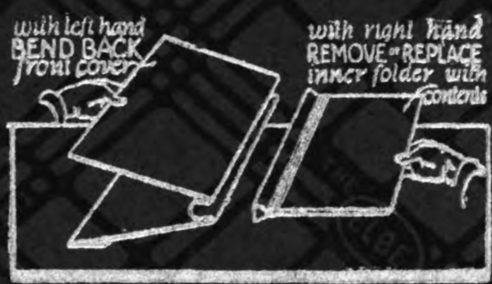
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A STUDY OF THE PROFITABILITY OF FROZEN FOOD DEPARTMENTS

By

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A THESIS

Submitted to Dr. Edward M. Barnet
in partial fulfillment of the
requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

1960

THESIS

ACKNOWLEDGEMENTS

The writer wishes to express his appreciation to the Fisher Brothers Company for their help in making this study possible.

Thanks is due to Dr. Edward M. Barnet, whose penetrating questions and helpful advice were a constant source of inspiration to me.

Recognition is also due the many companies and individuals who have contributed information for this thesis.

I wish to give special thanks to my wife, Jean, whose patience, cooperation and typing ability made this thesis a reality.

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INTRODUCTION

The frozen food industry has been growing at a rapid pace. It has reached a point now where approximately a nickel of every food dollar is spent for frozen food. It has moved from a struggling infant business to one of adolescence which seems to see maturity in the not too distant future. Seventy-one per cent of the retail frozen food business is being done by the corporate chain food store. The growth of frozen foods, while being strong, has not reached the anticipated ten per cent of total food sales predicted a few years back. Everyone has a different opinion as to why the sales have not reached this ten per cent figure. These reasons range from lack of interest by the consumer to lack of profits for the retailer.

The retailer has been bombarded by a constant barrage of new products being introduced daily. He is confused by this saturation of new products to a point where he doesn't know which product to keep and which to let go. Compounding this dilemma of a superabundance of items with a shortage of display space is the high cost of expansion. As various studies have shown, a greater amount of frozen food display case is not a guarantee of greater sales and profits. In addition to the high initial costs, the retailer must consider the increased operating and maintenance costs. He must also consider the effects of the economic area he operates in, the social classes he caters to, and also the factor of whether he could utilize the space occupied by frozen food to a greater advantage, both volume and profit wise, with another line.

The purpose of this paper is to try to gain an insight into some of the problems presented to the retailer by a study of the profitability of a frozen food department.

A study was made of eight stores of a midwestern chain whose performance was judged typical of the company's operation. The study was made for a four week period during which the operating performance of the eight frozen food departments were recorded.

A comparison between the individual stores was drawn and analyzed in relation to dollar contribution of the grocery, meat, produce and frozen food departments to total store sales. This comparison and analysis was carried through to percentage of total store sales, dollars per square foot of selling area and dollars per lineal foot of display and selling area.

In order to gain some insight into whether the frozen food department was a profitable operation, the operating expenses of the individual frozen food departments were tabulated and the net profit figures obtained. These figures helped determine the answer as to whether frozen foods were economically feasible to handle in these eight stores.

A comparitive study was then attempted to determine the relationship, if any, of the social, economic, environmental and age factors upon the individual store operations.

The study was used as a basis for the section of the paper devoted to the analysis of increasing sales and profits by the innovation of new product lines, rearrangement of present stocks, location of selling space, pricing and merchandising.

The paper has been subject to some limitations. No attempt was made to compare gross profits of the other departments with the frozen food department. There also was not any attempt made to compare the manner in which items were on display in relation to their sales. Whether these limitations have any adverse affect on the results is not known.

Here is one group of stores analyzed, the results of which, it is hoped, will prove of value in the retailing of frozen foods. The results are by no means meant either to encourage or discourage any retailer from attempting to sell frozen foods. The findings are merely offered as a guide. It is up to the individual retailer to experiment in his own situation. However, the issues raised may aid him in being aware of the issues.

The material used in this report came from personal observation, published periodicals, books, government documents and correspondence with people in the frozen food industry.

CHAPTER I

HISTORY OF FROZEN FOODS

MAN'S EARLY WAYS

Historically, it is believed that man began freezing flesh foods as he moved from sub-tropical zones into glacial zones and temperate zones which became frigid in winter. There is even historical evidence that the Egyptian Pharaohs were fond of frozen desserts.[1]

It is less than a 100 years ago that slow freezing by artificial means came into being. About 1865 fish and poultry were slow frozen. In 1880, some freezing of meats was done and in 1905, small fruits for remanufacture were frozen.[2] In 1929, the commercial quick freezing of fruits and vegetables actually began.

TECHNOLOGICAL DEVELOPMENT

The quick freezing process was developed by an enterprising Gloucester, Massachusetts man named Clarence Birdseye. He did not invent quick freezing, but did develop a system for the rapid freezing of perishable foods in packages by pressing them between two refrigerated metal belts.

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[1]Robert A. Froman, "Ice Cream -- Sundae, Monday and All Ways", Colliers, June 9, 1951, p. 18.

[2]Clifford F. Evers, "Frozen Food Industry", Industrial and Engineering Chemistry, 40:2251-53. December, 1948.

The scientific principles underlying this method had long been known but never applied to fast freeze. Quick freezing preserves the top qualities of a product because of the speed of heat removal, whereas slow freezing is uncertain and uncontrolled and quality deterioration often results.

Clarence Birdseye received his big idea in 1915, while on a hunting and fishing trip in Labrador. He noticed that fish frozen in the minus 30 to 40 degrees fahrenheit weather were as tasty as the fresh product when thawed and cooked months later.[3]

Upon returning, Birdseye began to do research and experiments with the artificial freezing of foods. In 1923, he developed plans for a belt froster. Borrowing on his life insurance, Birdseye went into business. In 1924, he established the General Seafoods Corporation, unearthed three backers who staked him to $60,000 and set up shop in Gloucester for more experimental work. By 1926, the belt froster plans had grown into a 20 ton quick freezing machine.

Birdseye began shipping bulky packs of frozen fish to the Midwest and kept on experimenting with fruits, berries and vegetables. Business was bad though, it was necessary to educate the public to the advantages of frozen foods. Frozen food was synonymous to cold storage food whose flavor was so bad that the customers would not buy it.

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[3] Quick Frozen Foods, General Foods Corporation, New York, 1959. p. 2.

In June, 1929, Clarence Birdseye was able to sell the patents and assets of his immature company to the Postum Company who recognized the potential of this infant industry.

On March 6, 1930, in Springfield, Massachusetts, quick-frozen food was offered to America in retail stores for the first time. Behind a tumultuous 40 week advertising campaign, Birdseye launched 27 different products in 18 stores. They sold 80,000 packages that year; 800,000 in 1931 and 1,200,000 in 1932.[4]

GROWTH OF THE FROZEN FOOD INDUSTRY

By 1934, the five year old Birdseye business was frozen deep in red ink and deeply bogged down by a distribution problem. The first step in correcting this situation was a cut in retail prices to develop a greater volume sales and still maintain a profitable operation. This price cut proved to be the answer and the company began to move into the black.

It was not until 1940, at which time the country began to move out of the economic doldrums, that the Birdseye Company began to push for national distribution. Helping to bolster the sales of frozen foods was the fact that shortly thereafter no less than 24 per cent of the homemakers had become defense workers. In the quest for shortcuts the age of convenience foods was born.

[4] Ibid.

This era was not one of complete success, due to the fact that it gave birth to many unscrupulous fly-by-night operators who saw in frosted foods a chance to make a quick dollar.

The war effort helped the frozen industry to grow in still another way. Frozen foods in their paper cartons were a natural to save many tons of steel for other vital needs. The industry grew from an output of 325 million pounds in 1939 to that of over 4 billion pounds in 1958.

TABLE I

VALUE OF ALL FROZEN FOODS AT RETAIL*

1942	$162,000,000	1950	$ 500,000,000
1943	178,000,000	1951	700,000,000
1944	197,000,000	1952	875,000,000
1945	257,000,000	1953	1,200,000,000
1946	324,000,000	1954	1,450,000,000
1947	245,000,000	1955	1,700,000,000
1948	292,000,000	1956	2,106,000,000
1949	375,000,000	1957	2,362,000,000

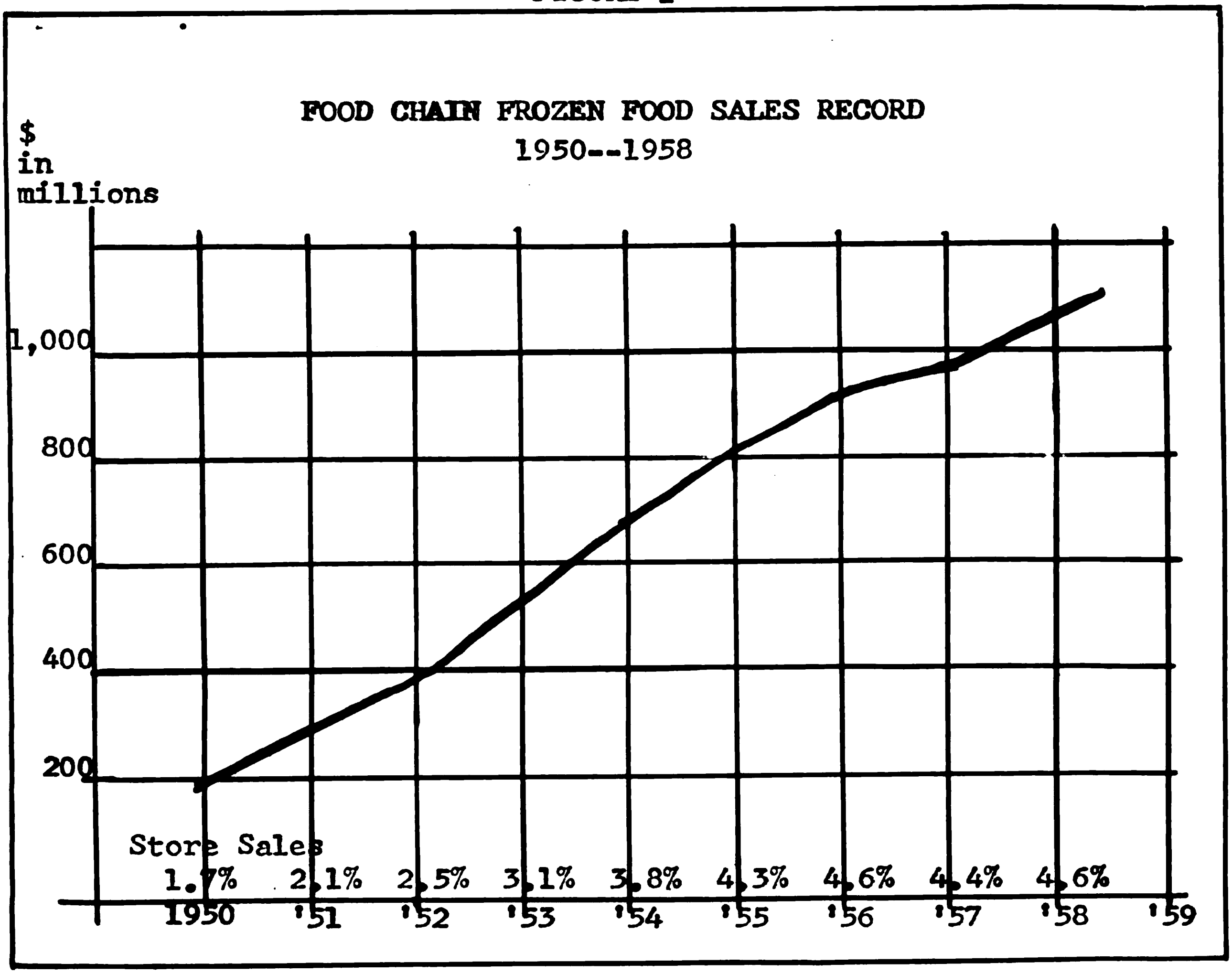
1958..........2,320,000 ,000

*Includes all sales of frozen vegetables, fruits, concentrates, poultry, seafoods, meats and prepared foods projected at retail prices.

Source: Quick Frozen Foods, March, 1959, p. 150.

The sale of frozen foods through retail outlets consisted of 70 per cent of these values of frozen foods. Of this 70 per cent, approximately 71 per cent of the sales were made through chain outlets.

FIGURE 1



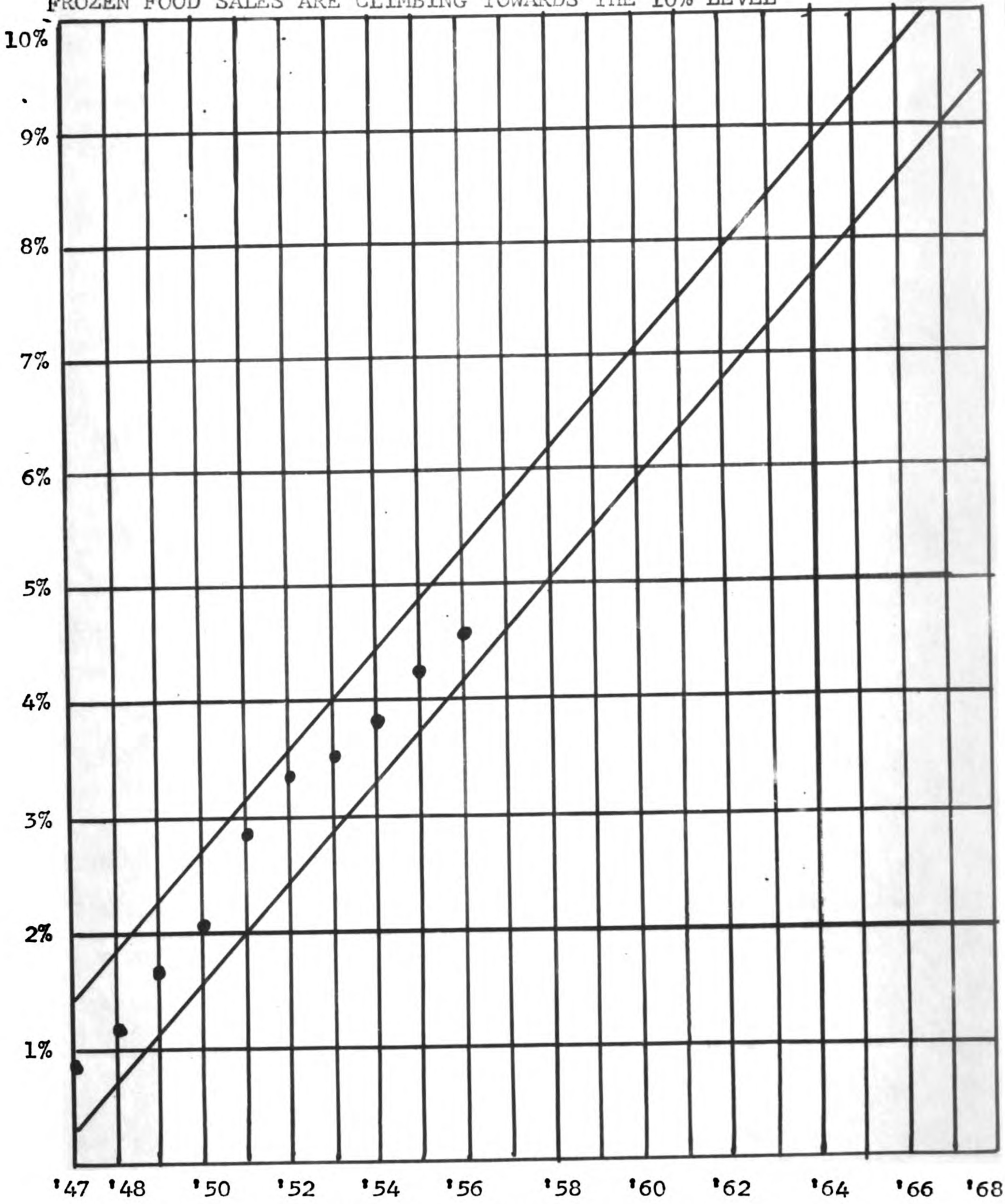
Source: Chain Store Age, April, 1959, p. 161.

EFFECTS OF OUR CHANGING ECONOMY

There are many socio-economic factors which have resulted in the growing popularity of frozen foods. While the growth of frozen foods has not hit the predicted ten per cent of retail food store sales, they have continued to grow at an ever increasing rate.

FIGURE 2

FROZEN FOOD SALES ARE CLIMBING TOWARDS THE 10% LEVEL



Black dots show percentage of total food store sales represented by frozen food sales.

The average consumption of frozen foods by individuals today is around 28 pounds per year, which is better than 0.5 pounds per week for every man, woman, and child in the country.[5] This growth in the consumption of frozen food can be attributed to changing socio-economic conditions.

One of the changes in our country has been the increased number of women being employed in the United States. Frozen foods' growth began at the inception of women in defense jobs. Now that the emergency is over there still is a working force of women which encompasses a third of the total national working force. Most women are looking for easier and faster ways to do their culinary chores. It is estimated that frozen foods of all types can reduce the cooking time of the homemaker from six hours to ninety minutes.

Another factor in the growth and popularity of frozen foods is one which can be said to be a natural growth. This factor is our exploding population. It is estimated that the population of the country will increase from 180 million to 214 million by 1970 if the birth rate remains constant. The young adult group (from 21 to 24 years of age) decreased in the past decade but in the 1960's it will increase by 53 per cent. New households will be formed resulting in a

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[5]Lawrence Martin, "Growth Factors For Frozen Foods in the 1960's", Frozen Food Field, April, 1960, p. 12.

still larger potential for frozen foods. Table II shows the increase in the number of households from 1947 to 1956 and the projected numbers from 1960 to 1975.

An increase in our gross national product will also bring increased demands for frozen foods. As our standard of living and take-home pay has grown so has the demand for frozen foods. The increased demand has been especially growing for the convenience foods, those with "built-in maid service". This demand has closely paralleled the rising gross national product.

There has been a steady increase of the population into metropolitan areas with emphasis on the growing suburban population. These suburbs have been growing in the past decade about 1 1/3 times as fast as the central cities. This move to "suburbia" resulted in fewer shopping trips and the desire to purchase on this trip enough perishable foods to last at least a week. With the advent of the two car family and the building of shopping centers into outlying sections this pattern of once a week shopping is beginning to change. In the 1959 Dupont study of consumer shopping habits it was found that the average shopper now visits the supermarket three times each week, with four or five visiting a supermarket at least twice a week and more than half going three or four times a week.

The move to metropolitan areas from rural areas has contributed to frozen food growth by the fact that more people who live in urban areas consume frozen food than those living in rural areas.[6]

The development of mechanical refrigeration for home use has helped increase the sale of frozen foods. An early study of families owning refrigerators showed that families owning refrigerators with frozen food compartments bought as much frozen fruits and vegetables as families owning freezers.[7] This early survey would seem to indicate that those families possessing home freezers tended to process fresh food for their home freezers rather than to purchase commercially processed foods. With the advent of lower prices and more competitive selling of commercially processed frozen food this phenomena, it can be assumed, will change. At present, it is estimated that there are 7,700,000 home freezers in use and 1/2 of the population now live in homes where home freezers are in use. It is estimated also that 93 per cent of the families in the United States possess some form of mechanical refrigeration equipment.[8]

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[6]Robert B. Reese, Family Purchases of Selected Frozen Fruits and Vegetables, Agriculture Marketing Services, United States Department of Agriculture, Market Research Report No. 317(Washington:Government Printing Office, 1959), p. 4.

[7]United States Department of Agriculture, Purchases of Frozen and Canned Food by Urban Families as Related to Home Refrigeration Facilities, Agriculture Marketing Service, Market Research Report No. 60.

[8]Norbert L. Chaplicki, A Second Look at Frozen Meats, Address given at N.A.F.C. Management Clinic in Chicago, Illinois, February 20, 1956.

The educational level of the United States has also been a factor in the growth of frozen foods. A survey of frozen food consumers indicated that their educational level was much higher that non-users. It is estimated that 50 per cent of all Americans today are users of frozen food.

It can be assumed by these preliminary findings that as the educational level increases so will the amount of frozen food consumed. By 1970, school enrollment will reach 57,500,000 and the population 25 years old and over will have a high school education or better. The average education at present is the seventh grade.[9]

The rising educational level along with the development of chains and supermarkets has helped to eliminate the social barrier which once separated the rich from the worker's families. The former have learned to be more tolerant and they now all shop the same stores, as the wide variety in the markets allows them to supplement their diets at will.[10] This tolerance and reduction of social and racial barriers has opened up many new markets for frozen foods.

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[9] Lawrence Martin, op. cit.

[10] "How American Buying Habits Change", Monthly Labor Review, February, 1959, p. 25.

CHAPTER II

BACKGROUND OF THE STUDY

GENERAL OPERATIONAL AREA

There is a need for an analysis of the general operational area in which the eight supermarkets used in this study are located. There are various socio-economic and environmental factors which will affect the operations of the stores used and these factors in turn affect any comparitive analysis of the results.

The eight supermarkets used for this study are members of a large food chain operating in the Norht Central region of the United States. The United States Department of Agriculture through various studies and research projects has indicated that this region ranks second in frozen food consumption in the United States.[1] A key factor in the greater quantities of frozen food consumed in this area no doubt stems from the fact that within this area lies most of the greatest industrial might of the nation. This results in higher incomes, more working women and, therefore, as previously indicated, a larger market for frozen food. Also, in this area are more urban families and a greater concentration of population. This factor also was indicated in previous surveys as being contributory to greater frozen food sales.

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[1]United States Department of Agriculture, Family Purchases of Selected Frozen Fruits and Vegetables, Agriculture Marketing Service, Market Research Report No. 317, p. 4.

SPECIFIC OPERATIONAL AREA

The eight stores used in this study were located in the Cleveland, Ohio metropolitan area. The city of Cleveland has a population of 1,758,100. The family effective buying income is $7,333. This ranks the city eleventh nationally both in population and family effective buying income. Cleveland's frozen food sales in 1959 amounted to $25,809,000 which gives it a rank nationally of ninth. The rank can be traced to the previously mentioned factors of high income rank, concentrated population, high degree of urbanization and the highly industrialized area with its correspondingly higher wages.

The stores used were judged as typical of the company's operations and were located in various areas to give a cross section of the operating areas of the chain as a whole. They were not the best stores and they were also not the poorest stores in frozen food sales.

RATING OF THE CHAIN IN THE CLEVELAND METROPOLITAN AREA

The chain from which the stores being studied were selected operated 36.2 per cent of the corporate chain self-service food stores in the Cleveland metropolitan area.[2] With this percentage of stores, the chain did 25 per cent of the total food business in the Cleveland area.

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[2] Where And How To Sell in the Greater Cleveland Market, Market Research Department, Cleveland Plain Dealer, Cleveland, Ohio, 1958.

A survey conducted by the Cleveland Press in 1958 indicated that there was almost an even break of consumer preference for shopping this chain's stores by both the upper and lower economic halves of the population.[3] The survey also indicated that the greatest reason for shopping the stores was convenience of location. This was also the greatest single factor in the preference of all the other chain food stores operating in this area.

TABLE II

THE CLEVELAND MARKET FOR FROZEN FOOD - 1959

Total Food Sales	$614,502,000
Food Sales Rank	11
Total Frozen Food Sales	$25,809,000
Frozen Food Sales Rank	9
% Total Frozen Food to Total Food Dollars	4.2
Total Frozen Food Sales per Capita Consumption	14.68 lbs.

	in (1,000)	per capita
Frozen Fruits and Vegetables Consumed	$5,678	$3.23
Frozen juices consumed	5,059	2.85
Frozen Prepared Foods Consumed	7,304	4.15
Frozen Meats and Poultry Consumed	5,006	2.85
Frozen Seafoods Consumed	2,762	1.57
% Total Frozen Sales by leading chains		64.9%

Source: Quick Frozen Foods, March, 1960

[3] 15th Cleveland Home Inventory, The Cleveland Press, Cleveland, Ohio, 1958.

SOME FACTORS TO BE CONSIDERED IN COMPARISON STUDIES

The value of any study and its results lies in the ability of using the results obtained as a basis for comparing one's own operation to competitive operations. In order to help facilitate this and provide a basis for comparisons, a survey was done of competitive food chains' frozen food departments.

A survey was made of nine chains, including the one being studied, as to which department was held accountable for operation of the frozen food department. Seven of the chains operated vegetables and ice cream under the grocery department. One of the respondents had the vegetables under the produce department. Eight had the frozen packaged meats displayed, stocked and rung up by the meat departments. The company, under observation in this study has the complete frozen food department under the jurisdiction of the meat department. The figures presented in the study will be governed by this characteristic.

Another factor to be considered in evaluating these figures is that all frozen food sales quoted include ice cream sales. There are various schools of thought which would exclude ice cream sales from frozen food sales. It is my contention that inasmuch as they require the same handling facilities it is much easier to use the common storage and stocking facilities of the frozen food department. This would appear, in my opinion, to reduce costs of operation by the exclusion of duplicate facilities and effort. The exact savings thus induced could be the subject of another study.

The chain, at the time of the study, did not possess any label of its own on juices, fruits, vegetables, fish, meat products and prepared food items. The total frozen food sales consisted of 85 per cent manufacturer's label and 15 per cent packer's label.

They did sell ice cream under the company label, offering a complete ice cream line. Under the manufacturer's label a premium line of ice cream was offered. It was not a nationally advertised brand of ice cream.

CHAPTER III

A STUDY OF THE OPERATION OF EIGHT SELECTED FROZEN FOOD DEPARTMENTS

ANALYSIS OF FROZEN FOOD SALES TO TOTAL AND DEPARTMENTAL SALES

The operating results of the eight supermarkets being studied were gathered in a four week period of February and March, 1960. The time was chosen to obtain a period during which operational figures and sales would be typical of the store's average frozen food business. It was a period unaffected by unusual holiday business, special promotions, which might throw the averages out of line and tempered by the beginning of the Lenten season which normally results in a decrease in some food sales. This period would tend to balance meat and grocery sales and to catch produce in a season which was good but not peak in sales. It also allowed for the seasonal fluctuation of ice cream sales.

TABLE III

COMPARISON OF DOLLAR FROZEN FOOD SALES TO TOTAL AND DEPARTMENTAL SALES FOR A FOUR WEEK PERIOD.

Store	Total Sales	Grocery	Meat	Produce	Frozen Food
A	$156,793	$ 90,629	$34,782	$17,672	$6,855
B	100,629	56,661	26,398	9,664	3,928
C	115,216	64,645	27,330	12,079	5,581
D	156,192	90,596	36,328	15,208	7,030
E	215,702	122,418	52,812	22,404	9,034
F	158,789	94,255	36,447	15,425	6,381
G	196,465	109,996	51,696	19,957	7,408
H	128,214	76,597	28,593	12,116	4,954

TABLE IV

COMPARISON OF PERCENTAGE OF DEPARTMENTAL SALES TO TOTAL SALES

Store	% Grocery	% Meat	% Produce	% Frozen Foods
A	57.9	26.5	11.2	4.4
B	56.3	30.1	9.6	4.0
C	56.9	28.0	10.4	4.7
D	58.0	27.8	9.7	4.5
E	56.7	28.8	10.3	4.2
F	59.4	27.8	9.7	4.1
G	55.9	30.2	10.1	3.8
H	59.7	26.2	10.2	3.9
Average	57.6	28.1	10.2	4.2

The analysis of the percentage of total sales figures of the eight frozen food departments reveals that the average percentage of frozen food sales is 4.2 per cent. This percentage of total sales figure is below the national average of 4.7 per cent[1] by .5 per cent. In talking with the merchandiser of frozen foods for the chain he expressed the opinion that this percentage figure may reflect some unusual condition as the company estimated their percentage of frozen food sales to be closer to 5 per cent. This would indicate a deviation of .8 per cent. This would still indicate a good operation percentage wise as Chain Store Age magazine reported that in a study of the frozen food operations in 1959 of 25 chains, frozen food sales varied in the reporting chains from 2.1 to 10 per cent of total food

[1]"The True Look of the Super Market Industry, 1959", Super Market Merchandising, May, 1960, p. 78.

sales.[2] This variation is one of the widest of any commodity in the store and indicates that the potential market is still larger than has been topped by the chains to date.

Taking these remarks as a keynote it is possible to assume that while these eight markets are doing an acceptable amount of frozen food business there lies in these markets a heretofore untapped potential. Frozen foods are products in which there is the greatest potential for the individual department manager to display his own initiative and merchandising techniques in boosting the sales of this department. The Dupont survey revealed that of frozen food purchases 83.4 per cent were in store decisions. This is eight out of ten frozen food purchases.[3]

A further analysis of these percentage figures does not reveal any great correlation between produce and frozen food sales. That is, there were not any stores which had high frozen food sales and exceptionally low produce sales or vice-versa that might indicate a preference of one for the other. Some correlation was thought to exist as frozen vegetables and frozen juices are the best sellers in most frozen food departments.

Store A, which had the highest percentage of produce sales to total sales ranked third in frozen food sales.

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[2]"The Untapped Frozen Food Market", Chain Store Age, April, 1960, p. 138.

[3]Instant Money, The American Institute of Food Distribution, Inc., New York, 1960, p. 25.

Store C, which ranked the highest in frozen food sales, ranked second in produce sales. The conclusion reached on the basis of performance of these eight stores in this limited study is that the two departments rather than competing with each other complement each other.

There seemed to be very little variance between the grocery sales and frozen food and produce sales which might indicate a preference of canned goods over fresh or frozen. Of course, it must be realized that although total grocery sales plus frozens and produce remain relatively constant, we do not know enough about the breakdown of grocery sales themselves (dairy, bakery, soaps, canned goods, etc.) to be able to state definitely that canned versus frozen items are in any predictable relationship.

There was some anticipation of a definite correlation between the highest meat department sales and higher frozen food sales. The basis for this anticipation was based on the fact that in this chain the majority of frozen food departments are located in space opposite the meat department. The implications being that high traffic in the meat department would draw customers to the frozen foods department. The reasons stated for this location is that it facilitates stocking of frozen foods by meat department personnel who handle the frozen food operation. It also was reasoned that the homemaker, in choosing her main course of meat, was able to supplement it with frozen vegetables and desserts to complete her meal in the same general buying area. Store G, with the highest percentage of meat sales, ranked lowest in frozen food sales. In direct contrast, Store H, which ranked lowest in percentage of meat sales, also ranked low in frozen food sales.

There does not appear to be any correlation between high meat sales and high frozen food sales except in the case of the lowest performer. At this point it would be unfair to make any rash conclusions on performance until other factors affecting it have been considered.

RELATIONSHIP OF PERCENTAGE OF STORE SELLING AREA TO PERCENTAGE OF SALES

The next area to be considered in determining the profitability of a frozen food department is to determine the percentage of store selling space occupied by the department in relation to that occupied by the other departments. The purpose of this comparison is to determine whether the frozen food department is producing sales comparable to other departments in the store. It sets up the question as to whether in some stores the space allocation should be reduced or in others it should be increased.

The analysis of Table V indicates that in relation to the amount of total store selling space, the meat department returns the best percentage of store sales. In the eight stores studied it is interesting to note that in an average

TABLE V

PERCENTAGE OF STORE SELLING SPACE TO PERCENTAGE OF DEPARTMENT SALES

	GROCERIES	MEAT	PRODUCE	FROZEN FOOD
STORE A				
% of Sales	57.9	26.5	11.2	4.4
% of Selling Space	68.9	13.6	8.6	9.0
STORE B				
% of Sales	56.3	30.1	9.6	4.0
% of Selling Space	67.0	15.0	12.0	6.0
STORE C				
% of Sales	56.9	28.0	10.4	4.7
% of Selling Space	69.0	14.0	10.0	7.0
STORE D				
% of Sales	58.0	27.8	9.7	4.5
% of Selling Space	65.0	16.0	10.0	9.0
STORE E				
% of Sales	56.7	28.8	10.3	4.2
% of Selling Space	66.0	14.0	11.0	9.0
STORE F				
% of Sales	59.4	27.8	9.7	4.1
% of Selling Space	68.0	15.0	11.0	6.5
STORE G				
% of Sales	55.9	30.3	10.1	3.8
% of Selling Space	69.1	13.2	12.7	6.0
STORE H				
% of Sales	59.7	26.2	10.2	3.9
% of Selling Space	66.0	14.0	13.0	7.0

of 14 per cent of total store selling space this department did 28.1 per cent of the total store business. Groceries, in contrast, while doing 57.6 per cent of the total store business, needed 67.3 per cent of the total store selling area. The produce department did close to the amount of business for which it had floor space. It averaged 10.1 per cent of total sales in 10.8 per cent of the total store selling area. The frozen food department occupied 7.5 per cent of the total store selling area and did only 4.2 per cent of the business. This performance would indicate that in relation to the other departments frozen foods were not contributing their share of sales in relation to space occupied. The immediate reaction to this is perhaps the space is not being utilized properly and could be used more advantageously in another way. Here again, it is not intended to jump to any premature conclusions until all the evidence has been carefully weighed and analyzed.

The analysis of Table VI, which compares the dollar returned to the square feet of space occupied by the departments bring forth a conclusion that in some instances frozen food sales compared favorably with the sales of other departments in the stores.

It was revealed that in stores B, C, G and H, frozen food sales per square foot of selling space were very near that of grocery sales. The significance of this revelation can only be hinted at as there is not enough evidence to

TABLE VI

COMPARISON OF SQUARE FEET OF DEPARTMENTAL SELLING SPACE TO DOLLARS RETURNED

	STORE							
	A	B	C	D	E	F	G	H
Total Sq. Feet of Store	10,315	9,144	8,776	12,447	14,727	10,252	12,443	9,260
$ Per Sq. Foot of Store	15.20	11.91	13.13	12.54	18.48	15.57	15.79	13.73
Total Sq. Feet of Groceries	7,107	6,126	6,055	8,089	7,741	6,971	8,598	6,111
$ Per Sq. Foot of Groceries	12.75	9.24	10.67	11.19	15.81	13.53	12.90	8.10
Total Sq. Feet of Meat	1,403	1,371	1,229	1,991	1,641	1,538	1,642	1,296
$ Per Sq. Foot of Meat	29.54	22.12	26.77	21.77	37.69	27.96	35.99	25.08
Total Sq. Feet of Produce	877	1,097	877	1,244	1,290	1,128	1,580	1,203
$ Per Sq. Foot of Produce	20.15	8.80	13.77	12.22	17.58	13.67	12.63	10.90
Total Sq. Feet of Frozen Food	928	450	615	1,123	1,055	615	623	650
$ Per Sq. Foot of Frozen Food	7.39	8.73	9.07	6.25	8.56	10.37	11.88	7.62

substantiate it. The dollars per square foot of produce in stores B and G is very close to that of frozen foods. Three of these four stores also have the lowest total square feet of selling area. This hints at several possibilities. The first possibility being that perhaps the stores with the lowest dollars per square foot have not matured to their expected return per square foot of selling space and those with the highest return have reached their best operational level. The other possibility exists that perhaps some of the stores were built larger than necessary in relation to the market it serves.

The stores having the smallest amount of frozen food selling area appear to have the best dollar return per square foot. The question arises at this point as to whether an expansion of frozen food selling space in these stores would result in a proportionate increase in frozen food sales. It also raises a question as to whether a reduction of selling area in the stores with the poorest performance records would leave sales at the present level or whether they would decline more by such a move. If an affirmative answer could be given to the first two questions it would appear to be beneficial to the chain as a whole to reallocate the departmental selling area to fit the needs of the individual operational area. Both sales and profits would likely be upgraded. One indication at this point is that a larger selling area for frozen foods is not a guarantee of greater sales. There are other factors which influence the rate of sales of frozen foods which will be investigated later in the paper.

TABLE VII

RELATIONSHIP OF VARIOUS MEASUREMENTS OF FROZEN FOOD SALES EFFICIENCY

$ Per Lineal Foot of Display Case

Store A	Store B	Store C	Store D	Store E	Store F	Store G	Store H
95.21	95.80	99.64	76.41	102.60	104.67	112.24	98.46

Lineal Feet of Selling Space for Frozen Food

Store A	Store B	Store C	Store D	Store E	Store F	Store G	Store H
72	41	56	92	88	61	66	56

$ Per Square Foot of Selling Space

Store A	Store B	Store C	Store D	Store E	Store F	Store G	Store H
7.39	8.73	9.07	6.25	8.56	10.37	11.88	7.62

Square Feet of Selling Space

Store A	Store B	Store C	Store D	Store E	Store F	Store G	Store H
928	450	615	1,123	1,055	615	623	650

% of Selling Space Occupied

Store A	Store B	Store C	Store D	Store E	Store F	Store G	Store H
9	6	7	9	9	6.5	6	7

Table VII is intended to indicate that the measurement of a frozen food department's efficiency in regard to dollars per lineal foot and dollars per square foot, in this case, are roughly parallel. As dollars per lineal foot went up so also has the dollars per square foot in proportion. In relation to the other stores, Store E did show a greater dollar per lineal foot increase than the dollars per square foot in proportion. The reason for this cannot be accounted for. Perhaps the answer lies in the actual operation of this department. Possibly better utilization of space was realized for some facet of the store traffic pattern was capitalized on.

COST OF OPERATIONS AND PROFITS RESULTING

The relationship of dollar sales and floor space occupied of the frozen food department to the other departments in the store has been investigated. It is necessary in any evaluation of performance to compare the costs of operations and the profits resulting. The study of the operations of the eight frozen food departments is presented at this time. No attempt has been made to compare the costs of operations and profits of the frozen food department to that of the other departments in the store. The main thought is to establish the profitability of the frozen food department.

Every company has its own method of charging expenses to the various departments. The charges made to these eight stores are governed by the company's accounting procedures. It was very difficult to obtain some costs of operations on a per store basis. Some of the figures available were charges to that particular department as percentage of sales. The results obtained are governed by this condition. Wages applied to the department were actual wages utilized by the frozen food department and were thusly charged.

It is the author's opinion that such allocation of costs act in various instances as a penalty to the superior performer, as he is being charged in proportion to the amount of sales he has the ability to conjure. The argument in retaliation would be that perhaps some of the inefficient operators were faced by outside influences over which they didn't have any control and could not reduce their costs below a certain minimum figure.

Table VIII shows a breakdown of expenses of the eight frozen food departments and the resulting profits of each operation. It can be noted that all eight departments operated very profitably. The average net profit before taxes of all eight departments was 7.9 per cent of sales, after taxes, a net profit of 3.8 per cent is indicated. Chains of this size as a whole had a net profit after

TABLE VIII

OPERATING RESULTS FOR A FOUR WEEK PERIOD

	STORE							
	A	B	C	D	E	F	G	H
Frozen Food Sales	$6,855	$3,928	$5,581	$7,030	$9,034	$6,381	$7,408	$4,954
Cost of Merchandise	5,475	3,176	4,456	5,614	7,234	5,016	5,916	3,955
Gross Profit	$1,380	$ 752	$1,125	$1,416	$1,800	$1,375	$1,492	$ 999
Expenses								
Wages	$326.00	$144.00	$240.00	$326.00	$428.00	$330.00	$428.00	$203.00
Laundry	9.59	5.49	7.81	9.84	12.64	8.93	10.37	6.94
Supplies	4.79	2.74	3.90	4.92	6.33	4.47	5.19	3.47
Power[1]	52.09	29.85	42.42	53.42	68.66	48.50	56.50	37.65
Rent	100.42	24.13	91.52	115.29	148.16	104.65	121.50	81.25
General[2]	169.31	96.95	137.85	173.64	223.14	157.61	182.98	122.47
Indirect[3]	175.41	100.56	142.87	179.96	231.27	163.36	199.64	126.92
Total	$849.61	$403.72	$666.37	$863.07	1,118.20	$815.82	1,004.18	$581.70
Profit Before Taxes	$530.39	$348.28	$459.63	$552.93	$682.80	$559.48	$487.82	$418.30
Profit Percent of Sales	7.7	8.8	8.7	7.8	7.5	8.7	6.5	8.4
Federal Taxes	$275.80	$184.10	$239.00	$287.51	$335.05	$289.92	$253.66	$217.51
Net Profit	$254.59	$164.18	$220.63	$265.42	$347.75	$269.56	$233.16	$200.79
Net Profit % of Sales	3.7	4.1	3.9	3.7	3.8	4.2	3.1	4.0

[1] Included in power costs are light and water charged to the frozen food department.

[redacted]

TABLE VIII (Cont'd.)

[2]Included in general expenses are all other expenses incurred directly at the store such as depreciation, repairs, etc.

[3]Included in indirect expenses are all expenses not incurred directly at the store as advertising, administrative expense, etc.

taxes in 1958 of 1.41 per cent of sales.[4] This would indicate that these eight stores' frozen food departments are operating 2.39 per cent better profit wise that the store as a whole. While there aren't any figures available to indicate what percentage of total dollar profit the frozen food departments in these stores contribute, it would be safe to assume that it is at least in relation to the other departments' contributions.

The individual stores' performances, profit wise, showed very little variation, the majority operating close to an eight per cent net profit before taxes figure. The store with the highest dollar volume of sales did not produce the highest percentage of profit to sales, in fact, store B with the lowest dollar volume of sale presented the largest percentage of profit to sales of the eight stores. Store E, with the highest dollar sales lay in the medium range of percentage of sales profit but contributed the greatest dollar profit of all stores. This would seem to indicate that percentage of sales profits are not always the chief determinant of dollars contributed to total profits. It is necessary to also have volume of sales to maintain high dollar profits.

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[4]Wilbert B. England, Operating Results of Food Chains in 1958, Harvard Business School, Bureau of Business Research, Boston, Massachussetts. p. 4.

Edward M. Barnet writes, "A small appliance dealer with operating expenses of 28 per cent of sales is assured a 33 1/3 markup on the retail list of a nine dollar fair traded electric fan --- what is not guaranteed is his total dollar return. If he sells 12 dozen fans in one year, his gross margin is $432.00 (144 x $3). But if a nearby discount house sells 240 dozen fans at $7.50 each (20 per cent markup on retail) it has $4,320 in gross margin (assuming the same $6 unit cost) a dollar intake, ten times greater!

Even more dramatic is the difference in gross return on investment --- the traditional retailer carries an average inventory of three dozen of these electric fans and he turns his investment of $324 (at retail) four times a year. With a margin of 33 1/3 per cent times turnover of four his gross return on investment is 133 1/3 per cent-- our discounter turns over an average stock of 12 dozen fans ($1,080 sales worth) 20 times a year, his gross return on investment is 400 per cent -- not counting possible savings arising from quantity discount."[5]

The meaning and importance of the preceeding passage has been indicated by the performance figures studied. It also indicates that here is an area upon which very little consideration has been given in this study, that of return on investment. The study was limited by lack of information

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[5]Malcom P. McNair and Eleanor G. May, "Pricing for Profit", Harvard Business Review, May-June, 1957, p. 111.

as to inventories carried and turnover. For the chain as a whole, it is estimated that turnover in frozen food is nearly twice in every four week period. The importance of this can be visualized in that the faster the turnover of capitol invested, the greater return on capitol invested.

Also shown in an analysis of Table VII is the fact that store G which was one of the larger volume stores had the lowest profit percentage of all stores. Based on only percentage of sales this would seem to indicate that various factors were at play in this lower profit figure. A look at the expense figures shows wages to be the chief variable, seemingly indicative that there is improper utilization of labor in this department. This can be taken to mean that proper utilization of labor in the frozen food department can result in increased profitability.

RELATIONSHIP OF AREA INCOME TO FROZEN FOOD SALES AND PROFIT

The chain as a whole had its stores fairly uniformly distributed throughout the various economic areas, although the largest single area encompassed was the higher income or "A" area of $5,000 to $10,000 and over income areas. The eight stores used were divided among the various income groups. Actually, the trading areas of the stores tend to overlap the various income groups and in some it is hard to define accurately the actual group purchasing frozen foods unless a personal survey was taken. As was stated earlier, the supermarkets have tended to break down social barriers and the shoppers in any one store may consist of a "melting-pot" of various income levels. A breakdown as close as possible will be presented in an attempt to determine some relationship between the sales and income levels.

TABLE IX

INCOME LEVELS OF SHOPPERS TRADING THE EIGHT STORES

Store	Income Levels
A	$2,000 to $10,000 and over
B	$3,000 to $10,000 and over
C	$2,000 to $5,000 and over
D	$5,000 to $10,000 and over
E	$2,000 to $7,000 and over
F	0 to 3,000 and over
G	$3,000 to $10,000 and over
H	$2,000 to $7,000 and over

In analyzing the sales figures of the individual stores it is found that the store with the highest dollar sales figures, Store E, lay in the medium two to seven thousand dollar income group. It also lay in the medium area of percentage of frozen food sales to total store sales.

Store B, which had the lowest dollar sales of frozen foods lay in the medium to high income bracket. It also had one of the lower percentage of frozen food sales to total sales figures of the group. It also had one of the lowest gross profits of the stores in the study. This would seem to indicate greater sales of the lower profit items and specials in this store.

Store F, in the lowest income area, is in direct contrast for it has the highest gross profit of the stores in the study. Net profit wise it is also one of the best performers and in relation to percentage of total sales it is close to the average. In total dollars contributed to net profit it is only surpassed by the highest volume store E. The significence of this store's performance will be brought out later by another factor which influences sales and profitability.

RELATIONSHIP OF AGE GROUP TO SALES AND PROFITS

An attempt was made to bring together many factors to see the relationships, if any, between them and sales and profits of the stores studied. A breakdown of the various ages of the customers shopping the stores was made. The results are enumerated in Table X.

TABLE X

AGE LEVELS OF CUSTOMERS SHOPPING THE EIGHT STORES

Store	% Young (18-35)	% Middle Age (35-55)	% Old (60 & over)
A	35	50	15
B	45	50	5
C	40	55	5
D	60	35	5
E	45	45	10
F	45	45	10
G	60	35	5
H	40	45	15

Not in any store in the study was there a predominance of shoppers of 60 and over. Stores A and H did have a predominance of the shopping group ranging from 35 to 60 and over. Store A with a widely varied income group shopping the stores was better than average in percentage of frozen food sales to total sales, while Store H in the low to medium income group was one of the lowest performers in this way. In gross profit both stores were exactly the same with difference only in net profit figure which only indicates the actual store's ability to keep costs of operations down. A possible assumption at this point would be that people of this age group tend to buy similar products.

Stores D and G are predominantly the younger age groups. Store D, which lies in the higher income group, is one of the best performers in relation to department sales to total sales. Store G, in contrast, which lies in a lower income level group, is the poorest performer of the group in this respect. This would seem to indicate that of these stores studied the younger people with the higher incomes tend to purchase more frozen food than those with lower incomes. In respect to gross profit performance, they are alike, indicating that the difference lies only in the amount purchased. I haven't used actual dollar sales figures because I believe that by using percentage of sales figures a more accurate indication of sales can be obtained. It also allows for the individual store's actual performance as a whole.

Store C, which has the greatest proportion of the middle age group, was the top performer in percentage of sales to total sales group. This would seem to indicate this age group has a strong preference for frozen foods. As far as income level is concerned, these people were of the low medium income level ($2,000 to $5,500). It was in relation to gross profit, the same as the previous two stores looked at, indicating again a general trend in these eight stores of shoppers purchasing similar products.

Stores B and E, which have the lowest gross profit figures of the eight stores fall in the area of being in an age group of very little variation. It is almost an even split between the young (18-35) and middle (35-55) age groups. Yet their income levels are more varied, B lying in a higher income group than E. They both are similar in percentage of sales to total sales. From these figures, one can assume that this group, while buying frozen foods, tend to look for the bargains and purchase the lower profit items. The reason for this lies, perhaps, in an idea that as families grow larger and older the amount of money spent for other necessities becomes larger and the tendency is to reduce the amount spent for food by purchasing the bargains. There is not any evidence to prove this statement; it is merely the opinion of the writer.

The other stores in the study merely follow the trend of the preceding stores in relation to age levels of the shoppers.

RACIAL AND NATIONALITY FACTORS AFFECTING FROZEN FOOD SALES AND PROFIT

It was intended to attempt to establish a relationship between sales of frozen foods and nationality groups and also racial differences. In only two of the stores was there even a small amount of foreign born populations trading at the store. Stores A and E both had these small populations and it is impossible to say that there could be any relationship established by such a small sample.

The majority of the eight stores had predominantly white shoppers. Only in Store F was there a large amount of negro shoppers. At this store over 50 per cent of the people shopping were negro. This store's customers were also in the lowest income bracket of the eight, yet this store had the highest gross profit percentage of all eight stores. It did not have the largest percentage of department sales to total store sales but it was only .1 per cent below the average. In total dollar profit, as was indicated before, it is only surpassed by the highest volume store in the study. This would indicate that the negro population, even with low incomes, tend to buy the higher profit items in the frozen food department.

An idea of this market is brought out by Frank Campbell, one of the country's top frozen food salesmen and representatives. Campbell says, "The greatest potential market in the frozen food industry is the country's vast negro population". The reasons for this he states are:[6]

1) The Negro never has been offered the opportunity to display his buying power of frozen food since negro populations are in low economic areas and there are few supermarkets in proportion to population in these outlying areas of the city.

2) The Negro possesses fetish for name brand products. This is a result of the old days when shoddy goods was given them so they abhor all buy name brands. It also gives them ego satisfaction.

3) The Negro spends more than the white family in the store. He eats more at home because of the limited access to good restaurants, etc. There is more social eating in the home.

RELATIONSHIP OF FIVE TOP SELLING ITEMS TO SALES

A list of the top five selling items in each store was obtained. It was interesting to note that in all cases the largest selling item was frozen orange juice with lemonade in most cases running as second choice. The next items were divided up between french fries, strawberries, fish and peas. Table XI shows the ranking of the items in each store.

Comparing the top selling items in these eight stores with the top selling items of the chain as a whole it was found that they were closely related. The top five items

[6] "The Negro Market for Frozen Food", Quick Frozen Food, April, 1960, p. 106.

of the chain were orange juice, lemonade, french fries, meat pies and peas. It is interesting to note that meat pies were absent from the top five items of all the eight stores in the study. The significance of this cannot be established.

TABLE XI

TOP SELLING FROZEN FOOD ITEMS IN STORES STUDIED

	STORE							
	A	B	C	D	E	F	G	H
Orange Juice	1	1	1	1	1	1	1	1
Lemonade	2	2	2	2	2	2	3	2
French Fries	3	5	5	3	3	3	2	3
Peas	4	3	3	4	4	5	4	4
Cooked Fish	5	-	-	-	-	-	-	-
Fish	-	-	-	-	-	4	5	-
Strawberries	-	4	4	5	5	-	-	5

CONCLUSIONS REACHED IN THE STUDY

The conclusions reached in the study were that frozen foods in these eight stores was a profitable operation and in comparison to the total operation of the retail food chain store it is more profitable.

Profits from store to store varied due to variations in the efficiency of each store's individual operation. Some were more efficiently operated than others. Variations also occurred from economic area, age and racial differences. One of the greatest influences was that of the negro customer who was shown to be a somewhat undeveloped potential frozen food customer.

The study also showed the need of better merchandising techniques on the part of the individual operator to compensate for the variations in sales made by the influencing factors. A need is shown for the development of sales that are more in line with other departmental percentages of sales as a whole. The frozen food departments are operating below the national average in terms of percentage of sales but above in net profits. By increasing the volume it can be assumed that this particular operation will be one of the greatest contributors to company profits.

It also revealed that in planning any new operation considerable investigation should be done as to the market for frozen foods in the area of operation. The planning of store space allocations should allow room for contraction and expansion of the department to allow for the most profitable operation. The reason for this can be seen in the high cost of installation and operation of a frozen food department. In order to allow for good profits in relation to the investment a balance must be struck. Each individual operation presents a very different problem and no set rule can be used for the designing of an operation.

CHAPTER IV

CREATING GREATER PROFITS IN FROZEN FOOD

The preceeding chapter was composed of a study of the profitability of the frozen food departments in one group of stores. The results received were good, but it is believed that an even greater volume of sales lay still untapped.

It is necessary to remember that there is a limit to the profitable use of any merchandising, advertising or space allocations used in the creation of a new volume of sales. Knowing when the peak point has been reached is difficult to perceive and more difficult to admit.

It is the purpose of this chapter to look into some of the problems and some of the solutions suggested in obtaining greater profits for a frozen food department. We did see in the preceeding study that there are numerous factors which influence the operation of a frozen food department.

If we were dealing with robots, these factors wouldn't present any problem, but we are dealing with human beings and their emotional, social and environmental make-up. These behavioral patterns are constantly changing and with these changes come a change in the wants and needs of the individual. To meet these demands a dynamic program of merchandising is needed at all times.

ADVERTISING

The use of consumer advertising in frozen foods has been on the most part limited to manufacturer advertising of their products. What has been done in this area has accomplished much in the education of the consumer on the merits of frozen products, buy the actual advertising of frozen foods in the weekly newspaper and at a local level has seemed to be below par. In observing the ads of the various food chains over a period of months, it was difficult in most instances to find the frozen food items advertised. For the most part they were relegated to small, unobserved boxes in the least read section of the ad. The reason for this minor use of advertising of frozen foods probably stems from the fact that the Dupont survey shows that almost 83 per cent of frozen food buying decisions are made in the store. These statements are not meant to indicate that some good local advertising has not been done by many chains for frozen food sales, but it does indicate that there is a great area still open in the use of frozen items in advertising.

The actual value of advertising has been very hard to measure. In many surveys used to measure the effectiveness of advertising the results obtained were contrary to the expected results. The major use of food advertising seems to be based on the ability of the advertised items to draw the customer into the store. In the face of rising competition this seems to be a logical reason. The conclusion to be reached on the basis of this reasoning is that frozen foods as a whole have not been enough of a drawing card to bring customers into the store. There are exceptions to this rule, one is ice cream, which has been used as a "football" to draw shoppers. Of course, the high appeal of ice cream to all ages and income groups must be remembered in using it as a criterion. In 1958, each American consumed 18.8 quarts of ice cream and supermarkets sold 48 per cent of the ice cream consumed.[1]

Crawford's Stores of Los Angeles, California, have made good use of advertising in frozen food sales. They have used two page ads offering case and dollar-lot promotion prices. Not only was the sale a success in the amount of frozen food sold, but it also increased over-all store volume and most important it was profitable.[2]

Much could be done by advertising in the way of educating the consumer in the use of frozen meats. It is known that frozen meats were "the grand flop" of the frozen food industry. The reasons were various: poor quality and high prices being in the forefront with consumer ignorance following closely. In a field which offers the retailer the means

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[1] Ice Cream Review, August, 1958, p. 12.

[2] "Crawfords Feature Case Lots", Quick Frozen Foods, August, 1959, p. 25.

to greater profits, the education of the consumer through advertising should be looked into. Surveys show that the consumer is not immune to frozen meat for she does buy meat and freeze it at home, but she does resist the already packaged meats.[3] Therefore, it would seem to indicate that an educational program with advertising leading the way could do much to help gain acceptance of this product.

Indicated in the study was the great negro market for frozen foods. His buying role is bound to increase even further according to a report submitted by Vice-President Nixon to President Eisenhower as Committee Chairman of the President's Committee on Government Contracts. He submitted that "Our non-white population increased more rapidly between 1940 and 1950 than our white population. The former increased 22 per cent and the latter 14 per cent."

"Employers who will still be looking for male, white under age 45 workers will be in trouble in the next decade. These sought for types of workers simply will not be available in the numbers required -- the Committee will, therefore, emphasize the integration of minority groups into the white collar positions."[4]

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[3] Quarterly Bulletin, Michigan Agricultural Experiment Station, Michigan State University, East Lansing, Michigan, May, 1959.

[4] "The Negro Market For Frozen Foods", Quick Frozen Foods, April, 1960, p. 109.

With the increasing numbers of negroes moving into the white collar positions, the need by this group for convenience foods such as frozen products will increase and represent a constantly growing market.

Ebony Magazine, which occupies a position in the Negro magazine field comparable to that of Life gives a summary of the scope of this market:[5]

1) In the United States, there are almost five million Negro households, representing more than 17 million people. Almost 75 per cent of these households are concentrated in cities of 50,000 or more, with the bulk in cities of 250,000 and over.

2) Of the two million Negro families living in cities of 250,000 and over, a third spends $28.35 per family per year for frozen vegetables, or $19 million.

3) Of the 1,237,500 Negro households in cities between 50,000 and 250,000 in population, 45,000 spend $28.00 per family per year for frozen vegetables or $12,600,000.

4) In summary, three-fourths of all Negro families are located in cities where one-third to 36 per cent of these families are spending $28.00 or more per family per year for frozen vegetables, aggregating $31.6 million per year.

Because of the percentage of working wives in the negro community is greater than that of the white, the negro has become an increasingly important factor in the sale of frozen prepared foods.

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[5] Ibid.

The significance of this market can be seen and it can be opened by the use of advertising direct and toward it through publications widely read by the negro population.

A Safeway store in California boosted its sales of frozen food to 12 per cent of sales by increasing cabinet space and advertising in newspapers to attract the trade to its enlarged frozen food section.

The Big Apple Chain in Georgia boasted a 50 per cent increase in frozen food sales the week they ran a full page advertisement built around frozen foods.[6]

Strong and continuous frozen food advertising benefits the retailer three ways:[7]

1) It increases sales for the advertised brands.
2) It increases sales for private label brands.
3) It increases sales for all brands by creating new cabinet traffic.

PROMOTION

The area of promotion goes hand in hand with advertising. Advertising incites the desire for a product and promotion pushes and urges the consumer on to purchase the product. Any good large promotional device begins with the advertising idea. The chief purpose of promotion and advertising is to sell more goods and thereby, create greater profits. It is also the purpose of promotion to introduce

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[6] Quick Frozen Foods, April, 1960, p. 76.

[7] Frosted Food Field, May, 1960, p. 5.

new products, new packages and to create new demand for old products.

Examples of the promotion of various products would be the seasonal promotion of products such as fish during the Lenten season, juices during the summer season. In addition, there are many special promotions used such as the promotion of Chinese foods by the use of the Hawaiian luau theme. The manufacturer usually offers special advertising and display materials in order to gain maximum benefits from the promotion. Other national promotions may offer premiums to stimulate the sale of their products.

The manager of a frozen food department is not necessarily limited to national or company promotions. He may, by the use of his own ingenuity and imagination, create promotions of his own to suit his marketing area. Particularly favorable to this type of promotion is that of combination promotions, that is the selling of related items. It is possible by the use of such promotional ventures either to combine two top profit items for greater profits or one low profit with a high profit item to balance out the profits, thereby gaining greater over-all profit.

Particularly suited to such promotional activity is ice cream. Ice cream can be promoted with waffles as an extra special dessert combination. It can be promoted with frozen pies as a "pie 'n ice cream" promotion. Using the type of fruit pie in season will result in good profits, also.

Ice cream can be featured with cantaloupes when in season, and with frozen strawberries in any season. A special promotion with bananas can be very good. Utilizing the season of warm weather and low banana prices a good "banana-split" campaign can be waged. With this can be featured the dishes for them to be constructed in, the nuts and fruits for garnish, and the whipped cream for topping. This could be a store-wide profit maker. During the holiday season the special types ice cream and novelties can be promoted with emphasis on the easily prepared and novel desserts to be had during this particularly busy season for the homemaker.

Ice cream was used as an illustration for promotional activity. The same principles can be used with other frozen products. The idea being to appeal to that sector of a human's desires that is most in need. Without it, most any promotion will not be of much value. The wise and imaginative promoter is the one whose end result shows the greatest increase in sales, profit, and repeat sales.

An example of such promotion are the Crawford stores in Los Angeles, whose promotions have continually shown extraordinary results. In their 1958 frozen food sales, by promotion of ice cream they were able to increase ice cream sales by 46 per cent over the previous year's sale for the same period.[8]

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[8]"Crawford's Freezerama Sets Fourth Frozen Food Sales Record", Progressive Grocer, December, 1958, p. 57.

DISPLAY

Display may be called the third phase of any successful operation to increase sales and profits. The other phases being advertising and promotion. The overall results are surely caused by the successful integration of these three forces.

Display may be divided into two categories: (a) the regular display, that is, merchandise in their allotted slots, or (b) special displays, usually consisting of merchandise in areas other than its customary places. Both types of displays serve a purpose in the production of sales and profits. The use of both categories are important in determining the volume of sales and profits.

The regular display of frozen food is confronted by the need for the most efficient utilization of all the cabinet space. The reason being that the items in the limited amount of cabinet space are constantly being beset by an onslaught of new items clamoring for the use of the already overcrowded space in the cabinets. It is not possible to set up a standard procedure for the display of frozen foods for each individual operation must be tailored to fit the needs of its environment.

To begin with, the frozen food department layout must be designed to pull the shoppers through the entire department. One method used by Acme stores is to design the item layout so that no matter which direction the customer approaches the department she is met by a popular top-volume frozen item. Once the shopper is in the aisle, Acme attempts to draw her down the aisle, the idea being that once she is halfway down the aisle she will continue the rest of the way. This is done by spotting other top popularity items in the center of the case. As seasonal shifts in tastes affect which items will draw customers through the department, the items filling the star roles will also change.[9] Figure III illustrates the operational set up of such a plan.

In another experiment on the display of frozen food conducted in Azzolina's Food Circus Super Market in Middletown, New Jersey, it was found that by simply reallocating display space a 23 per cent increase in overall sales was realized.[10] The amazing part of this was that no additional labor was assigned to the department or was there any extra promotional emphasis applied in weekly store ads. It was basically a matter of working out a more realistic allocation of display spaces to individual items; one that more closely paralleled the relative movement of each item in the inventory.

The basis for determining just how much space an item

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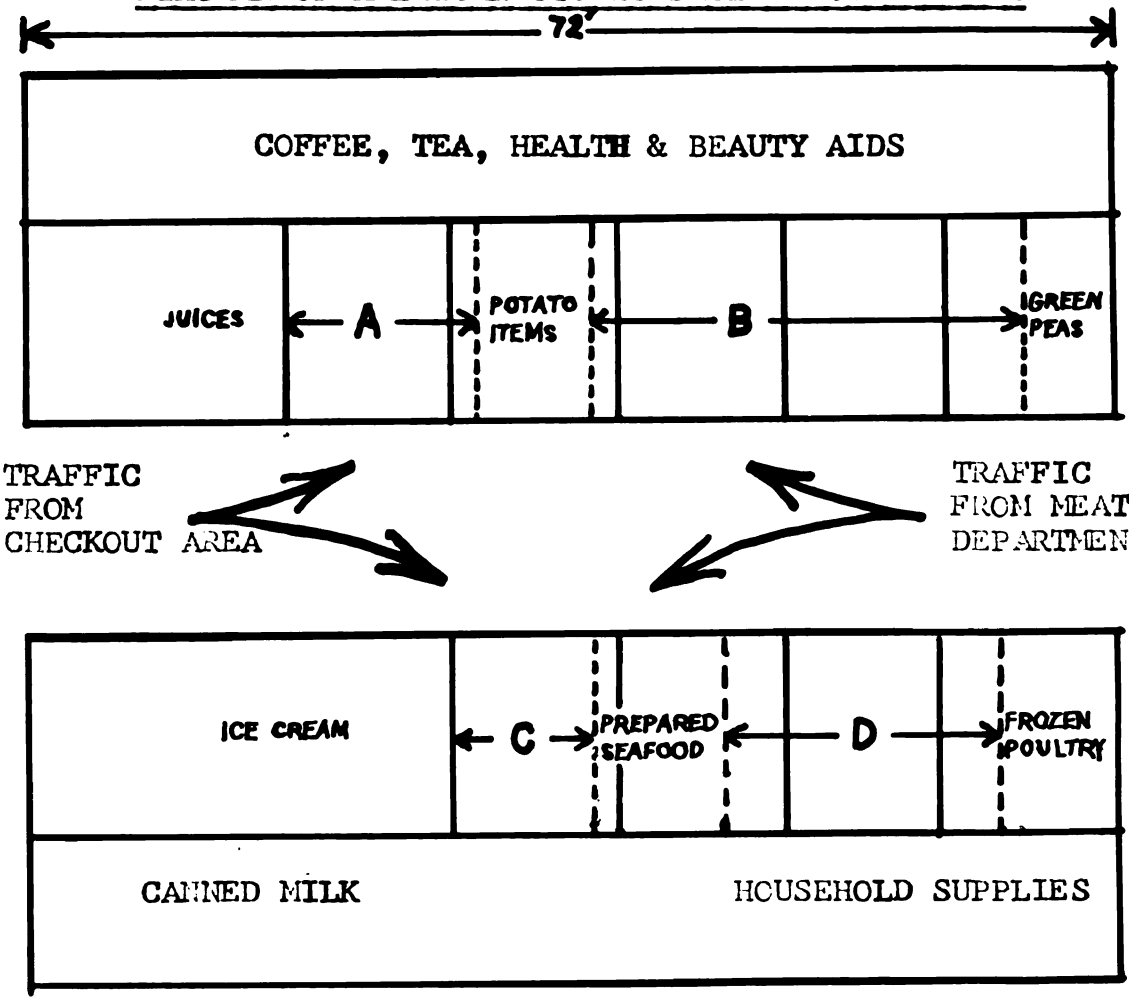
[9]"Freezer Layout is Designed to Draw Traffic From All Directions", Chain Store Age, March, 1959, p. 123.

[10]George E. Kline, "Reallocation of Display Space Results in 23% Increase in Frozen Food Sales", Progressive Grocer, April, 1959, p. 74.

FIGURE III

DIAGRAM OF AMERICAN STORES FROZEN FOOD LAYOUT



A - Fruits, baked goods, casseroles and soups.

B - Vegetables-asparagus, squash, spinach, broccoli, Brussels sprouts, cauliflower, corn, etc.

C - Pet food, unprepared fish.

D - Meat pies, prepared entrees, poultry pies, breaded uncooked meats and poultry pieces.

Source: Chain Store Age, March, 1959.

should be allocated was its average weekly unit sales as revealed by the initial four-week sales audit. During this time period a detailed diagram of the department display was drawn up and the unit capacity per facing of each item was determined.

In working out the space allocation plan it was the intention to plan it to require as little restocking as possible throughout the week and ultimately result in fewer stockouts.

Consideration was given in working out the plan to obtaining color contrast. The result being a ribbon effect which tends to provide a contrast to help distinguish one item from another. Placing of products was also considered in relation to traffic flow in order to create the maximum impulse and related items sales possible.

The main point to be gained from the preceeding illustration is that better space management seems to produce better sales and profits and with a minimum of costs to the operator. It is an area to be considered in the display of frozen foods.

A survey conducted by New York University on frozen foods departments revealed that in half the stores surveyed between one-fifth and two-fifths of the available space was wasted. The reasons for this waste were concluded to stem from lack of efficient housekeeping and merchandising by store frozen food men and lack of sufficient supervision which permits this condition to happen.[11] The implication being that there is a need for better operation of the departments to insure greater sales and profits.

Stemming from the wasted space problem comes the significance of the proper utilization of space available. By proper utilization of space, stockouts are reduced and space is conserved to be utilized for greater sales and profits. Damaged and soiled packages can be considered as wasted space because the consumer will not purchase these packages and they also detract from the rest of the stock. Chain Store Age sponsored a survey to check two phases of the proper utilization of space. The two phases were to check if foods displayed were in top condition and appearance and to see if stocking practices indicated sufficient concern for proper refrigeration needs. In the stores surveyed, damaged and soiled packages were found in 55 per cent of the major departments and the number of packages in the 34 stores ranged from 2 to 22. The total number of damaged packages on display in the 34 stores was 73.[12] Judging from this performance an indication is that the stores surveyed were carefully policed in this regard. The other phase

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[11] "Available Space Not Fully Used", Chain Store Age, August, 1959, p. 114.

[12] "Greater Efficiency In Use of Cabinet Space Needed", Chain Store Age, September, 1959, p. 156.

of the operation was that of checking each department to see which stores had packages piled above the frost line. The importance of this lies in the fact that packages stored above the frost line thaw out and the customer purchasing these packages is not receiving quality. In addition to becoming a dissatisfied customer she most likely will not return to shop. This results in loss of sales and profits in addition to raising the costs of the operation of refrigeration equipment. Any obstruction in the air movement of the cases tends to lower their efficiency and increases their operational time. It also is a major cause of premature breakdowns.

The findings in the stores surveyed revealed that 73 per cent (44 out of 62) were displaying items above the indicated load limit. The total number of packages above the frost line was 3,595.[13]

The second category of display to be touched is the special display. The term special display can cover a multitude of variations from a dump display to a special "super-duper" display. The special display is so common-place in today's supermarket that its value is often overlooked. In a recent audit of special displays sales of 360 grocery items on 734 displays in five supermarkets, it was found that an average grocery item sells 652 per cent better than from a

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[13] Ibid.

normal shelf position.[14]

From the retailer's point of view there are ten obvious good reasons for special displays:[15]

1) They sell more merchandise
2) They create a low price impression
3) They help to balance inventories
4) They strengthen advertising
5) They add excitement to a store
6) They break shopping monotony
7) They create impulse sales
8) They highlight new products
9) They help reduce stockouts on weekly ad features
10) They offer shoppers suggestions on what to serve

The special display need not be merely a price reduced item. It is beneficial to mix them up with non-reduced related items which tend to balance the profits. The display need not be a gigantic one to be successful. While the huge ones are exciting it is necessary to realize that some of the smaller displays may be just as productive in merchandise movement. The effectiveness of the small display lies in its ability to remind the customer of what they want or need. Remember, that nearly 83 per cent of frozen food purchases are made on in-the-store decisions.

The survey, while only being of grocery items, tends to stress the importance of these special displays. The principles utilized can be used just as effectively in frozen food merchandising.

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[14] George E. Kline, "How to Build More Profits Into Your Special Display Program", Progressive Grocer, January, 1960, p. 49.

[15] Ibid.

The easiest of these displays to be used in frozen food merchandising is the dump display. It creates an exception to the neatly stocked packages and cans by breaking the monotony of the visual pattern. By doing so it catches the shopper's eye and possibly results in an impulse sale. The use of a homemade crayon sign may be the eye catcher in such a display which results in an extra sale. It turns an ordinary display into an eye catching special display.

The biggest problem facing the retailer in creating special displays has been the need for maintaining low temperatures. The answer seems to lay in the on-the-spot merchandiser. With this merchandiser, the frozen foods may be merchandised and displayed anywhere there is an electrical outlet. It is possible to utilize it with related items as the cantaloupe, bananas and ice cream promotion. The profits resulting should be excellent if utilized properly. Here again, the need of using the equipment efficiently is stressed. A promotion or display is only as good as its placement.

The cost quoted by a manufacturer for a 4.3 cu. foot dual temperature freezer cabinet was $157.50 F.O.B. factory. Proper utilization of such a model would soon return the initial investment. The advantage of a dual-temperature model is that it may be utilized for other perishable products thus increasing its ability to return profits. A Portland, Oregan, operator using spot display in a weekend frozen food promotion reported a 400 per cent increase over normal sales.[16]

While only the use of special displays of frozen food with related frozen food were considered, it is possible to consider the use of related non-frozen food displays to be located in proximity to frozen food cabinets, thereby, using a two-way application of the related items approach. This brings us to the use of the extra shelving over many of the frozen food display cabinets.

It would seem that there is a flagrant misuse of this valuable space. It is used for displaying everything from shoelaces to model airplanes. The thought crosses my mind as to whether this space can be more fully utilized by the placing of related items on its shelves. Ice cream cabinets seem to be doing this successfully by the placement of cones, toppings and ice cream dispensing implements. Suggested related items are plastic juice containers and glasses near the frozen juices, sauces and spreads near the fish and meat sections, casseroles, serving dishes, etc., near the vegetables. The idea to place some item nearby that is directly related to the frozen item.

New developments in display cases will tend to change the concepts of merchandising of frozen food. The new double-decker cases will allow for related frozen food

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[16] Progressive Grocer, March, 1960, p. 126.

selling. The main item in the lower cabinet the related items on the smaller second shelf. The advent of the in-the-wall upright freezer will help enormously to solve some of the space and stocking problems. Its predecessor, currently in use, with sliding doors involves the customer in the job of opening doors. This tends to lessen sales because the customer doesn't wish to be bothered opening doors. It also involves the need for bending down which also tends to lessen sales. As is known, at eye level merchandise moves with the greatest rapidity. The future of these display cases on sales and profits need only be speculated on at this point, the necessity being to utilize the equipment at hand to the greatest advantage.

Theodore W. Leed in a frozen food seminar, conducted at the University of Massachussetts, contrived what he called a work customer analysis. It is related to the location and display of frozen food and its basic precepts are:[17]

1) The frozen food department should be located last in shopping pattern for greater customer satisfaction.

2) Frozen food sales will be relatively greater if the display cases are located in the periphery of the store rather than somewhere in between.

3) Space the fast moving products groups -- juices, vegetables, meat pies, etc., so as to encourage complete shopping of the case.

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[17] Quick Frozen Foods, May, 1960, p. 124.

4) Special attention is required in back to back frozen food displays. It may be necessary to divide the fast moving product groups between two cases. This is especially true if on aisle of frozen foods is opposite power items such as coffee, baby foods, soups or cereals.

5) Special displays in the middle of the aisle tend to reduce the rate of sales on both sides.

PROPER HANDLING

The importance of proper handling and its effect on profits and sales was touched upon in the preceeding section. The direct relationship of handling to profits can be seen. Improper handling of frozen food results in lowered sales and profits induced by defrosted and torn packages, poorly marked packages, increased labor costs resulting from time lost through the inefficient use of labor. Costs are increased by excessive operation of refrigeration machinery resulting from improper stocking of frozen food cabinets.

It is up to the manager to train the personnel in the efficient operation of the frozen food department. It is through this training that efficient methods of handling will be learned. No detail should be overlooked for each inefficiency of operation reduces profits by increasing costs.

The manager can facilitate the handling of frozen foods by the use of a check list such as follows:

1. Be ready for the frozen food delivery.

2. Unload the order quickly.

3. Segregate the items to go into display cases and stock freezers.

4. Place order in cabinets and storage freezer immediately.

5. Segregate, rotate and keep labels out on merchandise in storage.

6. Check display at least twice a day.

7. Straighten cases while checking.

8. Handle full or half cartons only.

9. Keep cases neat and free from broken and damaged packages.

10. Do not load cases above frost line.

11. Keep aisles free while loading cases.

12. Do not allow frozen food to thaw while loading frozen food cases.

13. Use both hands when loading cases.

14. Rotate packages while stocking.

15. Mark packages legibly.

16. Keep 0°F. in freezers and cabinets (check often)

17. Do not allow ice and snow to build up on coils and side walls of freezer and cabinets.

18. Keep freezers and cabinets clean.

19. Never display frozen food in unrefrigerated stalls.

20. Check all refrigeration equipment first thing in the morning, last thing at night.

DISTRIBUTION COSTS

Many of the chain stores have their own facilities for the distribution of frozen foods to the individual store. The costs involved in such an operation are reflected in the profits of a frozen food department. A reduction in these costs increase the profits. Those chains who do not have their own distribution facilities can benefit from lower prices by the reduction of costs by their suppliers.

The ability of a company to be large enough to automate all or part of its frozen food distribution system can result in large savings. The initial cost of the equipment is high but the savings incurred in the long run pays for it. A recent visit to the automated frozen food distributing warehouse of the Abner Wolf Company in Detroit indicated some of the savings incurred. The exact dollars savings were not obtainable but they were there. Savings were incurred at the offset in the mechanical recording and transcribing of the orders from the stores. An idea of the savings can be garnered from a recent Agricultural Marketing Service report which related that by transcribing and recording salesman's orders mechanically instead of manually it was possible to save $4.54 per 100 orders. The savings were resultant from reduced labor requirements, elimination of overtime work and reduced telephone expenses. It represented a 161 per cent increase in productivity and a 54 per cent reduction in processing costs.[18]

A second savings at the warehouse resulted from a reduction in the number of men on the order filling crew from

[18] Agricultural Marketing, October, 1959, p. 16.

ten to six. This was accomplished with an increase in the number of stores serviced.

It also induced savings in the chain as a whole, by giving the stores more frequent deliveries thereby, reducing capital tied up in inventories and allowing the capital to be used for other purposes.

It also helps to reduce costs by the elimination of shipments of partial cartons of merchandise. Also utilized were containers for the shipment of small orders to stores. These small orders of frozen food were delivered along with regular grocery deliveries, thereby utilizing all space available. This latter technique is used also by the chain whose stores were used in the study. Part of the frozen foods used by the chain are shipped from the meat warehouse thereby utilizing common refrigeration facilities, and shipped to the individual stores along with regular meat deliveries which are made daily. The use of common facilities and frequent deliveries enable the chain to save also, by the reduction in the size of inventories in the stores.

MANUFACTURER'S LABEL VS. DISTRIBUTOR'S LABEL

The question arises when attempting to increase the profitability of frozen foods in the store, whether profits can be increased by the use of the distributor or "private" label. The question has been argued back and forth and proponents of each side claim to be right.

The Grand Union Company, in its initial decision to move to its own label, gave the following reasons for doing so:[19]

1) To give the consumer a quality product at a lower price.

2) To enjoy a better return on sales

3) To build consumer loyalty to a brand that is exclusive.

4) To exercise direct control so as to prevent price footballing to meet competition.

The reasons listed are typical of the reasons for which a chain goes to its own exclusive or a distributor exclusive for its area label.

In contrast, the advantages of the manufacturer label are listed as follows:[20]

1) Manufacturer brands bring in customers.

2) Manufacturer brands are less costly to promote.

3) Manufacturer brands require less stock and provide higher turnover if distribution centers are nearby.

4) Manufacturer brands are less likely to incur losses due to price reductions to move overstocks.

5) Manufacturer brands may give the store added prestige and good will.

6) Manufacturer brands often give better service to the retailer.

7) Manufacturer brand pricing is generally more stable over the business cycle.

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[19] "The Grand Union Frozen Food Story", Quick Frozen Foods, April, 1960, p. 102.

[20] This Week Magazine, 7th Annual Grocery Study, 1957, p. 40.

8) Manufacturer brands being readily identified by the consumer may make good leaders.

The reasons stated by both sides overlap in some respects. The private label offers the higher margins but the manufacturer is able to offer the services of cooperative advertising and promotion plus the constant research and improvement services which go into his products. Some of the added margins which are offered by the private label must be used for advertising and promotional expenses. It would seem at this point that the two would balance off, the advantage being offset by the disadvantage.

The second reason stated by Grand Union in the use of its private label is based on the assumption that through the private label they are able to give the customer a quality product at lower cost. Actually, there are two types of consumers to be dealt with. One who puts faith in a national product, the other who prefers to rely on the dealer with whom they have direct contact. The first type wants good quality but not exclusiveness and does not put much trust in the retailer's recommendations. The second group are those who want a bargain and trust the retailer to give them something as good but at a price.[21] The latter group is the group that the private label caters to.

What happens to the other group? If the dealer in-

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[21] John W. Wingate, Buying For Retail Stores, (Englewood Cliffs. N.J.: Prentice Hall, Inc., 1956), p. 659.

sists on stocking his own label, the other segment soon drifts off to other stores. A typical example of such a situation may be seen in a recent survey made at Marsh Foodliners. Marshs' were engaged in an extensive promotion of their own brand frozen foods. Their claim was that although their dollar profit was less due to lower prices, it was compensated by rapid movement of their own labels. In a close check on store by store operations it was found that where Marsh private label was strong the store showed the greatest loss in sales. The stores with the greatest gain in sales were those that stocked only advertised brands.[22] While this cannot be taken as concrete evidence that people prefer manufacturer brands, it does show that they do want choice. Marsh, in allowing its own brand to dominate the frozen food cabinet, overlooked that sector of the market which was willing to pay a few cents more for an advertised brand in which they had confidence. This domination deprived the customer of a freedom of choice in brand selection.

The third reason given for having a private brand was that of consumer loyalty to the brand that was exclusive. This segment of the market can be served by both factions, distributor and manufacturer, because many manufacturer brands are sold exclusively at certain retail out-

[22] Frosted Food Field, October, 1959, p. 59.

lets. It is only a segment of the market that demands exclusiveness. Brand loyalty, itself, has been the subject of much contention as to its effect on the purchases made by a shopper. Some surveys have indicated that customer loyalty to a specific brand has decreased of late. Using this as a basis the contention is that both types of brands suffer from this loss of loyalty. It would be reasonable to assume that the effect of brand loyalty is questionable. The product's main consideration would be merely the satisfaction of the individual shoppers wants and needs. If the shopper is primarily price conscious, she will buy the package with the lowest price tag regardless of brand. If it is exclusiveness she desires, she will no doubt purchase the brand that is only available at a certain store, thereby, satisfying her ego. The shopper desiring quality and non-variance in a product will purchase the product which is available anywhere, whether in Cleveland or Chicago, bearing a nationally advertised label. She knows the contents of the package does not vary from area to area and it is dependable.

The fourth reason given was that of being able to exercise direct control in order to prevent "footballing" and meeting competition. This reason is also given indirectly as one which is created by manufacturer brands. The reliability of either side preventing "footballing" seems to be a mere ruse. One needs only to pick up a newspaper with food store advertising to see manufacturer brands products being used as "footballs" to draw traffic and in another corner to see distributor brands being used the same way. This has been especially prevalant in private label ice cream. The argument received is to meet competition, but when the price is constantly below costs of production it is "footballing" in any language. Competition in the retail food business has been keen, but it is necessary to make a profit. By using tactics such as "footballing" a point may be reached where the benefits of any label policy is lost.

There have been excellent results obtained both by those using manufacturers labels and those using distributor labels. Publix Markets, using an exclusive manufacturer label, have enjoyed excellent results in both sales and profits. Others such as Acme Markets claim excellent results in the use of their exclusive private label. A middle of the road approach would seem to be the best, for through a modified distributor and manufacturer approach all factions would be served. The final determination would depend on the individual retailer, the market he serves and the environment he operates in. It is necessary to obtain the correct product mix in order to have a resulting profitable operation.

MAINTENANCE COSTS

The increase in profits for the frozen food departments by the reduction of maintenance costs was touched upon in previous sections by the outlining of proper handling procedures and their effect upon the operation of the frozen food refrigeration equipment. Profits can be increased by the reduction of these maintenance costs.

The reduction of maintenance costs begin for the retailer in the choosing of the equipment he uses in his frozen food installation. The retailer, in order to reduce his initial costs of equipment and installation, often tends to purchase inferior equipment or equipment with insufficient ability to handle the load placed upon it. This equipment does not maintain the proper temperatures to hold frozen food at its peak level of quality resulting in losses through thawing and consumer dissatisfaction. Secondly, the compressors must work at peak capacity at all times in order to maintain proper temperatures resulting in premature breakdowns and constant repairs. The long run savings are obvious to reduce maintenance costs in the long run purchase equipment to handle the needs efficiently and at the lowest maintenance costs.

Careful scrutiny of maintenance costs and the bills presented by the repairing organization is important in reducing costs. Too often a market operator merely signs the invoice without checking the work and parts needed and the time required to make the repairs. Grazzini's Market in San Francisco, California, were able to reduce their refrigeration maintenance costs by two-thirds by the application of a maintenance policy.[23] The basic ideas used were as follows:

1) Checked with three maintenance companies on the amount of maintenance required to keep the equipment in good working order.

2) Chose specific company to perform these functions.

3) Checked the time required to perform the functions.

4) Instruction of clerks to watch temperatures in cases and report immediately any abnormal deviation. This spotted troubles immediately and minimize overtime service calls.

5) Careful check of all repair bills.

6) Use of dry ice to eliminate overtime calls which can be handled at lower rate the following day.

The ideas outlined are those of preventitive maintenance which can be used by any company either though its own service organization. The results being those of greater profits through reduced costs.

FUTURE TRENDS

The trend for greater future profits in frozen foods are influenced by a great number of innovations. The con-

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[23] Vincent Reardon, "How We Reduced Refrigeration Maintenance Costs by Two-thirds", Progressive Grocer, May, 1960, p. 252.

stantly increasing number of new products coming out every day reflect the insight of the producers to make those products which will result in greater profits by the satisfaction of customer wants and needs.

Many of the studies which have been done with various organizations on individual product movement indicate the marked trend of frozen fruits and vegetables sales to remain relatively stagnant while the sales of baked goods, precooked foods, and products generally having "built-in-maid" service are generally increasing at a rapid rate.[24]

This change in product requirements is due to various factors. One previously mentioned is the rapidly growing negro market. Another is the marked trend of single consumers away from "rooming" and toward maintaining their own households. Census population data for years prior to and since 1950, reflect the increasing financial independence of the individuals particularly among the aged. In 1957, the medium age of single consumers was 57 compared with 54 in 1950. Two-thirds of single consumers kept house and prepared at least ten meals at home each week. Of this group, 75 per cent of the men and 66 per cent of the women were employed, indicating a large market for the quick, easily

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[24]"Whats Happening in U.S. Supermarket Cabinets", Frosted Food Field, February, 1960, p. 18.

prepared meals.[25] The increasing life span of individuals and the growing number of this age group would seem to indicate a growing market for frozen foods to this area of the population.

There is some indication by certain segments of the industry towards the production and selling of premium brands of frozen foods to create larger profits margins and to cater to a specialized group of consumers. The plans for marketing such products are now in the planning stage, whether they will be marketed needs to be left to the future.

The packaging of frozen foods in polyethelene, large size packages is considered to be another step forward in increasing the profits of a frozen food department. The results so far in this new area of packaging have been good.

A. C. Nielsen reports that large packages are definitely on the upswing in many major commodities sold in food stores. A survey outlined the progress of 31 sizes over a period of three years. In some areas the larger size moved from a 52 per cent share of the market in 1957 to 64 per cent in 1959.[26] A general consensus of opinion in the frozen food industry has been that the size of the package in which frozen foods have been packed has become outmoded. It

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[25] Marsha M. Froeder, "Single Consumer's Spending Patterns in Three Periods", Monthly Labor Review, February, 1959, p. 142.

[26] Quick Frozen Foods, October, 1959, p. 57.

is estimated that a 12 ounce package will move 20 per cent more merchandise and help to balance the industry and at the same time increase profits.[27]

A factor to be reckoned with in future profits will be the much disputed AFDOUS Code for the proper handling of frozen foods. Laws enacted and strictly enforcing the provisions of this code could greatly upset the industry. Much of the equipment in use in stores at present cannot perform up to the standards recommended by the code. Rigid enforcement would generate the replacement of the present equipment with new, more efficient types. This replacement of equipment by the producers and distributors would tend to increase immediate costs and reduce immediate profits. The alternative would be to raise prices and thereby, run the risk of pricing many frozen products out of the market. The only avenue open at this point would seem to be a policy of waiting to see the effects of the code in those areas which have passed legislation to enforce the code, and then act accordingly. A long run consideration, not to be overlooked, would be that perhaps, replacement of this outdated equipment could result in greater savings and profits. These savings and profits could be the direct results of fewer production rejects, lowered maintenance costs, and more effective utilization of labor.

The Libby Company, in a move to bolster the sales of

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[27] Ibid.

its frozen products inaguarated a new pricing plan for its products. The object being to offer substantial savings on most products and permit distributors to concentrate on merchandising Libby's frozen foods at cabinet level at more realistic prices to customers.[28] The object being increased sales, by lowering retail prices and yet allowing for a good profit to the retailer. What the effect will be on other processors is not known although, it could open up a completely new concept of pricing to the retailer because he could increase sales by being able to offer more competitive prices.

The use of financing large frozen food sales has been experimented with by the J. S. Dillon Company of Kansas. The plan is applicable for orders of meats and frozen foods in excess of $50.00 Dillon's supplies the food and a local investment firm finances the transaction for the customer providing the customer's credit is good. A check is then mailed by the investment company to Dillon's and the customer has four months to pay off the loan to the investment company. Savings offered by the plan to the consumer is usually more than enough to cover the interest on the loan.[29]

The advantage to the customer can be seen in which she

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[28] "Libby Sets New Pricing Policy", Frosted Food Field, March, 1960, p. 1.

[29] Marguerite MacMorris, "J. S. Dillon Finance Plan on Meat, Frozens Pulls", Supermarket News, March 14, 1960, p. 56.

is able to take advantage of the sale prices to fill her freezer. The advantage to the retailer can be seen by the elimination of risk to him in the financing of the food, the ability to boost sales of frozen foods, and the ability to increase profits through savings incurred by the lesser amount of handling required in the selling of quantity amounts of frozen products. The effect of this type of merchandising of frozen foods cannot be judged by any one attempt at this plan but it should be considered in any future planning of innovations in the merchandising frozen foods.

CHAPTER V

SUMMARY AND CONCLUSIONS

The popularity of frozen foods has been increasing since the 1930's. The reasons being that of the growth in the ownership of home freezers and refrigerators, increased per capita income, more working women, an increasing birth rate, higher educational levels, and a movement of the population to urban living. Seventy per cent of frozen foods are sold through retail outlets. Of this, 71 per cent are sold through retail chain stores.

A study was made of eight frozen food departments of a large midwestern chain operating in the North Central region of the United States. This area is the second best market for frozen foods in the country. The eight stores selected operate in the Cleveland metropolitan area and are located in varied neighborhoods. The stores studied represented a typical operation of the chain.

The average percentage of frozen food sales to total store sales for the eight stores amounted to 4.2 per cent, a figure below the national average but acceptable. Individual stores varied in percentage of sales from 3.8 to 4.7 per cent.

The stores' frozen food departments were operated by the meat department and the location of the frozen departments were either directly opposite or in close proximity to the meat department. In analyzing sales there was not great positive relationship between high meat sales and high frozen food sales.

When comparing store selling space occupied it was found that the meat department returned the greatest percentage of sales to space occupied. Produce followed and grocery and frozen foods brought the least percentage of sales to space occupied, indicating that improvement could be made in these areas. Some of the stores which had very low returns in this respect gave indications that perhaps some thought should be given to reallocation of space requirements of the various departments in the setting up of new stores.

An analysis of the operating results of the eight departments revealed that with the allocation of expenses as used by the company the greatest variants were in wages and gross profit. The stores utilizing their help to the greatest advantage and selling the higher profits items produced the best net profits. Of course, it was realized that the turnover in the department was important but this was considered as an effective utilization of labor. It is believed that the most efficient and imaginative operator produced the best sales and profit results.

The economic areas in which the individual stores operated tended to overlap but as close a comparison as possible was drawn. The store producing the highest gross profit lay in the lowest economic area. The store laying in the medium to high economic area produced the poorest gross profit return. The store producing the most dollars in sales lay in the medium income area and the store producing lowest dollar sales also was the one mentioned previously as having the lowest gross profit return.

In relation to age group results varied in the different economic areas. In the younger age group the best performer was composed of the group that lay in a higher income group. The younger age group whose incomes were lower tended to buy less frozen food. The middle age group purchased the greatest quantity of frozen food. The stores possessing an evenly divided age group of shoppers with a wide variance in income levels tended to purchase similar quantities of frozen food. Evidently, this group purchased the bargains and low profit items for gross profit margins were the lowest of all the stores.

A significant finding in relation to racial differences lies in the fact that the store possessing a high percentage of negro shoppers produced the best gross profit ratio of all stores, yet it was located in the lowest economic area. The significance of this is that here lies a very lucrative market for the higher profit items.

The top selling items in all the stores studied followed approximately the same pattern. The items in order of their sales were orange juice, lemonade, french fries, strawberries, fish and peas.

It was concluded that in these eight stores, operation of a frozen food section was profitable. From the variation of the sales in each store an indication was that various factors influenced the sales of frozen foods and the wise operator received the greatest rewards. It also indicated that there could be improvement in the amount of total sales if the chain as a whole planned its frozen food departments to the operational area and the individual operator played up those items which his particular type of shopper wanted. It also indicated that at least in these eight stores, the store should not be without frozen food departments.

There lies quite an open field in the area of frozen food advertising at the local level. Much can be done through the medium of advertising in the education of the consumer on the merits of new frozen products. Educating the consumer to buying frozen meats presents a challenge to the frozen food industry. Advertising also can be used quite effectively in the reaching of specific nationality and racial groups through publications which are widely read by them. It also can be the cornerstone in large promotions to draw customers into the stores.

Promotion goes hand in hand with advertising. It is the purpose of promotion and advertising to sell more goods and thereby, create greater profits. Promotional activity is used to intorduce new products, new packages and create new demand for old products.

Promotions can be used not only at a national level but also at a local level. The ingenious and imaginative operator can boost his sales considerably by the use of promotional devices in his individual store.

Promotions may be seasonal, geographical, premium type and of the related item kind, the basic idea being to appeal to the individual customer's wants and needs.

The third phase of any successful use of advertising and promotion is the proper use of displays in the store. Displays are of two types the regular display, all products are in designated pre-selected spots and remain there consistently, and special displays in which the item is moved from its conventional position.

Effective regular displays are used in such a manner as to draw the customer through the complete frozen food line. Seasonal shifts are made in order to obtain the maximum results in sales and profits. Space is allocated to the individual articles as to movement and desirability in order to minimize restocking.

Special care must be given to good housekeeping in the frozen food department in order to keep the number of broken and damaged packages at a minimum. It also helps reduce refrigeration operational and repair costs by the proper maintenance of packages at a level below the frost line.

A study showed the ability of special displays to increase sales on some items as much as 652 per cent. The special display can be used for frozen food either as a dump display or as an island display utilizing a low temperature, portable merchandise cabinet. The use of the portable cabinet enables the retailer to combine his frozen items with other related non-frozen items. As new developments are introduced, further innovations may be made in the display of frozen foods.

Improper handling of frozen foods results in lowered sales and profits induced by defrosted and torn packages, poorly marked packages, high labor costs resulting from poor training, and increased costs resulting from high maintenance expenditures.

The use of automated ordering and dispensing of frozen foods can greatly increase profits by a reduction of labor needed, reduction of inventories in stores, reduction of less than full carton orders, utilization of common delivery systems, and the availability of capital not tied up in inventories for other profitable uses.

The use of either a manufacturer's or distributor's label for frozen foods should be governed by the environment in which the individual company operates. Both labels have favorable and unfavorable characteristics and tend to draw a specific category of shopper. Both types have been used effectively but it is the opinion of the author to select a middle of the road policy to satisfy the greatest number of shoppers.

Maintenance costs on frozen food equipment are high and if allowed to become abnormal soon eat away any profits gained. By initially buying equipment to handle the work load demanded the cost of maintenance decreases by fewer breakdowns. Also, a carefully planned maintenance program should be inaguarated to eliminate unnecessary service calls. A part of this planned program should consist of the instruction of employees in keeping a constant check of temperatures and in the proper housekeeping of a frozen food cabinet.

Indications are of a greater demand for larger packages, relative stagnation in the sales of fruits and vegetables and the growth in sales of baked goods and precooked foods. Through the increased sale of these items larger profits are hoped for. The future indicates a greater market for these products with the increase of the negro population and the number of older single households.

The future effects of temperature controlling legislation can greatly affect the industry. Strict enforcement would mean the replacement of much of the equipment now in use, thereby, temporarily increasing the costs of operation of the frozen food departments.

The demand for frozen food is here, a retailer who does not stock frozen foods seems to be at a disadvantage and could injure himself by turning customers away from him to other sources. The importance of this will grow as the demand increases. Whether the retailer operates profitably lies in his ability to measure his market potential and the factors influencing it. Proper governing of all costs coupled with imaginative and ingenious merchandising should put the frozen food department in a very enviable position profit wise.

This paper has dealt with the effect of ethnic, economic, geographic and age factors in relation to the profitability of frozen food departments. Impetus was given to the gross profit of frozen products. Based on the preceeding factors and expense allocations, frozen foods are profitable to handle.

The paper has left some areas open for future study. Very little emphasis was given to the factors of turnover and capital investment although it is realized that they do exist. Increased competition will tend to make these factors play an even greater role in profit determination. A careful and detailed study in this area could and should be made.

It was the original intent of this study to obtain actual operational expenses incurred by the frozen food departments. It was found that the information desired was difficult to obtain. Such expenses as light, heat, water, etc., were not obtainable without the use of special measuring devices. It was, therefore, necessary to use the expense figures as allocated to the departments by the accounting department.

Accounting figures may often be used either to inflate or deflate the operational performance of a department. Variations in accounting procedures can often produce conflicting results. Further study in this area of expense allocations is needed.

When consideration is given to the accounting procedures used, the question of the true profitability of frozen food departments remains. Are frozen food departments more or less profitable than believed?

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