3-1950

A Study of the Retail and Wholesale Distribution of Frozen Foods in Tennessee

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To the Graduate Council:

I am submitting herewith a thesis written by John F. Boyd III entitled "A Study of the Retail and Wholesale Distribution of Frozen Foods in Tennessee." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Statistics.

Robert G. Deupree, Major Professor

We have read this thesis and recommend its acceptance:

Charles P. White, E. O'Dille

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

March 6, 1950

To the Committee on Graduate Study:

I am submitting to you a thesis written by John F. Boyd III entitled "A Study of the Retail and Wholesale Distribution of Frozen Foods in Tennessee." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Statistics.

Robert J. Dewpree

Major Professor

We have read this thesis
and recommend its acceptance:

Charles P White

E. O. Wille

Accepted for the Committee

E. G. Waters

Dean of the Graduate School

A STUDY OF THE RETAIL AND WHOLESALE DISTRIBUTION OF FROZEN FOODS IN TENNESSEE

A THESIS

Submitted to
The Committee on Graduate Study
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Master of Science

by

John F. Boyd III

March 1950

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CHAPTER I

INTRODUCTION

One of the most amazing stories to come from the foods business during the past decade is the growth of the frozen foods industry. Its rapid development, after having partially solved many perplexing problems of production and distribution, was somewhat accelerated by higher consumer incomes and wartime scarcities. Equally important is the fact that housewives have been relatively quick to adopt frozen foods. Therefore, today frozen foods are occupying an increasingly important position and the industry no longer considers itself as being in the "infant" stage of development.

The Problem

Statement of the problem. The primary purpose of this study was to gather original information concerning the merchandising of frozen foods in the state of Tennessee. The study consisted of two separate phases: (1) a survey of grocery store retailers of frozen foods, and (2) a survey of the wholesalers or distributors of frozen foods. Within each of these two areas a detailed analysis was made of selected aspects of the development, present facilities, merchandising techniques and future plans as related to these levels of distribution.

Importance of the study. The problem of the distribution of frozen foods is one of a complex nature and of paramount importance. It is vitally necessary that each step in the process be effective in order to assure the continued growth of the industry. Only through study and research is it possible to uncover and solve the problems inherent in the frozen food business.

At the present time, a very limited amount of data is available concerning this problem in Tennessee. Previous research studies have been distinctly limited in scope, and have been primarily concerned with consumer attitudes regarding frozen foods. This study of retail and wholesale distribution has been made in order that a more complete picture of the frozen food industry in Tennessee might be obtained for those groups interested in the industry.

Among those groups in Tennessee interested in the frozen food industry has been the Tennessee Valley Authority. Through its various departments such as the Regional Products Research Division, Commerce Department, and the Food Processing Section, Division of Agricultural Relations, the Tennessee Valley Authority has conducted original research and also cooperated with other groups on studies concerning frozen foods. This work began as part of an extensive program designed not only to improve the standard of living of those rural families living in areas served by the Tennessee Valley Authority, but also to develop the agriculture and industry of the South. Today, as consumer acceptance of frozen foods continues to increase, the Tennessee Valley Authority is more than ever interested in obtaining information, such as that contained in this study, which may be used in the further improvement of the frozen food industry in Tennessee.

Scope of the study. The results presented in this study are an attempt to trace the development of the retail and wholesale distribution of frozen foods in Tennessee, and to show present operational procedures and major problems confronting the industry as related to these levels of distribution. In this manner it is believed that the study will present a continuous picture of the activities of the frozen food industry in Tennessee from packer to consumer.

The Sample and Method of Procedure

The sample used in this study makes no pretense at getting a representation of all grocery stores in Tennessee. Therefore, it is not a random, stratified sample, but a hand-picked sample. Since the purpose of this study was to secure information regarding the more progressive methods of merchandising frozen foods as used in the larger and better type independent and chain stores, it was not considered necessary to follow sampling techniques that would assure inclusion of all types of food retailers. Instead, the sample was restricted to the better type retail store in six metropolitan areas in the state.

It was decided that 250 retail grocery stores were sufficient to provide adequate information for the purposes of this study. Because of the continuous association of distributors and retailers, it was feasible to have the distributors select the majority of the retailers to be interviewed. Distributors were also requested to provide a list of stores which would be scattered throughout the respective metropolitan areas and representative of their dealers. The location and type of these 250 retail grocery stores is shown in Table I.

TABLE I

DISTRIBUTION BY LOCATION AND TYPE OF THE 250 RETAIL GROCERY STORES HANDLING FROZEN FOODS IN TENNESSEE

Type	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Independent[a]	46	76.7	16	32.0	34	56.7	44	73.3	7	87.5	11	91.7	158	63.2
Corporate Chain	14	23.3	34	68.0	26	43.3	16	26.7	1	12.5	1	8.3	92	36.8
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	250	100.0

[a] Includes voluntary and cooperative chains.

In the state of Tennessee, there are thirteen frozen food distributors located in six urban areas. Therefore, it was considered advisable to include all the thirteen wholesalers in the study and their respective geographic locations are shown in Table II. At this point it should again be stressed that the percentages in Table I are not proportional to the stores in the state, and those percentages in Table II are not proportional to the stores in the six cities.

The data for this study were obtained through personal interviews, conducted by the writer, with the use of carefully prepared questionnaires. These questionnaires were developed after consultation with the Tennessee Valley Authority and members of the frozen foods industry. At a meeting attended by these groups, selected aspects of the wholesale and retail distribution of frozen foods were discussed. Using this discussion as a guide, trial questionnaires were prepared for the two respective levels of distribution and submitted to the above groups for their further criticism and suggested improvements. From this were evolved the finished questionnaires used in this study. Sample forms of these questionnaires are illustrated in Appendixes A and B.

It should constantly be kept in mind that results obtained from interviewing the 250 grocery operators are representative of only the leading retailers and should not be interpreted as being indicative of the average grocery stores handling frozen foods throughout the state. However, since all of the thirteen wholesalers of frozen foods were included, these findings may be interpreted as being indicative of conditions existing among wholesalers in the state.

TABLE II

DISTRIBUTION BY LOCATION OF THE THIRTEEN WHOLESALERS OF FROZEN FOODS IN TENNESSEE

Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
3	23.1	2	15.4	4	30.7	2	15.4	1	7.7	1	7.7	13	100.0

Review of Related Studies

The experiences of the frozen food industry during World War II focused attention on a number of problems which were more or less general throughout the entire industry. In the years since the war's end, a number of studies have been made in Tennessee and in other sections of the country in an effort to provide needed information for the solution of those problems. A brief summary of those available studies closely related to the problem at hand will be given in this section.

Food Industries and Refrigeration Research Foundation Survey[1]

In 1946, Food Industries and the Refrigeration Research Foundation, Berkley, California, jointly conducted a frozen food survey designed to secure data regarding the activities of various members of the industry. Among those members receiving special questionnaire forms were all frozen food distributors.

Results obtained from these questionnaires indicate that the practice of featuring one brand of frozen foods exclusively has been abandoned by most distributors and in the future they will merchandise several different brands. The advertising of frozen foods is being expanded although one processor continues to supply the majority of the advertising used in the industry. The most widely used medium for this advertising is newspapers although radio and magazines are gaining in use.

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[1] Harvey C. Diehl and Charles R. Havighorst, "Frozen Food Report No. 2," *Food Industries*, 19:149-160, February 1947.

The efforts of distributors are largely directed toward the retail market for frozen foods which constituted approximately 60 per cent of their sales from 1943 to 1945.

University of Tennessee Study on Consumer Attitudes Regarding Frozen Foods[2]

In November of 1947, the University of Tennessee conducted a study designed to determine the attitudes of consumers regarding frozen foods. This study was made in Knoxville, Tennessee, and consisted of 400 personal interviews conducted with housewives who were users of frozen foods, and who represented average and above average households.

Results of this study indicate that frozen foods appeal to the housewife because: (1) they are easier to prepare than fresh foods, (2) frozen foods are more economical, (3) frozen foods taste better and have a better appearance than canned foods, (4) the quality of frozen foods is consistent, (5) the size of frozen food packages is adequate. The major disadvantages of frozen foods are high cost and the storage space required.

Definitions of Terms Used

Certain terms are used in this study which should be specifically defined, not only to avoid needless confusion of the reader, but in

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[2] Edward E. Garrison, A Study of Consumer Attitudes Regarding Frozen Foods, The University of Tennessee Record Extension Series, Vol. XXIV, No. 1, pp. 21-44, February 1948.

addition to minimize possibilities of misinterpretation. It is, therefore, necessary that those definitions as given in this section be used consistently throughout the study.

The term "distribution" as used in this study is interpreted as relating to the buying and selling functions of marketing and the institutions and methods used to implement them. The two classifications of distribution used throughout this study are interpreted as follows: wholesale distribution relating to those buying and selling functions of marketing concerned with the sale of goods to retail and institutional buyers for purposes of resale or other use in the conduct of their business; and retail distribution relating to those buying and selling functions of marketing concerned with the sale of goods to the consumer for his personal consumption. In this study the terms wholesaler and distributor are used interchangeably and should be interpreted as meaning a business concern which sells to buyers for purposes of resale or other use in the conduct of the buyer's business. As used in this study, "merchandising" is interpreted as meaning those internal practices and policies followed by retailers and distributors for the purpose of promoting the sale of frozen foods. The "institutional market" for frozen foods is interpreted as being that market composed of hotels, restaurants, hospitals, and clubs, and similar users.

Organization of the Study by Chapters

In order to have the most logical arrangement of the two phases of this study for purposes of interpretation, the following organization has been used for the remaining chapters.

The historical development of the frozen food industry in the United States is presented in Chapter II, and provides the necessary background for a clearer understanding of the industry's expansion in Tennessee. In Chapter III a presentation is made of background information leading to the development of the present status of frozen food merchandising in Tennessee. Information with respect to operating techniques and the present facilities for handling frozen foods is presented in Chapter IV. The purpose of Chapter V is to discuss the merchandising techniques employed by retailers in Tennessee to promote the sale of frozen foods. The future plans of frozen food retailers are revealed in Chapter VI. A detailed analysis of the wholesale merchandising of frozen foods by distributors in Tennessee is presented in Chapter VII. Specific conclusions and findings are summarized in Chapter VIII.

The results presented in this study should be of value not only to all retailers and distributors, but also to all packers and processors of frozen foods. The problems in the study are handled in a general manner and those conclusions of major importance are presented.

CHAPTER II

DEVELOPMENT OF THE FROZEN FOOD INDUSTRY

Early History

Methods of preserving foods through freezing originated as long ago as the 1870's, but the first real interest developed in the 1920's when Clarence Birdseye's method of continuous freezing received wide publicity.

In 1929 the General Foods Corporation purchased the Clarence Birdseye quick-freezing patents and formed a subsidiary, Frosted Foods Sales Corporation, to develop and put on the market the Birds Eye line of frozen foods. The date of the first Birds Eye commercial pack is usually given as 1930.[1] From the beginning its processing and distribution have been carried on in such complete independence of other packers that any discussion of the industry divides naturally under two headings -- Birds Eye, and other packers and distributors.[2]

Many independent packers and distributors have criticized Birds Eye, or the Frosted Foods Sales Corporation, because of its independent attitude with respect to processing and distribution. There is, however, something to be said on the other side of the question in favor of Birds Eye.

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[1] Harry Carlton, The Frozen Food Industry (Knoxville, Tennessee: University of Tennessee Press, 1941), p. 4.

[2] Ibid.

In the period from 1929 until 1939, the General Foods Corporation spent an estimated $30 million on its subsidiary, Frosted Foods Sales Corporation.[3] A large part of this expenditure was represented by low-temperature frozen food cabinets which were owned by Birds Eye and rented to retailers who agreed to handle Birds Eye products exclusively. Before it received any return on an extremely heavy investment, Birds Eye went through a long, expensive pioneering stage. It could hardly be expected to forego the advantage of the closed cabinet and open up retail distribution which it had established by hard experience and heavy expense, to all packers and distributors on an even footing with its own products.

During these early years the complexity of retail distribution obstacles, as well as technical difficulties in freezing vegetables, discouraged small packers and distributors from competing seriously in the retail market. As a result, they confined their business operations to processors and institutional markets. The history of the introduction of quick-frozen foods to the retail trade is, for the most part, the story of Birds Eye's early operations.[4]

The growth of the frozen food industry has followed a pattern similar to that which has characterized much of the industrial growth in this country. During what may be called the period of experimentation, extending from 1925 to 1936, inclusive, the production of frozen fruits

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[3] R. C. Fyne, "High Spot Report on Frozen Foods, Hundred-Million-Dollar War Baby," Sales Management, 52:18, November 1943.

[4] Carlton, *loc. cit.*

and vegetables was relatively small. It was during these years that the industry experimented with raw materials, developed processing methods, and went through the evolution from hand labor to original machines and thence to more efficient mechanical equipment.[5]

From this industrial uncertainty, technology began to evolve an industry that could function and produce finished products of desirable quality. Practices, methods, and machines were in the process of becoming standardized. New packaging materials and methods were being studied and the problems of refrigerated storage and distribution were being worked out.

Chart 1 gives a revealing picture of the growth of frozen foods. During the early period of experimentation the industry confined itself to fruits. This was due to the more advanced methods of processing fruits which had been developed. Most fruits were processed by the cold pack method, which consisted of slow-freezing the fruits in bulk containers.

Experimental work on frozen vegetables was in progress in the early 1930's, and was primarily concerned with bacteria control for purposes of preserving product quality and preventing spoilage after processing. Frozen vegetables were considered as a potential health hazard because processing operations could not achieve complete sterilization, and thereby eliminate all bacteria.[6] Frozen fruits, while unsterilized

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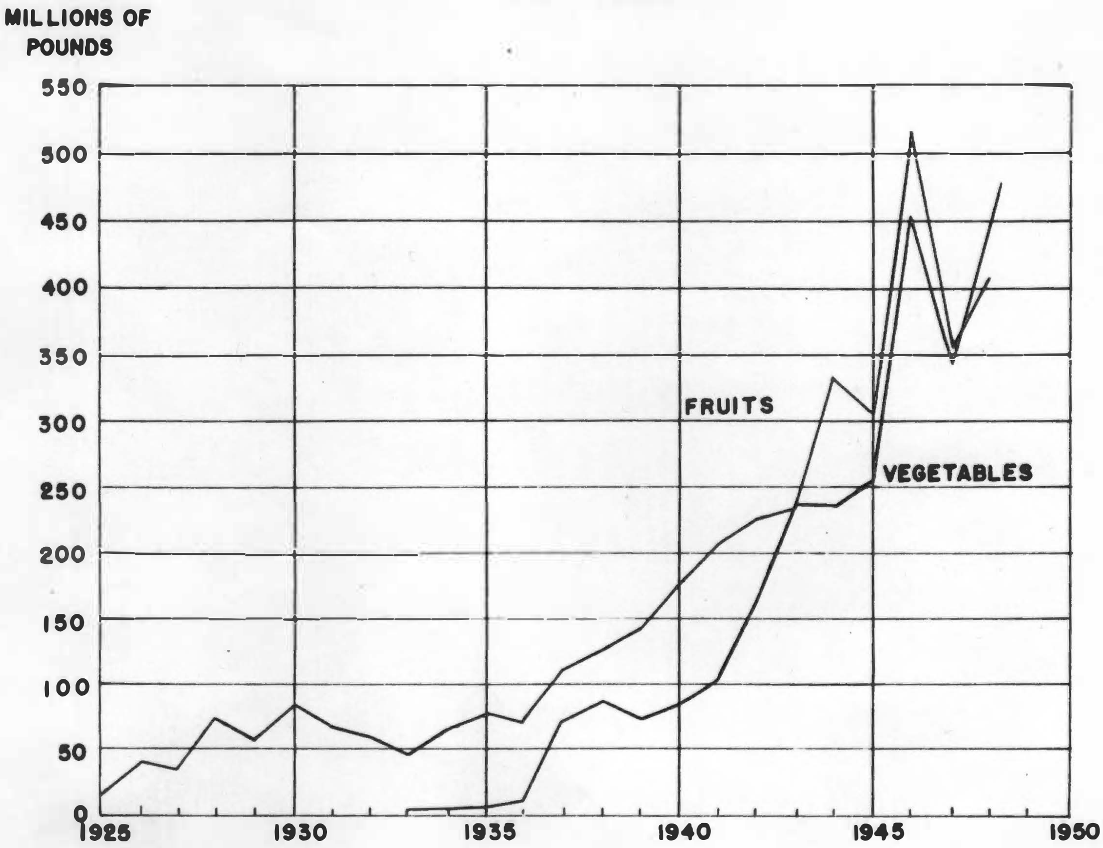
[5] H. C. Diehl and C. R. Havighorst, "Frozen Foods -- The Past, The Potential," Food Industries, 17:271, March 1945.

[6] Gerald A. Fitzgerald, "Are Frozen Foods a Public Health Menace?," American Journal of Public Health, 37:697, June 1947.

CHART I

GROWTH OF FROZEN FOOD PRODUCTION IN THE UNITED STATES 1925-1948



SOURCE: BUSINESS WEEK, NO. 857, p. 30, FEBRUARY 1946. DATA SINCE 1945 FROM WESTERN CANNER AND PACKER, pp. 100-113, 209-221, 1949 YEARBOOK.

by processing, were protected from the action of bacteria by their acidity.[7] In 1933, after the frozen food industry was satisfied that frozen vegetables could be eaten safely, the emphasis shifted to quick-freezing, although no significant pack of frozen foods was offered to the retail trade until 1935.

Distribution Problems

During these early years the problem of distribution was a major problem of the industry. The existing food-distribution systems had been set for foods which divided roughly into the following classes:[8]

1. Packaged, non-perishable products, such as canned goods and cereals, which require no refrigeration for transportation and storage;

2. Fresh produce, which is refrigerated only if shipped long distances or held in storage for limited periods. Retail-store above-freezing refrigeration for this class was comparatively a new development and seldom available;

3. Meats, fish, poultry, which are either held above freezing for short periods or frozen solid for long storage and transportation. They are usually allowed to thaw out in the retail store and sold as a fresh, unfrozen product. Ice refrigeration or slightly above-freezing mechanical refrigeration was the best that could be expected in retail stores selling these products;

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[7] Fitzgerald, loc. cit.

[8] Carlton, op. cit., pp. 5-6.

4. The highly perishable dairy products, which require refrigeration at above-freezing temperatures during their distribution to the consumer;

5. Manufactured dairy products, such as butter and cheese, eggs and miscellaneous products which require refrigeration in transportation and storage;

6. Ice-cream products. This industry alone requires retail refrigeration facilities comparable to those demanded by the quick-frozen-food industry. Storage and transportation are limited, however, to short periods, and to local, conveniently reached territory. Low-temperature storage space is limited and long-distance transportation is seldom attempted.

It is at once apparent that no one of these food-distribution systems was able to provide adequately for frozen foods. Because of this situation, distribution was forced to move slowly, using existing facilities wherever possible, and building new ones.

Retail and institutional distribution of frozen foods was started by Birds Eye, or the Frosted Foods Sales Corporation, in the larger cities, where the consumer demand for high-quality fresh foods was considered to be greatest, and where some low-temperature storage was available. Because of this policy, the distribution of frozen foods centered principally in the Midwest and Northeast with respect to the retail and institutional markets.

The lack of low-temperature storage facilities and transportation had not proved to be a serious drawback to the distribution of frozen fruits in the processors' markets. The adaptation of existing cold-storage warehouse space in fruit-packing and marketing centers had been accomplished with satisfactory results.

The retail distribution difficulties were not so easily overcome. Grocers who handled frozen foods had to invest from $1,200 to $2,000 for a low-temperature cabinet in which to store frozen foods. Local advertising was very limited, national advertising non-existent. The grocer found himself with a new item which added materially to his expense, competed with fresh fruits and vegetables, and for which there was little consumer demand.

To counteract the declining state of retail distribution, Birds Eye, in 1934, instituted new sales and promotion policies in Rochester and Syracuse, New York.

The main features of the policies were:[9]

1. Retail efforts concentrated in the Northeast.

2. A less expensive mechanically refrigerated storage case was offered the retailer on a rental basis.

3. An established wholesale grocer was given exclusive distribution in each district.

4. A prominent food-advertising agency was given direction of the promotional advertising.

These new policies, while doing little to help other packers and distributors, did prove beneficial to the industry as a whole through increased consumer education in the demand for and use of frozen foods.

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[9] Ibid., p. 8.

With many of its production problems solved, with distribution on an improved level, the industry seems to have entered a period of rapid growth about 1937. Freezing operations began branching out into other foods such as fish, poultry, pastry, meat, and seafood. Estimates of 1939 sales placed the figures at $40 million.[10]

Status of the Frozen Food Industry During World War II

The industry continued its rising rate of expansion until forced into a temporary slowdown by World War II.

Secretary of Agriculture Claude R. Wickard, on December 27, 1942, stated that he had directed the Office of Price Administration to ration canned, dried, and frozen fruits and vegetables, as soon as rationing could be set up. He further stated:[11]

> Increased requirements of canned fruits and dried fruits for military purposes make it essential that our stocks be conserved. While our total supply of canned fruits and dried fruits are the largest in history, they are among the foods most urgently needed for the fighting men of the nation and the United Nations. This year over one third of our production of canned and dried fruits and vegetables is being used by the armed forces, during the coming year nearly half of our production will be needed for military purposes.

Frozen foods up to this time had experienced wide acceptance as stated earlier, and it was hoped that the people of this country would shift a considerable part of their demand from canned to frozen foods

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[10] Fyne, loc. cit.

[11] "Canned, Dried, Frozen Fruits, Vegetables to be Rationed Under Point System," Commercial and Financial Chronicle (January 7, 1943), Vol. 157, No. 4140, p. 72.

due to heavy restrictions on canned foods available for civilian consumption. Rationing of frozen foods would make possible the best distribution of available supplies.

The processed foods to be rationed in February, 1943, were listed by the Office of Price Administration as follows:[12]

1. Canned and Bottled Fruits and Fruit Juices

2. Canned and Bottled Vegetables and Vegetable Juices

3. Other processed foods -- Canned soups . . . Frozen fruits: cherries, peaches, strawberries, other berries, all other frozen fruits. Frozen vegetables; asparagus, beans, lima beans, green and wax beans, broccoli, corn, peas, spinach, all other frozen vegetables.

4. Items not included -- Candied fruits . . . frozen fruits in containers over ten pounds, frozen vegetables in containers over ten pounds.

Plans for the rationing system were not completed as scheduled. On February 2, 1943, the Office of Price Administration announced that rationing of canned fruits, vegetables, juices, frozen fruit and vegetables would begin on March 1.[13]

With the initiation of rationing, the results were just opposite to those desired by OPA. Sales of frozen foods experienced an immediate slump while sales of canned goods continued without change. This was due

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[12] "OPA Issues List of Foods to be Rationed," Commercial and Financial Chronicle (January 7, 1943), Vol. 157, No. 4140, p. 68.

[13] "Rationing of Canned Foods Begins March 1," Commercial and Financial Chronicle (February 11, 1943), Vol. 157, No. 4150, p. 584.

to an incorrect comparison of point values for the two types of processed foods by the civilian population.

As an illustration, consider the point values on whole-kernel, cut corn. Frozen corn cost seven ration points for a ten-ounce package, while canned corn cost fourteen ration points for twenty ounces. People immediately concluded that frozen foods were actually more costly on a ration point basis than canned foods and, therefore, there was a slump in frozen food sales.

To correct this wrong assumption, Birds Eye immediately instituted an advertising campaign to show that frozen corn actually cost the same as canned corn for the weight received and ration points required. By comparing frozen weight with drained weight in cans, the point cost per ounce of frozen foods was actually less than that of canned foods.

The week of March 24, 1943, OPA came to the relief of the frozen food industry and slashed point values on frozen foods 50 per cent, effective immediately.[14] In the meantime, the Birds Eye advertising campaign had achieved a measurable amount of success in educating consumers to the economy of frozen foods. Following OPA's reduction of point values, the retail sales of frozen foods received a tremendous stimulus and in one week were reported back to pre-rationing levels in many areas.

The institutional demand for frozen foods also received a tremendous stimulus. One of the paradoxes of food rationing was that OPA

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[14] "Frosted Boon," Business Week, No. 712, p. 94, April 1943.

sharply restricted the supply of sugar to canners, bakers, ice cream makers, preservers, and other packers, yet allowed frozen packers to process apples, apricots, and peaches, in sugar syrup, in astoundingly increased volume.[15] Hotels, restaurants, clubs, and hospitals -- the so-called institutional users -- therefore conserved their small supply of sugar by competing for frozen foods.

The expansion of distributional facilities for frozen foods was severely restricted during the war. Production of new, low-temperature display cabinets was completely abandoned. All available metals were funneled into the war effort, leaving cabinet manufacturers without a metal supply. This greatly reduced possible expansion of new frozen food outlets.

Refrigerated warehousing facilities expanded generally during the wartime period. However, it is doubtful that this expansion was of any real value to the frozen food industry. The major additions made to warehousing were those which best served the war effort, which were not necessarily those best for civilian distribution.

The final stimulus given to frozen food demand came during the latter part of the wartime period. In 1944 OPA stopped rationing of frozen foods seventeen months before canned goods.[16]

In summarizing the more important points relative to the status of the frozen food industry during the wartime period, the following facts are significant:

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15 "Frozen Foods: A New Horizon," Business Week, No. 857, p. 31, February 1946.

16 "Frozen Foods: Interim Report," Fortune, 34:105, August 1946.

1. OPA regulations created favorable market conditions for frozen foods toward the end of the wartime period.

2. Because of food shortages during the war, there was little competition.

3. The civilian population was faced with food shortages, yet had dollars to spend.

4. The demand resulting from these various factors taxed the frozen food industry's production and distributional facilities to the utmost, and pointed the need for further study of distribution.

Now that the war is over, frozen foods are free to go ahead and the food freezer, as he enters upon the peacetime period, can set his sights upon a production target. Little regard has to be given to those factors which diverted his aim during the war years.

Problems Now Facing the Frozen Food Industry

The American food business is the world's largest industry. The food bill of this nation is annually more than $30 billion. Of this amount, approximately $18 billion is classified as perishable. In 1945 about $250 million worth of frozen foods were sold.[17]

Despite the phenomenal growth of the frozen food industry, consumption of frozen fruits and vegetables is barely one-twelfth that of canned goods, and far less than one-one hundredth that of fresh

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[17] R. E. Nagler, "Six Major Problems Facing Frozen Foods," <u>Sales Management,</u> 56:46, March 1946.

produce.[18] The per capita consumption figures (1 1/2 pounds of frozen fruit annually, for example) are at once disheartening and heartening to the food freezer and to distributors. They are disheartening in their smallness, but heartening in the opportunity for expansion.

Men in the frozen food industry have predicted that within a period of five years from 1946 the frozen food pack in this country will be from eight to ten billion pounds yearly.

Mr. R. E. Nagler, writing in 1946 in Sales Management, has stated what he considers to be the six major problems facing frozen foods. They are as follows:[19]

> 1. Better transportation must be made available between the packers' plants and the retail distributing centers. The best fruits and vegetables for freezing are grown on the West Coast in an area roughly measured from mid-California north and east to the Sierras and Cascade Ranges. Frozen at the source, often right in or near the fields and orchards, they must be transported to the thickly populated East and middle East for consumption.
>
> Such refrigerator cars as we now have are makeshift, neither equipped nor intended to hold zero temperature. The right kind of cars for this task are yet to be designed and built.
>
> 2. Retail food merchants must do more to feature frozen items, taking them out of the step-child class. Someone must develop a better display cabinet that will put these marvelous vitamin-rich foods on full display, within handy reach of the customer. The distributor and retailer must win new customers through a consumer-education program to be carried on at point-of-sale by trained personnel.
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> 3. There must be advertising and promotion on a national scale. Either some central association or group must finance

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[18] "Frozen Foods: A New Horizon," loc. cit.

[19] Nagler, loc. cit.

the job or it must be carried on by individual manufacturers. Very likely some central organization will do the over-all job while manufacturers will promote their own brands. That would be fine team work. Editors of women's and food pages of newspapers, food magazines, and dietitians columns will help. The Department of Agriculture is already doing a first-class job.

4. Manufacturers of packers freezing equipment, railway refrigerator equipment, truck and trailer equipment, food storage lockers, and home freezers will afford to do their share.

Motion pictures, shorts, and trailers used locally, should play a considerable role, and color photography will have a grand opportunity. When television comes, the convenience of frozen foods can be dramatized in the home.

5. Next must come better packaging. Two steps forward in packaging must be taken soon: (a) better protection; (b) packages permitting greater speed in processing.

6. The final step in frozen food distribution will be delivery to the home. This is necessary to protect the frozen foods all the way to the consumer's home freezer.

The above mentioned problems present a formidable challenge to the future growth of frozen foods, but only a few are of immediate concern. The others are yet to be encountered in the near and distant future.

One of the principal problems which the frozen food industry must begin to solve immediately is the problem of distribution, including transportation and warehousing.

Spurred by ever increasing demand, frozen food processing operations are being increased at a tremendous rate which threatens to outstrip distributional facilities completely. The industry can conceivably expand too much for its own good and eventually face a chaotic condition.

Transportation

Refrigerated transportation, an important part of the low temperature pipiline to markets, plays an extremely vital role in the production and marketing processes connected with frozen foods. Throughout the marketing process from agricultural regions to freezing plants, to refrigerated storage warehouses and wholesale distributors, thence to retailers and consumers, refrigerated transportation is indispensable to the industry. This may be further emphasized by the fact that approximately one-half of our frozen foods are processed on the West Coast, and about 60 per cent of consumption is in the northeastern section. Although railroads have in the past carried the greater part of frozen foods shipped over the country, refrigerated truck lines and marine transport are now making a determined bid for their share of the business.

Rail

The initial and only means of transport open to early frozen food packers was the reefer car, originally designed and insulated to carry perishable foods at temperatures ranging around 35-40 degrees F. Few shipments were made with these cars before the railroads began converting a small number into heavily insulated cars by the addition of more insulation to the ceilings, walls, ends, and floors.

Research concerning refrigeration and temperature variations in reefers used for frozen food shipments began early in 1929. However, it was not until 1945 that the most extensive research was begun. The United States Department of Agriculture conducted tests involving eight cars.[20]

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[20] H. C. Diehl and C. R. Havighorst, "Frozen Food Report No. 2 — Transportation," Food Industries, 19:8, January 1947.

At the outset, little was known about the railroad's ability to transport frozen foods safely, and every possible precaution was taken to assure safety in transit. The temperature of the product and packages was brought down as close to 10 degrees F. as possible, and reefer cars pre-cooled to as close to the same temperature as practicable. Some packers loaded cars with frozen foods or merchandise incompletely frozen, at temperatures around 20 degrees or higher, and apparently expected that car refrigeration would lower the temperature of the products. Even with the fastest and most protected handling and the best reefer cars, the movement of frozen foods is hazardous, especially during the summer months.

The Refrigerator Car Research Bureau of A.A.R., the United States Department of Agriculture, and the United States Bureau of Standards conducted tests in 1946 involving six specially constructed cars.[21] These tests were expected to produce a great deal of new, valuable information.

Frozen food shippers in 1946 seemed to prefer an overhead brine-tank reefer to all other type cars available. Next came the heavily insulated fan car, and finally the standard end-bunker reefer. Because of the indifferent rating given to reefer cars, the railroads are continuing research in an effort to provide better cars. There were in this country in October, 1946, 1,639 heavily insulated refrigerator cars.[22]

Transportation costs are reflected in the final retail price of frozen foods. Shippers naturally prefer to employ the safest, most

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[21] Ibid., p. 12.

[22] Ibid., p. 15.

efficient and economical means of transportation. In this respect the rail reefer offered in 1946 safe and efficient transportation at an average cost of 0.8 cents per ton mile on transcontinental shipments.

Truck

A major competitive factor which the railroads will have to face in the years to come is refrigerated truck and trailer shipments of frozen foods. The early history of truck transportation was a period featured by inadequate equipment and inexperienced operators. Through a program characterized by improved equipment and continued effort to provide efficient service, refrigerated truck transportation has become an important service in many parts of the frozen food industry.

The cost of providing refrigeration in truck transport is dependent upon three factors:[23] (1) the temperature to be maintained, (2) the outdoor temperature, and (3) the length of time the refrigerated service is provided. The same amount of refrigeration is required for moving an empty trailer at zero degrees as is required for moving any precooled shipment at zero degrees provided temperature and length of service are equal in each case. The cost of refrigerated truck transportation is, therefore, figured on an hourly basis rather than ton mile.

Gradually the refrigerated truck and trailer have firmly established themselves in the distribution process. The extreme flexibility of truck transportation and the ability to serve smaller markets have demonstrated its worth. Trailers now carry approximately half

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[23] Ibid., p. 16.

reefer car capacity and are designed to maintain a temperature of zero or lower under special conditions.

Refrigerated ships are being planned and built with facilities for the storage of frozen foods. There is no indication as yet, however, as to when such ships will be placed in service for the transportation of frozen foods.

There are no air freight companies as yet operating refrigerated planes that offer safe temperatures for frozen foods. In 1947, plans were under way for building a plane which would carry frozen foods at approximately 3.9 cents per ton mile.[24]

Warehousing

In all the publicity which has accompanied the growth of frozen foods, little recognition has been given the part played by refrigerated warehouses. During the last 20 years, especially, the frozen food industry could not have made such tremendous advances in production and distribution had it not been for refrigerated storage located in production regions, metropolitan markets, and at strategically located transit points.

Contrary to the popular impression of the speed with which frozen foods are moved from the packer to the dinner table, they are actually processed for subsequent freezer storage. In this manner they may be distributed according to consumer demand and during out-of-season months.

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[24] _Ibid._, p. 16.

Peas processed and frozen during June and July may not be consumed until May of the following year. During this ten-month interim they must be kept in proper freezer storage.

The storage of frozen foods as just described is not without its cost. As inevitably as death and taxes, a pound of frozen food increases in cost one-fourth cent a month from the moment it leaves the freezing room. A pound of peas offered in May for 25 cents must bring 26 cents in September, or somebody takes a loss.[25] This is the rule of thumb cost of keeping a pound of food for a month at a temperature of zero or lower.

Because of the rigid temperature control which must be maintained over a food after it has been frozen, warehousing is a far more vital factor in the distribution of frozen foods than of any other processed food. A processing plant must have its own warehouse or be near a commercial refrigerated warehouse capable of handling its production volume.

Among warehousemen there exists a not unnatural feeling that the processing plants should keep out of the cold storage business. On the other hand, processors of frozen foods resent, to a certain extent, the failure of the warehouse industry continually to provide new storage space for the products of new processors.

This issue again resolves itself into the chicken and egg question. As a rule, warehousemen will not gamble on new construction unless assured of volume; processors cannot guarantee volume unless assured of

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[25] "Frozen Foods: A New Horizon," loc. cit.

sufficient storage. There, as often as not, the issue stands.

Uncertainty as to adequate storage space must be combined with transportation in the problem of distribution.

Another component part of the distribution problem which must receive immediate attention is that of low temperature (zero or lower) storage cabinets for the retail and institutional trade. Production of such cabinets was eliminated during the war.

Most refrigeration manufacturers began in 1944 the planning of low-temperature storage cabinets. These cabinets were planned to avoid the disadvantages of the old pre-war closed cabinets, and to permit adequate display. The cabinets produced from the end of the war up to the present time have been both elaborate and costly, selling between $1,500 and $2,000.

Old-timers insist that it will be hard to get a grocer to invest more than $1,000 in a cabinet, and predict a compromise model to sell for around $800.[26]

Advertising and promotion of frozen foods have expanded rapidly, both on a national and local scale. In the early and pre-war years, Birds Eye remained the only producer to use any significant local advertising. With the end of the war, producers were forced to abandon their free advertising ride which had been provided by Birds Eye, and to furnish their own advertising in preparation for the approaching competition for new rewards in the frozen food business.

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[26] "Frozen Food," Business Week, No. 800, p. 66.

Today, the frozen food industry can no longer be called an infant, but must be considered as a mature part of this nation's food industry.

Summary

In this chapter the writer has discussed the development of the frozen food industry since its beginning. First, the industry's early period of experimentation was discussed. During this period the industry was mainly concerned with solving various production problems and establishing a satisfactory distribution system for frozen foods. Second, the industry's transition to a period of rapid growth was briefly summarized. Next, the effect of the war on the industry was analyzed, and significant facts pointed out. The expansion of distributional facilities was severely handicapped, although the demand for frozen foods greatly increased. Next, problems standing in the way of post-war expansion were examined for significance. The need for improved transportation facilities and increased advertising and sales promotion appeared to be particularly important. Finally, those significant problems of immediate concern were analyzed with emphasis upon progress toward their early solution. Distribution, including storage and transportation is of immediate concern, and real progress has been made in these two aspects of distribution. Display cabinets still pose a restriction on expanded distribution because of their high cost. Advertising and promotion have expanded rapidly on a national and local scale which should prove highly beneficial to the industry as a whole.

The development of the wholesale and retail distribution of frozen foods in Tennessee, as presented in this study, may be profitably analyzed in the light of those problems discussed in this chapter relative to the development of the frozen food industry in this country.

CHAPTER III

PRESENT STATUS OF FROZEN FOOD MERCHANDISING BY RETAILERS

In the analysis of any industry, it is desirable to have some knowledge of conditions that have existed prior to the time of study. The development of the frozen food industry in the United States was discussed at some length in Chapter II. The present chapter and those following, however, are primarily concerned with a study of the frozen food industry in Tennessee. It is the purpose of this chapter, therefore, to give some of the background leading to the present situation in frozen foods in Tennessee.

The frequent use of percentage figures has been made in the body of this chapter for purposes of analysis. These figures relate to totals for all cities combined, and should be so interpreted except where otherwise noted. Percentage figures in the remaining chapters should be interpreted in the same manner.

Growth of Frozen Food Outlets

The historical study of the development of frozen foods in the United States reveals that there were very few retail outlets for products of this kind prior to 1935. By 1940, however, there had been a definite increase in the number of retail stores handling frozen commodities, and it is interesting to note that very few were corporate chains. Conditions with respect to the growth of frozen food outlets included in this study are shown in Table III.

TABLE III

YEARS IN WHICH THE 250 RETAIL GROCERY STORES BEGAN HANDLING FROZEN FOODS

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Year	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1948	15	25.0	11	22.0	12	20.0	5	8.3			1	8.3	27	17.1	17	18.5	44	17.6
1947	10	16.6	14	28.0	21	35.0	25	41.7	6	75.0	6	50.0	57	36.1	25	27.2	82	32.8
1946	7	11.6	6	12.0	2	3.3	9	15.0			1	8.3	13	8.2	12	13.0	25	10.0
1945	5	8.3	4	8.0	6	10.0	3	5.0			2	16.8	11	7.0	9	9.8	20	8.0
1944	4	6.7	2	4.0	2	3.3	1	1.7			1	8.3	6	3.8	4	4.3	10	4.0
1943	4	6.7	3	6.0	4	6.7	2	3.3					7	4.4	6	6.5	13	5.2
1942	4	6.7	2	4.0	3	5.0							3	1.9	6	6.5	9	3.6
1941	6	10.0	6	12.0	4	6.7	3	5.0	2	25.0	1	8.3	12	7.6	10	10.9	22	8.8
1940	1	1.7			1	1.7	4	6.7					3	1.9	3	3.3	6	2.4
1939	3	5.0	1	2.0	4	6.7	2	3.3					10	6.3			10	4.0
1938							2	3.3					2	1.3			2	0.8
1937					1	1.6							1	0.6			1	0.4
1936																		
1935			1	2.0			1	1.7					2	1.3			2	0.8
Before 1935	1	1.7	—	—	—	—	3	5.0	—	—	—	—	4	2.5	—	—	4	1.6
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

There is every indication that in general the expansion of retail distribution for frozen foods in Tennessee has closely paralleled that of the national growth. Only about 7.5 per cent of the 250 stores studied started handling frozen foods prior to 1940, and chain stores were not represented in this group. Apparently, in Tennessee, the independent retailers bore the brunt of introducing frozen food products. The evident lack of interest on the part of chains may possibly have been explained as follows:[1]

(1) Like many other new products, frozen foods found most favor in higher-than-average income families.

(2) Chains had greater interest in the field of fresh produce for which they had established satisfactory sources of supply.

It was not until 1940 that the first chain organizations began to stock frozen foods. Apparently satisfied with the results obtained, the number of chain outlets tripled by 1941; however, independent retailers also showed a more rapid rate of growth during the same year. From all indications, this accelerated rate of expansion would have continued except for the advent of World War II. As would be expected, there was a sharp decline in the number of new outlets in 1942 since the war effort made it practically impossible for retailers to obtain frozen food cabinets.

The growth of new outlets continued at a depressed rate through 1945 with the use of many reconditioned cabinets. Reconversion in late

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[1] "Frozen Foods: A New Horizon," Business Week, No. 857, p. 42, February 1946.

1945 made new cabinets available and also permitted packers to increase the supply of frozen foods. These factors, plus increased consumer income, accounted for the very fast growth (32.8 per cent of the total number of stores interviewed) in 1947. Although information was not secured on new outlets since 1948, it is evident that the rate of expansion is slowly decreasing. This decline may be explained by a combination of reasons:

(1) Many of the retailers for whom it was feasible to carry frozen foods had already adopted it.

(2) Retailer resistance to continued high prices for cabinets was appearing.

(3) Retailer uncertainty regarding future economic conditions.

Types of Frozen Food Handled

In order to attract and maintain continued consumer demand, it is necessary that retailers carry a fairly complete variety of frozen foods. The degree to which this is necessary varies with the individual retailer and his clientele. Table IV lists the types of frozen foods carried by the retailers included in the study.

Fruits and vegetables are stocked by all of the retailers in the six metropolitan areas. This is as would be expected since these are the two main types of frozen foods. Specialty items and rolls and pastries are carried by 98.5 per cent of the retailers. These items have wide popular appeal and, while they may not be purchased regularly, most grocers find it necessary to carry them to satisfy many of their customers.

TABLE IV

TYPES OF FROZEN FOODS HANDLED BY THE 250 RETAIL GROCERY STORES

Type	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Independent		Total Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Vegetables	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Fruits	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Meats	43	71.6	26	52.0	15	25.0	4	6.6	1	12.5	4	33.3	67	42.4	26	28.2	93	37.2
Fish	44	73.3	32	64.0	50	83.3	43	71.6	4	50.0	6	50.0	135	85.4	44	47.8	179	71.6
Poultry	59	98.3	28	56.0	43	71.6	54	90.0	7	87.5	12	100.0	143	90.5	60	65.2	203	81.2
Rolls and Pastry	60	100.0	50	100.0	59	98.3	58	96.6	8	100.0	11	91.6	154	97.4	92	100.0	246	98.4
Specialties[a]	60	100.0	50	100.0	59	98.3	60	100.0	7	87.5	11	91.6	155	98.1	92	100.0	247	98.8

[a] Includes stores handling one or more specialty items. A total of 30 different specialties were handled by one or more stores.

The most apparent discrepancies among the retailers are found with respect to the handling of fish, poultry, and meat. A much larger percentage of independents carry frozen fish and poultry than do chains. This may be explained in part by the fact that, with the established sources which the chains have for fresh poultry and fish, there is more profit to be made than in selling the same products in the frozen form. Frozen meats are carried by only slightly more than one-third of all the retailers. This commodity in the frozen form seems to be relatively new to most people and has not had too favorable consumer acceptance.

In general, the independent retailers have been more responsive to the addition of new frozen products, which have not achieved considerable consumer acceptance, than have the corporate chains. This may account in part for the fact that more independents than chains carry frozen fish, poultry, and meat.

Major Brands of Frozen Food Normally Carried

One of the problems facing the retail grocer handling frozen foods is the determination of the number of major brands to be carried. This is a primary buying problem intensified by the necessity of having cabinet space to accommodate the merchandise. The number of major brands carried by the 250 retailers is shown in Table V.

It can be seen that almost one-half of all the grocers normally carry two major brands. In most cases they were the two most popular brands within each metropolitan area, but in some instances they were carried in order to have the highest and the lowest priced brands available. The remaining retailers were almost evenly divided between those

TABLE V

NUMBER OF MAJOR BRANDS OF FROZEN FOODS USUALLY HANDLED BY THE 250 RETAIL GROCERY STORES

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Number	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One	20	33.3	15	30.0	6	10.0	15	25.0	4	50.0	2	16.7	37	23.4	25	27.2	62	24.8
Two	27	45.0	27	54.0	35	58.3	23	38.3	1	12.5	7	58.3	82	51.9	38	41.3	120	48.0
Three	13	21.7	8	16.0	16	26.7	22	36.7	3	37.5	3	25.0	36	22.8	29	31.5	65	26.0
Four	—	—	—	—	3	5.0	—	—	—	—	—	—	3	1.9	—	—	3	1.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

carrying one and those carrying three brands. Evidently, the decision of these retailers depended upon their respective circumstances, and the findings varied among the six cities.

Rating of the Popularity of the Major Brands Normally Carried

To follow through on the question of the number of major brands carried, retailers were requested to state the brands stocked in the order of their consumer popularity. The results are revealed in Table VI.

From these data, it is apparent that Birds Eye holds the dominant role in popularity since it was rated most often by the grocers as their first, second, and third choice. This popularity is due in part to the fact that for many years Birds Eye was the only national advertiser in the frozen food industry.

The popularity of the next two brands is more difficult to differentiate because of the variance in first, second, and third place choices. Although Honor Brand was mentioned more times, Wintergarden received a much greater number of first choice ratings. Increased advertising in recent months seems to have accounted for much of the consumer acceptance of Honor Brand, while Wintergarden received much of its popularity in Knoxville where it is packed. It is interesting to note the position of Wintergarden despite the fact that at the time of this study it had no distribution in Memphis.

Each of the remaining brands shown in Table VI was distributed in only one or two of the six metropolitan areas and, therefore, it was impossible to secure a fair comparison as to popularity.

TABLE VI

RATING OF THE POPULARITY OF THE MAJOR BRANDS OF FROZEN FOODS HANDLED BY THE 250 RETAIL GROCERY STORES

Brand and Rating[a]	Memphis	Nashville	Chattanooga	Knoxville	Bristol	Oak Ridge	Total: Independent	Total: Chain	Total: Total
	Total No.	Total No.	Total No.	Total No.	Total No.	Total No.	Total No.	Total No.	Total No.
Birdseye									
First	54	12	34	8	1	2	88	23	111
Second	3	2	13	29	2	3	21	31	52
Third	1	2	4	20			7	20	27
Total	58	16	51	57	3	5	116	74	190
Wintergarden									
First		32	2	46	3	2	36	49	85
Second		7	9	7		7	27	3	30
Third		2	2	2	1	1	6	2	8
Total	0	41	13	55	4	10	69	54	123
Honor Brand									
First	4	2	8	6	4	8	20	12	32
Second	36	20	10	13	2	1	54	28	82
Third		1	2	14	2	1	10	10	20
Fourth			1				1		1
Total	40	23	21	33	8	10	85	50	135
O and C									
First			9				5	4	9
Second			17				12	5	17
Third			9				2	7	9
Total	0	0	35	0	0	0	19	16	35
Snowcrop									
First	2		1				3		3
Second	3		2	1			5	1	6
Third	8		1				9		9
Fourth			1				1		1
Total	13	0	5	1	0	0	18	1	19
Pictsweet									
First		4					3	1	4
Second		6					4	2	6
Third		3					2	1	3
Total	0	13	0	0	0	0	9	4	13
Dewkist									
First			6				3	3	6
Second			3				1	2	3
Third			1					1	1
Fourth			1				1		1
Total	0	0	11	0	0	0	5	6	11
Blue Grass									
Third	1							1	1
Total	1	0	0	0	0	0	0	1	1

[a] This table shows the rating of the popularity of the major brands handled by first, second, third, and fourth choice according to consumer purchases as interpreted by retailers.

Estimated Per Cent of Customers Buying Frozen Foods

Despite the fact that frozen food sales have increased steadily, it still constitutes a small proportion of the total sales of the average grocery store. This is substantiated by the results shown in Table VII with regard to the estimated per cent of total customers who buy frozen foods.

Almost one-half of the retailers estimated that only from 5 to 15 per cent of their customers buy frozen foods. This was true for many of the better type retail stores, which indicates that a majority of the people are either unfamiliar with frozen foods or, for certain reasons, do not buy them. This may be partly due to the relatively higher prices and consumer uncertainty as to the value of frozen foods. It is interesting to observe that both chains and independents report that about equal percentages of their customers buy frozen foods. Since a few stores estimate that a fairly high proportion of their customers buy commodities of this kind, it might indicate that gradually more income groups are being reached by frozen foods distribution.

Estimated Dollar Volume of Retail Sales Per Week

Another way to measure the present status of frozen food sales is by the results enumerated in Table VIII. These data show the estimated dollar volume of frozen food sales during an average week.

A total of 57.6 per cent of the retailers reported sales for an average week of from twenty-five to seventy-five dollars. Many of these retailers expressed dissatisfaction with the profit margins on frozen foods in relation to the time and effort involved in handling them. This

TABLE VII

ESTIMATED PER CENT OF CUSTOMERS BUYING FROZEN FOODS IN THE 250 RETAIL GROCERY STORES

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Per Cent	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Under 3			1	2.0									1	0.6			1	0.4
3 - 7	6	10.0	7	14.0	16	26.7	18	30.0	4	50.0			33	20.8	18	19.5	51	20.4
8 - 12	5	8.3	5	10.0	8	13.3	14	23.3	2	25.0			23	14.6	11	12.0	34	13.6
13 - 17	4	6.7	7	14.0	10	16.6	9	15.0	1	12.5	2	16.7	20	12.7	13	14.1	33	13.2
18 - 22			4	8.0	3	5.0	4	6.7					4	2.5	7	7.6	11	4.4
23 - 27	7	11.7	8	16.0	10	16.6	7	11.7			3	25.0	18	11.4	17	18.5	35	14.0
28 - 32	5	8.3	3	6.0	1	1.7							4	2.5	5	5.4	9	3.6
33 - 37	3	5.0			1	1.7			1	12.5	1	8.3	3	1.9	3	3.3	6	2.4
38 - 42	3	5.0	2	4.0	3	5.0							3	1.9	5	5.4	8	3.2
43 - 47																		
48 - 52	10	16.7	4	8.0	1	1.7	5	8.3			3	25.0	17	10.8	6	6.5	23	9.2
53 - 57																		
58 - 62	3	5.0	1	2.0			1	1.7					2	1.3	3	3.3	5	2.0
63 - 67																		
68 - 72			1	2.0									1	0.6			1	0.4
73 - 77	2	3.3	4	8.0			2	3.3			2	16.7	9	5.7	1	1.1	10	4.0
78 - 82	2	3.3											2	1.3			2	0.8
83 - 87	1	1.7											1	0.6			1	0.4
88 - 92	4	6.7	1	2.0							1	8.3	6	3.8			6	2.4
93 - 97																		
98 and over			1	2.0	3	5.0							3	1.9	1	1.1	4	1.6
No idea	5	8.3	1	2.0	4	6.7	—	—	—	—	—	—	8	5.1	2	2.2	10	4.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE VIII

ESTIMATED DOLLAR VOLUME OF FROZEN FOODS SALES IN THE 250 RETAIL GROCERY STORES DURING AN AVERAGE WEEK

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Volume	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Under $13																		
13 - 37	7	11.7	9	18.0	14	23.2	12	20.0	2	25.0			29	18.4	15	16.3	44	17.6
38 - 62	13	21.8	11	22.0	16	26.6	23	38.3	2	25.0			47	29.7	18	19.7	65	26.0
63 - 87	9	15.0	4	8.0	8	13.3	10	16.6	2	25.0	2	16.9	21	13.3	14	15.2	35	14.0
88 - 112	5	8.3	7	14.0	4	6.7	4	6.6			3	25.0	16	10.1	7	7.6	23	9.2
113 - 137	5	8.3	4	8.0	7	11.7	1	1.7			1	8.3	10	6.3	8	8.7	18	7.2
138 - 162	5	8.3	3	6.0	4	6.7	2	3.3	1	12.5	1	8.3	11	7.0	5	5.4	16	6.4
163 - 187	2	3.3	1	2.0	3	5.0							2	1.3	4	4.3	6	2.4
188 - 212	6	10.0	3	6.0	1	1.7	3	5.0	1	12.5	1	8.3	9	5.7	6	6.5	15	6.0
213 - 237			1	2.0							1	8.3	1	0.6	1	1.1	2	0.8
238 - 262	1	1.7	3	6.0	1	1.7	1	1.7			1	8.3	1	0.6	6	6.5	7	2.8
263 - 287							1	1.7							1	1.1	1	0.4
288 - 312	2	3.3	1	2.0	1	1.7	1	1.7			1	8.3	2	1.3	4	4.3	6	2.4
313 - 337			1	2.0			1	1.7					1	0.6	1	1.1	2	0.8
338 - 362			2	4.0									1	0.6	1	1.1	2	0.8
363 - 387																		
388 - 412	2	3.3											2	1.3			2	0.8
413 - 437											1	8.3	1	0.6			1	0.4
438 - 462																		
463 - 487																		
488 - 512	1	1.7					1	1.7					2	1.3			2	0.8
513 and over	2	3.3			1	1.7							2	1.3	1	1.1	3	1.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

seems a valid criticism, but may be overcome by increasing the volume of this type of business.

Of the independent stores studied, 61.4 per cent had sales of seventy-five dollars or less, while 51.2 per cent of the chains were in this group. From this it appears that chains as a whole have a somewhat larger consumer demand for frozen foods than do independents.

It was revealed by 89.6 per cent of the retailers that the sales of frozen foods account for 0.5 to 2.0 per cent of the total volume of business. Despite this small ratio, 82.4 per cent of the independents and 82.6 per cent of the chains reported a continuous increase in frozen food sales.

Therefore, there is every indication that the sales of frozen foods seem to be increasing despite the fact that for most retailers they account for a relatively small per cent of the total volume of business. It is evident that retailers, distributors, and packers must increase their promotional efforts if frozen foods are to become a more profitable item for grocery stores.

Summary

This chapter has given some of the necessary background leading to the present situation in frozen foods in Tennessee. First, the retail growth of frozen food outlets was discussed and a comparison made with the national growth of retail outlets. Next, an analysis was made of the conditions which determine the types and brands of frozen foods carried by retailers, and the question of brand popularity was discussed.

Finally, the present status of frozen food sales was measured through a study of retailer estimates of consumers purchasing frozen foods and retail sales volume during an average week.

CHAPTER IV

PRESENT FACILITIES AND OPERATING TECHNIQUES OF RETAILERS

The purpose of this chapter is to determine the present facilities of retailers for handling frozen foods, the adequacy of these facilities, and the amount of time and care necessary for their maintenance. Proper care and use of these facilities are very important from the standpoint of the cost of operation and also successful sales promotion.

Location of Frozen Food Departments

The proper selection of a location for the frozen food department may have a very material effect upon sales. It is, therefore, important that serious thought be given to this problem in a grocery store. The various locations now used by the retailers for the frozen food department are listed in Table IX.

The location now used by 56.0 per cent of all the retailers is next to the fresh produce rack. This appears to be a logical location and places the cabinet in the line of heavy customer traffic. Fresh products which the customer is unable to find may be conveniently found in the frozen foods cabinet while the customer is still thinking about this type of food.

Several other locations were given, and some may be effective because of particular store designs and available space which in some instances was the deciding factor in the placement of this department.

As a follow-up to the question just discussed, the retailers were requested to state an opinion as to what they thought was the best

TABLE IX

PRESENT LOCATION OF FROZEN FOODS DEPARTMENTS IN THE 250 RETAIL GROCERY STORES

Location	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
By Produce Rack	26	43.3	35	70.0	34	56.6	33	55.0	6	75.0	6	50.0	85	53.7	55	59.8	140	56.0
By Meat Case	11	18.3	6	12.0	9	15.0	12	20.0	1	12.5	3	25.0	27	17.1	15	16.3	42	16.8
By Front Entrance	10	16.7	3	6.0	2	3.3	2	3.3			1	8.3	15	9.5	3	3.2	18	7.2
By Dairy Case			1	2.0	4	6.7	6	10.0			1	8.4	5	3.2	7	7.7	12	4.8
By Checking Stand	2	3.3	2	4.0	4	6.7	2	3.3					8	5.1	2	2.2	10	4.0
Between Meat Case and Produce Rack	4	6.7			2	3.3	1	1.7			1	8.3	5	3.2	3	3.2	8	3.2
By Canned Goods	4	6.7	1	2.0					1	12.5			4	2.5	2	2.2	6	2.4
Middle of Store	2	3.3	1	2.0	1	1.7	1	1.7					5	3.2			5	2.0
Between Meat and Dairy Cases					2	3.3	3	5.0					2	1.3	3	3.2	5	2.0
Between Dairy Case and Produce Rack			1	2.0	1	1.7							1	0.6	1	1.1	2	0.8
Between Checking Stand and Produce Rack	1	1.7			1	1.7							1	0.6	1	1.1	2	0.8
Total	60	100.0	50	100.0	60	100.[illegible]	60	100.0	8	100.0	12	100.0	15[illegible]	100.0	92	100.0	250	100.0

location for the frozen foods department. These replies are enumerated in Table X. The location "next to the fresh produce rack" was recommended as most desirable by 70.8 per cent of the retailers. The differences between the present and proposed location for the frozen food department can largely be accounted for by such factors as lack of available space and shape of the building.

Number and Type of Cabinets Used

The number of frozen food cabinets used by retailers is usually dependent upon the sales volume, and the type is frequently determined by initial cost. The number and type of cabinets now used are shown in Table XI.

These figures indicate that 82.3 per cent of the retailers had only one cabinet. Among those having only one cabinet, there is almost an even percentage having open and closed types, although the advantages of the newer open type cabinet are well known. Many retailers stated they would like to buy new open cabinets but felt that the prices are too high.

Moreover, corporate chains have tended to lead in the installation of the newer type display cabinets. One notable exception to the trend of the chains toward the open type display cabinets was expressed by Mr. R. R. Willingham, Grocery Merchandiser for the Kroger Company chain in the Central Tennessee district, Nashville, Tennessee. He made the following statement with reference to display cabinets:

> We are planning to switch from the open type display cabinets to the closed type cabinets with glass tops, due to the trouble of keeping the open type cabinets defrosted and the loss of temperature due to exposure to warm air.

TABLE X

OPINIONS OF THE 250 RETAIL GROCERS REGARDING THE BEST LOCATION FOR FROZEN FOODS DEPARTMENTS

Location	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
By Produce Rack	40	66.7	36	72.0	39	65.0	48	80.0	6	75.0	8	66.7	108	68.3	69	75.0	177	70.8
By Meat Case	4	6.7	4	8.0	4	6.7	4	6.6	1	12.5			11	7.0	6	6.5	17	6.8
By Front Entrance	5	8.3	1	2.0	8	13.3	1	1.7			1	8.3	13	8.2	3	3.3	16	6.4
Between Meat Case and Produce Rack	2	3.3	4	8.0	3	5.0	1	1.7					6	3.8	4	4.3	10	4.0
By Checking Stand	1	1.7	1	2.0	1	1.7	2	3.3	1	12.5			4	2.5	2	2.2	6	2.4
By Dairy Case	1	1.7	1	2.0	1	1.7					1	8.3	2	1.3	2	2.2	4	1.6
Between Meat and Dairy Cases	1	1.7	1	2.0	2	3.3									4	4.3	4	1.6
Middle of Store	2	3.3											2	1.3			2	0.8
Between Dairy Case and Produce Rack			1	2.0			1	1.7					1	0.6	1	1.1	2	0.8
No Best Location	2	3.3	1	2.0	2	3.3	2	3.3			2	16.7	9	5.7			9	3.6
No Opinion	2	3.3					1	1.7					2	1.3	1	1.1	3	1.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XI

NUMBER AND TYPE OF FROZEN FOODS CABINETS IN THE 250 RETAIL GROCERY STORES[a]

Number and Type	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1 Open Top	23	36.4	20	38.5	26	41.9	28	45.2	1	12.5	8	61.5	62	38.5	44	44.5	106	40.8
2 Open Top	9	14.3	12	23.1	5	8.1	2	3.2			2	15.4	13	8.1	17	17.2	30	11.5
3 Open Top	1	1.6			1	1.6	1	1.6							3	3.0	3	1.2
5 Open Top					1	1.6							1	0.6			1	0.4
1 Closed Top	26	41.3	16	30.8	26	41.9	30	48.4	7	87.5	3	23.1	76	47.2	32	32.3	108	41.5
2 Closed Top	2	3.2	4	7.6	3	4.9	1	1.6					7	4.4	3	3.0	10	3.8
3 Closed Top	2	3.2	—	—	—	—	—	—	—	—	—	—	2	1.2	—	—	2	0.8
Total	63	100.0	52	100.0	62	100.0	62	100.0	8	100.0	13	100.0	161	100.0	99	100.0	260	100.0

[a] Figures in this table include retailers having a combination of open and closed top cabinets.

Opinions of Grocers Regarding Suitability of Frozen Food Cabinets Now in Use

In order to determine the extent to which the retailers were satisfied with frozen food cabinets, they were requested to judge their suitability with respect to four major features. These findings are shown in Table XII.

One-half of the retailers were satisfied with the size of their display cabinets. Of the 42.8 per cent who estimated their cabinets to be unsuited as to size, the most frequent comment was the need for a larger cabinet. This seems to indicate that these retailers have outgrown their present storage facilities because of increased sales.

The most suitable feature of frozen food cabinets according to retailers is shape. Present-day cabinets are compactly built and occupy much less space than earlier models. This compactness is of importance in a retail store where every square foot should be utilized to the best advantage. A majority of the 18.0 per cent reporting that the shape of the cabinets was unsatisfactory, stated that their store arrangement was largely responsible for this condition.

Easy accessibility is a desirable feature of a frozen food cabinet. Since customers look for convenience in shopping for food items, this feature may have an important effect on sales. Almost one-third of the retailers reported their cabinets unsuitable in this respect. The comments indicate that retailers are becoming more aware of the advantages of open type cabinets which are more convenient for customers.

TABLE XII

OPINIONS OF THE 250 RETAIL GROCERS REGARDING THE SUITABILITY OF FROZEN FOODS CABINETS NOW IN USE

Feature and Opinion	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Size																		
Satisfactory	34	56.7	30	60.0	24	40.0	42	70.0	4	50.0	9	75.0	92	58.2	51	55.4	143	57.2
Unsatisfactory	26	43.3	20	40.0	36	60.0	18	30.0	4	50.0	3	25.0	66	41.8	41	44.6	107	42.8
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Shape																		
Satisfactory	54	90.0	35	70.0	50	83.3	50	83.3	5	62.5	11	91.6	134	84.8	71	77.2	205	82.0
Unsatisfactory	6	10.0	15	30.0	10	16.7	10	16.7	3	37.5	1	8.4	24	15.2	21	22.8	45	18.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Accessibility																		
Satisfactory	48	80.0	32	64.0	40	66.7	37	61.6	2	25.0	11	91.6	106	67.1	64	69.6	170	68.0
Unsatisfactory	12	20.0	18	36.0	20	33.3	23	38.4	6	75.0	1	8.4	52	32.9	28	30.4	80	32.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Visibility																		
Satisfactory	44	73.3	33	66.0	38	63.3	37	61.7	2	25.0	11	91.6	101	63.9	64	69.6	165	66.0
Unsatisfactory	16	26.7	17	34.0	22	36.7	23	38.3	6	75.0	1	8.4	57	36.1	28	30.4	85	34.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

Visibility is a necessity for the proper display of frozen foods, and this feature of the cabinets was reported unsuitable by 34.0 per cent of the retailers. In general, visibility was rated as the weakest feature of the closed type cabinets.

In connection with the two previous questions, the retailers were asked if they had installed new open type cabinets recently and if there had been an increase in sales. Only 24.0 per cent of the whole group had replaced older type cabinets with the newer open type, but over 80.0 per cent of these reported a sales increase since the change was made. Estimates of these retailers as to percentage of the increase ranged from under 25.0 per cent to over 400.0 per cent. Comments indicated the belief that the new cabinets were responsible for much of the increase. However, it is certain that other factors contributed to the increase, such as advertising, special sale items, and the general growth in consumer demand for frozen foods.

Frequency of Defrosting Frozen Food Cabinets

In order to keep cost of operation at a minimum and to secure the maximum efficiency and benefits from the frozen food cabinets, proper care is essential.

The various periods of time elapsing between defrosting of cabinets are listed in Table XIII. The periods of time are not based on records kept by the retailers, but represent their own personal estimates. As would be expected, there is a wide range in the frequency of defrosting because of the types of cabinets as well as other factors. The data are based on averages for a year, and it should be kept in mind that

TABLE XIII

FREQUENCY OF DEFROSTING FROZEN FOODS CABINETS IN THE 250 RETAIL GROCERY STORES

Frequency	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Every Week	8	13.3	6	12.0	5	8.4	9	15.0					15	9.5	13	14.1	28	11.2
Every 2 Weeks	5	8.4	5	10.0	7	11.6	8	13.2	1	12.5	3	25.0	15	9.5	14	15.2	29	11.6
Every 3 Weeks					1	1.7	1	1.7							2	2.2	2	0.8
Every 4 Weeks	20	33.3	21	42.0	16	26.7	22	36.7	1	12.5	6	50.0	49	31.0	37	40.2	86	34.4
Every 6 Weeks					1	1.7									1	1.1	1	0.4
Every 8 Weeks	11	18.3	9	18.0	8	13.3	9	15.0	3	37.5	2	16.7	33	20.9	9	9.8	42	16.8
Every 12 Weeks	8	13.3	5	10.0	12	20.0	3	5.0	2	25.0	1	8.3	24	15.2	7	7.6	31	12.4
Every 16 Weeks	2	3.3	1	2.0	4	6.6	1	1.7					6	3.8	2	2.2	8	3.2
Every 24 Weeks	5	8.4	1	2.0	3	5.0	1	1.7	1	12.5			10	6.3	1	1.1	11	4.4
Over 24 Weeks							2	3.3					2	1.3			2	0.8
Never (Automatic Defrost)	1	1.7	2	4.0	3	5.0	4	6.7	—	—	—	—	4	2.5	6	6.5	10	4.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

defrosting is necessary more often in summer than in winter. A total of 87.6 per cent of the retailers defrosted their cabinets within a time period ranging from one week to three months.

The time required for defrosting the cabinets varies greatly. This is explained by the fact that some retailers defrost by scraping the freezer plates rather than disconnecting the electrical current. A total of 72.8 per cent of the retailers require less than three hours for defrosting cabinets. This process necessitates the transfer of frozen foods to other storage facilities or from compartment to compartment within a cabinet. Table XIV shows the number of retailers who feel there is little difficulty in defrosting. From this it is evident that defrosting of cabinets is not a major problem.

Temperatures of Frozen Food Cabinets

The maintenance of proper temperatures in frozen food cabinets is insurance against loss of profits and customers. If a package of frozen food has been allowed to thaw and is then refrozen, the quality has been greatly damaged.

In order to determine the actual temperatures of the frozen food cabinets, the interviewer used a special thermometer for this purpose. These actual temperatures are shown in Table XV.

Proper temperatures recommended for frozen foods are zero degrees Fahrenheit or lower. The results in the table show that 41.5 per cent of the cabinets had temperatures higher than zero degrees. This is a definite indication that retailers fail to pay proper attention to

TABLE XIV

DIFFICULTIES ENCOUNTERED IN DEFROSTING FROZEN FOODS CABINETS IN THE 250 RETAIL GROCERY STORES

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	1	1.7	1	2.0			1	1.7			1	8.4	2	1.3	2	2.2	4	1.6
No	59	98.3	49	98.0	60	100.0	59	98.3	8	100.0	11	91.6	156	98.7	90	97.8	246	98.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XV

TEMPERATURES OF FROZEN FOODS CABINETS IN THE 250 RETAIL GROCERY STORES[a]

Temperature	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Below -24° F.					1	1.3	1	1.5					2	1.1			2	0.7
-24° to -20°			1	1.5	1	1.3	2	3.0					1	0.5	3	2.4	4	1.3
-19° to -15°			2	3.0			1	1.5	1	12.5			1	0.5	3	2.4	4	1.3
-14° to -10°	14	17.5	9	13.4	7	9.2	4	6.0	1	12.5	1	6.7	14	7.4	22	17.7	36	11.5
- 9° to - 5°	19	23.7	16	23.9	16	21.1	10	14.9	1	12.5	1	6.7	32	16.9	31	25.0	63	20.1
- 4° to - 0°	16	20.0	19	28.4	13	17.1	20	29.9	2	25.0	4	27.7	49	25.9	25	20.3	74	23.6
+ 1° to + 5°	19	23.7	7	10.4	14	18.4	8	11.9			4	26.6	40	21.2	12	9.7	52	16.6
+ 6° to +10°	11	13.8	10	14.9	17	22.4	15	22.3	2	25.0	4	26.6	39	20.7	20	16.1	59	18.8
+11° to +15°	1	1.3	1	1.5	5	6.6	3	4.5			1	6.7	5	2.6	6	4.8	11	3.5
+16° to +20°			2	3.0	2	2.6	1	1.5	1	12.5			4	2.1	2	1.6	6	1.9
+21° to +25°							2	3.0					2	1.1			2	0.7
Total	80	100.0	67	100.0	76	100.0	67	100.0	8	100.0	15	100.0	189	100.0	124	100.0	313	100.0

[a] Temperatures were actually taken by the interviewer and are for all cabinets used by retailers.

cabinet temperatures, which in turn is explained by the fact that 80.0 per cent reported that they never checked cabinet temperatures.

Grocery Stores Having Contracts for Refrigeration Repair Service

Although retailers appear to have little trouble with frozen food cabinets today, mechanical failures cannot be entirely eliminated. Whether or not the retailers had contracts for refrigeration repair service is shown in Table XVI. Only 27.6 per cent had such contracts. Many of those who did have special contracts had a contract for all refrigeration equipment in the store. Further investigation disclosed the fact that most chains use company repair service or that rendered by the power company in their particular metropolitan area, while independent stores prefer to employ local repair men or call the distributor for the cabinets.

Summary

In this chapter a study has been made of those facilities used by retailers for handling frozen foods, and a further study made of the care exercised by retailers in the operation of these facilities. First, the location of frozen food departments was discussed in regard to the effect of location on sales of frozen foods. Next, the number and types of frozen food cabinets used by retailers was discussed, and retailer opinions regarding the suitability of their present display cabinets given. Finally, the care and maintenance of frozen food cabinets by retailers was discussed with emphasis on temperature, defrosting, and repair service.

TABLE XVI

NUMBER AND PER CENT OF THE 250 RETAIL GROCERY STORES HAVING CONTRACTS FOR REFRIGERATION REPAIR SERVICE

Response	Memphis No.	Memphis %	Nashville No.	Nashville %	Chattanooga No.	Chattanooga %	Knoxville No.	Knoxville %	Bristol No.	Bristol %	Oak Ridge No.	Oak Ridge %	Total: Independent No.	Total: Independent %	Total: Chain No.	Total: Chain %	Total: Total No.	Total: Total %
Yes	21	35.0	13	26.0	11	18.3	17	28.3			7	58.3	53	33.5	16	17.4	69	27.6
No	39	65.0	37	74.0	49	81.7	43	71.7	8	100.0	5	41.7	105	66.5	76	82.6	181	72.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

CHAPTER V

MERCHANDISING TECHNIQUES EMPLOYED BY RETAILERS

Both packers and distributors of frozen foods have been prone to criticize the present methods of sales promotion used by retailers. In order to determine the extent to which this criticism is justified, a study was made of those principal merchandising procedures employed by grocery store retailers in Tennessee. This chapter, therefore, presents a resume of the techniques used by retailers in selling frozen foods.

Retailer Advertising of Frozen Foods

Prior to the end of World War II, there was only one brand of frozen food which was nationally advertised and local advertising was practically non-existent before this period. In other words, retailers made little attempt to assist in the advertising of frozen foods.

Today, however, retailers are beginning to show more interest in the sales promotion of frozen foods, and Table XVII shows that a total of 43.2 per cent of the retailers included in this study now advertise these products. A much larger proportion of chains report that they advertise frozen foods, which is in keeping with their general policy of aggressive promotion. Despite this increased interest, retailers as a whole are still not taking full advantage of the opportunity to increase their sales of frozen foods through progressive advertising. It is interesting to note that all retailers in Knoxville who advertise include frozen foods in their advertisements.

TABLE XVII

NUMBER AND PER CENT OF THE 250 RETAIL GROCERY STORES INCLUDING FROZEN FOODS IN NEWSPAPER ADVERTISING

Response	Memphis No.	Memphis %	Nashville No.	Nashville %	Chattanooga No.	Chattanooga %	Knoxville No.	Knoxville %	Bristol No.	Bristol %	Oak Ridge No.	Oak Ridge %	Total Independent No.	Total Independent %	Total Chain No.	Total Chain %	Total Total No.	Total Total %
Yes	25	41.7	30	60.0	15	25.0	32	53.3	4	50.0	2	16.7	43	27.2	65	70.7	108	43.2
No	32	53.3	17	34.0	20	33.3			1	12.5	4	33.3	48	30.4	26	28.3	74	29.6
Do Not Advertise	3	5.0	3	6.0	25	41.7	28	46.7	3	37.5	6	50.0	67	42.4	1	1.0	68	27.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

Although only 39.4 per cent of the retailers made comments regarding newspaper advertising, some of the results seem worthy of mention. Almost half of the chains which do not advertise frozen foods indicated that they had adopted their policy because these products are not handled by all of their stores. Moreover, one-half of the independents reported that they depended upon the local distributors for advertising efforts. This seems to indicate a lack of participation on the part of retailers in promoting the sale of frozen foods.

Of the retailers who advertise frozen foods, Table XVIII shows that 93.5 per cent were of the opinion that their advertising was effective.

In addition to newspaper advertising, many retailers use other methods of sales promotion within their stores. An analysis of these procedures is revealed in Tables XIX and XX. It is interesting to note that approximately three-fourths of the retailers use special methods or techniques to emphasize their display cabinets. This is a much larger group than those using newspaper advertising and is accounted for, in large part, by the fact that distributors provide materials for this purpose. Furthermore, chains make more use of special techniques of sales promotion than do independents. The utilization of these methods adds to the general attractiveness of the frozen food department as well as to the store.

Average Mark-up Used by Grocers for Frozen Foods

Of all the problems of merchandising, the one in which retailers were most interested was that of mark-ups. A most common complaint was

TABLE XVIII

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS WHO ADVERTISE WHO BELIEVE ADVERTISING HAS BEEN EFFECTIVE

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	24	96.0	28	93.3	15	100.0	28	87.5	4	100.0	2	100.0	38	88.4	63	96.9	101	93.5
No	1	4.0	2	6.7	—	—	4	12.5	—	—	—	—	5	11.6	2	3.1	7	6.5
Total	25	100.0	30	100.0	15	100.0	32	100.0	4	100.0	2	100.0	43	100.0	65	100.0	108	100.0

TABLE XIX

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS USING SPECIFIC METHODS TO EMPHASIZE FROZEN FOODS CABINETS

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	51	85.0	39	78.0	48	80.0	38	63.3	3	37.5	10	83.3	108	68.4	81	88.0	189	75.6
No	9	15.0	11	22.0	12	20.0	22	36.7	5	62.5	2	16.7	50	31.6	11	12.0	61	24.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XX

METHODS USED TO EMPHASIZE FROZEN FOODS CABINETS IN THE 250 RETAIL GROCERY STORES

Method	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
As Part of Display Cabinets																		
Colored display pictures	34	66.7	30	76.9	28	58.3	23	60.5	1	33.3	4	40.0	64	59.3	56	69.1	120	63.5
Lighted "frozen food" sign	3	5.9	4	10.3	24	50.0	16	42.1	1	33.3	4	40.0	25	23.1	27	33.3	52	27.5
Total	37	*	34	*	52	*	39	*	2	*	8	*	89	*	83	*	172	*
Added to Display Cabinets																		
Colored display cards					1	2.1	17	44.7			2	20.0	8	7.4	12	14.8	20	10.6
Point of sale posters	2	3.9	17	43.6	5	10.4	2	5.3	1	33.3	3	30.0	14	12.9	16	19.8	30	15.9
Banners	21	41.2			21	43.8	1	2.6					23	21.3	20	24.7	43	22.8
Wooden lettered frozen food sign	4	7.8	7	17.9	1	2.1	4	10.5					6	5.6	10	12.3	16	8.5
Painted sign	1	1.9			1	2.1							2	1.9			2	1.1
Display of frozen food packages			1	2.6											1	1.2	1	0.5
Neon sign	1	1.9			1	2.1							2	1.9			2	1.1
Total	29	*	25	*	30	*	24	*	1	*	5	*	55	*	59	*	114	*

* All figures and per cents based on total number of methods used and therefore do not equal 100 per cent.

that the margin on frozen foods was not adequate; Table XXI lists the average mark-up used by the various retailers.

Although it was found that 68.0 per cent of the grocers average a 27 per cent mark-up, a majority of them were independents. More independents average a 27 per cent mark-up than do chains. Retailers as a whole, in Memphis and Nashville, average a 5 per cent less mark-up than do those in the other metropolitan areas. This is partly explained by the fact that many distributors in these cities advocate that retailers use a smaller mark-up. Because profit is based on sales volume, retailers who achieve a maximum volume of frozen food business can usually operate on a smaller mark-up. One solution for those retailers with small sales volume may be to lower their mark-up so that volume can be increased to a point of profitableness.

When retailers were asked what mark-up was best for the greatest net profit on frozen foods, a wide range of answers resulted. However, about two-thirds suggested an average 27 per cent mark-up. One point seems evident from the results obtained from these two questions. Chains, because of larger sales, successfully use a smaller mark-up and report that frozen foods are a profitable department.

Deliveries Per Week Necessary to Supply Frozen Foods to Grocers

Retailers are dependent upon distributors for adequate delivery of frozen foods. The number of deliveries per average week needed is shown in Table XXII. From this it is observed that approximately half of the retailers require more than two deliveries a week. Since a majority of the retailers have weekly sales of seventy-five dollars or less, it is

TABLE XXI

AVERAGE MARK-UP ON FROZEN FOODS USED BY THE 250 RETAIL GROCERY STORES

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Per Cent	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
10 - 14	1	1.7													1	1.1	1	0.4
15 - 19	9	15.0	1	2.0									2	1.3	8	8.7	10	4.0
20 - 24	29	48.3	29	58.0	3	5.0	5	8.3	8	100.0			37	23.4	30	32.6	67	26.8
25 - 29	19	31.7	20	40.0	57	95.0	55	91.7			12	100.0	117	74.0	53	57.6	170	68.0
30 - 34	2	3.3	—	—	—	—	—	—	—	—	—	—	2	1.3	—	—	2	0.8
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XXII

NUMBER OF DELIVERIES DURING AN AVERAGE WEEK NEEDED TO SUPPLY THE 250 RETAIL GROCERY STORES WITH FROZEN FOODS

															Total			
	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Independent		Chain		Total	
Number Per Week	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One	11	18.3	4	8.0	2	3.4	10	16.7	4	50.0			21	13.3	10	10.9	31	12.4
Two	26	43.2	17	34.0	30	50.0	21	35.0	2	25.0	2	16.7	67	42.4	31	33.7	98	39.2
Three	10	16.7	3	6.0	15	25.0	12	20.0	1	12.5	3	25.0	28	17.7	16	17.4	44	17.6
Four	10	16.7	15	30.0	9	15.0	6	10.0			6	50.0	28	17.7	18	19.6	46	18.4
Five	1	1.7	2	4.0	2	3.3	3	5.0					3	1.9	5	5.4	8	3.2
Six	1	1.7	8	16.0	2	3.3	2	3.3	1	12.5	1	8.3	8	5.1	7	7.6	15	6.0
Over Six	1	1.7	1	2.0	—	—	6	10.0	—	—	—	—	3	1.9	5	5.4	8	3.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

evident that the average amount delivered is relatively small. This retailer tendency to buy frozen foods on a hand-to-mouth basis may be due either to a lack of storage space or a hesitancy to buy in large quantities. Regardless of the cause, frequent and small deliveries are partly responsible for the high cost of distributors.

Price Consciousness of Buyers of Frozen Foods

It has been contended by some that since frozen foods appeal to a high income group, most of the purchasers are not too price conscious. Retailers were asked whether their customers showed any tendencies toward greater price consciousness, and the replies are shown in Table XXIII. Only 60.8 per cent felt that their customers were becoming more price conscious regarding frozen foods. This is interesting in view of present high food prices and consumer uncertainty concerning future economic conditions. More chains report that their customers are price conscious than do independents, which is understandable because chain customers are usually more price conscious of all grocery products. Three-fourths of Knoxville retailers reported such a tendency and this may be explained by the generally depressed manufacturing activity in the city at the time of this study. The most frequent comment made by the 39.2 per cent of the grocers reporting no increase in customer price consciousness of frozen foods was that their customers still look for quality and do not sacrifice this feature for price.

Substitution of Frozen Products for the Fresh Products

In order to eliminate losses from heavy spoilage in certain fresh foods, a few retailers have begun to substitute frozen foods for these

TABLE XXIII

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS BELIEVING CUSTOMERS ARE TENDING TO BECOME MORE PRICE CONSCIOUS IN SELECTING BRANDS OF FROZEN FOODS

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	30	50.0	31	62.0	37	61.7	45	75.0	3	37.5	6	50.0	85	53.8	67	72.8	152	60.8
No	30	50.0	19	38.0	23	38.3	15	25.0	5	62.5	6	50.0	73	46.2	25	27.2	98	39.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

fresh products. This information is included in Table XXIV. A total of 86.4 per cent have not eliminated fresh foods of any kind that were normally carried. More independents have dropped items than have chain retailers, which can be accounted for by the fact that fresh produce has always been a more profitable item for chains. In Knoxville, more substitution has taken place than in the other cities. This is again probably due to the intensive sales efforts of a local processor. The items most frequently substituted were those especially susceptible to excessive spoilage such as fresh broccoli, brussel sprouts, cauliflower, English peas, and greens.

Complaints of Customers Regarding Frozen Foods

The success of frozen foods as well as any other product depends upon continued consumer acceptance. Satisfaction can be determined to some degree by the comments or complaints received by the retailer. Table XXV lists the frequency with which retailers receive complaints from customers about frozen foods.

None of the grocers reported regular or frequent complaints from their customers. Only slightly more than half have reported receiving occasional complaints. This is an indication that in general those who buy frozen foods are fairly well satisfied with the products.

Of the complaints received, the one reported most frequently was in regard to quality and included such things as: foreign matter (grit and sand) in greens, toughness, failure in constant coloring in some items. This indicates that packers and processors need to pay more attention to such factors in the future. When retailers were asked if

TABLE XXIV

NUMBER AND PER CENT OF THE 250 RETAIL GROCERY STORES HAVING SUBSTITUTED FROZEN FOODS FOR THE SAME OUT-OF-SEASON FRESH PRODUCTS

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	10	16.7	1	2.0	5	8.3	18	30.0					28	17.7	6	6.5	34	13.6
No	50	83.3	49	98.0	55	91.7	42	70.0	8	100.0	12	100.0	130	82.3	86	93.5	216	86.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XXV

FREQUENCY WITH WHICH THE 250 RETAIL GROCERS RECEIVE COMPLAINTS FROM CUSTOMERS REGARDING FROZEN FOODS

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Regularly																		
Frequently																		
Occasionally	36	60.0	27	54.0	36	60.0	32	53.3	5	62.5	4	33.3	83	52.5	57	62.0	140	56.0
Never	24	40.0	23	46.0	24	40.0	28	46.7	3	37.5	8	66.7	75	47.5	35	38.0	110	44.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

they thought such complaints were justified, 85.7 per cent replied in the affirmative.

Evaluation of Selected Features of Frozen Food Packages

The importance of quality in frozen foods is evident from the discussion in the previous paragraphs concerning customer price consciousness and complaints. The preservation of this essential feature of frozen foods is in a large part dependent upon the protective packaging used.

In addition to protecting the quality of the product, frozen food packages must also be attractive for purposes of display and sales promotion. The packages must also be as uniform in size as possible to facilitate storage and contain proper quantity for consumer use.

To meet all these requirements, special attention must be given to certain features of packaging, and modification and improvement must continually be made. In order to determine the attitude of retailers with respect to frozen food packaging, they were asked to rate seven selected features. These results are revealed in Table XXVI.

All of the features were rated satisfactory or better by 95.0 per cent of the retailers. Although a majority indicated that the present packages were suitable, there was still room for improvements. Consumer eye appeal which is of major importance received the highest rating of the criteria evaluated.

It is interesting to note that chains rate these features of packaging about the same as do independents. Since chains have done

TABLE XXVI

EVALUATION OF SELECTED FEATURES OF FROZEN FOODS PACKAGING BY THE 250 RETAIL GROCERS

Feature and Rating	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Strength for Protection																		
Very satisfactory	17	28.3	9	18.0	8	13.4	2	3.3					25	15.8	11	11.9	36	14.4
Satisfactory	42	70.0	38	76.0	52	86.6	57	95.0	8	100.0	12	100.0	130	82.3	79	85.9	209	83.6
Unsatisfactory	1	1.7	3	6.0			1	1.7					3	1.9	2	2.2	5	2.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Leak-Proof																		
Very satisfactory	9	15.0	2	4.0	1	1.7	1	1.7			1	8.4	12	7.6	2	2.2	14	5.6
Satisfactory	49	81.7	47	94.0	57	95.0	54	90.0	8	100.0	11	91.6	139	88.0	87	94.5	226	90.4
Unsatisfactory	2	3.3	1	2.0	2	3.3	5	8.3					7	4.4	3	3.3	10	4.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Moisture- and Vapor-Proof																		
Very satisfactory	8	13.4	4	8.0	2	3.3							10	6.3	4	4.3	14	5.6
Satisfactory	50	83.3	44	88.0	57	95.0	60	100.0	8	100.0	12	100.0	144	91.2	87	94.6	231	92.4
Unsatisfactory	2	3.3	2	4.0	1	1.7							4	2.5	1	1.1	5	2.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Consumer Eye-Appeal																		
Very satisfactory	17	28.3	14	28.0	11	18.3	13	21.6	3	37.5	9	75.0	41	26.0	26	28.3	67	26.8
Satisfactory	40	66.7	34	68.0	48	80.0	46	76.7	5	62.5	3	25.0	113	71.5	63	68.4	176	70.4
Unsatisfactory	3	5.0	2	4.0	1	1.7	1	1.7					4	2.5	3	3.3	7	2.8
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Labeling																		
Very satisfactory	16	26.7	6	12.0	3	5.0	1	1.7					17	10.8	9	9.8	26	10.4
Satisfactory	40	66.7	43	86.0	54	90.0	59	98.3	8	100.0	12	100.0	137	86.7	79	85.9	216	86.4
Unsatisfactory	4	6.6	1	2.0	3	5.0							4	2.5	4	4.3	8	3.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Size																		
Very satisfactory	16	26.7	9	18.0	7	11.7	10	16.7					26	16.5	16	17.4	42	16.8
Satisfactory	44	73.3	41	82.0	52	86.6	50	83.3	8	100.0	12	100.0	131	82.9	76	82.6	207	82.8
Unsatisfactory					1	1.7							1	0.6			1	0.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0
Uniformity in Size and Shape																		
Very satisfactory	15	25.0	4	8.0	5	8.3	2	3.3					17	10.8	9	9.8	26	10.4
Satisfactory	40	66.7	40	80.0	53	88.4	57	95.0	8	100.0	12	100.0	133	84.2	77	83.7	210	84.0
Unsatisfactory	5	8.3	6	12.0	2	3.3	1	1.7					8	5.0	6	6.5	14	5.6
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

more research on this problem, it might be assumed that they would be more critical of any existing weakness.

Though retailers were generally satisfied with the packaging of frozen foods, there were a few concrete suggestions that should prove of interest to packers. These include such things as: (1) more effort to insure flat packages rather than slightly rounded sides to assist in stacking and keeping an orderly display cabinet; (2) more definite data on the packages as to number of servings that may be obtained from the package; (3) possible variation in the size of packages of certain vegetables to suit the needs of various size families.

The problem of marking the price on frozen food packages is of considerable concern to retailers. Since most wrappings are heavily waxed or made of paraffin impregnated paperboard, it is practically impossible to write legibly on the package. In addition, most packages are almost completely covered with writing and illustrations. As shown in Table XXVII, retailers are decidedly in favor of a blank space on the package for purposes of pricing. Furthermore, they suggest that if possible the wax be removed from the space provided for this purpose.

Broken Frozen Food Packages as a Problem of Retailers

Another item which retailers must guard against is that of broken packages. Carelessness on the part of distributors and customers is responsible for much of the breakage. Broken packages detract from eye appeal and are difficult to sell, which results in a loss to retailers. The frequency with which retailers are confronted with this problem is shown in Table XXVIII. While only two grocers indicated that packages

TABLE XXVII

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS PREFERRING A BLANK SPACE ON FROZEN FOOD PACKAGES FOR MARKING THE RETAIL PRICE

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	59	98.3	46	92.0	57	95.0	60	100.0	8	100.0	12	100.0	154	97.5	88	95.6	242	96.8
No	1	1.7	4	8.0	3	5.0	—	—	—	—	—	—	4	2.5	4	4.4	8	3.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XXVIII

FREQUENCY WITH WHICH THE 250 RETAIL GROCERS ARE CONFRONTED WITH THE PROBLEM OF BROKEN PACKAGES

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Regularly					1	1.7									1	1.1	1	0.4
Frequently							1	1.7					1	0.6			1	0.4
Occasionally	55	91.7	50	100.0	56	93.3	57	95.0	8	100.0	12	100.0	147	93.0	91	98.9	238	95.2
Never	5	8.3	—	—	3	5.0	2	3.3	—	—	—	—	10	6.4	—	—	10	4.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

are broken regularly or frequently, a majority reported that broken packages are an occasional occurrence. Retailers are, however, making an effort to reduce the amount to a minimum, and 97.2 per cent reported that they keep a constant check on broken packages in their display cases.

Distributors for the most part cooperate in this problem by replacing those packages that are broken, according to 83.6 per cent of the retailers. Such a policy assures the grocers of a minimum loss from this factor that is inherent in the frozen foods business.

Summary

A resume of those techniques used by retailers in selling frozen foods has been given in this chapter. First, retailer advertising of frozen foods was discussed with additional attention being given to special methods of sales promotion used within the stores. Second, the problem of retail mark-ups for frozen foods was discussed with respect to their ultimate effect on profit. Third, the relation between weekly sales volume and number of weekly frozen food deliveries to retailers was briefly mentioned. Fourth, the development of increased price consciousness on the part of consumers with respect to frozen foods was analyzed. Fifth, a brief discussion was given concerning the substitution of frozen products for fresh products by retailers. Sixth, an attempt was made to determine the degree to which consumers are satisfied with frozen foods through a study of those consumer complaints and comments received by retailers. Finally, an evaluation of selected features of frozen food packaging by retailers was given, and the problem of broken packages briefly discussed.

CHAPTER VI

FUTURE PLANS OF FROZEN FOOD RETAILERS

The three preceding chapters of this study dealt with the development and present status of the retail distribution of frozen foods by selected grocery stores in Tennessee. The further expansion of retail frozen food distribution in Tennessee is dependent to a great extent upon the continued efforts of retailers to provide adequately for the needs of their customers and to observe closely their merchandising procedures. Attention in this chapter is, therefore, directed toward a study of the future plans of retailers with respect to frozen foods.

Future Plans Regarding New Display Cabinets

Although the types of cabinets now in use were enumerated in Chapter IV, a total of 46.4 per cent of the retailers plan to install new display cabinets. This information is revealed in Table XXIX. Chain retailers showed more interest in buying new equipment than did the independents. However, many of these grocers modified their replies by such comments as: (1) if demand continues, and (2) if business conditions in general do not decline. Most of the merchants were of the opinion that the use of frozen foods will continue to expand, but they are not sure that this is the proper time to invest more capital in new cabinets.

TABLE XXIX

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS PLANNING TO INSTALL NEW DISPLAY CABINETS IN THE FUTURE

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	32	53.3	26	52.0	22	36.7	27	45.0	4	50.0	5	41.7	67	42.4	49	53.3	116	46.4
No	28	46.7	24	48.0	38	63.3	33	55.0	4	50.0	7	58.3	91	57.6	43	46.7	134	53.6
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

Future Plans Regarding Bulk or Reserve Storage Facilities

Frozen food distributors today are usually willing to make deliveries to retailers as frequently as they are needed. For this reason, few retailers provide reserve storage facilities. The results shown in Table XXX verify this statement. Further questioning disclosed that 19.6 per cent of the retailers now have some reserve storage facilities. In most instances, this was found to be part of the display cabinets which indicates that a good many prefer cabinets that have reserve storage facilities.

Future Plans in Regard to Types of Frozen Food Handled

Retailers must carefully selecte the types of frozen foods carried in order to obtain the maximum value from their limited storage space. At present, there is some indication that a few retailers stock too many frozen food items; however, Table XXXI shows that approximately 80.0 per cent intend to continue handling the same types of frozen foods in the future.

The chains seem to follow a more rigid policy with regard to limiting the number of varieties than do independents, and carry only those items which have a rapid turnover. Therefore, as would be expected, more chains, 94.6 per cent, stated that they would keep the same number of items, whereas only 70.9 per cent of the independents expressed this opinion.

Future Plans in Regard to Number of Brands Handled

Most retailers believe that it is advantageous to concentrate efforts upon a limited number of brands. This policy is illustrated

TABLE XXX

NUMBER AND PER CENT OF THE 250 RETAIL GROCERS PLANNING TO PROVIDE BULK OR RESERVE STORAGE FACILITIES FOR FROZEN FOODS IN THE FUTURE

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	3	5.0			1	1.7	2	3.3			2	16.7	8	5.1			8	3.2
No	57	95.0	50	100.0	59	98.3	58	96.7	8	100.0	10	83.3	150	94.9	92	100.0	242	96.8
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XXXI

FUTURE PLANS OF THE 250 RETAIL GROCERS REGARDING THE TYPES OF FROZEN FOODS TO BE HANDLED

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Smaller	1	1.7	5	10.0	7	11.7							9	5.7	4	4.3	13	5.2
About the Same	39	65.0	40	80.0	53	88.3	50	83.3	7	87.5	10	83.3	112	70.9	87	94.6	199	79.6
Larger	20	33.3	5	10.0	—	—	10	16.7	1	12.5	2	16.7	37	23.4	1	1.1	38	15.2
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

in Table XXXII, as 92.0 per cent of the retailers stated they intend to carry the same or a fewer number of brands in the future. Many retailers stated that too many brands appear to confuse customers, and that they believed two brands were adequate.

Future Plans in Regard to Amount of Display Space

Because of the relatively small volume of frozen food business, a majority of the retailers do not anticipate a need for increasing their display space. Approximately 85.0 per cent, as shown in Table XXXIII, were of this opinion. Although this seems to contradict the fact that 46.4 per cent plan to buy new cabinets, it should be pointed out that in most cases these purchases will be made in order to obtain better visibility and accessibility rather than additional space.

Despite the apparent lack of definite plans for further expansion of the frozen food department, 94.0 per cent of the retailers believe this phase of their business has a good future. Although many of the respondents were doubrful that frozen foods can in the near future compete with fresh foods on a price basis, a few seem to be willing to increase their efforts to obtain the adequate sales volume necessary for making this type of merchandise a profitable line.

Summary

Attention has been centered in this chapter upon the future plans of retailers with respect to frozen foods. First, retailers' plans with respect to the installation of new display cabinets were

TABLE XXXII

FUTURE PLANS OF THE 250 RETAIL GROCERS REGARDING THE NUMBER OF BRANDS OF FROZEN FOODS TO BE HANDLED

Response	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total: Independent		Total: Chain		Total: Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fewer	7	11.6	5	10.0	2	3.3	1	1.7					10	6.3	5	5.4	15	6.0
About the Same	47	78.4	42	84.0	55	91.7	54	90.0	7	87.5	10	83.3	129	81.6	86	93.5	215	86.0
More	6	10.0	3	6.0	3	5.0	5	8.3	1	12.5	2	16.7	19	12.1	1	1.1	20	8.0
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

TABLE XXXIII

FUTURE PLANS OF THE 250 RETAIL GROCERS REGARDING THE AMOUNT OF SPACE TO BE USED FOR DISPLAYING FROZEN FOODS

	Memphis		Nashville		Chattanooga		Knoxville		Bristol		Oak Ridge		Total					
													Independent		Chain		Total	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Increase	14	23.3	6	12.0	3	5.0	8	13.3	4	50.0	3	25.0	31	19.6	7	7.6	38	15.2
Same	46	76.7	44	88.0	57	95.0	51	85.0	4	50.0	9	75.0	126	79.8	85	92.4	211	84.4
Decrease	—	—	—	—	—	—	1	1.7	—	—	—	—	1	0.6	—	—	1	0.4
Total	60	100.0	50	100.0	60	100.0	60	100.0	8	100.0	12	100.0	158	100.0	92	100.0	250	100.0

discussed. Second, plans of retailers for the installation of reserve storage facilities were briefly mentioned. Next, those plans of retailers with respect to types and brands of frozen foods to be carried were studied. Finally, retailer plans for increasing the amount of display space given to frozen foods were discussed.

CHAPTER VII

WHOLESALE DISTRIBUTION OF FROZEN FOODS IN TENNESSEE

Present Status

In the absence of a better method for introducint their products, frozen food packers patterned early marketing procedures after those of canners. With very few exceptions, brokers were initially employed for product distribution.[1]

A few frozen food wholesale distributors began operations when retail consumer-sized packages were made available by packers, but lack of frozen food cabinets in retail stores severely restricted sales.[2] These early distributors usually operated from a public refrigerated warehouse and used poorly insulated or uninsulated delivery trucks. It was almost impossible for distributors to represent more than one packer because of the restrictions imposed on them by the first source of supply. As a result of these conditions, many of the early distributors failed, and only the most persevering survived the early period of the introduction of this new type of processed food.[3]

Growth of Frozen Food Distributors

The growth of wholesale frozen food distribution in Tennessee has

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[1] H. C. Diehl and C. R. Havighorst, "Frozen Food Report No. 2 -- Marketing," *Food Industries,* 19:150, February 1947.

[2] Diehl and Havighorst, *loc. cit.*

[3] *Ibid.*, p. 156.

followed a somewhat uneven pattern as shown in Table XXXIV. Before 1940, retail outlets were few in number and there was not enough incentive to induce more distributors to enter the business. However, by 1940 consumer interest in frozen foods and, along with it, retailer interest, had reached a point where more and wider distribution was necessary. In that year, three new distributors entered the field.

Wholesale distribution would probably have continued to expand had it not been for World War II. The same basic reasons that slowed retailer growth in frozen foods also accounted for depressed distributor expansion. Only two new distributors entered business between 1940 and 1946.

With the end of the war, the entire industry again began rapid expansion and more distributors entered the frozen food field. Seven, or over half of all the present distributors in the state, started operations since the war. There has also been a fairly even growth of the wholesalers in all of the six cities.

It is interesting to note that these distributors have not all entered the wholesale frozen food business with frozen foods as their only items. Of the thirteen in the state, only three are engaged solely in the frozen food business. The other ten distributors have varied interests such as the distribution of fresh produce, dairy products, meat products, ice, fish and oysters, or the operation of frozen food lockers. Therefore, frozen foods are only a sideline for most of the distributors. At the present time, there is only one distributor in the state that packs frozen foods and this is located in Knoxville, Tennessee.

TABLE XXXIV

YEARS IN WHICH THE THIRTEEN DISTRIBUTORS BEGAN HANDLING FROZEN FOODS

Year	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
1938				1			1
1939							
1940		1	2				3
1941				1			1
1942	1						1
1943							
1944							
1945							
1946		1				1	2
1947	1		2				3
1948	1				1		2
Total	3	2	4	2	1	1	13

Number of Varieties of Frozen Food Handled

In order to satisfy retailer demand for frozen foods, distributors are forced to carry a wide variety of items. Table XXXV shows the kinds and varieties handled by the distributors.

Vegetables are undoubtedly the most important from a standpoint of sales of the two basic kinds of frozen foods. For this reason, distributors usually handle a large assortment of vegetables. Although some may not yet be profitable, distributors feel that if the industry is to expand consumer demand must be increased as well as the range of frozen food items.

Frozen fruits, the other basic kind, are restricted to relatively few varieties because a few account for a majority of total fruit sales.

Frozen meats are carried by only five of the distributors, two in Memphis, two in Chattanooga, and one in Knoxville. Distributors handling this item usually carry only one brand. Few distributors carry frozen meat because of its limited consumer acceptance.

More retailers report that as yet frozen fish and poultry have not been generally accepted by the public. This, plus the fact that profit margins on these items in the fresh form are greater, accounts for the fact that frozen forms are not carried in great quantity. However, some distributors feel that they are being fairly successful in the promotion of these items and as a result carry a rather large number of varieties.

Specialty items offer a source of increased profits for distributors, and for this reason some may be tempted to carry large numbers of

TABLE XXXV

NUMBER OF VARIETIES OF FROZEN FOODS HANDLED BY THE THIRTEEN DISTRIBUTORS

Variety and Number	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Vegetables							
11			1				1
14			2				2
15	1						1
16		1		1			2
17		1					1
19				1			1
20	1				1	1	3
25	1						1
30			1				1
Total	3	2	4	2	1	1	13
Fruits							
2		1					1
3			1				1
4	1		1				2
5		1	2		1	1	5
6	1						1
8				1			1
9				1			1
12	1						1
Total	3	2	4	2	1	1	13
Meat							
0	1	2	2	1	1	1	8
1	2		2	1			5
Total	3	2	4	2	1	1	13
Fish							
1	1						1
3			1	1			2
4			2	1			3
5		1			1	1	3
6	1	1					2
8			1				1
9	1						1
Total	3	2	4	2	1	1	13
Poultry							
0		1	1				2
1	2		2	1			5
3		1		1			2
4			1				1
10	1				1	1	3
Total	3	2	4	2	1	1	13
Specialties							
3		1	1	1			3
4			2				2
5				1			1
6	1						1
7	1	1					2
10	1				1	1	3
12			1				1
Total	3	2	4	2	1	1	13

these items. This may result in retailers being loaded with hard-to-move merchandise. As a whole, the Memphis wholesalers carry larger assortments than do those in the other cities, and it is interesting to note that one distributor in Chattanooga handles a much larger assortment than the others in that area.

Number of Brands Carried

Distributors today are no longer handicapped as to the number of brands they can carry because with such a relatively small number in the state, packers and processors must sell to all if they are to obtain wide distribution. The number of brands now carried by the thirteen distributors is shown in Table XXXVI.

Most wholesalers state that their policy is to carry the smallest number of brands possible to meet retailer demand. This procedure concentrates sales efforts on a smaller group of products. Furthermore, the elimination of duplications is necessary because of the limited amount of cabinet space in most retail grocery stores.

The wide range of brands is accounted for by the fact that a few distributors enumerated all their brands and specialty items, some included only major brands and specialties, while others listed only the one major brand handled.

Distributors in Chattanooga, as a whole, handle a larger number of brands than do those in the other five cities. This is interesting in view of the fact that distributors in that city complain that there are too many distributors for the potential market. There is only one

TABLE XXXVI

NUMBER OF MAJOR BRANDS OF FROZEN FOODS HANDLED BY THE THIRTEEN DISTRIBUTORS

Number	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
1		1		1			2
3	2						2
4				1			1
5			1		1	1	3
8	1		2				3
14		1					1
17			1				1
Total	3	2	4	2	1	1	13

distributor in the state having a private brand of frozen foods. This distributor, located in Knoxville, is also a packer.

Per Cent of Sales to Retail and Institutional Establishments

The two largest markets for frozen foods at the present time are the retail and institutional outlets. Figures shown in Table XXXVII give the present proportions of distributors' sales between these two markets. Institutional sales at the present account for a rather small portion of the business. Over three-fourths of the distributors reported one-third or less of total sales to this market. It was reported that this is not as profitable a market as the retail business, as a consequence, is not promoted extensively.

Therefore, most distributors have concentrated on the retail market which constitutes over three-fourths of their sales volume. While Memphis distributors depend almost entirely upon retailers, the fairly even division of sales by Chattanooga wholesalers is interesting. They have tended to cultivate the institutional market in order to offset the heavy competition for the retail business.

Sales to retailers are increasing according to 92.3 per cent of the distributors. One of the thirteen distributors reported sales about the same, but he stated that he had only a small retail business. Only 30.8 per cent reported increasing institutional sales while one distributor does not cultivate this business.

Per Cent of Sales to National Chains, Local Chains, Independents

A follow-up question on the amount of sales to retailers was made

TABLE XXXVII

ESTIMATED PER CENT OF FROZEN FOODS SALES OF THE THIRTEEN DISTRIBUTORS TO RETAIL AND INSTITUTIONAL ESTABLISHMENTS[a]

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Per Cent Retail							
60		1	1				2
65				1			1
66 2/3				1			1
70			2				2
75		1	1				2
85					1		1
90	1						1
95	1					1	2
100	1						1
Total	3	2	4	2	1	1	13
Per Cent Institutional							
0	1						1
5	1					1	2
10	1						1
15					1		1
25		1	1				2
30			2				2
33 1/3				1			1
35				1			1
40		1	1				2
Total	3	2	4	2	1	1	13

[a] Estimates submitted by the distributors.

by asking distributors to estimate distribution of these sales by chains and independents. The results are shown in Table XXXVIII. These figures indicate that independents are the most important customers as a whole. About 85 per cent of the distributors report that 50.0 per cent or more of their total retail sales are made to independents. The small per cent of sales to independents in Nashville is due largely to the great number of chain stores in that city.

National chains still comprise a small part of the retail market for Tennessee distributors. About 85.0 per cent of the distributors report that 20.0 per cent or less of their retail sales are made to them.

Local chains account for a slightly larger share of the retail market than do national chains. However, about 45.0 per cent of the distributors report that this group accounts for less than 10.0 per cent of total retail sales, while 23.1 per cent report no sales to local chains.

Present Sales Volume Fluctuations Compared to Previous Years

One of the problems that has always confronted frozen food distributors has been that of seasonal sales. In the past, sales could be depended upon to increase during the winter months and to decrease with the spring, summer, and fall months when fresh produce was abundant. Advertising and consumer education regarding frozen foods have reduced these seasonal fluctuations. When questioned concerning present seasonal fluctuations compared to past seasonal movements, the distributors answered as shown in Table XXXIX. Almost half, or 46.2 per cent, reported less seasonal fluctuation than in previous years. It may be hoped that

TABLE XXXVIII

ESTIMATED PER CENT OF FROZEN FOODS SALES OF THE THIRTEEN DISTRIBUTORS TO NATIONAL CHAINS, LOCAL CHAINS, AND INDEPENDENT RETAILERS[a]

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Per Cent National Chains							
0	1		1				2
3					1		1
5			1	1			2
10	1		1				2
15	1						1
20		1		1		1	3
25		1					1
30							
35			1				1
Total	3	2	4	2	1	1	13
Per Cent Local Chains							
0	2				1		3
5			1	1			2
10						1	1
15			1				1
25				1			1
30			2				2
40		2					2
50	1						1
Total	3	2	4	2	1	1	13
Per Cent Independents							
35		1					1
40		1					1
50	1						1
55				1			1
60			2				2
70			1			1	2
80			1				1
85	1						1
90	1			1			2
97					1		1
Total	3	2	4	2	1	1	13

[a] Estimates submitted by the distributors.

TABLE XXXIX

NUMBER OF THE THIRTEEN DISTRIBUTORS WHOSE SEASONAL SALES VOLUME FLUCTUATES AS IN PREVIOUS YEARS

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	1	1	2				4
No	1		1	2	1	1	6
Don't Know	1	1	1				3
Total	3	2	4	2	1	1	13

this is an indication of a leveling out of marked seasonal fluctuation; however, much more intensive work on this is necessary.

Distributors' Satisfaction with the Promotion of Frozen Foods by Retailers

Distributors are still, for the most part, dissatisfied with retailer cooperation in the promotion of frozen foods. This dissatisfaction was expressed by 61.6 per cent of the distributors, as shown in Table XL. Although this criticism may be justified, many retailers do not have the time or understanding to do a satisfactory job of promotion. However, it is interesting that in the cities of Memphis and Knoxville all the distributors are satisfied with the efforts of the retailers in sales promotion.

Distributor Evaluation of Their Present Business

Despite the fact that distributors report increasing sales and expanding interest in frozen foods by consumers, only one of the thirteen evaluated their present situation as very satisfactory, while the other twelve reported satisfactory conditions. No doubt this is due in part to the natural hesitation of businessmen ever to view their present situation too optimistically. However, another reason for this feeling on the part of distributors seems to be that expansion of the industry and general acceptance by consumers has not taken place as rapidly as they had earlier believed would be the case. This is still a new field, and by all indications will account for a large share of the total food business when eventually developed, but it is doubtful that too rapid

TABLE XL

NUMBER OF THE THIRTEEN DISTRIBUTORS SATISFIED WITH THE PROMOTION OF FROZEN FOODS BY RETAILERS

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	3			2			5
No		2	4		1	1	8
Total	3	2	4	2	1	1	13

expansion should be expected in the near future. There are a number of major problems yet to be solved, and time and increased operations will be necessary in order to work these out.

Methods of Operation

As in the previous section on retail distribution, this is an analysis of present operational techniques employed in the actual physical handling of frozen foods by distributors.

Per Cent of Frozen Foods Received from Packers by Railroad and Truck

The importance of adequate refrigerated transportation cannot be overestimated in the operation of the frozen food industry. Though this has been solved to some degree, there is still much to be done in the co-ordination of available facilities.

The transportation facilities now employed in distribution between packers and distributors are shown in Table XLI. This table clearly indicates the reliance upon trucks for delivery. This is largely due to the fact that the four distributors in Chattanooga all state that their main source of supply is Atlanta, Georgia, and that trucks are used for this haul. Available rail and truck facilities and distances involved usually determine the type of transportation used and so, to a large degree, is beyond their control.

Although these two types of transportation still need better equipment for this particular purpose, most distributors consider them adequate. About 70.0 per cent using both rail and truck delivery reported

TABLE XLI

ESTIMATED PER CENT OF FROZEN FOODS DELIVERED TO THE THIRTEEN DISTRIBUTORS BY RAILROAD AND TRUCK[a]

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Per Cent Railroad							
0			4	1	1		6
25	1						1
40				1			1
50	1	1				1	3
80	1						1
90		1					1
Total	3	2	4	2	1	1	13
Per Cent Truck							
0							
10		1					1
20	1						1
50	1	1				1	3
60				1			1
75	1						1
100			4	1	1		6
Total	3	2	4	2	1	1	13

[a] Estimates submitted by the distributors.

the present methods to be adequate. Although very few comments were made, two mentioned the need for better refrigeration.

Methods Used in Storage of Frozen Foods

In addition to adequate facilities for delivery, distributors must make provision for proper storage. The methods used in providing storage are shown in Table XLII. From this it is evident that all but four of the distributors own some storage space. However, six of those who own storage facilities find them inadequate. This means that ten of the thirteen do not own facilities sufficient for their present storage operations.

The fact that most distributors own some storage space is accounted for by the fact that many already had facilities for their other operations such as ice, dairy products, etc., before becoming engaged in distributing frozen foods. Only slightly over half of the distributors stated that their present storage space, both owned and rented, was adequate for present operations. Also, only three of the ten now renting indicated their intention of building their own adequate facilities.

This situation may indicate that most distributors do not: (1) have sufficient faith in the future of the industry, (2) have sufficient capital to provide their own storage facilities, (3) believe that future economic conditions are settled enough for such investments.

Number of Frozen Food Salesmen Employed

The number of salesmen employed by distributors seems to be dependent upon the major business interest of each individual wholesaler. As shown in Table XLIII, the number of salesmen varies widely.

TABLE XLII

METHODS USED BY THE THIRTEEN DISTRIBUTORS FOR HANDLING THE STORAGE OF FROZEN FOODS[a]

Method	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Own Storage Facilities	2	1	3	2	1		9
Rent Storage Facilities	3	2	2	2		1	10
Both	2	1	1	2			6

[a] Figures are based on all methods used by each distributor.

TABLE XLIII

NUMBER OF SALESMEN EMPLOYED BY THE THIRTEEN DISTRIBUTORS[a]

Number	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
0					1		1
1			1				1
2		1	2			1	4
3	1			1			2
4	1						1
8		1					1
10			1	1			2
28	1						1
Total	3	2	4	2	1	1	13

[a] Includes full- and part-time salesmen.

In the four largest cities in the state, there are four distributors employing eight or more salesmen. In every case except the one in Knoxville, these salesmen have dual jobs. They normally sell fresh produce, fish and oysters, and meat along with frozen foods. The salesmen of the Knoxville distributor sell only frozen foods to retail and institutional establishments. The other extreme is found in Bristol where the distributor operates a locker plant and does not employ salesmen but relies on his customers to come to the locker plant. However, 61.5 per cent of the distributors employ from one to four salesmen to sell frozen foods. An interesting supplement to this information is the fact that 38.5 per cent of the distributors use part-time salesmen for this business. Salesmen in Memphis and Chattanooga who also sell fresh produce and meats are considered to be part-time employees.

Number of Trucks Used in Delivery

A similar pattern with respect to the number of trucks used by distributors is shown in Table XLIV. The same four distributors in the largest cities use their trucks for delivery of other items with the exception of the one in Knoxville. However, most distributors try to keep their frozen food delivery operations separate, and about two-thirds of them use from one to three trucks.

Per Cent of Sales Made by Advance and Truck Selling

A much argued point in the selling of frozen foods concerns the relative merits of advance selling and truck selling. The division of distributors' sales between these methods is shown in Table XLV. Less

TABLE XLIV

NUMBER OF TRUCKS USED BY THE THIRTEEN DISTRIBUTORS[a]

Number	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
1		1	1		1		3
2			2			1	3
3	2			1			3
7		1		1			2
8			1				1
33	1						1
Total	3	2	4	2	1	1	13

[a] Includes trucks used both full- and part-time for distributing frozen foods.

TABLE XLV

ESTIMATED PER CENT OF FROZEN FOODS SALES OF THE THIRTEEN DISTRIBUTORS MADE BY ADVANCE AND TRUCK SELLING

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Per Cent Advance Selling							
0					1		1
50						1	1
70			1				1
90	2						2
100	1	2	3	2			8
Total	3	2	4	2	1	1	13
Per Cent Truck Selling							
0	3	2	3	1	1		10
30			1				1
50						1	1
100				1			1
Total	3	2	4	2	1	1	13

than 20.0 per cent of the distributors use any sizeable amount of truck selling, and most indicate they are not interested in this more expensive type of distribution.

The figures for Knoxville show an apparent discrepancy in the total. This is due to the fact that one distributor uses truck selling for his institutional trade and advance selling for his retail trade. The remaining distributors using truck selling employ this method for covering outlying territories.

Approximately 75.0 per cent of the distributors stated a preference for advance selling because of the following reasons: (1) less expensive, (2) provides for taking better care of customers, and (3) makes for easier buying for retailers. However, they reported that both types of selling could be used to advantage in certain territories and especially in the institutional field.

<u>Distributors Shipping Frozen Foods by Common Carrier</u>

Because of the size of territories, most distributors are required at one time or another to ship frozen foods by common carrier. Table XLVI indicates the number of distributors using this method of delivery to their customers. Of approximately 85.0 per cent who used this method of transportation, practically all limited such shipments to regular customers on regular routes. Very few shipments are made to retailers off regular routes, and shipments to other territories are made only on agreement with other distributors.

All distributors use shipping containers to furnish additional protection for the packages against rough handling. The containers are

TABLE XLVI

NUMBER OF THE THIRTEEN DISTRIBUTORS SHIPPING FROZEN FOODS BY COMMON CARRIER

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	3	2	3	2		1	11
No	—	—	1	—	1	—	2
Total	3	2	4	2	1	1	13

usually shipped by express and by two types of carriers -- bus and motor freight. There seems to be little preference among these three methods. Express shipments are made by 46.2 per cent of the distributors, and 53.8 per cent use both bus and motor freight equally. Common complaints of this type shipping are: (1) high cost, (2) poor handling, (3) poor schedules, causing delays.

Distributor Evaluation of Selected Features of Frozen Food Packaging

The importance of packaging has been discussed in Chapter V, and an evaluation of selected features by retailers was shown in Table XXVI. For purposes of determining distributor attitudes, they were asked to evaluate the same feature, and the results are shown in Table XLVII.

All distributors regard packages as satisfactory or better with respect to strength and durability. In view of their experience with handling and shipping, this speaks well for these features.

Almost one-fourth of the distributors were dissatisfied with the ability of the packages to prevent leaking, and of those who rated this feature satisfactory, some mentioned occasional trouble. The greatest problem seems to be with those packages containing fruits packed in syrup. These comments and results indicate a need for improvement in this feature of packages.

An essential objective of frozen food packaging is the prevention of moisture losses and the formation of water vapor due to exposure to air. Loss of moisture causes food to dry out and water vapor causes the food to become discolored and rancid. This feature was rated satisfactory

TABLE XLVII

EVALUATION OF SELECTED FEATURES OF FROZEN FOODS PACKAGING BY THE THIRTEEN DISTRIBUTORS

Feature and Rating	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Strength for Protection							
Very satisfactory	1		2	2			5
Satisfactory	2	2	2		1	1	8
Unsatisfactory							
Total	3	2	4	2	1	1	13
Leak-Proof							
Very satisfactory	2		1	1			4
Satisfactory	1	1	3	1			6
Unsatisfactory		1			1	1	3
Total	3	2	4	2	1	1	13
Moisture- and Vapor-Proof							
Very satisfactory	1		1	2			4
Satisfactory	2	2	3				7
Unsatisfactory					1	1	2
Total	3	2	4	2	1	1	13
Consumer Eye-Appeal							
Very satisfactory	2	1	2	1			6
Satisfactory		1	2	1			4
Unsatisfactory	1				1	1	3
Total	3	2	4	2	1	1	13
Labeling							
Very satisfactory	1			1			2
Satisfactory	1	2	3	1			7
Unsatisfactory	1		1		1	1	4
Total	3	2	4	2	1	1	13
Size							
Very satisfactory	2		1	1			4
Satisfactory	1	1	3	1	1	1	8
Unsatisfactory		1					1
Total	3	2	4	2	1	1	13
Uniformity of Size and Shape							
Very satisfactory	2			1			3
Satisfactory	1	1	1	1			4
Unsatisfactory		1	3		1	1	6
Total	3	2	4	2	1	1	13

or better by over 80.0 per cent of the distributors. However, two wholesalers reported definite dissatisfaction with this feature.

Eye appeal was rated the highest by the distributors with almost one-half evaluating this factor as very satisfactory. Since this greatly affects sales promotion and is of vital interest, such ratings are of major importance to the industry.

Almost one-third of the distributors are dissatisfied with the labels used on frozen food packages. Many of those rating this feature as satisfactory mentioned occasional trouble with labels. The main criticism of labels was the fact that they come open easily on the ends of the packages and are frequently torn off. The transparent overwrap still used by some packers is also objectionable. This tears and gives the package a shopworn appearance which does not appeal to customers, and distributors suggest that this overwrap be eliminated.

The size of frozen food packages at the present time is fairly well standardized. Distributors indicated that present quantities provide adequate servings and eliminate much of the loss due to left-over food. Over 90.0 per cent rated this feature satisfactory or higher.

In order to conserve space and facilitate storage, packages must be uniform in size and shape. This feature does not seem to be satisfactory. Distributors were especially critical of those packages that tend to be round on top rather than flat. Such packages cannot be easily stacked for shipping or neatly displayed in cabinets.

Although distributors did not comment on other features of packaging, it was learned that the most frequent complaint of retailers was that the labeling was unsatisfactory because it tore easily and slipped off.

Distributors Tending to Eliminate Slow-Moving Items of Frozen Food

It is generally known in most food businesses that some items have such a slow rate of turnover that it is not profitable to carry them. This is especially true in frozen foods where the items must be kept under controlled conditions at all times.

Figures shown in Table XLVIII indicate the attitude of distributors with respect to this phase of frozen food merchandising. Distributors are tending to eliminate slow-moving frozen food items. Such a policy is especially important because space is too costly.

According to the experience of the distributors, the following items are slow movers: some fruits, including apricots, rhubarb, applesauce, boysenberries, and blackberries; vegetables such as yellow squash, peas and carrots, and succotash.

Although 92.3 per cent of the distributors report they pick up slow-moving items of frozen foods, these commodities were found in a large majority of the retail cabinets. Distributors are forced in some cases to carry small supplies of slow-moving items because of particular requests of certain retailers, especially those catering to high income families. Three distributors do not pick up slow-moving items unless retailers insist.

Approximately 85.0 per cent of the distributors reported that retailers were satisfied with the present number of varieties of frozen

TABLE XLVIII

NUMBER OF THE THIRTEEN DISTRIBUTORS TENDING TO ELIMINATE SLOW-MOVING VARIETIES OF FROZEN FOODS

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	3	2	4	2	1	1	13
No	—	—	—	—	—	—	—
Total	3	2	4	2	1	1	13

foods. Some distributors commented that retailers in the past had tried to handle too many items and varieties, and a few occasionally call for items that distributors do not carry.

Distributors' Attitude Concerning Deliveries

Most distributors today are willing to provide retailers with all the deliveries necessary to supply their needs for frozen foods. Because of this practice, all distributors reported retailers as being satisfied with the frequency of their deliveries.

Distributors Advertising Frozen Foods

In order that frozen foods receive the most effective sales promotion possible, it seems necessary that distributors as well as retailers advertise. Those distributors who advertise are shown in Table XLIX. Three of the thirteen do not advertise. The Nashville distributor reported that he had advertised in the past, but had not found it too effective. One Chattanooga distributor used coupons and streamers in stores, and the other was planning to start advertising in the near future.

Media Used by Distributors in Advertising

The various media used by distributors are shown in Table L. Newspaper advertising is the most widely used medium. The use of radio advertising is relatively new, with distributors in only two cities having used this medium. Point of sale posters in connection with the display cabinets is a valuable aid in increasing sales. This method is

TABLE XLIX

NUMBER OF THE THIRTEEN DISTRIBUTORS ADVERTISING FROZEN FOODS

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	3	1	2	2	1	1	10
No	—	1	2	—	—	—	3
Total	3	2	4	2	1	1	13

TABLE L

MEDIA USED BY THE THIRTEEN DISTRIBUTORS FOR ADVERTISING[a]

Media	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Radio	2			1	1	1	5
Newspaper	3	1	2	1			7
Point of Sale	1		1	2			4
Magazine	1			1			2
Car Cards				1			1

relatively inexpensive and has proved unusually effective in other types of businesses.

Distributors' Dependence on Advertising by Packers

Although distributors do considerable advertising, they still depend upon packers to help create a demand for frozen foods. The extent of this dependence is shown in Table LI. Packers are usually more able to set up large-scale advertising programs and cover a wide area. Distributors, in turn, try to coordinate their advertising with that of the packers. Many of the distributors who began operations within the last few years were forced initially to depend to a large degree on demand created by the advertising of the packers.

Specific Advertising Assistance Received from Packers

In addition to their own advertising, packers now make available to distributors various advertising aids. The different types are shown in Table LII. A total of 61.6 per cent of the distributors use some of the advertising assistance offered by packers. The most important aids are mat services, point of sale posters, and advertising allowances.

Distributor Predictions for Next Year

The majority of distributors in the state expect a general increase in business in 1950. They feel that consumers are becoming more educated regarding the use of frozen foods and that this will account for an increase in sales. However, the need for more advertising and aggressive

TABLE LI

NUMBER OF THE THIRTEEN DISTRIBUTORS DEPENDING UPON ADVERTISING BY PACKERS TO CREATE A DEMAND FOR FROZEN FOODS

Response	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Yes	3	1	2	2	1	1	10
No							
Does Not Advertise	—	1	2	—	—	—	3
Total	3	2	4	2	1	1	13

TABLE LII

ASSISTANCE RECEIVED FROM PACKERS BY THE THIRTEEN DISTRIBUTORS FOR PROMOTING THE SALE OF FROZEN FOODS[a]

Type of Assistance	Memphis Number	Nashville Number	Chattanooga Number	Knoxville Number	Bristol Number	Oak Ridge Number	Total Number
Mats	2		1	1	1	1	6
Point of Sale Posters	2	1	1		1	1	6
Newspaper	2			1	1	1	5
Radio	1						1
Billboard	1	1					2
None at This Time		1	3	1			5

[a] Figures are based on all types of assistance received by each distributor.

sales promotion was emphasized by the distributors, thus indicating that they are aware of the tremendous amount of work yet to be done if frozen foods are to attain an equal status with fresh and canned foods. Three distributors expected little change in business because of the uncertain general economic situation. In Chattanooga, some distributors feel that competition is already too keen for the limited amount of business available.

Predictions on Brands to be Carried During New Year

Distributors were requested to state their expected actions with regard to the number of brands to be handled, and these future plans are shown in Table LIII. Over 90.0 per cent expect to maintain or reduce the present number of brands of vegetables carried. This action should prevent overstocking and enable them to concentrate sales activity on the better selling brands.

The number of brands of fruits is quite limited at present, but regardless of this fact, one-fourth of the distributors expect to reduce the number of brands still more. The reason for this is the fact that sales of frozen fruits are at present limited to a few items.

It appears that the number of brands of meat, fish, and poultry will remain small. Until there is a substantial increase in the sales of fish and poultry, and better consumer acceptance of meats, most distributors feel there is little need for increasing the number of brands of these items.

Almost one-third indicate plans for increasing the number of brands of specialties because more are constantly being produced and,

TABLE LIII

ESTIMATED CHANGE IN THE NUMBER OF MAJOR BRANDS OF FROZEN FOODS TO BE HANDLED BY THE THIRTEEN DISTRIBUTORS DURING THE NEXT YEAR

Variety and Change	Memphis	Nashville	Chattanooga	Knoxville	Bristol	Oak Ridge	Total
	Number	Number	Number	Number	Number	Number	Number
Vegetables							
Larger	1						1
Smaller	1		2		1	1	5
About the Same	1	2	2	2			7
Total	3	2	4	2	1	1	13
Fruits							
Larger	1						1
Smaller	1		2				3
About the Same	1	2	2	2	1	1	9
Total	3	2	4	2	1	1	13
Meats							
Larger	1						1
Same	2	2	4	2	1	1	12
Total	3	2	4	2	1	1	13
Fish							
Larger							
Smaller	1				1	1	3
About the Same	2	2	4	2			10
Total	3	2	4	2	1	1	13
Poultry							
Larger							
Smaller							
About the Same	3	2	4	2	1	1	13
Total	3	2	4	2	1	1	13
Specialties							
Larger	1	1	2				4
Smaller							
About the Same	2	1	2	2	1	1	9
Total	3	2	4	2	1	1	13

thus far, most of them have had satisfactory consumer reception. This, plus the higher margins of profit, no doubt, account for the intentions of increasing the number of these items. Only one distributor, located in Memphis, indicated an increase in number of brands of all items carried.

Summary

Attention in this chapter has been centered upon an analysis of those conditions leading to the present status of wholesale frozen food distribution in Tennessee, an analysis of operational techniques used by distributors for the wholesale merchandising of frozen foods, and a brief discussion of distributor predictions for the coming year.

With respect to the present status of wholesale distribution, the growth of frozen food distributors was first discussed. Second, an analysis was made of those conditions determining the number of varieties and brands of frozen foods carried by distributors. Next, an analysis was made of the distribution of distributor sales between the retail and institutional markets, and a further study made of sales distribution within these two markets. Finally, distributor satisfaction with retailer frozen food promotion was discussed, and an evaluation of their present business by distributors given.

The analysis of merchandising techniques was begun by a study of those types of refrigerated transportation used by distributors for securing frozen foods from packers, and a study of those methods used for the storage of frozen foods. Second, those factors affecting the size of the distributors' sales force were discussed, and a brief discussion given to delivery facilities. Third, a study was made of those conditions determining the use of advance or truck selling by distributors. Fourth, the problems of shipping frozen foods by common carrier was discussed. Fifth, an analysis was made of distributor evaluations of selected features of frozen food packaging. Sixth, the problem of eliminating slow-moving items of frozen foods was briefly mentioned, and distributor attitudes regarding delivery summarized. Finally, the question of distributor advertising was discussed in some detail with emphasis on number of distributors advertising, various media used for advertising, dependence on packers for advertising, and specific advertising assistance received from packers.

Distributor predictions for the next year were briefly summarized, and action with respect to number of brands to be carried was discussed.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

Frozen Food Retailers

Frozen foods were first handled in Tennessee in 1921 by an independent retailer located in Knoxville. From this early beginning, the number of stores handling frozen foods has constantly increased, although the growth has not been consistent throughout these years.

Until 1940 the only grocers handling frozen foods were independents. At this time, an active interest was created and independents as well as chains began stocking frozen foods. The early lack of participation on the part of chains seems to have been due to: (1) the fact that frozen foods initially found the best reception in higher-than-average income families, and (2) the interest of chains in the more profitable line of fresh produce.

During World War II, the opening of new frozen food outlets was seriously retarded by the lack of available display cabinets. This was offset in part, however, by the great increase in consumer demand. Display cabinets became more available at the close of the war which resulted in the more rapid expansion of the frozen food business in Tennessee.

To satisfy the demands of their customers, retailers endeavor to carry as complete a variety of frozen foods as possible. Because of insufficient consumer acceptance and demand, three types of frozen foods --

meat, poultry, and fish -- are not carried by many retailers. They carry the smallest number of major brands possible, which is usually determined by competitive conditions in the respective city or neighborhood. Chains seem to follow a more restricted policy concerning the number of brands handled than do independents. Birds Eye is still the most popular brand, although the most rapid gains in consumer popularity seem to have been made by Wintergarden and Stokely's Honor Brand.

The consumption of frozen foods is still small in comparison to that of fresh and canned products. However, frozen food sales seem to be no longer limited to the higher income families and are gradually being purchased by the middle and lower economic groups. Sales in over half of the retail stores surveyed during an average week are seventy-five dollars or less, which is estimated to be 2 per cent or under of the total volume of business in 89.2 per cent of the stores. It is evident that retailers and distributors must increase their sales efforts if frozen foods are to become more profitable. At the present time, chains seem to be more successful in merchandising this type of product than do independents, which may be accounted for by the faster turnover of the chains.

The location of frozen food departments in retail grocery stores has become fairly well standardized. These departments are usually located next to the fresh produce unless such conditions as store design or lack of available space make this selection impossible.

Although the advantages of the open type cabinet are fairly well recognized, retailers use the open and closed type in almost equal numbers. Most grocers expressed a desire to switch to open type cabinets, but think the present cabinet prices are prohibitive.

Retailers pay very little attention to the operation of their display cabinets, with the exception of the defrosting process. Although the maintenance of proper temperature is especially important, grocers as a whole had no idea of temperature ranges in their display cabinets, and very few ever check temperatures. If operational costs are to be kept at a minimum and maximum efficiency achieved, retailers must pay more attention to cabinet care and operation.

Expansion of frozen food sales has been handicapped in the past because of insufficient advertising and sales promotion on both a national and local scale. Retailers are now beginning to use newspaper advertising for frozen foods to some extent, but the number is still small. The greatest advance seems to have been in the use of sales promotional methods within the stores. Still many of the retailers depend on the distributors or packers entirely for this type of advertising. However, the retailers need to assume a portion of this promotion as they do with other grocery products.

Retailers for the most part state they are not too satisfied with the profit margins on frozen foods despite the fact that most of them use a mark-up that should be adequate. Evidently, the solution to this problem is to increase the sales volume which will require more effective sales promotion.

The continued satisfaction of customers is necessary for future expansion of frozen food sales. Consumers are apparently becoming more price conscious with regard to brands of frozen foods, but are reluctant to sacrifice quality for price. The occasional complaints received by retailers are for the most part concerned with quality. The causes of these complaints must be corrected in order to maintain the good will of consumers.

The problem of packaging has been one of constant concern to the frozen food industry. However, many features have been improved, and retailers consider present packaging satisfactory. This does not necessarily mean that improvement will not be made in order to insure further safety of these products and maximum merchandising assistance.

Retailers have made numerous mistakes in connection with the merchandising of frozen foods, but most are gradually correcting them. A large number plan to install newer type cabinets in the immediate future. Furthermore, a majority are recognizing the advantages of concentrating their sales efforts on a small number of varieties and brands of frozen foods. Such a practice makes possible a higher rate of turnover. As a result of this intention, very few retailers plan to add new brands, thus attempting to keep display cabinet "dead space" at a minimum.

The future holds great promise for frozen foods according to most of the retailers, and they expect a gradual increase in sales. However, distributors and packers cannot obtain these increases without the active assistance of the grocery retailers.

Frozen Food Distributors

Wholesale distribution of frozen foods in Tennessee has followed somewhat the same pattern of growth since 1938 as that of the retail phase of this business. This is natural since retailer demand has much to do with the need for new distributors.

Only about one-fourth of the thirteen distributors in the state are engaged solely in the distribution of frozen foods. For most of the other three-fourths, frozen foods are more or less a sideline as they have other lines that constitute most of their total business.

At the present time, the two major markets for frozen foods are institutional and retail. Thus far, distributors have concentrated their sales efforts on the retail market largely because of the greater profit and potential volume. As a result, institutional sales have for the most part remained constant or decreased as a percentage of distributors' total sales.

A major portion of distributors' customers in the retail field are independent grocers. Chains, especially national chains, account for a relatively small per cent of their volume. However, a few chains, because of their large sales, represent the largest individual customers of the distributors.

Seasonal fluctuation in sales volume has long been one of the greatest problems of distributors and retailers of frozen foods. Present indications are that these seasonal fluctuations are becoming less pronounced as greater consumer acceptance of frozen foods has taken place.

By varying the type of frozen items offered with the changing seasons, this fluctuation should be still further reduced.

Retailer cooperation in the general promotion of frozen foods is still unsatisfactory as judged by most distributors. These wholesalers feel that retailers have only a passive interest in developing the field. Such criticism is justified in many instances, but distributors must realize that frozen foods are just another department in many stores and often are not especially profitable. The brunt of development still rests upon the packer and distributor in encouraging greater retailer effort.

Because of other major business interests, many distributors were already equipped with some storage facilities when they started to distribute frozen foods. Only three of the thirteen distributors own adequate storage facilities. Four own no storage space of their own, while the six others are forced to rent some additional space. Therefore, it is evident that most distributors have not as yet properly equipped themselves to carry out effective operation in this respect.

Distributors as a whole prefer advance selling to truck selling because of the greater time and expense involved in truck selling. A few distributors, however, because of the size of their territory and the nature of their major business interests, are forced to use some truck selling. The number of salesmen and trucks used for sales and delivery of frozen foods is hard to determine due to the fact that they are very often used in conjunction with the operation of other phases of their business.

At some time or other, distributors often are required to ship frozen foods to customers. At present, there is little choice between the available methods of shipping because of the generally poor and slow schedules and the rough handling.

As a whole, distributors seem to be providing retailers with satisfactory service. By eliminating certain slow-moving items, they are trying to help maintain a satisfactory rate of turnover. They seem to endeavor to supply retailers with those varieties of frozen foods desired, and deliver as often as supplies are requested.

National and local advertising have received increased attention from packers and distributors in the past few years. A number of different media are now used by these distributors for local purposes, and newspapers are the most frequently used medium. Distributors are, in turn, being aided by packers who are now furnishing certain specific advertising assistances.

In general, distributors expect increases in sales volume during 1950. They feel that consumers are becoming more educated with respect to the uses and advantages of frozen foods. They stress the need for advertising and other aggressive sales promotion on the part of packers, distributors, and retailers. However, distributors do not anticipate a great change in the size of stocks, brands, and varieties of frozen foods to be handled during the coming year.

Although this study has been of an exploratory nature, and the problems handled in a general manner, the results should prove of value to members of the frozen food industry in Tennessee. As this industry continues to expand, more studies of a similar nature will be needed. It is hoped that the results of this study may serve as a basic guide for measuring future changes and expansion in the field of frozen foods.

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APPENDIX A

Bureau of Business Research
The University of Tennessee

GROCERY STORE FROZEN FOODS QUESTIONNAIRE

(Confidential)

1. Do you carry frozen foods? Yes ___ No ___

   If yes: In what year did your store begin to carry frozen foods?

   If no: Why have you never carried them?

2. Which of the following lines of frozen foods do you carry?

Vegetables	___	Fish	___
Fruits	___	Poultry	___
Meats	___	Rolls, pastry, etc.	___

   Other (specify) ______________________________

3. Please specify the location of the frozen foods section of your store.

4. In your opinion, what is the best location in a grocery store for frozen foods?

5. How many frozen foods cabinets do you have?
   Open-top cabinets ___________ Closed-top cabinets ___________

   A. If you have replaced the old closed-top cabinet with the open-top cabinet, was there an increase in sales volume?
   Yes ___ No ___

   If yes: Approximately what was the per cent of increase?

6. Are your cabinets suitable as to:

Size:	Yes ___	No ___	Comments:
Shape:	Yes ___	No ___	Comments:
Accessibility:	Yes ___	No ___	Comments:
Visibility:	Yes ___	No ___	Comments:

7. Approximately what is your total space for the storage of frozen foods? ________ cubic feet

8. Do you have difficulties with defrosting your cabinets?
Yes ___ No ___

Comments:

9. Approximately how often do you defrost your cabinets?

A. Approximately how long does it take?

10. Within what temperature range do you operate your cabinets?

A. Approximately how often do you check the temperature?

11. Do you have a contract with a refrigeration company for repair service? Yes ___ No ___

Comments:

12. Do you use any special techniques or methods to emphasize your cabinets? Yes ___ No ___

If yes: Please describe.

13. How would you rate the following features of frozen food packaging?

	Very Satisfactory	Satisfactory	Unsatisfactory
Strength for protection	___	___	___
Leak-proof	___	___	___
Moisture- and vapor-proof	___	___	___
Consumer eye appeal	___	___	___
Labeling	___	___	___
Size	___	___	___
Uniformity in size and shape	___	___	___

14. What other features of frozen food packaging do you think should be improved?

15. Would you like for frozen food packages to have a blank space for writing in the retail price? Yes ___ No ___

    Comments:

16. To what extent are you confronted with the problem of broken packages?
    Regularly ___ Frequently ___ Occasionally ___ Never ___

    A. In general, what do you do with these broken packages?

    B. Do you keep a constant check on broken packages?
    Yes ___ No ___

    Comments:

17. How many brands of frozen foods do you normally carry?

    A. Please state the major brands normally carried in the order of their popularity.

    ______________________ ______________________

    ______________________ ______________________

    ______________________ ______________________

18. Do you include frozen foods in your newspaper advertisements?
    Yes ___ No ___ Do not advertise ___

    If no: Why?

19. In your opinion, has your advertising of frozen foods been effective?
    Yes ___ No ___ Do not advertise ___

    Comments:

20. Approximately how many deliveries per week are needed to supply you with frozen foods?

21. What is your average mark-up on frozen foods?

22. In your opinion, what mark-up is best for the greatest net profit on frozen foods?

23. Have you ever stopped handling any out-of-season fresh products because you carry them in frozen form? Yes ___ No ___

    If yes: Specify products.

24. Approximately what per cent of your customers buy frozen foods?

    A. Approximately how frequently do these customers buy frozen foods?
    Regularly ___ Frequently ___ Occasionally ___

25. In your opinion, are customers tending to become more price conscious when selecting brands of frozen foods? Yes ___ No ___

    Comments:

26. To what extent do you receive complaints from customers about frozen foods?
    Regularly ___ Frequently ___ Occasionally ___ Never ___

    A. Please specify the most typical complaints.

27. Do you think these complaints are justified? Yes ___ No ___

    Comments:

28. Do you plan to provide your own bulk or reserve storage facilities for frozen foods in the future? Yes ___ No ___

    Comments:

29. Do you plan to install new display cabinets in the future?
Yes ___ No ___

Comments:

30. Do you plan to carry fewer, about the same, or more brands of frozen foods in the future?
Fewer ___ About the same ___ More ___

Comments:

31. Do you plan to carry a smaller, about the same, or larger variety of frozen foods in the future?
Smaller ___ About the same ___ Larger ___

Comments:

32. Do you plan to increase, decrease, or use about the same amount of space to display frozen foods in the future?
Increase ___ Decrease ___ Same ___

Comments:

33. Approximately what dollar volume of business do you do on frozen foods during an average week?

A. What per cent is this to your total volume of sales during an average week?

B. Is your volume of frozen food sales smaller, about the same, or larger than it was a year ago?
Smaller ___ About the same ___ Larger ___

34. In general, as a retailer, what is your opinion regarding the future for frozen foods?

Evaluation of the Frozen Foods Department Based on Observation

1. Location

2. Accessibility

3. Lighting

4. Cleanliness

5. Variety

6. Arrangement

7. Visibility

CLASSIFICATION DATA

Name of Store ______________________ Name of Respondent ____________

Address ____________________________ Position ______________________

Size of Store: Under 50,000 ___; 50,000-149,999 ___; Over 150,000 ___

Date ______________________________

APPENDIX B

Bureau of Business Research
The University of Tennessee

FROZEN FOODS DISTRIBUTOR QUESTIONNAIRE

(Confidential)

1. In what year did your company begin distributing frozen foods?

    A. Is the distribution of frozen foods the major business of your company? Yes ___ No ___

    If yes: Is your company engaged in any other business activities? Yes ___ No ___

    Comments:

    If no: What is the major business of your company?

    B. Do you pack frozen foods? Yes ___ No ___

    Comments:

    C. What, other than frozen fruits and vegetables, do you distribute? List specialty items.

    Comments:

2. Please indicate on this map the area covered by your company in the distribution of frozen foods.

3. How many frozen foods salesmen does your company employ?

4. How many trucks are used by your company for distributing frozen foods?

5. Approximately what per cent of your total frozen foods sales are made by:
Advance selling ___________ Selling from trucks ___________

A. Which method of selling do you prefer?

Why?

6. Approximately what per cent of your frozen foods are obtained from packers by:
Railroad ___________ Truck ___________

A. Are these facilities adequate? Yes ___ No ___

If no: How could they be improved?

B. Do you plan any change in transportation facilities in the future? Yes ___ No ___

Comments:

7. Do you ship frozen foods by common carrier? Yes ___ No ___

Comments:

If yes: What disadvantages have you encountered in this practice?

8. In which of the following ways do you handle the storage of frozen foods?
Own storage facilities ___ Rent storage facilities ___ Both ___

If rent: Do you plan to build your own? Yes ___ No ___

Comments:

9. Do your present facilities provide adequate space for storage? Yes ___ No ___

If no: Please explain.

10. Do your present facilities provide adequate handling equipment for frozen foods? Yes ___ No ___

If no: Please explain.

11. In general, how would you rate the following features of frozen food packaging?

	Very Satisfactory	Satisfactory	Unsatisfactory
Strength for protection	___	___	___
Leak-proof	___	___	___
Moisture- and vapor-proof	___	___	___
Consumer eye appeal	___	___	___
Labeling	___	___	___
Size	___	___	___
Uniformity in size and shape	___	___	___

12. What other features of frozen food packaging do you think should be improved?

13. What are the most common complaints from retailers in regard to the packaging of frozen foods?

14. Are you tending to eliminate slow-moving varieties of frozen foods? Yes ___ No ___

Comments:

A. In your experience, what are the slow-moving varieties of frozen foods?

15. Are retailers satisfied with the frequency of your deliveries?
Yes ___ No ___

Comments:

16. Do you pick up slow-moving varieties of frozen foods from your retailers? Yes ___ No ___

Comments:

17. Are retailers satisfied with the present varieties of frozen foods?
Yes ___ No ___

Comments:

A. Do your retailers ask for varieties of frozen foods that you cannot supply? Yes ___ No ___

Comments:

18. Do you advertise frozen foods? Yes ___ No ___

If yes: Please explain your specific methods (budget, media, frequency, etc.) of advertising.

19. In general, do you depend upon the advertising by packers to create a demand for frozen foods? Yes ___ No ___

Comments:

20. What specific assistance do you receive from packers to help promote the sale of frozen foods?

21. Do retailers cooperate satisfactorily in the promotion of frozen foods? Yes ___ No ___

If no: Please explain.

22. Approximately what per cent of your sales of frozen foods are:
Institutional ________ Retail ________

A. In general, are your institutional sales:
Increasing ___ Decreasing ___ Same ___

B. In general, are your retail sales:
Increasing ___ Decreasing ___ Same ___

23. Approximately what per cent of your retail sales are to:
National chains ________ Local chains ________
Independents ________

Comments:

24. Does your sales volume fluctuate with seasons as much as in previous years? Yes ___ No ___

Comments:

25. Approximately how many brands of frozen foods do you distribute?

A. How many of these brands are your own (private brands)?

B. Please state the number of varieties you distribute.

Vegetables ________ Fish ________

Fruits ________ Poultry ________

Meats ________ Specialties ________

26. Do you plan to distribute a smaller, about the same, or larger number of brands during the next twelve months?

Vegetables ________ Fish ________

Fruits ________ Poultry ________

Meats ________ Specialties ________

Comments:

27. In general, how would you evaluate the present business of frozen food distributors?
Very satisfactory ___ Satisfactory ___ Unsatisfactory ___

Comments:

28. In general, what are your predictions for the future of frozen food distributors during the next twelve months?

29. Do you ship any frozen foods in shipping containers?
Yes ___ No ___

A. If yes: How do you ship these frozen foods?
Express ___ Bus ___ Motor freight ___

B. Are these shipments made to stores on your regular route?
Yes ___ No ___

C. Are these shipments made to stores lying on the fringe or off your regular route? Yes ___ No ___

D. Do you have any trouble with this type of shipping?
Yes ___ No ___

Comments:

CLASSIFICATION DATA

Name of Company ____________________ Name of Respondent __________

Address __________________________ Position ________________

__________________________ Date ______________________