geography (fig. 1). This is an area rich in agriculture, livestock, oil and other minerals, manufacturing, and trade. Dallas has 9 mainline railroads and 9 Federal and 7 State highways; Fort Worth, 9 railroads and 5 Federal and 3 State highways. Both cities are served by bus, air, rail, and truck transportation.

DALLAS-FORT WORTH TRADE TERRITORY

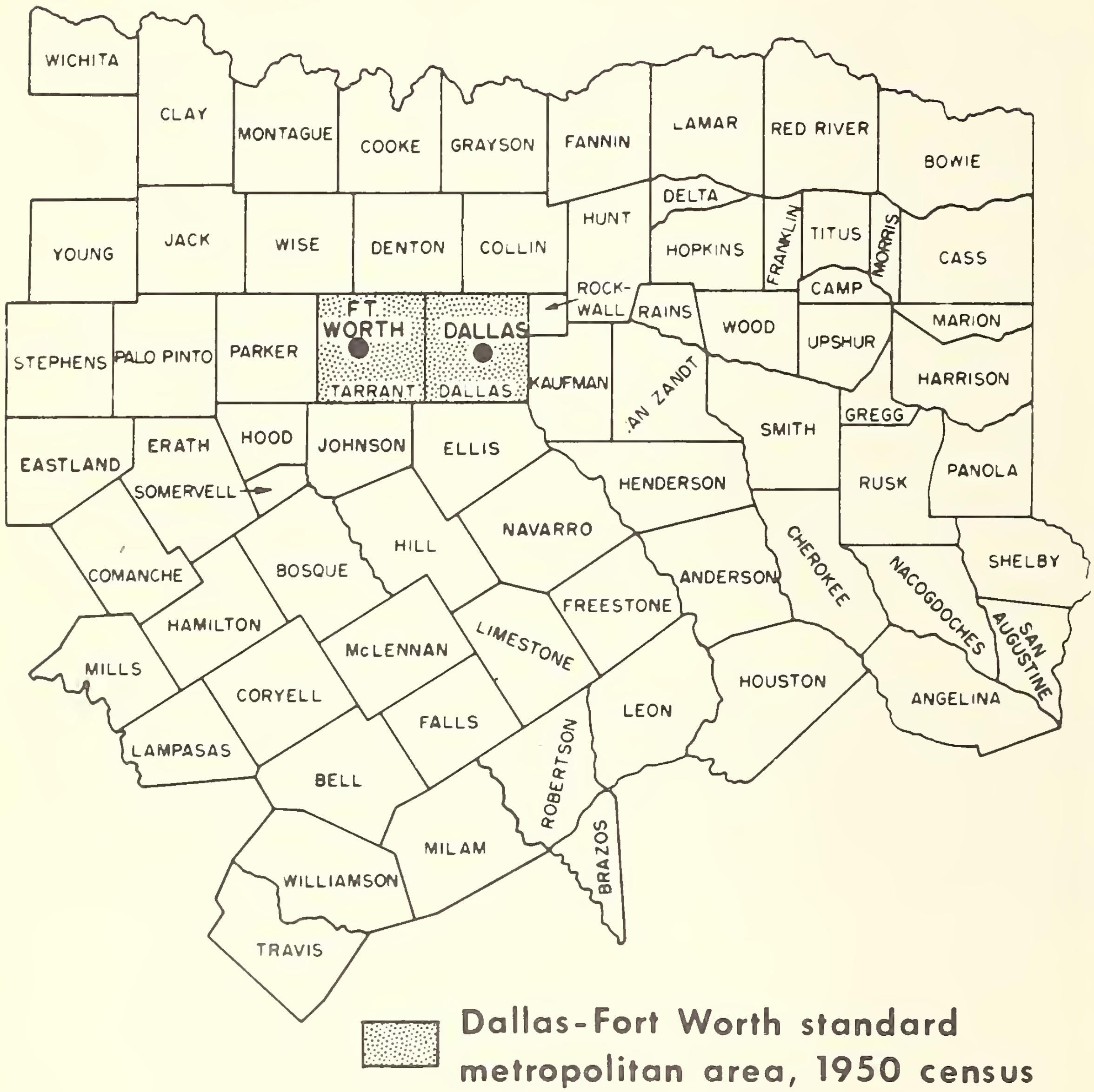

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Figure 1

The north Texas area served by Dallas and Fort Worth had a population, at the time of the study, of about 3.3 million living "in 265 big, medium, and small cities, towns, and villages and on farms and ranches." 1/ It had a buying (disposable) income of nearly 5 billion dollars a year, and retail sales approaching 4 billion. Were the area a State, it would rank fifteenth in population, fourteenth in buying income, and thirteenth in retail sales. 2/

Each of the two metropolitan areas consists of the county in which the city is located--Dallas County around Dallas and Tarrant County around Fort Worth. The former has a land area of 893 square miles and had a population density in 1950 of 688 persons per square mile; the latter has 877 square miles and had a population density in 1950 of 412 persons. 3/ Their combined population approximated 976,000 of whom about 615,000 resided in Dallas County. Dallas County had 187,038 households and Tarrant County, 109,752.

Both Dallas and Fort Worth have enjoyed substantial economic growth, especially since 1950. This growth has been accompanied by expanding business and industrial districts and residential areas with shopping centers.

These cities have been the marketing center for the entire area, not only in wholesale but also in retail trade. Wholesale trade for the 2 cities has been estimated at slightly under 2 billion dollars a year. 4/

Both Dallas and Fort Worth have had strong industrial expansion during the last few years. In Fort Worth, the number of plants has increased 71 percent between 1947 and 1955 and "value added by manufacture" has more than doubled. In Dallas, manufacturing employment has risen 64.4 percent since 1950. 5/

In both Dallas and Tarrant Counties, population increased approximately 40 percent between 1950 and 1956, and the number of family units showed similar gains.

This 2-county area, with the main centers of Dallas and Fort Worth, provided the frozen desserts distributed throughout the larger trade area. In the 2 cities, there were 15 mellorine manufacturers, varying in size from small local establishments that served the immediate city area to large, integrated firms that extended their distribution lines more than 400 miles from the central cities.

1/ The Dallas Morning News, The Shape of Things in Texas, p. 2, Dallas, Tex., undated.

2/ See footnote 1.

3/ U. S. Bureau of the Census, 1950 Census of Population, Vol. II, Characteristics of the Population. Part I, U. S. Summary, p. 75, 1953.

4/ See page 8 of reference, footnote 1. Fort Worth Chamber of Commerce, Facts and Figures on Fort Worth, Texas, p. 2, Fort Worth, Tex., undated.

5/ See p. 14 of reference, footnote 1, and p. 2 of reference, footnote 4, Facts and Figures on Fort Worth, Texas.

Production and Marketing

The Dallas-Fort Worth area was one of the first in the Nation to see the production of mellorine. In the 1940's, some manufacturers of ice cream began experimenting with the mixing of vegetable fats and butterfat in the production of ice cream, stimulated, perhaps, by the then shortage of butterfat and its high price in relation to the price of vegetable oils. Plants in nearby Corsicana and Bryan, Tex., were among the first to produce mellorine. 6/ The product soon found its way into the Dallas-Fort Worth area. Manufacturers reported, during the interviews made for this study, that in the 1940's the market for ice cream had become almost chaotic. As a result of reduced prices, manufacturers of ice cream had lowered the quality until it was unsatisfactory to many consumers. Mellorine attracted consumers soon after it was introduced because the product had a relatively high fat content, and overruns and flavorings comparable to those utilized in the better grades of ice cream. Mellorine was sold at a price comparable to that of the lower grades of ice cream, and was vigorously promoted by several large independent manufacturers.

The smaller ice cream manufacturers appear to have been pressed by the "cut-rate" ice cream market more than the larger companies. At least, they were the first to begin manufacturing mellorine. The new product provided a means by which they could compete and maintain their volume of operations. The larger companies, for the most part, started the manufacture of mellorine to meet competition developing from the new product made by both the independent plants in Dallas and Fort Worth and by plants outside the area.

The demand on the part of retailers for a full line of products from a single supplier also encouraged manufacturers to start making mellorine. It was reported that retailers preferred having one truck stop with all dairy supplies, rather than having several deliveries of different products such as milk, cheese, cream, ice cream, and mellorine.

During the period under study, several factors favored the rapid growth in mellorine sales in the area. Population increased at a rapid rate, providing more potential consumers. Incomes, both per capita and per family, were relatively high and permitted increased consumption. These two factors brought increased sales of other frozen desserts, as well as of mellorine. Other factors, tending to favor mellorine, were, in the opinion of those interviewed in the market, its price appeal and the failure of many consumers to differentiate between ice cream and mellorine. Most of the manufacturers adopted brand names for mellorine, and it was more conspicuously labeled with brands than as mellorine. The similarity of appearance and taste of mellorine and ice cream may explain why many consumers fail to distinguish between them.

Many representatives of the industry who were interviewed were of the opinion that many consumers in the area thought mellorine to be a low-calorie

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6/ Production and Marketing Practices for Mellorine. U. S. Dept. Agr., Mktg. Res. Rept. No. 212, p. 16, 1958.

dessert. State standards setting a lower minimum fat content for mellorine than for ice cream may have been the basis for this idea. Caloric content is, of course, contingent mainly on the amount of fat used in the product. An 8 percent mellorine contains as many calories as an 8 percent ice cream.

Mellorine met with almost immediate success, and in the first half of the 1950's attained as much as 75 percent of the frozen dessert market in the Dallas-Fort Worth area; but, in the highly competitive market, it shared some of the marketing problems of the ice cream which it had displaced. Many of the retail dealers began cutting prices and using it as a "loss leader." Some manufacturers, by lowering wholesale prices, contributed to the cutting of mellorine prices at retail.

Price cutting in the area remains a problem. Mellorine in some instances has been sold as low as 3 half-gallon cartons for a dollar. As a result, some manufacturers have attempted to reduce costs further by using cheaper ingredients such as imitation flavoring. Nevertheless, some makers of the product have continued to emphasize quality and have refused to lower prices as much as others. Ice cream quality has remained more uniform, since there has been less tendency to use ice cream in competition on a price basis.

Prices of mellorine ranged from 60 to 79 cents per half gallon, but were most commonly 69 cents. The price of ice cream ranged from 80 cents to $1.10, and the most frequently quoted price was 99 cents per half gallon. Fat prices were 71 cents a pound for butterfat and 18 cents a pound for vegetable fat.

The consensus of manufacturers' estimates was that mellorine had 60 percent of the frozen dessert market in the area in 1956. In the State, the percentage of total frozen dessert production attributable to mellorine was 42.

The structure of the frozen dessert industry, and some marketing practices, apparently common to the entire industry, have influenced mellorine production and sales.

Frozen dessert manufacturers in the area include small and large locally owned establishments and local units of national firms.

Practically all of the national firms bought out local firms when they entered the area. In addition to purchasing their main plants for manufacturing, they purchased smaller plants in the trade territory, using them for distributing points. In some cases, the main plant manufactured mix and sent it out to the smaller plants for freezing and distribution. There appeared to be a continuing movement toward concentration in the industry. One indication of such a trend is a recent market study in which 62 percent of the consumers showed a preference for the ice cream or mellorine from only 6 of the area's manufacturers. 7/ National firms tended more to central purchasing of supplies and materials, which may be another advantage.

7/ Belden Associates Marketing Research, Texas Markets and Media '56, Dallas, Texas, p. 9, Dallas, Tex., 1956.

Manufacturers' control of marketing extended to or interlocked with retailing through several devices. Numerous instances were found where the manufacturer owned the cabinets used in the retail store. The manufacturer placed them in the store on condition that only his product be sold through them, and thus the store would be slower to change its source of supply. Some of the plants manufacturing dairy products extended their control over retail outlets by either owning or franchising chains of grocery stores and supermarkets where their products were sold exclusively.

Among the changes in the pattern of distribution of dairy products is the dwindling importance of the corner drugstore or neighborhood grocery. 8/ The principal outlet for both ice cream and mellorine in the Dallas-Fort Worth area, as elsewhere, was the supermarket. 9/

Packaging practices for all frozen desserts took a peculiar twist in the Dallas-Fort Worth area. Consumers in Dallas liked the round carton, but Fort Worth customers preferred the square package. Differences, if any, in costs were not reflected in selling prices, but these differences may have been canceled, at least to some extent, by another characteristic: Dallas customers bought more of their frozen desserts in half-gallon containers, while Fort Worth consumers preferred the quart container over the half-gallon.

Most, if not all, of the larger manufacturers maintained cost-accounting records permitting them to know the costs for each of their frozen dessert products. Among smaller manufacturers, this was not true. Even though the larger companies maintained cost records, the costs entered only to a minor degree in setting prices for mellorine. Competitive factors brought about an administrative price decision. The smaller manufacturers followed the same pattern in determining the price of the product.

Mellorine had been promoted in the area at one time or another by practically all the makers. However, little promotion was being done at the time of the interviews. Certainly, promotion of mellorine was considerably less than for ice cream. Most of the large producers were doing little promotion of mellorine, but several of the independent producers advertised the product, mainly by "point-of-sale" methods; however, some radio and television advertising was noticeable.

Manufacturers who did not make mellorine and several who did expressed a dislike for or at least a neutral attitude toward making the product. Some frozen dessert processors, who might be described as strongly "dairy-minded," refused to make the product or did so only when competition had forced them to make it. The presence in Dallas and Fort Worth of some manufacturers who regarded mellorine as a satisfactory product, both as to content and as a suitable product for increasing their business, had done much in furthering volume sales of it in the area.

8/ U. S. Bur. Census, Special Census of Business, 1953, Dallas Standard Metropolitan Area, No. 2-10, pp. 8-13, 1954.

9/ See pp. 48-54 of reference, footnote 6.

TULSA

Economic and Marketing Background

Tulsa, the second largest city in Oklahoma, is in the northeastern sector of the State. The city is in Tulsa County, and this county constitutes the standard metropolitan area (fig. 2).

Generally speaking, the Tulsa standard metropolitan area has served as a marketing and distributing center for 30 counties of northeastern Oklahoma. However, for many of the commodities sold or distributed through the area, the trade lines have extended to the more remote sections of the State and, in some instances, well beyond the Oklahoma boundary (fig. 2).

Tulsa County has a land area of 572 square miles, and in 1950 had a population density of 440 persons per square mile. In the urbanized area of Tulsa, the land area is 37.7 square miles, and the population density was 5,472 persons per square mile. 10/

Tulsa County's population increased from 193,363 in 1940 to 251,686 in 1950 for a gain of 30.2 percent. This growth has continued, and in 1955 the county population was recorded at 306,141. This constituted an increase of 21.6 percent during the 5 years. 11/

While mere growth in numbers of people in a given area does not necessarily indicate a dynamic, progressive economy, it definitely shows there is an increased market for consumer goods and foodstuffs within that area.

Tulsa is an important oil center, and it has a variety of manufacturing, processing, and fabricating plants. The area, in addition to being one of the primary producers of oil operating equipment, has a sizable aircraft industry, aircraft repair and maintenance shops, the world's largest plant devoted solely to the manufacture of mobile homes, several branch plants of large national manufacturers, and numerous local industrial establishments.

Supplying this rising industrial center with frozen desserts are 6 manufacturers and 2 national-brand distribution plants. Seven of the eight market mellorine, and they distribute it in a region that extends to the Oklahoma borders on the north and east, and a less distance to the south and southeast.

10/ See pp. 28 and 75 of reference, footnote 3.
11/ See p. 38 of reference, footnote 3. Tulsa Chamber of Commerce, Tulsa's Progress 1950-1955, Research Department, p. 1, March 27, 1956 (mimeo.).

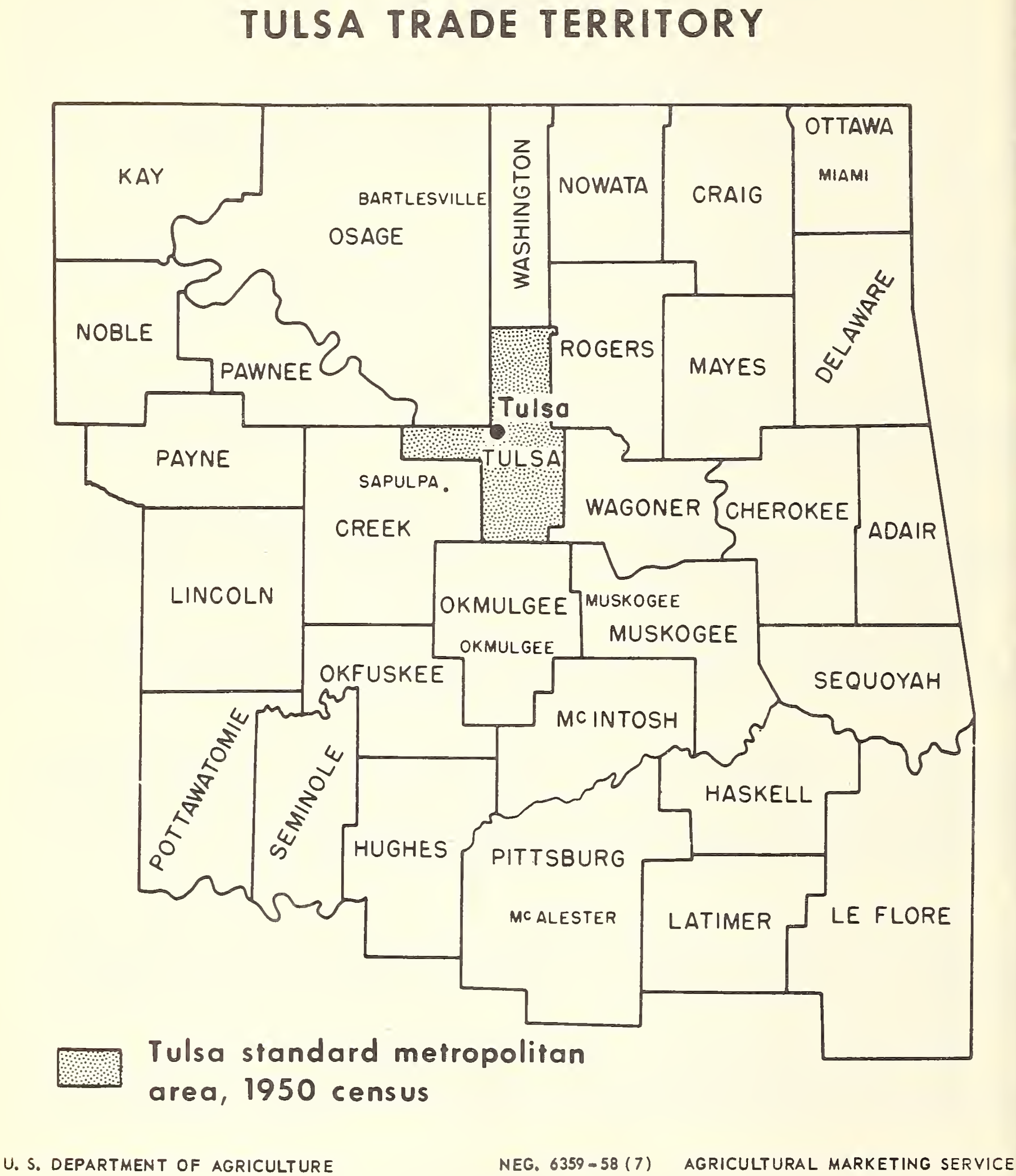
TULSA TRADE TERRITORY
KAY
OSAGE
BARTLESVILLE
WASHINGTON
NOWATA
CRAIG
OTTAWA
MIAMI
NOBLE
PAWNEE
ROGERS
MAYES
DELAWARE
Tulsa
TULSA
PAYNE
SAPULPA
CREEK
WAGONER
CHEROKEE
ADAIR
LINCOLN
OKMULGEE
OKMULGEE
MUSKOGEE
MUSKOGEE
OKFUSKEE
SEQUOYAH
Mc INTOSH
POTTAWATOMIE
SEMINOLE
HASKELL
HUGHES
PITTSBURG
Mc ALESTER
LATIMER
LE FLORE
Tulsa standard metropolitan area, 1950 census
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Figure 2

Production and Marketing

The consensus of manufacturers interviewed for this study was that approximately one-third of the total frozen dessert market in the Tulsa area in 1956 was supplied by mellorine. In the State, mellorine accounted for 28 percent of total frozen dessert sales in that year.

There appeared to be several factors acting in concert to make the area one of fairly high mellorine consumption. Mellorine was introduced into Oklahoma as a product with a relatively high fat content. Most of the processors in the Tulsa area originally made mellorine containing 8 or 10 percent fat, and used the same flavorings, fruits, milk solids, and sweeteners in the vegetable-fat product as they used in ice cream. However, some manufacturers, at the time of interviewing, had dropped the fat content to the legal State minimum of 6 percent. Several of the larger manufacturers, continuing to make mellorine with a high fat content, obtained premium prices for it.

Most of the mellorine manufacturers employed a sliding scale of discounts which allowed large retailers to offer the products to consumers at a lower price than smaller retailers, but still maintain their profit margins. The practice of offering a sliding scale of discounts contingent on volume purchased was generally followed with all forms of frozen desserts in the Tulsa area. This discount, in some cases, ran as high as 20 percent, depending on the volume purchased.

Retailers used mellorine as a price leader in Tulsa, featuring it on week-end sales or on special sales at greatly reduced prices. At the time of the interviews in Tulsa, one retailer was featuring mellorine in a 10-day sale at a price 17 cents a half gallon below the prevailing retail price of 64 cents.

Merchants reported that some consumers believed that mellorine was a low-calorie dessert. Although there had been no deliberate promotion of that idea, it had nevertheless persisted. This belief is valid to the extent that mellorine with a 6 percent fat content contains less calories than the same quantity of a 12 percent butterfat ice cream. However, the two products with the same fat content would have similar caloric content.

Promotion and advertising of mellorine in the Tulsa market were primarily on a nationwide brand-name basis. Since most of the mellorine in the market was made by branch plants of national concerns, these branch plants reaped the benefits of brand-name advertising by their home offices. Television program sponsorship, large newspaper and magazine layouts, and radio coverage kept the brand name of the company before the consuming public.

Several large processors had contractual tie-ins with the large supermarkets. The supermarkets, the largest single retailers of mellorine, did not manufacture this product, although one supermarket firm had begun making other frozen desserts. Contractual tie-ins with the supermarkets by the larger mellorine processors enabled these supermarkets to buy advantageously and move more of the product.

As in the Dallas-Fort Worth area, many of the larger companies followed the full-line concept of supplying their retailers. These processors were able to compete more effectively for outlets, and they realized economies of delivery, storage, etc., that would be lacking in a single-item distribution system.

Several plants manufacturing mellorine in Tulsa were distributing their product throughout the State through branch distributing plants in other market areas. In addition, there were several distributing plants in Tulsa that received their mellorine from manufacturing plants outside the Tulsa area. Thus, distribution of mellorine in Oklahoma tended to be on a Statewide basis. Large centrally located manufacturing plants of the national concerns supplied several distributing plants throughout the State.

In addition to the 4 large national concerns located in Tulsa (2 manufacturing plants and 2 distributing plants), there were 2 large local manufacturers of mellorine, and 1 supermarket chain had a plant to make frozen desserts. Two smaller plants, formerly manufacturing mellorine, had for all practical purposes discontinued its manufacture. The smaller manufacturers had stopped making mellorine because demand from their outlets had declined. The smaller processors indicated that they could not afford to compete with either the large local manufacturers or the national firms.

The major part of the mellorine produced and distributed in the area reached consumers through supermarkets. Supermarkets usually operated on a competitive-bid system for mellorine and dairy products, and the manufacturer who submitted the lowest bid became the supplier for the supermarket during the contract period. Drugstores, drive-in stands, confectioneries, and institutions were other outlets utilized by the processors, but the supermarket remained the dominant factor in the distribution pattern. The market areas served by the plants producing and distributing mellorine in Tulsa were so varied that no generalization could be made about them. Some of the smaller plants distributed only in the county and the immediate vicinity, while others covered the entire State with mellorine sales and parts of several States with their marketing of butterfat frozen desserts.

Full-line merchandising was a competitive factor in the area. The firm which processed ice cream, cheese, mellorine, and fluid milk had a sales advantage over a one-product concern, as well as advantages in operating and overhead costs. This was especially important in wholesale distribution, but it occurred also in home delivery of frozen dessert products. The fact that a manufacturer could move his mellorine directly to the consumer through his milk-route truck supplemented the retail function and facilitated delivery of the product. Home delivery was significant for several of the manufacturers, although it did not constitute a highly significant part of the market. There were some company-owned retail stores in Tulsa, and a few were scattered throughout the county. These stores provided counter and carry-out service for the frozen dessert products.

Mellorine was marketed almost entirely in half-gallon packages in Tulsa, with sales divided about evenly between round and square cartons. Basically, mellorine prices in the Tulsa area were formulated with an eye to the competitive retail situation. Many of the manufacturers of mellorine used a cost-accounting system, and theoretically might have added a profit margin to their cost to determine their selling price, but in the last analysis it was competitive practices in the market that regulated the price sought by the manufacturer. The Tulsa mellorine market did not, however, reach the proportions of price cutting that were observed elsewhere. Price cutting and use of the product as a price leader had been fairly well confined to weekend sales and specials. The product returned to its normal price level after these sales. When one outlet was promoting a special price on mellorine, the other companies did not tend to follow suit, but waited for the sale to finish and the price to return to its usual level.

Sliding-scale discounts were offered by almost all the processors. Discounts allowed retailers purchasing in volume either to sell their product at a lower price or to realize a greater profit margin at the regular price. The discounts ranged up to 20 percent, depending on the volume purchased.

All frozen desserts in the area had undergone price increases during the last few years. The increase in prices was attributed to a general rise in the costs of materials, overhead, and labor, and was about the same for mellorine as for ice cream. Mellorine prices in the area were generally quoted at 53 to 55 cents per half gallon wholesale, and at 64 to 69 cents retail. Retail prices of ice cream ranged from 80 cents to $1.02 per half gallon. The wholesale prices quoted were those before the sliding scale of discounts was applied.

Retail prices varied with the locations of the retailers. The difference was as much as 10 cents for a half-gallon package. The in-city price was generally lower than the price in the stores in the county fringe area where competition was not so keen or volume was low. The central-city outlets were probably better able to take advantage of the sliding-scale discounts, and purchased the product more cheaply than did the fringe or county outlets.

Manufacturers received a lower profit margin on mellorine than on ice cream or ice milk. Pricing of ice cream and ice milk was less competitive than pricing of mellorine, and margins were higher than for mellorine. Retailers generally realized the same profit margin on each of the frozen dessert products sold except when sliding-scale discounts allowed the merchant to sell at a lower price or receive greater profit on some products.

The technical problems of producing mellorine in the Tulsa area did not differ materially from those in other areas observed. Generally, processors used a blend of vegetable fats in the product, although some animal fats were used. Fat content for mellorine ranged from the State minimum of 6 percent to a high of 10 percent.

Some plants had discontinued making mellorine. They said they had discontinued because of losing supermarket accounts. These plants were now making and promoting ice milk. They were able to find outlets for the product in drugstores, confectioneries, and drive-in stands where demand for mellorine was not so great.

Costs of producing mellorine were reported to be essentially the same as those for ice cream except for a lower cost for fat. Some companies realized lower costs by using cheaper flavoring agents in mellorine than in ice cream.

Some plants made mellorine mix for sale to others for freezing. Their outlets consisted almost exclusively of drive-in stands. Branch distributing plants received the frozen product from the manufacturing plant, and therefore did not handle mix.

There were mixed feelings in the Tulsa area as to the future of mellorine. Some persons in the industry thought the product would continue to command a sizable degree of consumer acceptance and would continue to be a strong factor in the frozen dessert market. However, mellorine was being challenged by ice milk. Production and sales of ice milk had increased rapidly during the last few years. Processors said they could realize a greater profit margin on ice milk than on mellorine, and that retailers, too, made a greater profit.

Ice milk was receiving greater promotion and advertising than mellorine, and its price and low calorie content had been stressed. Most manufacturers in the area believed that there was room for all three products--ice cream, ice milk, and mellorine. Each had a different appeal for the consumer, and it was contended that all three products would continue to expand in volume because of the increased population in the area and the improved economic status of the people. Processors did not anticipate a general price war. There was no prediction of the subsequent cheapening of mellorine, but rather an anticipation of steady improvement for the product in the market.

There was a distinct product differentiation between mellorine and ice cream in Oklahoma, primarily because of State labeling requirements. Processors seemed to feel that consumers bought mellorine because it was mellorine, and not with the misconception that it was ice cream. The manufacturers saw this as a healthy factor, and saw no particular market problems that could be caused by a lack of product differentiation.

LITTLE ROCK

Economic and Marketing Background

Arkansas has been moving toward industrialization during the last several years. The hub of the industrial movement is in and about Little Rock, the capital city. Metropolitan Little Rock is defined by the Census Bureau as coexistent with Pulaski County; the corporate areas include the contiguous municipalities of Little Rock, North Little Rock, Cammack Village, and Sherwood. Another sizable city, Jacksonville, is within Pulaski County, and is 17 miles northeast of Little Rock. 12/ The little Rock retail trade area is illustrated in figure 3.

12/ Little Rock Chamber of Commerce. Metropolitan Little Rock, 1, undated (mimeo.).

LITTLE ROCK TRADE TERRITORY

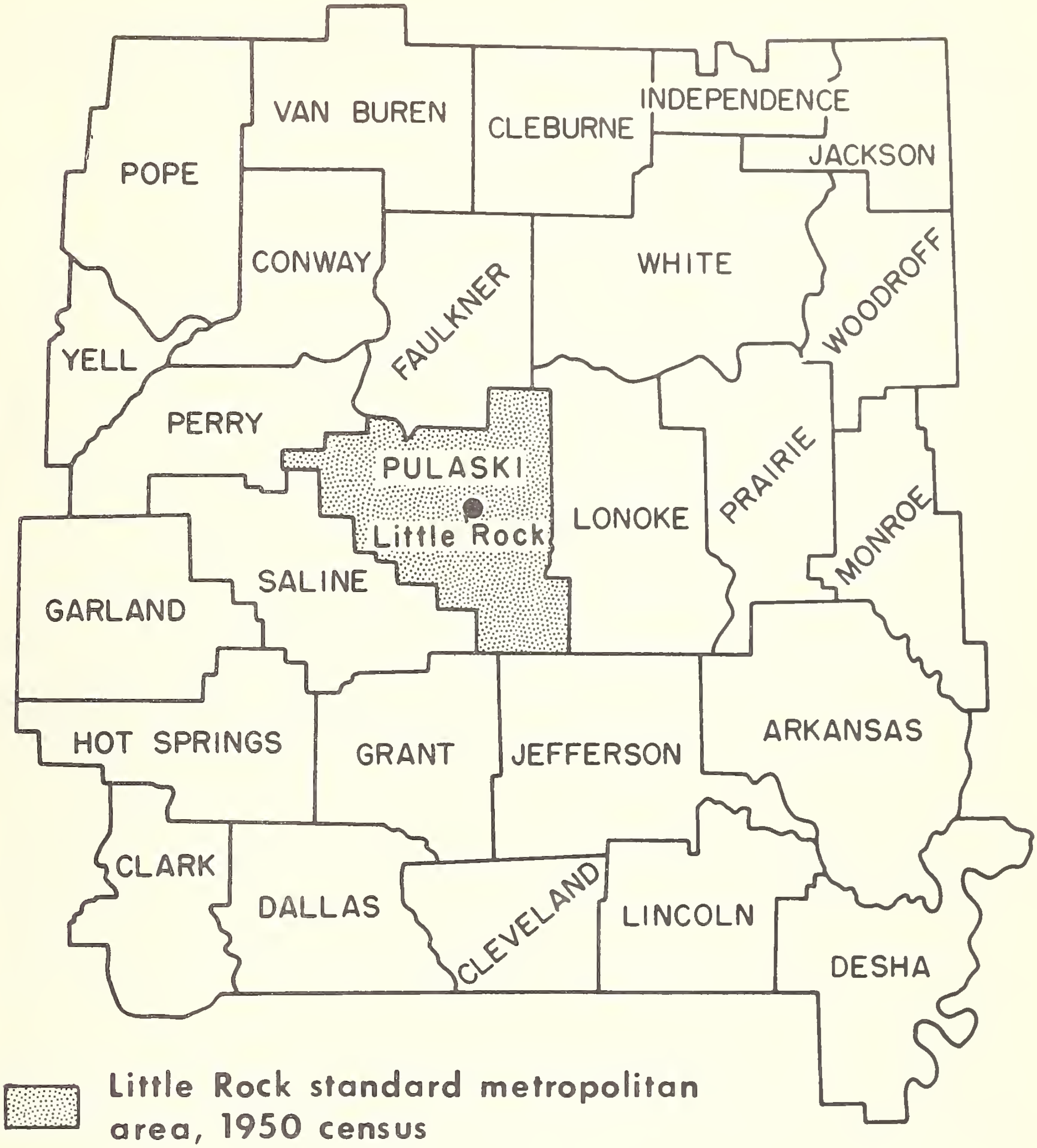

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Figure 3

In the Little Rock metropolitan area, between 1939 and 1956 the number of industrial plants increased from 129 to 380, a gain of 195 percent. From 1939 to 1954, the value added by manufacture rose from $8,892,000 to $67,971,000, an increase of 664 percent. 13/

In more recent years, between 1950 and 1955, manufacturing employment in the area increased from 11,700 to 12,900, a gain of over 10 percent. During the same period, the total nonfarm employment figures grew from 65,000 workers to 70,900, a growth of over 8 percent. 14/

In 1950, the population of Little Rock metropolitan area was 196,685, and by 1956 it was estimated at 240,900. 15/

Pulaski County has a land area of 781 square miles, and in 1950 there was a population density of 252 persons per square mile. The urban areas around Little Rock and North Little Rock combined have a land area of 38.3 square miles, and the population density in 1950 was 4,012 persons per square mile. 16/

Little Rock served the entire State with frozen dessert products. Ice cream and mellorine were made in other sections of the State, but the concentration of five sizable manufacturers or distributors in Little Rock made this area the focal point for the State's frozen dessert supply.

Production and Marketing

Mellorine apparently had not captured as much of the frozen dessert market in Little Rock as it had in the Dallas-Fort Worth and Tulsa areas. The best estimates were that 20 to 25 percent of total frozen dessert sales in the Little Rock metropolitan area were of mellorine. For the State as a whole, mellorine production was 11 percent of the total production of frozen desserts. These estimates were considerably below those obtained in other interview areas.

Several factors influenced mellorine sales in the Little Rock area. Mellorine in Arkansas had a relatively high fat content and it was frequently used as a price leader.

The State statutes specified a minimum fat content for mellorine of 10 percent, and required that 16,800 USP units of vitamin A be added to each gallon of the product.

Supermarkets, the primary movers of mellorine, frequently offered the product as a price or loss leader, particularly on weekend sales. These sales were probably encouraged by the sliding-scale discount offered by the Little Rock manufacturers of frozen desserts. This discount, contingent on the

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13/ See p. 3 of reference, footnote 12.
14/ See p. 2 of reference, footnote 12.
15/ See reference, footnote 12.
16/ See pp. 27 and 75 of reference, footnote 3.

volume purchased, ranged up to 20 percent. In addition, these special sales helped to introduce the product to the consumer. The special sales did not appear to cause a general or lasting disruption in the market, and prices again sought their normal competitive level after the special expired.

Wholesale prices in the Little Rock area were, with some exceptions, \$1.40-\$1.55 per gallon for ice cream, and \$1.00-\$1.10 per gallon for mellorine and ice milk. These figures are without benefit of the sliding-scale discounts.

Retail prices of mellorine in the area were generally quoted at 65 to 69 cents per half gallon. This was the normal price. However, at the time of the interviews in the area, 1 supermarket was featuring a sale which listed mellorine at 39 cents per half gallon. There were no indications that there was or had been any price cutting that reached the proportions of a price war.

As in the Tulsa area, there appeared to be a price differential for mellorine between the central-city Little Rock area and the urban fringe and county area. The price was lower for the product in the downtown locations because competition was more fully at work in this area. If a consumer thought the price for the product was too high in one downtown supermarket or grocery store, it was usually only a short distance to another store where the competitive price might be lower. Outside the city, on the other hand, this freedom of choice was limited by the time and distance factors. This was particularly true in the outlying county areas. Here the outlet had a more or less captive buyer, for the time and distance involved in traveling to the downtown area would probably more than offset the financial savings that could be realized. As a result, the stores in the county area could and did demand a higher price for mellorine than the central-city area. In addition, the downtown outlets, with greater volume of sales, were in a better position to realize savings on the sliding-scale discounts offered by the manufacturers, and these savings could be passed on to consumers in the form of lower prices.

Some consumers regarded mellorine as a low-calorie dessert, even though there was no evidence that mellorine was advertised or promoted in this fashion. Labeling requirements in the State did not specify that the volume of fat content be displayed on the carton. The lower price of mellorine, plus the direct competition between mellorine and ice milk, which is in reality a low-fat dessert, may have been contributing factors to the persistence of the idea that the vegetable-fat product had a low calorie content.

Although very little product advertising of mellorine was observed in the area, producers felt that brand advertising had helped mellorine sales. Promotion of mellorine as a product had been limited to some point-of-sale advertising and newspaper advertisements to announce weekend or special sales. Two of the larger plants in Little Rock were affiliates of national concerns that sponsored full television shows, radio broadcasts, magazine and newspaper advertisements, and signs and billboards to some extent. Thus, mellorine sold under these brand names received the benefit of the advertising of all the company products. The one local independent company in Little Rock had recently begun an advertising campaign, and could not, at that early date, evaluate the success of the campaign. Its advertising was primarily in newspapers, and since the company was a supplier in the full-line sense, its copy was written on a company-name basis rather than on an individual-product basis.

Arkansas permits the frozen dessert manufacturers to supply retailers with cabinets or freezers, so this practice was fully accepted and freely followed in the area. Freezers and holding cabinets supplied to the retailers by processors generally carried the stipulation that the fixtures supplied be used for the supplier's products only.

Supermarket supply was assured through manufacturer-retailer contracts. In the Little Rock area, manufacturers bid for the right to market their dairy and frozen dessert products through a specific chain of supermarkets. This practice not only assured the supermarket a constant supply of products, but also assured the manufacturer of a market to the extent that his retailers were effective merchandisers. Supply contracts between processors and retailers were subject to open bids periodically, usually once a year, so that even though a manufacturer held a contract at the time of the interviews, there was no assurance that he would not be underbid and lose the contract for the succeeding period.

As in other market areas, the full-line concept prevailed in Little Rock. The desire to follow the full-line concept of distribution in the area was shared equally by the processor and the retailer. The manufacturer, of course, could realize certain economies in distribution costs, while the retailer could realize economies in bookkeeping, display, and other factors.

The operation of the mellorine industry in Little Rock was, with a few minor exceptions, little different from operations in other areas. Mellorine was made by producers of other frozen desserts, distributed in company-owned vehicles, made according to the particular standards set up by the State, sold at a price that is basically competitive, and promoted to some degree.

In line with the national trend, Little Rock showed evidence of concentration in the frozen dessert industry. The number of plants making the vegetable-fat frozen dessert in Little Rock was less than might be expected for a city of this size. Territories for Little Rock processors generally included the entire State. In all, there were 3 primary processors, 2 of which were branches of national concerns. The remaining processor was a large local independent dairy. In addition to the manufacturing plants, there was one affiliate of a national concern that acted as a distribution plant for the market area. There were formerly more plants that made mellorine, but recently one had been purchased by a national concern which utilized the plant to make its own products.

The distribution of mellorine in the Little Rock market area can be divided into three broad categories: Distribution by local manufacturers of mellorine, by local nonmanufacturing plants, and by plants located in other cities. Some mellorine was brought into Little Rock from manufacturing plants in Pine Bluff and El Dorado, Ark., and from Cape Girardeau, Mo. According to Little Rock manufacturers, importations were from areas where savings in overhead costs could more than counter the added cost of getting the product to market.

It was rather difficult to define specifically the market areas served by the Little Rock mellorine manufacturers. Some of the companies distributed their products Statewide, while others concentrated on the metropolitan area and a few of the surrounding counties. Statewide distribution was preferred by the greater number of companies, and was perhaps a trend in States whose area and population were not unmanageable in size.

Distribution methods generally took the form of delivery, in company-owned trucks, from the production plant to the outlet, or delivery to branch distributing plants for further distribution to retail outlets. Some home deliveries were being made on milk routes of the dairies.

One processor in the area, in addition to processing his own products, manufactured and packaged mellorine for a distributing plant which, in turn, marketed the product throughout the State. This distributing plant also purchased its ice cream, but from one of its affiliated plants outside Arkansas.

Distribution of mellorine in the area was almost exclusively through the supermarkets and grocery stores. Small amounts of the product moved through drugstores and into institutions, but the grocery markets were by far the most widely used. Contract arrangements between the supermarkets and the processors have been mentioned previously.

Production patterns in the Little Rock area did not differ materially from those observed in other areas. Mellorine was made by the manufacturers of other frozen desserts, and it had become an accepted part of the full line of products.

The manufacturers all utilized a blend of various vegetable fats in their mellorine. Manufacturers believed the blend produced the best results, and there was believed to be less danger of an alien taste than when using just one fat. No animal fats were used, because the Arkansas State law specifically prohibited their use.

All of the manufacturing plants in the area began the manufacture of mellorine to meet competition. The plant that first made mellorine in the State had later been absorbed by a larger plant. The fact that the State is bounded by four States where mellorine production is legal might have had some effect on the competitive structure of the market. It was reported that mellorine had been shipped into the Little Rock area from neighboring States. The initial competition may first have appeared from outside, since at least two of the neighboring States had mellorine before the product was legalized in Arkansas.

In costs of production, the fundamental difference between ice cream and mellorine lay in the differential in the costs of the two types of fat. Packaging, delivery, labor, and other costs for the two products were reported as approximately the same.

The number of plants manufacturing frozen desserts in the area had declined in the last few years. This had resulted from the acquisition of smaller plants by the larger plants. The area was the first visited where no manufacturers could be classified as small and local.

Without exception, the frozen dessert manufacturers in the Little Rock area expressed the opinion that mellorine was a product that would remain and would continue to increase in sales in the market area.

The sale of the product in Arkansas has been more or less on a regional basis. For instance, there were areas within the State where the vegetable-fat product enjoyed more sales than in others. In the northwest section, sales of mellorine had been less than those in the southeastern section.

There was also an unusual seasonal factor in Arkansas. Arkansas experienced the normal seasonal fluctuations in demand for frozen desserts, but the cotton harvest season was an additional factor. At the time of the cotton harvest in the eastern section of the State, demand for mellorine rose sharply, and it declined just as sharply when the picking season was completed. The product was evidently well received by the itinerant workers and their families in that area.

The main competition with mellorine came from ice milk. Ice milk appeared in Little Rock before legalization of mellorine, and seemed to have gained rather widespread sales volumes. The two products had approximately the same wholesale and retail prices. Those persons who desired a lower calorie product made entirely of dairy products would normally choose the ice milk, while those consumers who wanted the product with the higher fat content, at the same price as ice milk and below the price of ice cream, would buy mellorine.

ST. LOUIS

Economic and Marketing Background

An area covering the eastern sector of Missouri and the southeastern part of Illinois comprises the trade area claimed for St. Louis. It extends approximately 150 miles from the city, and includes 91 counties within the 2 States. Wholesale grocery and drug distribution areas generally conform to this area (fig. 4).

The area described includes the St. Louis metropolitan area, as defined by the Bureau of the Census, straddling the Mississippi River and composed of Madison and St. Clair Counties in Illinois, and the city of St. Louis, St. Louis County, and St. Charles County in Missouri (fig. 4).

St. Louis is the hub of retail and wholesale trade, manufacturing, finance, and transportation for the entire area. It serves as an important link between the East and the Midwest and Far West regions.

The city is a major metropolitan area, with national rankings of 9th in population, 9th in number of families, 11th in effective buying income, and 10th in total retail sales. 17/

17/ The St. Louis Globe Democrat. The True St. Louis Market of 1956, p. 6, undated.

ST. LOUIS TRADE TERRITORY

U. S. DEPARTMENT OF AGRICULTURE NEG. 6361-58 (7) AGRICULTURAL MARKETING SERVICE

Figure 4

Within the city limits there were 872,800 persons in 1956, giving a population density of 14,308 persons per square mile. The St. Louis urban area, on the other hand, covers 227.8 square miles, and 1,849,200 persons live in it. The population density in the metropolitan area is 8,118 persons per square mile. 18/

Population in the St. Louis metropolitan area increased to its present size from 1,681,300 persons in 1950, a rise of over 10 percent in 6 years. In the same time (1950-1956), the number of families grew from 490,200 to 569,600, an increase of more than 16 percent.

Situated on the border between two States where mellorine is a legal product, St. Louis provides an ideal site for a manufacturing center for mellorine and other frozen desserts. In St. Louis itself, there were 14 mellorine manufacturers when this study was made, and the inclusion of the remainder of the St. Louis standard metropolitan area added another 5.

In addition to these 19 mellorine manufacturers, there were 4 other processors of frozen desserts that did not make mellorine. Market territories for the plants varied, ranging from central-city distribution up to 285 miles from St. Louis. Part of the Springfield, Ill., mellorine market was served by the St. Louis processors, and distribution lines extended far westward into Missouri.

Production and Marketing

Mellorine manufacturers interviewed in the St. Louis area estimated that 20 percent of all frozen dessert output in the region was in the form of mellorine. The product first appeared in the area in 1952 and met with immediate success. Production reached its peak in that same year, when, manufacturers believe, mellorine commanded almost 50 percent of the frozen dessert market. Following the peak period, production declined, but apparently stabilized, at least for the last 2 or 3 years, at the 20 percent figure. This percentage figure indicated that St. Louis was one of the better mellorine markets in the State, for Missouri totals showed that mellorine sales accounted for only 11 percent of total frozen dessert sales in the State. A variety of factors have influenced the initial success and subsequent stabilized popularity of the product.

The mellorine produced in St. Louis was comparatively high in fat content. Although Missouri had no statutory minimum for fat content of mellorine the majority of the manufacturers, including the larger ones, were making a product containing 9 or 10 percent fat. It was generally stated that the other ingredients, such as sweeteners, flavors, and milk solids-not-fat, were of good quality, so the finished product apparently was maintained at a relatively high standard. The minimum fat requirement in Illinois for mellorine was 8 percent, but the mellorine made in that part of Illinois that lies within the St. Louis metropolitan area was also generally a 10-percent-fat product. There appeared

18/ See reference, footnote 3. Also, Sales Management, Survey of Buying Power, Vol. 77, No. 10, p. 534, May 10, 1956.

to be two valid reasons why the Illinois plants conformed to the higher standards for fat content: One was the fact that several of the plants in Illinois operated under a franchise controlled by a St. Louis plant, and made their products according to the franchiser's specifications; the second reason was that the mellorine made in Illinois was in direct competition with the Missouri product and was kept at the relatively high standard to compete effectively.

Profit margins on mellorine were generally equal to, or higher than, those for ice cream in St. Louis. Manufacturers frequently were able to realize a greater profit margin on mellorine than on ice cream, and for this reason they naturally attempted to move as much of the product as possible. This profit margin motive was carried one step further, for the retailer also usually received a similar or larger margin on mellorine than on ice cream, which gave him an added motive to promote mellorine.

Most St. Louis manufacturers of mellorine offered their retailers a sliding-scale discount. This discount for volume purchases of mellorine, as well as other frozen desserts, ranged up to 20 percent, depending on the amount purchased. This method of wholesale pricing, in some degree, was found in practically all the market areas studied, and appears to be almost universal in the frozen dessert industry.

The larger mellorine processors in the St. Louis area had agreements, either tacit or contractual, through which the individual processors supplied supermarkets and other leading outlets with their frozen dessert products for a stated period of time. Included in these agreements were two fundamental factors that appeared to have an effect on mellorine. First, the manufacturer supplied retailers with freezers and storage cabinets to be used exclusively for the manufacturer's products. Second, the concept of an exclusive full line of products was followed. These arrangements allowed processors and retailers to realize some economies. The primary outlets for mellorine in the area were supermarkets and grocery stores. The larger supermarket chains usually were supplied on a contractual basis, but the smaller grocery stores were on a less formal basis. However, the full-line concept was still important. Company-owned stores were a popular type of outlet. One company had several such stores, and several other processors maintained outlets for their frozen desserts at the plant sites.

That mellorine was a low-calorie dessert appeared to be a generally accepted idea in the area. Although the idea was questionable in fact, little or no effort had been made to discourage it.

At the time of introduction of the product in St. Louis, the two pioneering companies, incidentally the largest processors in the area, did a great deal of promotion and advertising to introduce the new product. Newspapers, radio, television, billboards, and point-of-sale promotion were used extensively. Thus the public was made "mellorine-conscious," and a certain amount of this promotion was continued. Price was not particularly stressed; rather, the processors formed the advertising programs around quality and special flavors. The fact that mellorine was held at a relatively high price seems to have accounted for the fact that the selling price of the product was not stressed.

These two pioneer companies were not the only ones that advertised in the area, but they were the only ones found that pointed their promotion toward mellorine. The other processors promoted company or brand names that covered all of their products. The branches of national firms relied, to a large degree, on the national advertising schemes of the parent companies for much of their promotional coverage. Media most frequently used were newspapers, radio, television, and point-of-sale promotion.

Since mellorine at the time of the interviews supplied a smaller part of the market than it did at first, causes of the decline are of interest.

Certain grades of ice cream, rather than mellorine, have been used as price leaders in the area, as was found in other markets. In the St. Louis region, some manufacturers attempted to combat the popularity of mellorine and to increase their ice cream output by featuring ice cream on weekend sales and special occasions. These sales certainly tended to put ice cream in the foreground, and, according to interviewees, caused a decline in sales of mellorine.

Most of the frozen dessert manufacturers in the area made 2 grades of ice cream, and several made 3 grades. The lower priced ice cream formed the major basis of competition for mellorine. At times, ice cream was sold at a lower price than mellorine.

Mellorine prices had been maintained at a fairly constant level, high in relation to those for ice cream. There was little or no evidence of price cutting and subsequent general lowering of prices. Generally, mellorine was selling for the same price at the time of the interviews as it had sold when it first appeared in the market. Processors tended to maintain a high fat content in the product and to hold the prices relatively stable, compared with prices in other areas. Retail prices generally quoted in the area were 65 to 79 cents per half gallon of ice cream, and 59 to 69 cents per half gallon of mellorine. The pricing practices seemed to follow the lead of the two major manufacturers. These two processors, holding a large part of the market, succeeded in avoiding cutthroat competition.

The sale of ice cream at a lower price than mellorine in St. Louis contrasted with the situation in the other market areas studied. The normal, or most popular, price for mellorine was 69 cents per half gallon, and the low-priced ice cream was selling for 65 cents per half gallon. Mellorine prices had not generally been dropped in an attempt to meet this competition.

The operation of the mellorine industry in the St. Louis metropolitan area differed in some respects from that observed in other areas. As is the usual practice, mellorine was made mostly by producers of other frozen dessert products in the area, but one of the St. Louis pioneers in mellorine manufacture had begun operations from his cheese plant and later had redesigned it and devoted it entirely to production of mellorine. The plant, set up specifically for the manufacture of mellorine was, so far as is known, the only such operation in existence. However, the plant was later taken over by a national concern, and other frozen desserts were made there. At the time of the interviews, the area conformed to the pattern observed in other areas where all manufacturers of mellorine also made other frozen desserts.

Another distribution factor in which St. Louis differed from other areas studied was the franchise type of operation. One large processor in St. Louis franchised several smaller plants to manufacture the brand of mellorine that was made by the franchiser. For this privilege, the franchise holder paid a set gallonage price to the franchiser. The franchise holder more than made up this cost by savings that were realized in carton costs. The franchising agency bought the cartons for all of the plants, including its own, in huge quantities. The franchise holder then purchased the cartons at a price well below what he would have paid in purchasing singly in smaller lots. The mellorine was made according to the specifications of the franchiser in order to insure a product of uniform quality.

In the St. Louis area, mellorine moved freely across State lines, even though Missouri and Illinois regulations concerning mellorine differed somewhat.

One difficulty that confronted the Missouri manufacturers of mellorine who shipped their product into Illinois was that of labeling.

Illinois and Missouri labeling requirements differ. The Illinois law requires that the words "________(specified, vegetable or animal) Fat Frozen Dessert" be used on mellorine. While Missouri has no specific law for mellorine, its pure food and drug act requires the use of the words "Imitation Ice Cream." Processors in the two-State area were meeting this difference in requirements by using identical cartons with interchangeable tops, the top bearing the necessary inscription.

The mellorine market was dominated by two large independent producers. Although one of these producers was recently acquired as a branch plant of a nationwide dairy products manufacturer, the mellorine produced continued to carry the independent's brand name and to hold a large part of the market.

In addition to the 2 plants mentioned above, there were 17 other plants making mellorine in the St. Louis metropolitan area. Of these 17 plants, 3 were branches of national concerns, and the remaining 14 were independents. There were 4 dairy product manufacturing establisments in the St. Louis area that did not make mellorine, and there was 1 plant that did not manufacture any products but acted as a distribution agency for dairy and vegetable-fat frozen desserts in a 13-county area in Illinois.

The operators of the 4 plants in the area that did not manufacture mellorine all held strong opinions that preclude the manufacture of anything nondairy. Only 1 of these 4 went so far as to condemn mellorine as a product. The others stated their belief that mellorine had a definite place in the market, but that they preferred not to get involved in its manufacture.

There was some evidence of concentration in the frozen dessert industry in the area. Several independent firms had merged with or had been purchased by national firms. However, the relatively large number of independent firms attested that this concentration had not been vigorously pursued. Even though the area had so many plants, production and sales of frozen desserts were well concentrated. For instance, four major companies had considerably more than half the market.

The market area served by the mellorine manufacturers in the St. Louis area ranged from the central city itself to a territory extending 100 miles from the city, somewhat less than the trade area previously described. The larger plants tended to extend their distribution routes farther than the smaller plants. Delivery to retail outlets was by company-owned trucks. Few home deliveries were made.

Most of the manufacturers used a blend of various vegetable fats. Instances were observed where a single vegetable fat was used, or a blend of vegetable and animal fats, but the blend of vegetable fats predominated. Missouri and Illinois laws did not prevent the use of animal fats.

At the time of the interviews in the area, vegetable fat was wholesaling for 22 1/2 cents per pound, while butterfat prices were 81 cents per pound. Thus, the difference in cost of fat per gallon of frozen product was approximately 26 cents.

With one exception, the processors of mellorine stated that they began the manufacture of the product to meet competition. The one that did not give this reason was the first to produce the product in the area. His reasons for starting manufacture were to expand his existing business and to be the first in the area to produce this product that had already gained popularity in Texas.

Packaging of mellorine in the area generally followed the widely observed trend toward the half-gallon container. 19/ The half-gallon container seemed to lend itself more readily to the supermarket and larger grocery store type of retailing. As already pointed out, these two types of outlets moved most of the mellorine in the area.

Unless there is some change in the pricing structure in the St. Louis market area, prospects for growth in sales of mellorine do not appear to be particularly bright. In other areas, where mellorine was acquiring a larger part of the market, or at least holding its own, the price was considerably below that of ice cream. In these areas, price was the feature most frequently stressed in advertising. With ice cream selling in St. Louis at approximately the same price as mellorine, it is difficult to visualize any appreciable gains in mellorine sales. On the other hand, the mellorine market in the St. Louis area did not seem to be declining further, although the vegetable-fat product now commands less of the total frozen dessert production than it did a few years ago. New competition from ice milk would further influence the future trend in sales of mellorine.

Although the ice milk market in the area was negligible, with most of the production going into novelties, the situation threatened to change. Several of the larger manufacturers of frozen dessert were contemplating large-scale ice milk production. This would enable the manufacturers to offer a truly low-calorie product. In addition, if they were able to sell ice cream at a price comparable to that of mellorine, they would probably be able to move their ice

19/ See pp. 54-58 of reference, footnote 6.

milk at a price substantially below that commanded by the vegetable-fat product. There was a preference among manufacturers for the "all-dairy" product, and ice milk fills the requirement and satisfies this preference.

PORTLAND-CORVALLIS

Economic and Marketing Background

Portland might be described as a market or trade center for 2 of the 4 geographic regions of the State. A narrow strip of land along Oregon's Pacific Coast, rather thinly populated and having as major industries, fishing, lumbering, tourist trade, and agriculture, especially dairying and livestock production, forms one of these areas. The other is the Willamette Valley. The valley is a long stretch of land lying between the coastal mountain range on the west and the Cascade Mountains on the east.

The Willamette Valley contains about three-fourths of the State's population, and its economy includes manufacturing, transportation, and lumbering industries, as well as agricultural activities. In it are several of the State's larger communities--Portland, Oregon City, Salem, Albany, Corvallis, and Eugene.

Portland's trade territory is not strictly limited to these two geographic areas, for its location also makes it a natural trading center for certain areas in southern Washington State, as well as areas of eastern Oregon (fig. 5). The Columbia River Valley is the major water-level route from eastern Oregon, Washington, and Idaho to the Pacific Coast.

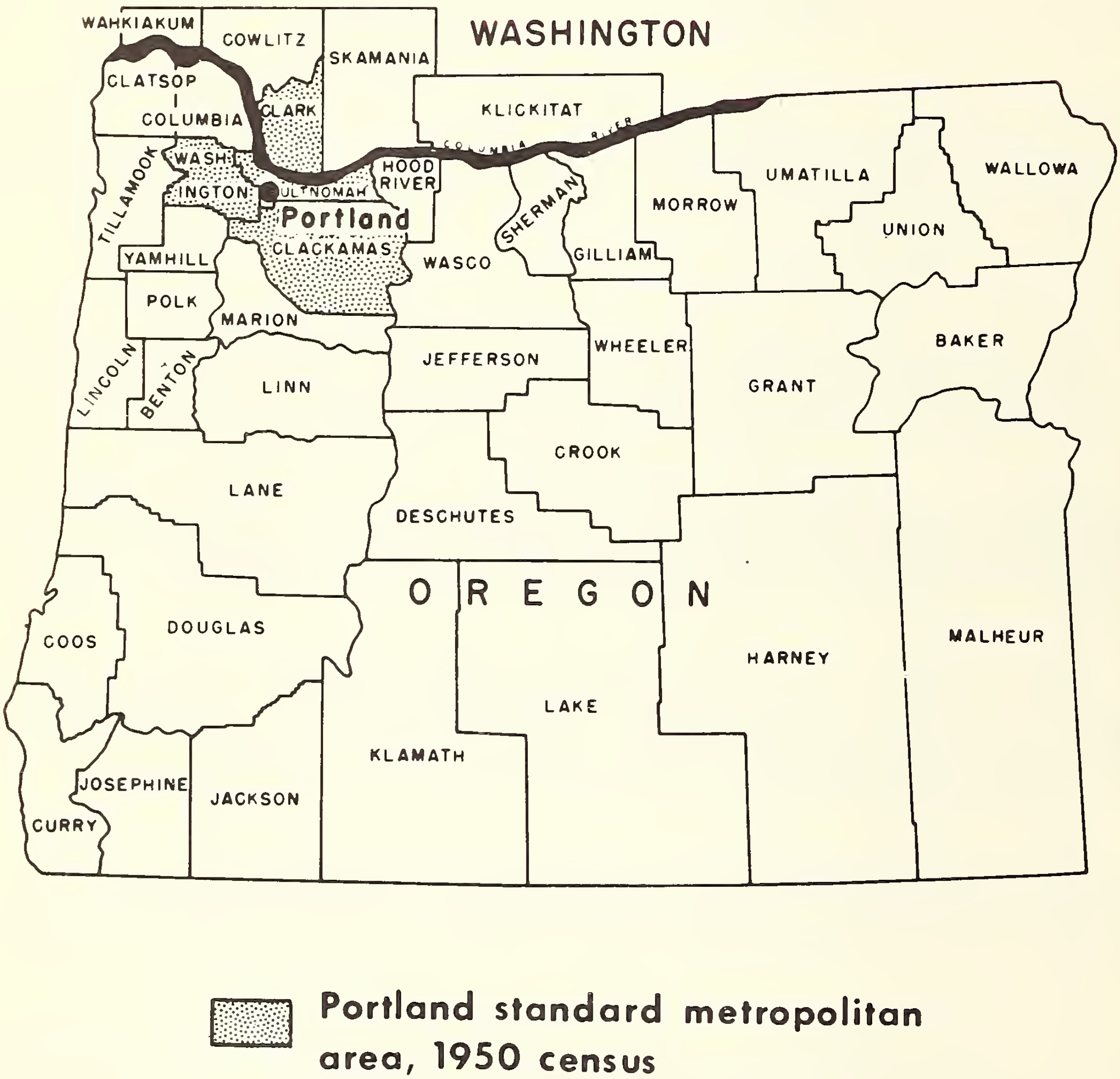
Corvallis, south of Portland in the Willamette Valley, is oriented toward Portland. It is more a part of the Portland market than a market in itself. It had a population of approximately 18,000 in 1956, about 10 percent more than in 1950. Its major activity, besides servicing the surrounding agricultural area, centers around Oregon State College.

Portland is the center of a metropolitan area consisting of Multnomah, Washington, and Clackamas Counties in Oregon, and Clark County in Washington State (fig. 5). The city itself had a population in 1956 estimated at slightly over 400,000, and the metropolitan area a population of approximately 800,000.

Since 1950, manufacturing employment has grown and is estimated at 60,000 for the Portland metropolitan area. Approximately one-fourth of this employment is in metal industries. Wood-products and food-processing industries include about one-third of the manufacturing employees, and the remainder are spread among pulp and paper, chemical, textile and apparel, printing and publishing, and furniture industries.

In addition to its trade and service industries and its manufacturing and processing, Portland receives considerable income from the agricultural, fishing, and timber resources of the region. None of these has any greater effect on the

PORTLAND TRADE TERRITORY



U. S. DEPARTMENT OF AGRICULTURE NEG. 6362-58 (7) AGRICULTURAL MARKETING SERVICE

Figure 5

city, though, than power--hydroelectric power already developed and that yet to come, along with the natural gas being piped into Portland from the San Juan Basin in Colorado and New Mexico and from Canada.

The Portland-Corvallis area is served by 9 manufacturers of frozen desserts, only 3 of whom make mellorine. There were formerly 5 plants that made the vegetable-fat product, but 2 of these discontinued its manufacture. Trade territories for the mellorine processors range from the immediate city area to the entire State. One frozen dessert processor markets his ice cream, ice milk, and sherbet into the States of Washington and California.

Production and Marketing

Only an insignificant part of the frozen dessert market was held by mellorine in the Portland area at the time of this study. In the State of Oregon, 4 percent of total frozen dessert production was mellorine. Nevertheless, in Corvallis and farther south, especially in Eugene, mellorine had greater popularity and held some 25 percent of the market.

Several years back, Oregon had its own milk marketing law. This law became increasingly unpopular and, after a struggle, it was repealed. At the same time, there were groups advocating changes in Oregon laws to make more readily available to the public such products as margarine and vegetable-fat frozen desserts. As a result of activities centered around these two subjects, mellorine became a legal product in the State.

Those most able to promote mellorine in the Portland area had no particular desire to see it advanced. The large manufacturers of frozen desserts in Portland were not particularly interested in promoting the vegetable-fat product. The small companies did not have sufficient strength or determination to do the job. Consumers, knowing little about mellorine, made no strong demand for it.

The frozen dessert industry in the Portland area was concentrated in a relatively few firms. At the time of the interviews, only 7 manufacturers of frozen desserts operated in Portland.

Of the 7, 2 large nationally owned companies had the greatest part of the market. A published 1957 survey of consumer preferences 20/ showed 43.4 percent of the buyers preferred ice cream carrying the brand names of these 2 firms. In addition, private labels put out by these companies accounted for the preference of more than another 10 percent. Thus, the product of these 2 companies was desired above others by more than 50 percent of the consumers in Portland. Other reliable estimates also indicated these 2 firms controlled more than half the market.

Practically all the plants were operating at only a fraction of their capacity, but this had not led to unusual competition for sales. Oregon's

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20/ The Portland Journal. The 1957 Consumer Analysis of the Portland, Oregon, Market, p. 9, undated.

part of total United States production of frozen desserts had steadily declined since 1950, when it was 1.33 percent, to 1.0 percent in 1955. Production per capita in Oregon in 1950 was 22.10 quarts, but in 1955 it was only 19.45 quarts. Monthly sales of frozen desserts fluctuated widely, ranging from as low as 5 percent of annual production during winter to as high as 13 percent in summer. Here again, then, might be a reflection of entrepreneurship. Manufacturers had spent rather little effort in educating consumers that frozen desserts were an item of food and not just a luxury during warm weather.

The retail price of ice cream in Portland was a factor in keeping mellorine sales low. Mellorine had been retailing from 33 to 43 cents per quart; ice cream from 39 to 69 cents per quart. Since the lower priced ice cream sold at approximately the same price as mellorine, the consumer was not attracted to mellorine through price appeal as strongly as in some of the other areas studied.

Manufacturers did not discuss this price policy in comparison with alternatives or explain their choice. However, they did make two generalizations related to the situation: The same ice cream, for the most part, went into the private labels as into the regular brands; and manufacturers gave sliding-scale discounts on volume purchases. This situation might be restated as one in which sellers (retailers and manufacturers) differentiated margins for volume, and buyers (consumers) differentiated product by label rather than by quality.

The climate appeared to affect the sale of frozen desserts in the area. Portland, and all of Oregon west of the Cascades, had a mild, humid climate. Rainfall in the city averaged 41.6 inches annually. Average temperature in July was 67 degrees, and in January, 39 degrees. Normal annual average temperature was 53.1 degrees. Normally, there are not more than 24 hours during an entire summer when the thermometer stays at 90 degrees or higher. Without exceptionally hot weather, the consumers' interest in frozen desserts must have been minimized.

Whether promotion among persons in the lower income brackets would produce a larger market for mellorine is doubtful. The low-priced ice cream was not believed to appeal to consumers in these income brackets to any unusual extent.

The mellorine situation in Oregon pointed up the importance of manufacturers' attitudes in making either a success or failure of a product. The relatively minor part mellorine played among frozen desserts in Portland contrasted with the situation in the southern part of the Willamette Valley at Corvallis and Eugene. In these cities were plants whose owners had actively campaigned for mellorine legalization and had promoted it extensively in their territories. Four such plants outside Portland produced mellorine at levels of 30 to 50 percent of their total frozen dessert output. A large Portland manufacturer distributing in the trade territory of these plants had recently started to make mellorine to meet the competition from local plants.

The Portland-Corvallis market in most other respects reflected conditions present in most other cities studied. Pricing, promotion, marketing or distribution, and other activities appeared to follow the practices found in other cities studied. The principal difference was the fact, just described, that manufacturers in Portland, for the most part, were passive to the merits or demerits of mellorine as a product in the frozen dessert line. Thus, without an unforeseen change in attitudes in the market, there appears little likelihood that mellorine will attain greater significance in the area. The possible entry of manufacturers from the southern part of the Willamette Valley into the Portland market does not appear likely.

SPRINGFIELD, ILL.

Economic and Marketing Background

Springfield, the capital of Illinois, is located almost in the center of the State. Sangamon County, constituting the standard metropolitan area of Springfield, is listed as one of the 100 leading agricultural counties in the nation. Coal deposits in the area contribute to the economic pattern of the region. There is a diversification of interests and efforts in the area, with agriculture, government, industry, and tourism each contributing to the economic pattern. The trade and service industries needed to sustain the major industries and the persons employed in them are present also. Springfield serves as a transportation hub for central Illinois.

Sangamon County, the standard metropolitan area of Springfield, had a population in 1956 of 140,000 in an area of 880 square miles, or 159 persons per square mile. Springfield itself has 88,100 persons within its 10.4 square miles, giving a density of 8,471. The Springfield trade territory is illustrated in figure 6.

Economic growth in terms of buying income, retail sales, and bank deposits has been much more rapid than population growth.

As was mentioned previously, the St. Louis mellorine market territory extends as far as Springfield, Ill. In Springfield, however, there are three frozen dessert processors that handle a full line of frozen desserts, including mellorine. The trade territories of these plants are limited by competitive plants in all directions, and, as a result, distribution by the Springfield plants is oriented toward the city and its immediate environs. Seldom do the Springfield processors extend their distribution lines over 50 miles from their plants.

Production and Marketing

Although mellorine manufacturing in Springfield did not begin until 1953, consumers in the area were introduced to the product about 1951. Its position

SPRINGFIELD TRADE TERRITORY

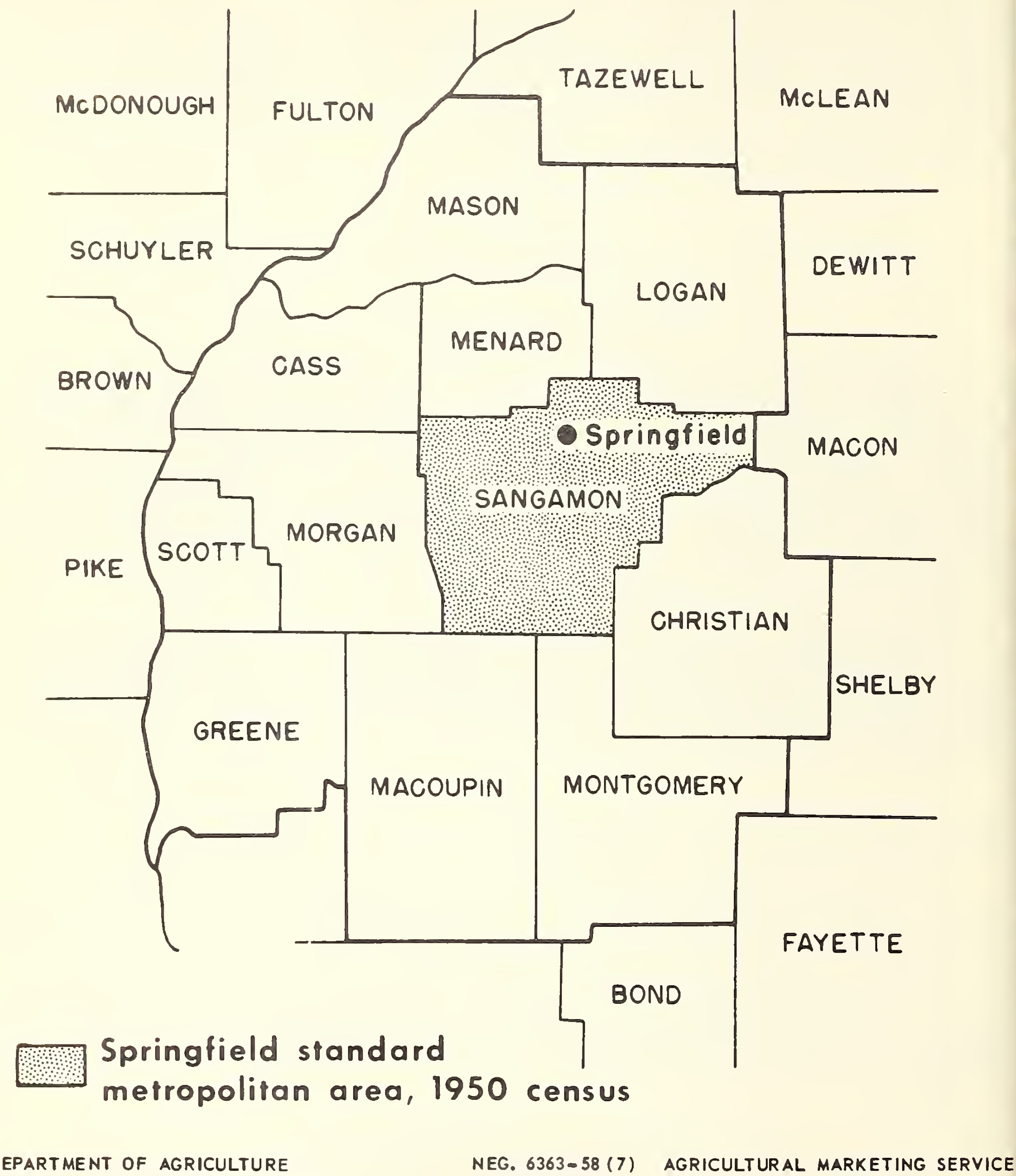


Figure 6

in the central part of the State made Springfield an excellent marketing target for both the Chicago and St. Louis mellorine manufacturers. St. Louis processors were the dominant factor in introducing the product to the city, and the manufacturers in Springfield began making the vegetable-fat product to meet this competition from outside the area.

Mellorine's part of the frozen dessert market in Springfield has not changed appreciably during the years the product has been made by local manufacturers. There have been some inter-industry shifts whereby one or another company increased its output, but this has generally been accompanied by a decline in production by another company.

Almost from the beginning, mellorine has had about 20 percent of frozen dessert sales, while in the State it had 11 percent. There were several factors that probably contributed to this apparent stability of the market. Mellorine manufacturers in the area did not think of making it a major item of their line. To them, it was a method of meeting competition from outside manufacturers. It cannot be assumed that the mellorine first sold in the area by manufacturers from St. Louis was entirely plus business; that is, over and above the normal volume of ice cream sales and production. In order to recapture part of the market that had been lost to mellorine, the local manufacturers began making the product as a countermeasure.

If the local manufacturers had desired to make mellorine a primary product and a major part of their frozen dessert line, this desire probably would have been reflected in their advertising and promotional campaigns, but promotion of mellorine in Springfield has been negligible. Advertising and promotion budgets were small, and in no instance was it found that mellorine was promoted or advertised as such. Promotion was on a brand-name basis that included all of the products of the manufacturers.

Another factor limiting expansion of production of mellorine, as well as other frozen desserts, in Springfield was the geographic position of the city itself, between Chicago and St. Louis. Any expansion of the market territory of the local plants has been checked by a wide coverage from these two producing areas. In addition, there were sizable mellorine operations within a more confined area around the city. Decatur, Pekin, Peoria, and Harrisburg all had mellorine processors, so a substantial expansion of operations into these areas by the Springfield manufacturers was not feasible.

The primary potential for expansion of mellorine sales by local processors appeared to lie in increasing the demand within the immediate vicinity of the city. Without promotion and advertising, any local expansion is highly problematical. Production has been geared to consumer demand, and consumer demand is highly dependent on consumer information. Without the impetus of successful advertising and promotion, it is difficult to foresee any major increase in mellorine sales in the area.

The mellorine industry in Springfield consisted of 3 manufacturing plants. These plants also made ice cream, ice milk, and sherbet. The 3 presented a cross section of business structure in that 1 was a branch of a national processor of frozen desserts, 1 was a large independent processor, and the third was a farmers' cooperative.

In addition to the production by these manufacturers, a significant amount of mellorine and other frozen desserts was imported from outside the standard metropolitan area and from outside the State. The primary reason that local mellorine makers did not have a larger part of the market was that producers from other areas had marketed the product in the Springfield area first. Outsiders, thus, had built up a certain amount of popularity among consumers that local makers had not overcome.

Locally made mellorine had fat contents ranging from 8 to 12 percent vegetable fat, compared with the legal minimum of 12 percent for ice cream. There was evidence that the flavoring and other product ingredients were of good quality. None of the processors in Springfield fortified his product with vitamins.

The most generally quoted retail price for mellorine in the area was 59 cents per half gallon. This price prevailed in the supermarkets. Quoted wholesale prices were $1.16 per gallon in half-gallon packages. This made the wholesale price appear just 1 cent per half gallon less than the retail price. The stores, of course, did not operate on such a small margin. Manufacturers offered discounts on a sliding scale according to volume purchased, up to 20 percent of the regular wholesale price. A 20 percent discount made the wholesale price of mellorine 93 cents per gallon in half gallons, or 46 1/2 cents per half-gallon package. The retailer then had a 12.5-cent margin per half gallon on which to work. Outlets not in the large purchasing categories usually priced their product 10 cents per half gallon more than the supermarkets. Thus, those outlets not able to take advantage of the maximum discount still realized at least 11 cents margin by selling at the higher price. These margins did not, of course, prevail constantly. They were the ones in effect at the time of the interviews in the area.

Prices of ice cream were between 69 and 81 cents per half gallon.

Retail prices of mellorine fluctuated in competition with those for ice cream and ice milk, and were used as price and loss leaders on special sales. There were instances cited where mellorine was sold as low as 29 cents per half gallon with each $5 order of groceries from a particular market.

A comparison of production cost factors for mellorine and ice cream in Springfield revealed that the only cost differential lay in the price of the fats used. None of the manufacturers indicated that other factors such as stabilizers, milk solids-not-fat, or storage of raw ingredients made for higher prices for mellorine; neither did they indicate that they were able to lower the cost of the vegetable-fat product by using different flavoring or sweeteners than were used in ice cream. Distribution costs for the two products were considered equal. All of the processors used their own trucks for distributing mellorine. There was no differential between packaging and carton costs for ice cream and for mellorine.

If the mellorine makers in Springfield continue their present mode of operation, there is no particular prospect of future growth for the product in that area. The market territory of Springfield processors is limited by extensive and highly competitive operations in St. Louis and Chicago and, to a less degree, by local plants in Pekin, Peoria, Decatur, and Harrisburg. These processors by their actions could definitely change the picture for mellorine in Springfield. Any expansion of mellorine production could be brought about only by a more vigorous and extensive advertising and promotional campaign. No such campaign was proposed or anticipated by local processors in the area.

CHARLESTON, S. CAR.

Economic and Marketing Background

Expansion in Charleston after World War II has included population increases, industrial growth, increased activity in building and housing, a rise in incomes, improvement of transportation facilities, and a greater value of manufacturing output.

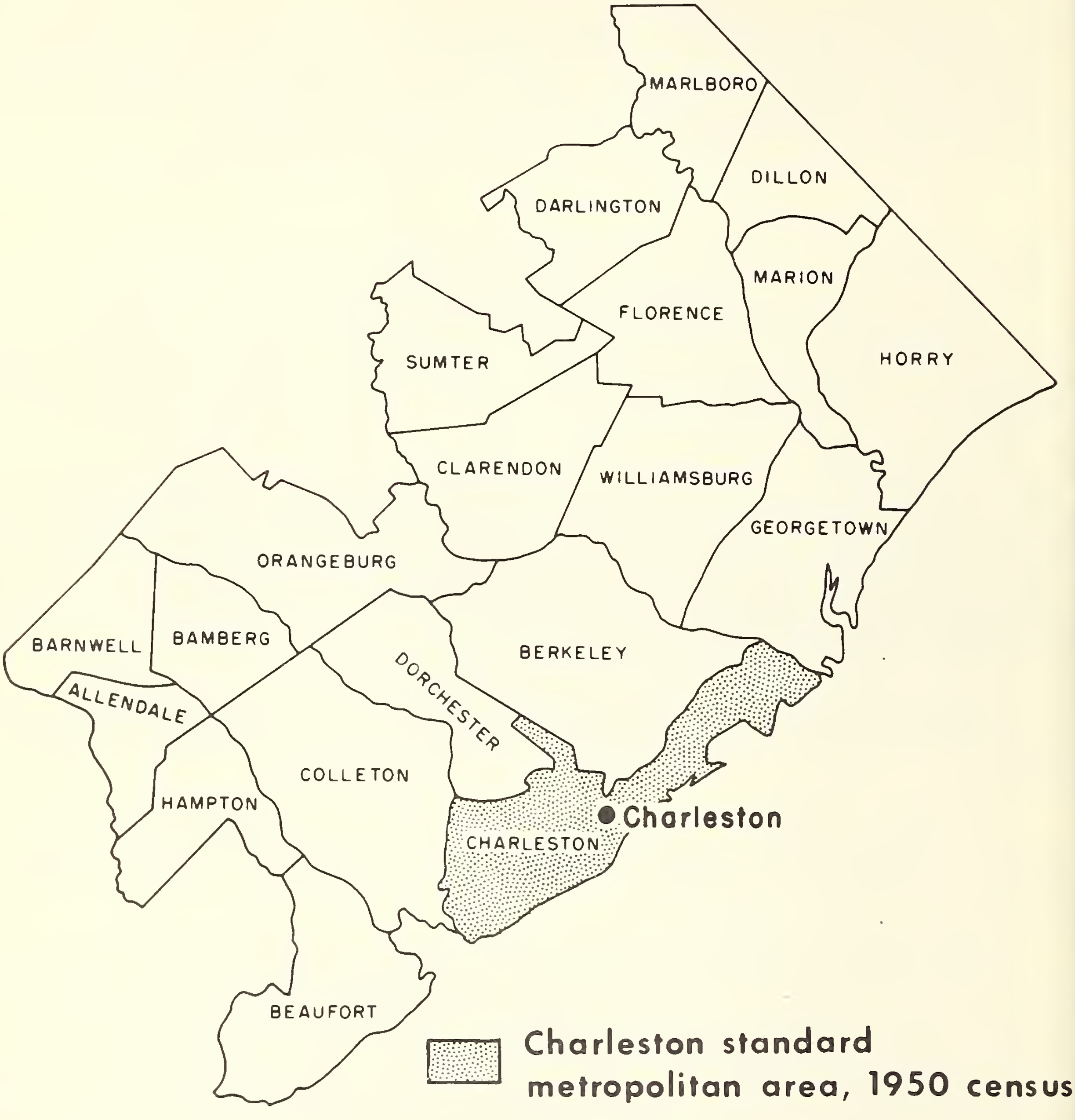
The standard metropolitan area of Charleston consists of Charleston County (fig. 7). The county has an area of 945 square miles and a population density of 204.4 persons per square mile. It is a narrow strip of land extending roughly north and south for approximately 80 miles, bounded on the east by the Atlantic Ocean for the entire length of the county. It consists of the mainland and numerous offshore and harbor islands. The territory served by Charleston trade and service industries is shown in figure 7.

The city has a land area of 5.1 square miles within which, in 1950, lived 70,174 persons. This makes a population density of 13,760 persons per square mile.

In addition to Charleston, there are several other urban places within the county. Some of these, such as Sullivan's Island, Isle of Palms, and Folly Beach, are resort areas. North Charleston, on the other hand, is a highly industrialized section of the county.

Charleston's frozen dessert needs were supplied, at the time of this study, by 4 area distributors. Only 2 of these actually processed frozen desserts; the other 2 plants were distribution centers for national brands of dairy products. Of the 4 plants, only 1 processed mellorine. The other frozen dessert manufacturer concentrated his distribution in the city and surrounding recreational beach area, while the mellorine processor and his jobbers covered an area that extended 250 miles from the city. The 2 distributing plants concentrated their distribution of ice cream, ice milk, and sherbet in the immediate Charleston and beach area.

CHARLESTON TRADE TERRITORY



U. S. DEPARTMENT OF AGRICULTURE NEG. 6364-58 (7) AGRICULTURAL MARKETING SERVICE

Figure 7

Production and Marketing

Charleston offered an opportunity to study frozen desserts in an area only recently introduced to mellorine. It illustrated factors probably present in the early stages of mellorine marketing in other areas studied. Much is revealed in the story of legalization of mellorine in the State.

The manufacture of frozen desserts using fats other than milk fat was first legalized in the State in May 1955. The story behind the legalization explains, at least in part, why mellorine is not a more popular product in some of the areas where it is sold. Interests only sécondary to the frozen dessert industry were the primary proponents of legalizing the product. A smaller part was played by the industry itself.

A bill to legalize mellorine was introduced in the 1953 session of the South Carolina legislature and was strongly backed by interests promoting the use of cottonseed oil, in alliance with those promoting the use of animal fats. Dairy interests opposed the bill, but it moved toward final passage. However, when an amendment allowing the use of only vegetable fats instead of both animal and vegetable fats in mellorine was added to the bill, proponents allowed the bill to die. In the 1955 session, the bill was reintroduced and passed. It permitted the use of either vegetable or animal fats in mellorine.

In this instance, legalization of mellorine was promoted and obtained not so much by frozen dessert makers as by those primarily concerned with selling mellorine ingredients. No unusual desire for the product was expressed by those who would make, promote, and sell it. Most members of the frozen dessert industry were actually either opposed to it or took a passive or neutral attitude toward it. Thus, more than a year after its legalization, only 1 of 4 frozen dessert processors and distributors made or handled the product. One plant manager even professed ignorance of the product when interviewed.

The single manufacturer of the product admittedly entered the field cautiously and has only recently started to make mellorine on what was referred to as a "large scale." However, detailed data on the size of the market attained by mellorine in Charleston, and on other pertinent factors, cannot be divulged without disclosure of confidential information.

The 4 concerns selling frozen desserts in Charleston included 3 national concerns that were distributors only, and 1 independent plant that carried on both manufacturing and distributing in the city.

That mellorine had not captured as great a part of the market as one might expect may be accounted for by several factors.

Consumers had had little opportunity to learn of the product or its merits. Even the 1 concern making mellorine had done little to promote it. All of the distributors and processors in Charleston depended primarily on brand-name advertising for their products. Consequently, no promotion of mellorine in particular had occurred.

There was no price appeal for the product. Mellorine sold at about the same price as ice milk. At the time of the interviews, the regular price was 69 cents per half gallon, lower than that for ice cream but practically the same as that for ice milk. Ice cream was 88 cents per half gallon. Other manufacturers and distributors felt that they were effectively competing with the lone maker of mellorine through their ice milk sales, and saw no need of making the vegetable-fat product unless it definitely cut their sales. In addition, ice milk did not violate the ideals of those manufacturers most sympathetic to the traditional concept of dairy products.

The future of mellorine in the area is dependent on the attitudes of the processors and distributors. It is conceivable that, without competition, promotion, or consumer education, the area could continue its relative indifference to the product. On the other hand, given a change in the competitive structure, promotion, and marketing, it is possible that the mellorine market in the area could expand to the potential that is indicated by the economic climate. Nonmanufacturers of mellorine indicated a possible entrance into the field if demand warranted, but so long as the consumer appears unaware of or indifferent toward the product, and so long as there is little or no promotion of mellorine, it appears doubtful that production will rise significantly.

While demand for mellorine was noticeably lacking in the area, the picture for all frozen desserts was somewhat similar. For instance, in 1955, before mellorine was sold in the State, per capita production of ice cream and related products was only 6.78 quarts. This ranked South Carolina at the bottom for all States, more than 3 quarts below the next highest.

CONCLUSIONS

In summarizing the findings of the surveys in seven areas, one thing stood out above all others: Mellorine's place in the market had an extremely close relation to the attitude of manufacturers in each area. Mellorine is only one of several products made by manufacturers of frozen desserts. The lines of competition drawn between one manufacturer and another were much sharper than the lines of competition between mellorine and frozen desserts made with milk fat. The proportion of frozen dessert sales held by mellorine seemed largely dependent on attitudes of processors and the actions resulting from them.

In all areas visited, save one, mellorine had its inception in the plant of an independent processor. These pioneers in their areas were usually of sufficient size to meet adequately the demand for the product and to advertise and promote effectively this new frozen dessert.

In Portland no independent of sufficient size and inclination to make the product was available to put it over. Charleston, S. Car., appeared to be the only exception to the rule that the larger independent processors introduced mellorine in their respective areas. In this area, one national company was the sole processor of the product.

These facts indicate a tendency for independent manufacturers to use mellorine as a lever to pry into the rather tight competitive situation that commonly exists in the frozen dessert industry. Where these manufacturers were of sufficient size and of proper inclination, mellorine took a significant part of the frozen dessert market and forced the large national concerns to manufacture their own brands of mellorine. Their estimate of the direct advantages of the product, or of the desirability of adding to the number of products carried, was not the deciding factor. To make it allowed them to meet competition from the independent processors. With the exception of the Charleston area, branches of national frozen dessert manufacturers indicated that the reason they began the processing of mellorine was to meet competition. It is interesting to note that, as part of a substantial merger movement in the dairy industry, the pioneer processors in two areas have since been absorbed by national concerns.

The large national processors looked on mellorine with apathy or overt hostility and showed no particular interest in promoting the product. Its manufacture was necessary in order to keep the full-line concept so as to supply the full needs of distributors and consumers using the company's brand.

When the national concerns began to make and market mellorine on a large scale and to stem, at least partially, the competition from the independent processors that had introduced mellorine, there tended to be a decline in the part of the frozen dessert market held by mellorine. At one time, mellorine in St. Louis was said to account for about 50 percent of the frozen dessert market. Following the acquisition of a local plant by a national concern, and entrance into mellorine manufacturing by several national concerns, mellorine commanded only 20 percent of the market. Similar reductions in the share of sales held by mellorine can be cited in other areas, especially in Dallas and Fort Worth.

This decline in relative importance can be attributed partly to a change in advertising. Advertising and promotional activities changed as the large concerns became more prominent in manufacturing mellorine. The independent processors, who introduced mellorine and were responsible to a large degree for the foothold gained by the product, had advertised mellorine as a separate entity, stressing flavors, quality, and, most of all, price. This type of promotion diminished, and advertising procedures of the national concerns stressed the brand name rather than individual products. The rigidity of this rule was, however, relaxed when ice milk was to be promoted, usually by the national concerns. In ice milk, the processors had an "all-dairy" product that could successfully compete with mellorine on a price basis. Processors were agreed that profit margins on ice milk were greater than those on mellorine, so any utilization of plant capacity in the production of ice milk at the expense of mellorine would prove more profitable to the processor. It is understandable then that ice milk would be promoted more actively than mellorine.

In several areas, the large national processors were involved in price-cutting and price-leader practices that tended, in the final analysis, to undermine the quality of mellorine. To sell mellorine profitably at the prices prevalent in some areas, some processors sought economies through the lowering of fat content, the use of less expensive flavorings, and the substitution of cheaper sweeteners. These alterations in ingredients tended to lower the quality of the product, contributing to the overall decline in mellorine's share of the frozen dessert market.

Several other findings appeared common to most of the areas. These might be listed as follows, but not necessarily in the order of their importance:

1.--Differences in levels of economic activity among market areas did not appear to affect the level of mellorine production and sales. The seven markets differed in their dependence on industry, trade, and agriculture, and in their rates of growth in population and employment. These factors tend to be reflected in differences of personal incomes among areas. It might be expected that people with lower incomes would prefer mellorine to ice cream because of mellorine's lower price, but such an effect did not appear in comparing the market studied.

For example, in Dallas, 23 percent of the consumer spending units earned less than $2,500 per year, and estimates indicated that mellorine gallonage accounted for 60 percent of the total frozen dessert market. Data for individual households might show income and consumption relationships more clearly.

2.--The fact that a particular area imported milk did not seem to affect materially the relationship between mellorine and ice cream sales. Even though an area did not have a sufficient local milk supply to meet the needs of frozen dessert manufacturers, there was no assurance or indication that the manufacturers would promote and produce mellorine to augment their ice cream sales. Milk importation was not such a formidable obstacle as to curtail frozen dessert production severely.

3.--The pricing of mellorine and other frozen desserts appeared to be more on an administrative basis than on a cost basis (see page 6). Although most of the major frozen dessert producers utilized a cost-accounting system, there was little indication that this cost system was used in establishing anything but a minimum margin for the frozen desserts. Prices fluctuated widely to meet such exigencies as competition, price-leader roles, and price wars, without comparable changes in cost factors. A further illustration of the pricing practices on an administrative basis was found in areas where identical products commanded prices that varied as much as 10 cents per half gallon, depending on the distance from the highly competitive central city market.

4.--According to most manufacturers, the primary cost differential between ice cream and mellorine lay in the difference in the cost of butterfat and vegetable fat. Packaging and distribution costs, costs of other ingredients, and plant utilization costs were considered equal. If this were the case, and there appeared to be no valid reason to question the statement, the price spread between ice cream and mellorine of the same fat content should have varied only as the costs of the fats varied. Using a hypothetical case, where a comparison of a 10-percent butterfat ice cream and a 10-percent vegetable-fat mellorine was made, utilizing a recent price comparison where butterfat cost 81 cents per pound and vegetable fat cost 22 1/2 cents, and assuming a 4.5-pound weight per gallon for the 2 products, the price differential at both wholesale and retail should have been 26 cents per gallon. In practice, however, this differential was seldom maintained. Prices of the two products varied from a situation where some ice cream sold for less than mellorine to one where the ice cream price was 60 cents per gallon more than mellorine. Prices of ice cream were usually 10 to 30 cents a half gallon higher than mellorine.

5.--Acceptance of mellorine differed among markets in a way to suggest that consumer demand was, to a large degree, controlled by manufacturers. Such demand for mellorine, or any other frozen dessert, for that matter, was basically a result of consumer education primarily through advertising and promotion. Lack of advertising, promotion, and consumer education resulted in a lack of consumer demand.

6.--Legalization of mellorine by a State did not necessarily indicate either a consumer demand for mellorine or a desire by manufacturers to produce the product. There was strong evidence that other interests were most energetic in seeking legislation permitting the manufacture of mellorine. This situation was well illustrated in Charleston, S. Car., where almost 1 year after legalization of the product, consumers were almost totally ignorant about mellorine, and only 1 processor was manufacturing it on a relatively small scale. The Oregon situation was similar.

7.--Advertising in the frozen dessert field was primarily on an institutional basis rather than a product basis. Most of the advertising and promotion in the frozen dessert field was done by the larger manufacturers. These manufacturers processed and distributed such products as ice cream, ice milk, mellorine, sherbet, and, in many cases, milk, cream, cottage cheese, and novelties. Basically, the advertising of these companies was on a brand-name basis rather than on the individual products handled by the company. There was little advertising of mellorine as a product, and companies depended on the brand-name promotion to move mellorine. However, point-of-sale advertising and promotion was used to some extent in promoting mellorine.

8.--Large processors, either independent or national concerns, or both, set the pattern in the frozen dessert market. Smaller companies tended to follow the lead of the large companies in marketing practices. The finding that the larger producers generally set the patterns for an industry is not unusual, but, since the frozen dessert industry has undergone rather recently a transition from small local processors to large regional processors, this presented a rather interesting case. Large manufacturers were in a position to indicate the wholesale price of their product and could, through extensive advertising that would be prohibitive for small manufacturers, create a certain demand for their brand at the desired price. The larger companies could, because of their volume production, offer concessions to retailers.

9.--Distribution distances of the larger companies usually were longer than those of the small processors, so the long-haul concept of distribution had become accepted. In some instances, distribution by a plant included the entire area of a State.

10.--Larger manufacturers of frozen dessert were in a better position to control their product through the retailer to the consumer. Several devices had been used by the large manufacturers to insure that their product received preferential treatment in the retail outlets. In States where there was no law prohibiting it, the majority of the larger manufacturers supplied holding cabinets to the retailer. This was done with the understanding that the cabinet be used only for the product of the producer supplying the equipment. Small processors found it difficult to compete with this factor. Most large manufacturers offered a sliding-scale discount to retailers, dependent on the volume of purchases. This discount ran as high as 20 percent. Again, the small manufacturer, because of lack of capacity or operating capital, found it difficult to compete with sliding-scale discounts. One manufacturer in the Tulsa area offered a sliding-scale discount that was adjusted for seasonal variations in demand. This discount ranged up to 10 percent, with an additional 5 percent allowable if the retailer owned his own holding cabinet. Another device used by larger companies was the owned or controlled retail outlet. Instances were observed where frozen dessert manufacturers owned chains of supermarkets. There were also cases where supermarket chains and a drugstore chain had begun making their own frozen desserts. Smaller companies did have owned outlets, but these outlets normally consisted of a retail outlet or a dairy store at the plant site. This situation could hardly be considered in the same competitive category with the ownership of a chain of supermarkets covering a territory larger than some States.

Where controlled or owned outlets did not exist, many larger processors of frozen desserts had obtained contracts, through competitive bidding, under which a processor was the sole supplier of frozen desserts for supermarket chains in the area. These contracts were usually for 1 year, during which competition from other processors in the particular outlet was curtailed. Only by underbidding the processor holding the contract could another processor secure the business of these outlets. Utilizing the full-line concept, these larger processors were in a position to bargain effectively for all the business of large outlets. The smaller manufacturer, on the other hand, often could not offer the variety of products, the necessary price schedules, or the services of the larger manufacturer to meet this competition.

11.--Many frozen dessert manufacturers were dairy-oriented, and explained their lack of interest in mellorine on this basis. The strong tie between the dairy industry and the frozen dessert industry was undeniable. This tie, historically obvious, had not dissipated to any great degree with the expansion of the frozen dessert industry. But many manufacturers of mellorine also expressed the opinion, based on company records, that profits on mellorine were generally lower than those on ice cream. It may be questioned which motive, the weakness of the profit incentive or the expressed dislike of the use of nondairy fat, most influenced the processing companies to make the product only in a sufficient quantity to meet competition and consumer demands successfully.

Nevertheless, the persistent expression of preference for making and selling an all-dairy product must be given some significance. Many frozen dessert manufacturers felt that the strongest potential competition for mellorine lay in the manufacture of ice milk. Frozen dessert processors could make ice milk without the feeling that they were going outside the dairy industry. In addition, ice milk was a low-caloric frozen dessert that gave the manufacturers a product with which to supply their weight-conscious consuming public. Most of the manufacturers were planning or already using extensive campaigns to promote their ice milk, while mellorine promotion was noticeably absent.

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