A STUDY OF PLANNED ITEM SPACE ALLOCATION IN THE GROCERY DEPARTMENT OF THE SUPERMARKET

Thesis for the Degree of M .A.

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Bobby D. Rousser

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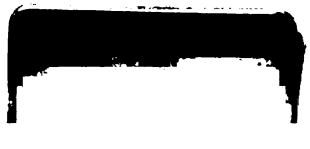

"The Food Distribution program at Michigan State University is under the sponsorship of the National Association of Food Chains."

A STUDY OF PLANNED ITEM SPACE ALLOCATION IN THE GROCERY DEPARTMENT OF THE SUPERMARKET

by

Bobby D. Reusser

AN ABSTRACT

Submitted to the College of Business and Public Service of
Michigan State University of Agriculture and
Applied Science in partial fulfillment
of the requirements for the degree of

MASTER OF ARTS

Department of Marketing and Transportation Administration
Curriculum in Food Distribution

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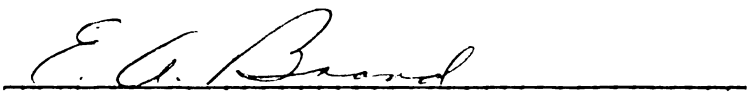
Approved 

BOBBY D. REUSSER ABSTRACT

The purpose of this study is to examine the advantages of logical and effective space allocation to items within the grocery department of the supermarket. Planned space allocation not only aids in controlling inventories, the largest single item among the current assets, but also aids in controlling the type of merchandise comprising the store's inventory. This is important since inventories have frequently been the prime cause of business failure. The proper utilization of an effective method of item space allocation can act as a deterrent to business disaster.

Another purpose of the study is to examine some considerations necessary to make a plan for item space allocation successful. Several plans are critically analyzed in an attempt to establish their usefulness as guides to better space allocation.

This study presents in detail a simplified method of allocating space to individual items on the grocery shelves. Accurate and detailed information on individual product performance is, admittedly, difficult and costly to obtain. The guide to item space allocation offered in this study points out a method which is sufficiently accurate and detailed to improve the allocation of shelf space to items within a product group; yet, employs a means of obtaining this information which is neither difficult nor costly.

BOBBY D. REUSSER ABSTRACT

Secondary sources, personal interviews, and letters were utilized to secure information on the importance of planned space allocation and the considerations necessary during the formulation of a space allocation plan. Text books were perused to secure information on the importance of stock turnover to a retail business.

Information on space allocation methods and plans was gleaned from trade publications and through letters and personal interviews with members of the retail food distribution industry.

The item space allocation plan described and analyzed in detail is a plan developed and used by The Kroger Co. Knowledge of the plan and the process and problems of its application was gained through interviews and letters, and from the writer's experience as a store co-manager.

Store space has always been one of the supermarket operator's major problems. The present trend to larger markets is not the only solution. Regardless of store size, operators constantly seek additional space for non-selling functions, new products, more displays, and et cetera. An approach to solving the problem may lie in the control of existing store space rather than constantly seeking additional space.

The effective utilization and control of store space can be approached through the control of merchandise

inventory levels. This is a difficult and often frustrating task. The many items in the grocery section of the supermarket forces management to use something more than instinct and observation as a control measure.

Planned space allocation can help solve many of these problems for management of retail food distribution organizations. Management can expect planned space allocation to result in increased gross profit dollars from each linear foot of shelf space and/or each square foot of floor space. This increase evolves with a minimum of labor expense.

The methodology used in The Kroger Co. plan is sound. However, as a result of this study certain modifications and/or additions to existing plans are recommended. The results obtained from applying a space allocation plan incorporating these additions and/or modifications may be considerably improved.

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The writer wishes to express deep appreciation to Mr. Ruel Kahler for his interest, patience, and guidance during the preparation of this study.

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CHAPTER I

INTRODUCTION

Today's supermarket operator faces a vastly different situation than he did a few years ago. Competition among retail food distributors has become more intense. Progressive organizations have expanded rapidly. New outlets, such as the discount houses, have recently entered the retail food distribution industry increasing the intensity of competition. In addition, while competitive conditions hold prices down net profits are further reduced because of increasing costs of operation.

These facts alone could account for the severe supermarket competition which operators are experiencing today. However, there are other contributory factors. Ten years ago there were 5,485 families per supermarket. In 1956 this number had diminished to 1,760.[1] This problem is one which has been created by the industry through expansion. Nevertheless, the problem has only recently been recognized by the members of food chain management.

Still another factor which aggravates this changing situation is the increase in number of new items available.

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[1]Progressive Grocer, The Super Valu Study (New York: The Butterick Company, 1958), p. S-70.

Since 1950, new items have increased at the rate of about 200 per year.[2] The management of some organizations report as many as forty-five or more items being offered their buyers every month.[3] "All indications are that we can continue to expect this same rate of growth in the number of new product additions."[4] The continued introduction of new items is considered essential to a growing retail industry; however, it still presents many problems.

The competition between retail food distribution organizations is not the only form of competition which prevails within the food distribution industry. Each store within a food distribution organization is teeming with internal competitive problems. In fact, every item, on every shelf, exists in a competitive environment.

Limited space is one of the principal reasons for this internal competition between items. Admittedly, each item is competing for the consumer's dollar. However, a far greater struggle ensues for the existing shelf space within the store. Space is constantly being sought for new departments, new merchandise, preparation and temporary

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[2] Ibid.

[3] Statement by Geo. McDaneld, Grocery Buyer, The Kroger Co., Kansas City Division, December 27, 1957. Personal interview.

[4] Progressive Grocer, op. cit., p. S-18.

storage areas, wider aisles, more checkstands, and for more and larger shopping carts. The increasing demand for more display space is a constant problem to the management of retail food distribution operations.

The problem of limited space in the supermarket is not new. It has received the attention of high level management in previous years. In 1954, the utilization of space in the supermarket was the topic of a national panel discussion conducted by food distribution executives.[5] There have also been elaborate studies performed by industry publications and governmental agencies to determine the relationship existing between products and the amount of space they occupy. Occasionally trade publications contain articles which place emphasis on the advantages of proper space allocation.

Several methods are used for determining the amount of space to be allocated to the various departments and other operations within retail food distribution outlets. Some of these methods are based on factual information while others may be based on an operator's whims and/or experiences. Any industry-wide examination of these methods would be of little value; since the majority of companies determine departmental space allocation according to the

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[5]"Effective Allocation of Store Space," A Panel Report compiled by The National Association of Food Chains, April 24, 1954.

departments they wish to emphasize. Some organizations choose to place major emphasis on meat, others produce, and still others may choose to use non-foods.

Space holds a position of high importance in today's supermarket operations. Articles have been written concerning the importance of proper space utilization, and factual studies have been conducted which give some indication as to successful methods of determining product group requirements. However, too little consideration has been given the individual grocery item.

Too often space allocation problems are considered only at the level of the department or product group. Seldom, however, will the whole of any matter deteriorate simultaneously. A breakdown of the individual components eventually causes the whole to weaken and fail. The importance of each item in the grocery department lies within its relationship to the whole.

Purpose of the Study

The purpose of this study is to examine the advantages of logical and effective item space allocation. Planned space allocation not only aids in controlling inventories, the largest single item among the current assets, but also aids in controlling the type of merchandise comprising the store's inventory. This is important since "inventories have frequently been the prime cause of

business failures, and it is not without reason that they have been called 'the graveyard of American business'."[6] The proper utilization of an effective method of item space allocation can act as a deterrent to business disaster.

Another purpose of this study is to examine some considerations necessary to make a plan for item space allocation successful. Several plans are critically analyzed in an attempt to establish their usefulness as guides to better space allocation.

This study presents in detail a simplified method of allocating space to individual items on the grocery shelves. Accurate and detailed information on individual product performance is, admittedly, difficult and costly to obtain. The guide to item space allocation offered in this study points out a method which is sufficiently accurate and detailed to improve the allocation of shelf space to items within a product group; yet, employs a means of obtaining this information which is neither difficult nor costly.

Need for the Study

Presently, food retailers are faced with a changing competitive situation. Rapid stock turnover becomes increasingly difficult to maintain. The greatly increased

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[6]Thomson M. Whitin, The Theory of Inventory Management (Princeton, N. J.: Princeton University Press, 1953), p. 4.

volume of goods moved through individual retail food outlets during the past several years has caused many retailers to overlook the advantages of carefully planned space allocation.

Through the effective allocation of shelf space, and the proper selection of merchandise, turnover can be increased with resultant benefits in lower cost distribution to both the retailer and the consumer. This may be one answer to the changing competitive situation.

Food retailers across the nation seem to experience wide variations in sales. Possibly one of the factors responsible for this variation in sales is the method used by the retailer for determining the space to be devoted to various product groups and to the items within these product groups.

Some effective method of scientifically determining the number of displayed units of an item that is necessary to satisfy demand is urgently needed. The large number of items that must be stocked, and the continual changes which take place in the public's demand for these items, makes this task difficult.

The increase in the number of items carried in the grocery section no longer makes it feasible for the manager to depend upon general observation to determine consumer preferences. This study highlights the need for planned item space allocation and space control.

Limitation of Study

The study is concerned with planned allocation of space to items within the grocery department of the supermarket. The total space allocated, or the methods used to allocate space to the various departments or non-selling operations is not considered.

Because the original allocation of space to items in a new store can only be based on experience gained through the operation of other stores, the emphasis is placed on the allocation of space to items within stores that have been in operation for a reasonable period of time. Once the store has developed a personality, and its own clientele, the allocation of space to items can be determined in line with customer preferences.

The study is further limited to the allocation of space to items within a product group. Organizations are aware of the performance of items as a product group; therefore, the methods of determining the space requirements of individual items within these groups merits attention in this study.

Methodology

Secondary sources, personal interviews, and letters were utilized to secure information on the importance of planned space allocation and the considerations necessary during the formulation of a space allocation plan. Text

books were perused to secure information on the importance of stock turnover to a retail business.

Information on space allocation methods and plans was gleaned from trade publications and through letters and personal interviews with members of the retail food distribution industry.

The item space allocation plan described and analyzed in detail is a plan developed and used by The Kroger Co. Knowledge of the plan and the process and problems of its application was gained through personal interviews and letters, and from the writer's experience as a store co-manager.

Other information came from various secondary sources located in the Michigan State University library and from organizations interested in the retail food distribution industry.

Chapter Plan

Chapter II, "The Importance of Planned Space Allocation." The importance of planned space allocation is developed by first discussing the advantages of a higher rate of stock turnover. These advantages have been proven through years of retail business experience. Planned space allocation is offered as one tool for providing the necessary pre-requisites to increase stock turnover. Other advantages of planned space allocation and the need for stock control are also developed.

Chapter III, "Considerations Affecting Planned Space Allocation." There are certain management considerations which should be made prior to the formulation or utilization of any item space allocation plan. These considerations are discussed and analyzed to give an indication of their importance.

Chapter IV, "Plans and Methods of Space Allocation by Item in the Grocery Department." The need for planned item space allocation is identified and the reason for its existence as a problem is examined. Item space allocation studies, methods, and plans are examined and analyzed to evaluate their usefulness to the retail food store. The Kroger Co. plan is presented in detail to provide a practical and simplified program which has proved successful.

Chapter V, "Summary and Conclusions." This chapter is devoted to a brief summarization of the study and to the presentation of some conclusions which can be drawn. As a result of the study certain modifications and/or additions to existing plans are recommended. The results obtained from applying a space allocation plan incorporating these additions and/or modifications may be considerably improved.

CHAPTER II

THE IMPORTANCE OF PLANNED SPACE ALLOCATION

Competition and rising costs can be cited as two of the most important reasons for planned and controlled space allocation. In the early supermarket, traffic was created through price appeal, mass display of product, and curiosity. These appeals are fast becoming commonplace due to the laws governing buying practices and intense industry competition. A differential advantage in price is difficult to achieve. While mass display continues to sell product, increased variety has also made such display more difficult to achieve. The operators of the first supermarkets aroused public curiosity with large markets, bizarre advertising, and gigantic promotions. However, customer curiosity has faded as supermarkets become the major distributors of foods.

Planned space allocation results in a balance of product on the shelf that satisfies customer demands and assures effective utilization of existing shelf space. Management can expect planned space allocation to result in increased gross profit dollars from each linear foot of shelf space and/or each square foot of floor space. This increase evolves with a minimum of labor expense.

> Business prospects do not hold the same promise for volume as they have for the past fourteen years. Supermarkets are increasing. The factors that built up individual store volume are not operating to the same degree that they were. We must, therefore review what other means are available to cope with rising costs.[1]

A major area of increasing cost has been labor. During periods of full employment, such as those experienced during World War II and the era that followed, certain practices are adopted that conserve labor. In some instances space was substituted for labor. One chain executive stated this case as follows:

> There are many places in our stores where the proper utilization of space can reduce cost by increasing the productivity of labor. For years merchandising has always been the paramount consideration. Operational factors were secondary. Today's higher labor cost makes some of the old merchandising practices uneconomical.[2]

The Relationship of Space Allocation to Stock Turnover

To understand the importance of space allocation a discussion of the importance of stock turnover is necessary. Stock turnover is one of the most important requirements of a successful low margin selling operation. In turn, planned space allocation can be offered as an answer to stock turnover problems.

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[1]James Cooke, "Standards for Effective Allocation of Store Space," A speech delivered to the Twentieth Annual Meeting of the National Association of Food Chains, September 29, 1953.

[2]Ibid.

Stock turnover defined. Stock turnover is defined as the number of times during a certain period, usually a year, that the average stock of merchandise is sold.[3] The rate of stock turnover can be ascertained in several ways:

1. Turnover on a retail base. Divide the average inventory at retail for any given period into sales for the same period. This method is most commonly used where the retail inventory system is in operation.

2. Turnover on a cost base. Divide the average inventory at cost into the cost of sales. Turnover figured on cost will usually yield a slightly different rate than similar calculations on a retail base.

3. Turnover on a unit base. Divide the number of units sold by the average inventory of units during the same period. This method is useful as an indication of unit movement for any group of items or any one item in a group, but has little value for heterogeneous groups of merchandise.

Stock turnover stated in terms of dollars is an indication of how efficiently the capital invested in inventory is used. Turnover stated in terms of physical

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[3] Pearce C. Kelly and Norris B. Brisco, Retailing (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1957), p. 305.

units, is an indication of how fast merchandise is being sold.[4]

Stock Turnover Related to Performance Standards

Historically, retailers have used the rate of stock turnover as an indication of how efficiently the money invested in merchandise is used, and as an indicator of management's efficiency.[5] A study of stock turnover in relation to some of these performance standards, by which management and businesses are gauged, discloses the desirability of increasing the stock turnover rate to an optimum point.

Stock turnover related to profit. Whether or not profit increases with stock turnover depends entirely upon the method by which the increase in stock turnover is obtained.[6] The expenditure of funds, in excess of the increased gross profit, to obtain an increased stock turnover, results in decreased net profit. Increased net profit from a higher rate of stock turnover can only result from the application of methods which do not absorb the gross profit gain.

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[4]Robert L. Cann and Minnie B. Tracy, "Stock and Purchase Planning," Principles of Retailing, ed. Committee on Retailing (New York: Pitman Publishing Corp., 1955), p. 549.

[5]Ibid., p. 551.

[6]Delbert J. Duncan and Charles F. Phillips, Retailing (Homewood, Ill.: Richard D. Irwin, Inc., 1955), p. 343.

Stock turnover related to return on investment. Return on investment can be used to judge the operating results of retail organizations. Enterprises with large capital outlays committed to the sale of goods can best measure and judge the effectiveness of effort in terms of return on investment.[7]

The factors which produce a higher return on investment, i.e., gross margin and/or turnover, should receive major managerial emphasis. Return on investment will respond to changes in these two factors.

With no change in selling price, higher stock turnover indicates that the inventory investment is being used more efficiently. Management in the retail food distribution industry has made efforts to reduce operating costs, and this has, on occasion, resulted in increased profits which were reflected in the investment yield. However, methods of improving the return on investment through a higher stock turnover rate have not been fully exploited. This might be the result of the rapid expansion experienced by progressive organizations. During periods of expansion operating costs are more readily apparent in the day to day operations and emphasis is usually placed on the reduction of this expense.

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[7]C. A. Kline, Jr. and Howard L. Hessler, "The Du Pont Chart System for Appraising Operating Performance," Readings in Cost Accounting, Budgeting, and Control, ed. William E. Thomas (Chicago: South-Western Publishing Co., 1955), p.754.

Stock turnover as a measure of efficiency. Gross profit expressed as a return on the merchandise investment can be a measure of efficiency. This is one measure of the efficiency with which a merchant manipulates the store capital invested in stock.

This measure can also serve as a "good measure of merchandising performance."[8] Adequate stock turnover is a result of good merchandising and, therefore, a measure of the alertness and ability of the management.

The store manager through his efforts to enthusiastically promote specials, control ordering, and eliminate items of questionable value to the operation, can increase stock turnover, thereby contributing to the success of the operation and himself.

Methods of Increasing Stock Turnover

Even though it is desirable to increase the rate of stock turnover, the rate cannot be increased indefinitely. If the rate is increased beyond a certain point, the increase may be accompanied by the performance of uneconomical activities. However, if the rate is too low, some of the operations are not being performed as efficiently as possible.

Basically, to increase the rate of stock turnover sales must be increased or stock must be decreased. Till

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[8]John W. Wingate, and Elmer O. Schaller, Techniques of Retail Merchandising (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1956), p. 294.

a given point is reached the cost of increasing sales can be less than the resulting increase in net profit. Beyond this point the added expenditures to achieve the increase in sales can result in decreasing net profits.

Increasing the rate of stock turnover by decreasing inventory also has its limits. When inventory is reduced beyond a certain point, reduced sales can result. Variety can become too limited and sales can be lost through increased out-of-stock conditions.

> Simply stated, the rate of stock turnover may be increased in any of the following five ways: (1) increasing sales while the stock remains the same; (2) increasing sales faster than the stock increases; (3) holding the sales stationary while the stock is decreased; (4) increasing the sales while decreasing the stock; (5) allowing the sales to decrease while decreasing the stock at a faster rate. Any of these courses of action are possible at any time, but increasing the sales is more a possibility in times of improving business conditions.[9]

Methods which require increased sales as a factor for increasing stock turnover are most desirable. The least desirable method is to allow sales to decrease while decreasing stock at a faster rate. Holding sales stationary while decreasing the stock, although not the most desirable, can serve an important purpose; such as, the elimination of slow moving items that contribute few or no sales.

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[9]Cann and Tracy, op. cit., pp. 551-552.

The Need for Stock Control

An analysis of the stock turnover relationship to the performance standards of profit, return on investment, and management efficiency, indicates the importance of inventories and the need for stock control. This need for control applies to all points along the chain of stock management.

Dollar profit and profit as a return on investment are the primary concerns of any retail business. Sometimes the goal of higher profits and higher return on investment is achieved by steps that also lead to a higher stock turnover.

One of the foremost principles of the retail food distribution industry is flexible low margin pricing. Operations based on a low gross margin price structure are dependent upon rapid stock turnover to produce satisfactory profits and an acceptable return on investment.

In the retail food distribution industry stock control is a problem of large proportions. The grocery department of a supermarket contains as many as 4,000 items.[10] Control of these many items is vitally necessary; however, the task is often very frustrating and store management is sometimes reluctant to meet the problem.

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[10]Progressive Grocer, op. cit., p. S-1.

Both the quantity and the variety of product in the supermarket must be controlled. An illustration of the results which might be expected from adequate control of both the quantity and variety of product is given in the Dayton Study conducted in several Kroger stores.[11] Better stock control of cigarettes in three test stores resulted in an inventory reduction of $2,714.85; without any decrease in sales.

The importance of stock control in the supermarket cannot be over emphasized. Indications are that modern food distribution outlets need modern measures of stock control.

Advantages of Planned Space Allocation

Higher stock turnover is the result of improved sales and/or improved stock control. Planned space allocation can fulfill these necessary requirements for increased stock turnover. An examination of the advantages of planned and controlled space allocation indicates why it can help solve turnover problems and further, indicates the importance of this management function.

Increased sales. "Planned space allocation will increase sales."[12] This is probably the greatest single

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[11]A study conducted by the Phillip Morris Tobacco Co. in cooperation with the Dayton Division of The Kroger Co., 1955 (unpublished).

[12]Statement by J M. Mullen, Vice-President, Kansas City Division, The Kroger Co., December 27, 1957. Personal interview.

advantage of planned space allocation. Items can possess more customer appeal when given the proper amount of space on the shelf. The large number of customer purchases made on impulse requires that stock be presented in an attractive and appealing manner. Any method which increases the customer appeal of items on the shelf acts as a catalyst to increase sales.

Control out-of-stock conditions. Space allocation cuts out-of-stock conditions to a minimum. Through the proper allocation of space, out-of-stock conditions caused through errors in store level ordering can be practically eliminated.

Control inventory levels. Planned space allocation affords realistic methods for controlling the level of store inventories. Properly controlled inventories are advantageous for several reasons; these are:

1. Inventory control holds capital investment in inventory to a minimum.
2. Eliminates or reduces waste, cost of handling, spoilage, storage, obsolesence, and taxes and insurance on investment.
3. Reduces investment in storage facilities.
4. Reduces the risk of theft.
5. Avoids losses from price declines.
6. Reduces the cost of taking physical inventories.
7. Permits better purchasing.[13]

An intimate knowledge of store inventories is gained by management through the application of a space allocation

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[13]Kelly and Brisco, op. cit., p. 299.

plan. In turn, management may have a better appreciation of the importance of periodically reviewing inventory conditions. "Space allocation is the best control of inventory investment at the retail level."[14]

Tends to maintain full shelf appearance. Shelves are easier to keep full when items are stocked in the amount of space that has been dictated by their movement. The items will have a tendency to be stocked and purchased at a more balanced rate. Shelves will continue to appear more fully stocked after considerable selling than they would under conditions of poor allocation where some items quickly receded from customer observation.

Progressive Grocer studies reveal that the effect of mass always sells more product and that shelves which are kept full can increase sales as much as twenty-two per cent.[15]

Holds competitive position. The proper allocation of space to each item may hold the price of all products at a lower level to the consumer. Planned space allocation increases sales and, normally, the increased sales are not accompanied by a proportionate increase in store operating

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[14]Statement by Albert E. Rains, Director of Grocery Merchandising, The Kroger Co., May 23, 1958. Personal interview.

[15]Robert W. Mueller, et al., "Full Shelves Mean Full Volume," Progressive Grocer, June, 1953, pp. 40-48.

costs. If improper allocation is allowed to exist, unproductive items remain on the shelves and eventually the price of many items may have to be raised to cover the higher operation costs.

Identifies non-productive items. Another function of controlled space allocation is that it aids in identifying slow moving items. Once these items have been identified they can be given additional consideration and a decision made as to their value to the operation.

Why Is Space Allocation A Problem

In view of the fact that most organizations have at their disposal the necessary facts to approach the job of space allocation methodically, the question exists as to why space allocation is a problem. The fact that space allocation is a problem, however, does not mean that operators fail to realize its importance. Most authorities believe operators realize that planned space allocation can mean increased sales and gross margin. However, "the job of analyzing and interpreting these facts is colossal and few dealers have the time, facilities, or desire to make such an analysis."[16]

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[16] G. E. Kline, "Planned Grocery Space Allocation--Key to Higher Sales," Progressive Grocer, August, 1953, p. 35.

This fact is borne out by the Super Valu Study. During the twelve week period in which sales were recorded, over 200,000 International Business Machine cards representing case shipments from the warehouse, and over 75,000 invoices containing records of merchandise delivered directly to the stores were analyzed and coded into product groups. Several million tabulations and calculations were required to get the figures necessary to formulate the report.[17]

The magnitude of the task of both recording and analyzing all the figures necessary to perform this type of study of space allocation is beyond the capabilities of most organizations. As a result, the burden of uncovering the character and value of each of these items to the organization remains with individual store operators.

A change in consumer purchasing habits has further added to the importance of space allocation and identifies it as a serious problem. The great majority of shoppers no longer specifically plan the items they will purchase at the store. This percentage of non-planners has increased annually. One study conducted in 1954, revealed that 70.8 per cent of the buying decisions were made in the store, and the shopper averaged less than one and one-half minutes of her total time in the store to select each

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[17]Progressive Grocer, op. cit., p. S-1.

item.[18] These figures emphasize the importance of giving each item sufficient space to create the necessary desire in the consumer to purchase.

The consumer further considers the supermarket as a place where practically all her needs can be satisfied.[19] Because of this, the supermarket operator has been induced to carry a large variety of products and to accept new product lines. The demands of the consumer for variety, new conveniences, and improved products has caused shelf space to become precious; thereby placing a need for greater emphasis on the careful apportioning of existing space.

Indicators of the Space Allocation Problem

The store manager can use various indicators to determine when his grocery stocks are in a state of imbalance. Many of these indicators function over a relatively short cycle in time.

One short period indicator is the recurring "out-of-stock" condition on various items, or an extremely uneven stock on the shelves after a period of heavy traffic. In theory, if every item in a section was allocated space based on average movement, a week of average sales on these

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[18] E. I. du Pont de Nemours and Co., "Latest Facts About Today's Shopper in Super Markets," 1957, p. 7 [booklet].

[19] M. M. Zimmerman, "The Coming Struggle for Power: National vs Private Brands," A speech delivered at a meeting of Merchandising Executives Club of Chicago, Inc., Chicago, Illinois, February 20, 1956.

items would end with the last customer taking the last item from the shelf. This illustrates perfect allocation of space and does not take into consideration any of the factors which go into successful merchandising, i.e., full shelves, complete variety, or the effect of mass. However, shelving which exhibits extreme penetration on some items and an over-abundance of other items after a period of heavy traffic certainly requires examination for possible re-allocation of existing space between the various items.

Another short period indicator of poor shelf space allocation might be the accumulation of stock in the reserve storage area. An item which possesses more space than is necessary to meet customer demand often causes the transmission of exaggerated stock orders. The person formulating the grocery order usually assumes that movement of an item is somewhat related to the shelf space it controls. The receipt of one order containing several extremely slow moving items in excess of their actual movement, can add considerably to the congestion of the reserve storage area. In some instances several weeks may be needed to relieve this costly condition.

These problems are early indicators that item space allocation should be reviewed. The more serious indicators will appear and reappear on the organization's operating statement in the form of reduced net profit and, consequently, lower return on investment.

Summary and Conclusions

The many advantages of planned space allocation appear throughout this study. It is difficult to bring all the advantages into one central area without becoming somewhat repetitious. The advantages mentioned are the major contributions planned space allocation can make.

Planned allocation of space to grocery items will increase turnover, thereby causing the organization to realize the highest possible gross margin per linear foot of shelf space and/or per square foot of floor space; with a minimum of labor expense.

The object of any business is to make a profit and not necessarily to increase turnover. Turnover is not an end in itself and by no means is it an automatic control which can be arbitrarily imposed. However, through sound methods of inventory control, sales can be increased and, consequently the advantages of high stock turnover realized by the organization.

Space allocation which logically distributes shelf space to the various grocery items according to their merit is constantly increasing in importance. Competition in the retail food distribution industry is increasing in intensity. It is no longer possible to depend upon product mass or price alone to move the many grocery products.

The importance and advantages of planned space allocation in the grocery department indicates the necessity

for further exploration in this area.

Planned space allocation may result in a reduction of lost sales from out-of-stock conditions, increase profit, increase efficiency, improve product rotation, and lower the investment in stock inventories. These results come from maximizing sales under self-service conditions and balancing inventories in relation to sales.

CHAPTER III

CONSIDERATIONS AFFECTING PLANNED SPACE ALLOCATION

Certain considerations precede the formulation or utilization of any plan designed to improve the allocation of space to items within the grocery department. These considerations are mainly policy decisions affecting both store operations and merchandising customs of the organization.

Among the first considerations of management is the establishment of a goal to be achieved through planned space allocation. Executive management's goal is to increase sales and lower operating costs. This goal, however, is too broad to motivate store personnel. Store managers should be given intermediate goals more closely associated with actual store operations. These goals aid in gaining store manager acceptance of the space allocation plan. Some intermediate goals may be improvement of store appearance, improvement of item facings, improvement of product rotation, reduction of stock inventory, and work simplification.

Communication of the plan to store level management is another important consideration. Failure to chose the right communication method could result in failure for any

plan. The most direct method of communication usually meets with greatest success. Presentation and explanation of the plan by executive management may succeed in stimulating store manager interest and support; whereas presentation through channels can reduce interest to a point of indifference.

> The complete acceptance of a space allocation plan by store personnel is very difficult to achieve. Executive management can enhance the plan's chances of success by direct communication with the store manager, explaining what the plan can contribute to him as an individual; i.e., promotions, raises, prestige, et cetera.[1]

Store managers may need additional authority if they are to operate their stores as individual enterprises. Executive management should realize the importance of this possibility when differences in item movement between the various stores are considered. To establish a pattern in one store that will allocate the needed space to each item in every other store is impossible. Since the store manager ascertains the movement of items in his store, the success or failure of the plan is dependent upon him. Store managers need sufficient authority to make adjustments in the items stocked in their stores. Inflexible policies are created when higher management tries to control every activity of the store manager; this may hinder successful application of the plan.

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[1]Statement by J. M. Mullen, The Kroger Co., May 23, 1958. Personal interview.

Other considerations taken into account by executive management vary in importance. Some are extremely important, while others may be minor in character. Most, however, can be examined by executive management and decisions made and incorporated into policy or the plan. Others can not be completely controlled by executive management but should be a part of their awareness of the space allocation problem and of the problems that may be faced by store managers.

Variety

Grocery product variety will not be eliminated by planned space allocation. This is not one of its purposes. To eliminate variety would result in the elimination of one important customer attraction feature of the supermarket.

The supermarket industry is aware of the importance of variety; however, too often management uses consumer demand as an excuse for carrying variety rather than as a reason.

A survey of eleven stores conducted by the Agricultural Marketing Service, United States Department of Agriculture, revealed that about twenty-seven per cent of the items carried on supermarket shelves had sales of at least one item per day. During the four week survey, 6.5 per cent of all items examined had no sales whatever, and

23.4 per cent had only one through five unit sales.[2] The stores surveyed had sales ranging from three thousand to forty-eight thousand dollars weekly.

The Super Valu Study points out that an analysis of unit sales will give management an insight into the sales performance of individual product groups. As an example, the canned vegetable sections of the stores studied contained 183 items representing twenty-nine different kinds of canned vegetables. Of the 183 items, 115 items did over eighty-five per cent of the total unit sales of the section. This is not too significant since some staple items would be expected to sell in greater quantities. However, a further breakdown becomes significant to the problem of variety. The vegetable section contained twenty-four items of canned corn yet only fifteen did eighty-nine per cent of the unit sales. Also, there were twenty-five items of baked beans, yet twelve items accounted for eighty-five per cent of the unit sales. Similar conditions existed throughout the section.[3]

The examples cited should cause management to examine any policy of variety for variety's sake. An analysis of product group unit sales leads to a re-appraisal of how

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[2]"Space Allocation of Grocery Items in Food Stores," United States Department of Agriculture, Marketing Research Report No. 80 (February, 1955), p. 16.

[3]Progressive Grocer, op. cit., p. S-18.

much variety is necessary in a given section. Whether the thirteen items of baked beans are all essential to variety is questionable; since they contribute only fifteen per cent of the unit sales. The only time an item should be considered a worthwhile addition to variety is when the item succeeds in satisfying a substantial amount of customer demand. Otherwise, the item is being stocked for the sake of having variety on the shelf and not for the consumer.

Variety demanded by the consumer is not impaired through the use of planned space allocation; actually, it is improved. Planned space allocation improves the gross mixture of items and aids in the elimination of items which have little consumer demand. The elimination of items occupying space merely for the sake of variety allows the addition of items which may satisfy more consumers. Consequently, the items can be stocked in relation to their demand, and variety more readily assured through the reduction of stock-outs.

Management often hesitates to discontinue an item for fear of restricting variety. The loss of customers and customer sales is their main consideration. This may not be sound practice. A survey conducted for The Kroger Co. revealed that a sales substitution rate of 33.3 per cent existed in their stores.[4] Based on this finding,

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[4]Sales substitution rate is defined as the percentage of substitute item purchases made as a result of a wanted

customer franchise would hardly be affected by discontinuance of extremely slow moving items.

Management, using information similar to that obtained by Kroger, can compute the gain or loss any item contributes while out-of-stock or after discontinuance as part of item variety. This may make management's decision easier.

Assume that 66.7 per cent of the customers normally buying an item will not purchase a substitute when the wanted item is unavailable. Using average movement figures, the number of unit sales lost is known and the gross profit loss can be determined. Assume also, that the money invested in inventory of the out-of-stock or discontinued item is reinvested to produce the current rate of return. The difference between the gross profit loss and the income derived from the alternative investment indicates the amount of profit dollars gained or lost. However, there is still another consideration. The money invested in the other item might strengthen the product line. The increased movement in this new item may increase stock turnover and increase profits beyond the current rate of return. Thus, customer satisfaction might be proven a costly guise for having variety for the sake of variety.

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item being out-of-stock or discontinued. The percentage figures used are based on findings of a survey of customer buying habits and attitudes made by Burgoyne Grocery and Drug Index, Inc., for The Kroger Co., October 1, 1956.

The question of variety must be considered when formulating the space allocation plan. A decision is needed to establish sales levels warranting the continuance of items in a product group.

Product Shelf Facings

A facing is defined as a shelf row display one unit wide and one or more units high. The number of facings assigned each item in the grocery department varies for many reasons. However, with space available, movement and size of the item are the two factors which should determine the number of facings.

The accepted practice in the industry is to display a minimum of two facings on most items; since smaller items rarely have good movement if stocked with less than two facings. This, however, is not the crux of the facing problem.

Many operators attempt to create additional sales by increasing the number of facings given an item. This may prove successful to a small degree; however, there is a point within the display of any item where returns begin to diminish rapidly.[5] This point of diminishing returns is probably lower than most operators believe.

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[5] "Getting the Most From Your Shelves," Supermarket Management, Vol. 18, No. 5 (May, 1953), 195.

An experiment conducted by the United States Department of Agriculture reveals that with the addition of each facing over two, sales increase an average of only ten per cent and the average gross margin increases only nine cents.[6] This percentage is the average increase realized from a total of six unit facings. Each additional facing, however, contributed less sales and gross margin than the previous facing.

A conclusion drawn from the experiment was that the addition of new items should be considered before increasing beyond two facings the display of all except fast moving items. The estimated effects of applying this conclusion to two typical supermarkets were that thirty-six per cent of the shelf space occupied by the items studied could be made available for other items.

The study emphasized the importance of determining the correct number of facings by item movement. The sales of an item do not appreciably increase with the addition of facings, nor do sales decrease drastically with the reduction of facings.

Management should specify the procedure for determining the minimum and maximum facings on items. Delivery schedules and stocking policies are important factors in determining these limits. These factors are discussed in

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[6]"Better Utilization of Selling Space in Food Stores," United States Department of Agriculture, Production and Marketing Service, Report No. 30, Pt. I (November, 1952), p. 3.

a later section. There seems to be little justification for displaying more units than necessary to meet the heaviest period of demand. An exception to this would be management's decision to place a minimum of one case of each item on display.

Placing less than a full case of units on display can cause reserve storage problems. The item should be examined for discontinuance if management believes it impractical to stock a full case.

The size of the item often influences the facings assigned. Extremely large items may well be stocked in single rows. One purpose of giving slow items more than one facing is to insure customer awareness of the item's availability.

Shelving

Grocery fixtures have an important place in effective space allocation. Although it is not always practicalable to change fixtures to improve space allocation; there have been fixture improvements in recent years making this an important management consideration.

The newer fixtures can materially aid effective space allocation. The results of planned space allocation can be improved if the implementation of the plan coincides with a remodeling venture. Fixtures are being designed that are easily adjusted to meet changing requirements of merchandise presentation with seasonal or category changes.

One large retail food distributor has found that the inverted tee-design shelving, with smaller base and smaller shelves, has increased the organization's flexibility in allocating space to items.[7] This organization uses fixtures in four foot sections which contain multiple position settings for shelves.

The immediate reaction to a discussion of changing grocery fixtures to improve space allocation is usually negative. However, this change may not be as expensive as first impressions might indicate. One small chain's labor expense increased to nine per cent of grocery sales as volume increased. In an effort to reduce labor costs, management elected to purchase sectional gondolas with flexible shelving. The new fixtures increased the amount of merchandise on display by fifty per cent and the number of facings by thirty per cent. In addition, the percentage of sales absorbed by labor expense was reduced to the lowest point in the organization's history.[8]

If a change to more flexible shelving is not possible, management should determine how existing shelf space can be used to eliminate stocking items in excess of demand. The most commonly used method is to place a sham behind the product blocking unneeded space.

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[7]Statement by John Hassel, Director of Store Planning, The Kroger Co., March 28, 1958. Personal interview.

[8]"Modernization Lifts Sales From $9,000 to $15,000 A Week," Progressive Grocer, March, 1954, p. 80.

Shams cause shelf space to be wasted, and can also cause shelf displays to appear disarranged. In order to avoid this effect, management should specify the type of sham to be used and the material from which it will be constructed. The first thing normally utilized at store level is cardboard. This is not suitable for use as sham material. The sham should be made from wood or metal for lasting service and acceptable appearance.

A major store level problem can be avoided if executive management will indicate a method of blocking excess shelf space, and provide the necessary blocking material.

Reserve Storage Area

The reserve storage area can defeat the best space allocation plan. Some advantages gained through effective space allocation can be lost through failure to consider this important area.

Reserve storage space should be allocated to items warranting reserve stock due to heavy movement or large unit size. Failure to allocate this space may result in the accumulation of slow moving items and an increase in labor expense. Heavy demand items on display usually require reserve stock. If space for reserve stock is not available, demand items on display are depleted and the empty shelf space temporarily stocked with a slower moving item. Eventually, effective item space allocation can be lost due to this shifting of items.

The advantage of faster stock turnover can not be realized if management fails to incorporate measures which demand store personnel recognition of reserve storage area importance. The elimination of slow moving items is reflected in higher stock turnover figures; however, the accumulation of excess stock in the reserve storage area can offset the results gained by better managed stock on the shelves.

There are methods of maintaining effective control of the reserve storage space. One method aids in maintaining the space allocated an item on the shelf, and encourages effective use of reserve storage space.[9] Basically, the method has one simple requirement. Each slow moving item is identified on the ordering guide by placing a mark next to the item discription. These items are ordered only when they can be placed directly on the shelf, thus eliminating the need for space in the reserve area.

A problem may be encountered with the above method unless a process for locating slow items is developed. This problem would not exist when the method was used in conjunction with a space allocation plan. The allocation of space to items on the shelf, according to their movement, identifies those items considered slow movers.

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[9]"Shelf Stock Only Ordering Plan," Progressive Grocer, August, 1955, pp. 58-61.

The development of a storage area to shelf space ratio can also aid in controlling the amount of stock placed in reserve storage. This will not necessarily control the type of stock held in reserve, but can eliminate unnecessary space or release space for other uses. Store personnel are forced to exercise more control of reserve space when the space is limited to the amount actually necessary to meet demands of the operation.

Delivery Schedules

The number of deliveries made to stores may vary, since all stores do not achieve the same sales volume or contain the same amount of space. This variation in delivery necessitates tailoring the space allocation plan to the individual store. The minimum number of days' supply on the shelf or in reserve may be determined by the delivery schedule.

Unit movement of an item may dictate that a case per week will be sufficient to meet the demand for that item. If a delivery is made weekly, there would be no need for a reserve stock of that item. Conversely, if grocery deliveries are received every ten days the item would require a larger minimum supply on the shelf or an additional quantity held in reserve.

Before using the space allocation plan, management should consider stores individually to determine whether present delivery schedules are most advantageous. Weighing

the cost of a larger stock inventory against the cost of more frequent deliveries can indicate the most profitable minimum supply of item units in the store.

Stocking Policies

Stocking policies affect space allocated to items in much the same manner as the delivery schedule. If the store is stocked daily, the minimum supply of stock on display need only be sufficient to meet the heaviest daily traffic. However, if complete restocking is done once each week an entirely different guide may be used to determine the amount of display stock necessary, i.e., heavy movement items will require large minimum display.

Management must decide which is the most practicalable or profitable; increased product storage on the shelf or more frequent restocking. To reach this decision requires comparison of inventory expense to labor and delivery expense. Sales volume also influences both the frequency of restocking and delivery.

Package and Product Size

A space allocation plan that initiates activity and interest in correctly allocating space to items in the grocery section presents an opportunity to make other corrections complementary to good merchandising. The collection of information on item movement by store personnel develops an awareness of the importance and differences between the many items.

Store personnel may realize that items can be better positioned within the section to take full advantage of their size, shape, or label design. A different grouping of products might allow shelving to be adjusted in such a manner that additional space is gained. Color patterns can be developed and shelf monotony reduced by shifting related items according to differences in label design. Advantage might be taken of an item's size and package design to pull customer attention to different levels of shelving or to other items returning a higher gross margin.

These factors should be considered by management and introduced to store personnel in the presentation of the allocation plan. Store personnel usually consider a package that is different in shape or size as something to be tolerated. An explanation of the possible contribution to shelf merchandising made by these packages can improve the attitudes of store personnel.

Summary and Conclusions

There are certain considerations that management should examine prior to the formulation or utilization of a space allocation plan. These considerations are necessary to facilitate understanding, interest, and success of the plan at store level.

Early considerations are: (1) the establishment of a goal to be achieved through use of a plan; (2) the determination of a method for successfully communicating the

plan to store level management; and (3) the examination of the degree of authority the store manager possesses, or will need to possess, to successfully reach the specified goal.

The problem of variety should be examined in an attempt to establish product sales levels warranting the continued stocking of various items. Too often items are stocked that do not contribute to sales or increase customer satisfaction. This results in stocking a variety for the sake of variety and might prove costly to the operation.

Management should also consider a method for determining product shelf facings. A minimum of two shelf facings, with sufficient depth to accommodate a full case of units, is acceptable for slow moving items. However, this is influenced by the amount of space available and sales volume. Faster moving items should be stocked in a quantity dictated by the heaviest period of demand. One study indicates that increased facings will not substantially increase the movement of any item. Therefore, the number of facings given an item should be determined by the item's movement.

Management should consider the advantages of modern grocery fixtures when seeking to improve space allocation. If new fixtures are not feasible, management should determine how existing fixtures can be modified to eliminate stocking items in excess of demand.

Employees should be given training on the importance of the reserve storage area. The accumulation of slow stock or poor utilization of reserve space can offset some of the advantages gained through planned space allocation.

Delivery schedules and stocking policies can affect the quantity of stock required in reserve and on the shelves. Delivery schedules and stocking policies should be examined to determine whether the present mix of labor, storage, and transportation is correct.

Package design and product size can serve an important purpose if store personnel are made aware of their possible merchandising contributions. This fact is often overlooked by store personnel because of the difficulties they encounter in handling the product.

CHAPTER IV

PLANS AND METHODS OF SPACE ALLOCATION BY ITEM IN THE GROCERY DEPARTMENT

Recent sales and margin studies conducted by Progressive Grocer Magazine present statistics on the movement of product divided into product family groups; i.e., tomatoes, beans, catsup, et cetera.[1] The figures in these studies represent the operation of one company; however, the possibility exists that similar sales situations prevail in other markets across the country. These statistics are most useful for comparing operations which have a similar division of product departments, with similar merchandising emphasis being placed on each department; nevertheless, operators can use the study as a guide for analyzing their operations.

The use of the Progressive Grocer studies, or similar studies, can point out major weaknesses in various product groups by reporting unfavorable figures on sales or dollar margins compared to the space occupied in the department. However, an even more searching analysis must be made of the product family to determine which items are not

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[1]Progressive Grocer, The Foodtown Study (New York: The Butterick Company, 1955), passim.

producing the desired results. The authors of the Super Valu Study revealed their awareness of this factor when they explained that:

> While space does not permit us to quote sales on an item by item basis, it is in this sort of detailed analysis that opportunities for improvement in space management come under sharp focus. By comparing sales of individual brands of products with the amount of space they occupy, it is possible to make adjustments to eliminate costly out of stock situations and at the same time cut down on labor required to stock shelves. Brand sales analysis will not only indicate the amount of space needed to maintain adequate shelf stocks of fast moving items, but will also provide the detailed facts needed to improve weekly ordering techniques.[2]

They further asserted that normally, "Space allocation in the average supermarket is determined on a 'seat of the pants' basis and is not precisely engineered on the basis of sales facts."[3]

The second quotation would probably be interpreted by a person outside the field of food distribution as a severe case of mismanagement. Such, however, is not the case for the authors of this same study indicated that space allocation to the basic product groups appears to be quite realistic within the various supermarkets across the country.[4] Still, within the product groups, various unproductive items have remained unnoticed and unchanged.

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[2]Progressive Grocer, Super Valu Study, op. cit., p. S-55.

[3]Ibid., p. S-50.

[4]Ibid.

Therefore, the quotation becomes realistic only when interpreted to mean item space allocation.

Latt Winder, an executive of Foodtown, Incorporated, emphasized the importance of space allocation with this statement: "We believe the next great merchandising frontier is in the field of better space allocation." [5] The executive was discussing the company's new concepts on space allocation brought forth by a Progressive Grocer study conducted in his stores. His major emphasis during the discussion was placed on the need for better item allocation within a product group. The following statistical facts were offered by the executive as a basis for emphasizing space allocation by item.

> Canned Pears....out of 11 items 2 do 68% of total.
> Fruit Cocktail..out of 11 items 2 do 56% of total.
> Canned Corn.....out of 16 items 4 do 56% of total.
> Cake,Cookie Mix.out of 50 items 8 do 53% of total.[6]
> [Total means sales by brands]

Some items will always move faster than others; but, management should not fail to examine the high percentage of items that account for a small percentage of sales. Mr. Winder pointed out that eighty per cent of the items in Foodtown Stores sell at the rate of one case a week or less.[7]

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[5] Latt Winder, "How We Improved Space Allocation," Report of the Eighteenth Annual Supermarket Institute Convention, May 1-4, 1955, p. 59.

[6] Ibid. [7] Ibid.

Foodtown, Inc., is using such valuable statistics as those quoted to further improve space allocation through the elimination of extremely slow moving items.

The Problem

No set pattern seems to exist within the retail food distribution industry for determining item space allocation. Furthermore, in many companies there appears to be no formal plan for accomplishing effective space allocation for individual items.

Discussion with respresentatives of several food chains participating in the Michigan State University Food Distribution Curriculum indicates that item space allocation plans do not exist within their organizations.[8] Should such plans be in existance within the organizations, these representatives do not have knowledge of their availability or importance. Several recalled having read within the manager's manual that a manager should exercise "reasonable attention" or make "prudent observations," of item space allocation on the shelf.

The Need for Planned Item Space Allocation

Some type of formal plan is needed to insure effective space allocation by item within the store. One study

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[8]This discussion was conducted among representatives of nine large retail food distribution chains on March 13, 1958, at Michigan State University, East Lansing, Michigan.

revealed that practically none of the item space allocation practices were based on factual analysis of sales. The principal reasons given by store managers for their shelf display procedures were:

> (1) Large shelf displays sold more merchandise than small shelf displays; and (2) shelves were stocked in relation to the sales of the items in order to minimize the frequency of restocking.[9]

Managers are prone to exaggerate movement of almost every item in their stores. The usual reply to a question on the movement of an item is that the item sells from two to ten cases per week.[10] These impressions can, and often do, cause excessive ordering and over display.

The importance of having a formal plan which will rectify these impressions can not be over emphasized. That these impressions can seriously affect the market operation becomes apparent when one realizes that only twenty per cent of all grocery items move in excess of one case per week.[11]

The need for planned item space allocation is also seen in the problem of identifying slow moving items. James Cooke recognized this need when he posed the question:

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[9]"Better Utilization of Selling Space in Food Stores," op. cit., p. 3.

[10]Winder, op. cit., p. 58.

[11]Ibid. This percentage was computed on product movement in a $10,000 weekly volume operation.

> Have we a mechanism in our organization which is just as effective in searching out and eliminating items whose contribution is doubtful, as our buying organization's are in screening new items?[12]

Planned item space allocation is a tool for searching out the items that contribute little to the organization.

A Revealing Comparison

To further point out the vital need for planned space allocation, compare the approach used in the perishable departments to that followed in the grocery department. Display space in the perishable departments is subjected to daily analysis in an effort to properly relate item movement to the space occupied; yet these departments contain only eighteen per cent of the total items in the store.[13]

The perishable departments do little more than half of the unit sales and dollar volume in some organizations. In contrast, the grocery department accounts for 48.5 per cent of the unit sales and forty-six per cent of the dollar volume, yet contains eighty-two per cent, or a large majority, of the total items in the store.[14]

The grocery department contains nearly five times the number of items as the perishable departments, and requires

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[12]Cooke, op. cit.

[13]Progressive Grocer, Super Valu Study, op. cit., p. S-18.

[14]Ibid., pp. S-5--S-18.

considerably larger dollar investment in inventory; yet, contributes less in total dollar sales and gross margin than the perishable departments.[15] The comparison emphasizes the necessity for considering the grocery department a major area of concern.

Item Space Allocation Defined

An item is defined for the purpose of this discussion as an individual product in the grocery department which is not identical in brand, weight, or size to any other product. A number of identical items are referred to as units of that item.

Item space allocation is concerned with the number of units an item can have on the shelf in relation to other items of the product group or product family.

Responsibility for Item Space Allocation

The item space allocation plan, to be carried on both effectively and successfully, should be applied to each store individually. Consequently, the manager or immediate store supervisor, regardless of his title, is normally responsible for controlling item space allocation. The allocation of space to items in a new store can be determined by a higher echelon of management. However, since

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[15]The figures used represent the operations of one organization. The departmental breakdown of another organization might well change the figures to form a vastly different picture. The grocery department in this organization excluded meat, dairy, produce, bakery, and frozen foods.

the space allocated to items can change with each shift in customer preference, continued success of the plan is dependent on the store manager. Each store is different; with different customers, a different personality, and in a different geographic location.

Item Space Allocation Studies and Plans

Most of the item space allocation methods and plans currently in use would probably fit into one of the following categories:

1. The manager attempts to determine the movement of each item through routine processes of ordering. The growing number of items in the grocery sections has caused this method to become ineffective. Early stores contained far fewer items and the manager was able to justify the existance of every item on the shelf from his knowledge of sales performance. Early store size also contributed to the success of this method. Managers were able to keep abreast of almost every detail of operation and in many instances personally performed many of the details.

The main fallacy of this method centers on the word "manager." Today's store managers have the responsibility of larger stores, more employees, larger inventories, and increased clerical functions. The responsibility for continuing item space allocation should also rest with the manager. However, this responsibility can be supervisory in nature. Too often the manager is not involved in routine

ordering; consequently, he develops the "two to ten case" mythical attitude previously mentioned.

A more formal method is needed that does not depend upon the manager's knowledge of every item's movement.

2. The seasonal change method of adjusting item space allocation. This method uses the seasons as a reason for examining shelf space allocation. Since the method is not a complete program of item space allocation, it is often the procedure to shift only enough items to remove the off season merchandise and insert the new. The items examined might only be the three or four items on each side of the desired position for insertion of the seasonal product. In addition, some sections of the grocery department may not contain items affected by seasonal demands.

There is a need for seasonal adjustments in most grocery sections. This adjustment is often made without any attention given to the movement of items shifted for the purpose of placing the seasonal items. Proper examination of seasonal item space requirements could serve as an additional check on planned space allocation of all items in the section.

3. The new item introduction method of adjusting item space allocation. New items are being introduced at a constantly increasing rate. Some organizations are accepting as many as fifteen new items every month.[16] The

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[16] McDaneld, op. cit.

buying committee usually checks the performance of all items in the product family to determine whether discontinuance of any one item is warranted prior to issuing the new item. The same procedure should be followed in the stores.

When the new item is received at the store space is made available in the family group. The re-evaluation of space to allow positioning of a new item is too narrow in scope to be an effective method of space allocation. On occasion, it might be wise to alter the number of units in other product families to gain the additional space needed.

The introduction of a new item rarely causes a thorough examination of the entire product group. The arrival of new items at the store is seldom scheduled, and the main concern of the manager is to place the item on display as quickly as possible. Proper space allocation requires time and planning, and neither are considered in this method.

4. Routine or scheduled checks by managers of shelf merchandise is another method which may be in use. Again, without a definite plan this system cannot materially improve item space allocation. The four thousand or more items in the grocery department create a problem in space allocation too large for the manager to solve through cursory examination.

Shelving can be checked at different times during the selling day to gain some insight into product movement. Items that are continually nearing an out-of-stock condition are relatively easy to recognize; however, it is difficult to determine which items are in the lowest or non-movement bracket. This method is based on observed item movement over a short period and does not consider the more meaningful figures provided by computing average movement over an extended period.

Frequent checks of merchandise on the shelves is one responsibility of the store manager. These checks can identify changes in customer preference and serve as a method of followup on the formal space allocation plan. They can not, however, be a substitute for planned item space allocation.

5. The clerk assignment method of item space allocation. This is probably the most successful of any non-formal method of allocating item space. In this method the store manager assigns different clerks the responsibility for maintaining a section or group of sections within the store. The clerk's responsibility could include ordering, stocking, housekeeping, and space allocation. Through the performance of these duties the clerk can gain a rather complete knowledge of the items in his section; and, if the methods and importance of proper space allocation have been emphasized by the manager, good space allocation could result.

The quality and conscientiousness of employees would determine the success of this method. They must be capable of accepting responsibility and possess the desire to complete an assignment on their own.

The difficulty in obtaining employees who possess the ability and willingness to accept responsibility makes this method a questionable means of attaining store-wide success. The method does possess definite possibilities if management can recruit and train a higher caliber of people.

The methods examined for attaining item space allocation are usually based on informal procedures and conducted in an informal manner. They are methods which acknowledge the existence of the space allocation problem, but none offer a sound solution to the problem.

Several, if not all, of the methods presented can be used to increase the success of planned space allocation. Once all the items in the department are given the space required, methods are needed to adjust space requirements from day to day. These methods can serve to keep the space allocated to items in pace with changes in customer product preferences.

The Poisson distribution.[17] The Poisson distribution applied to the control of grocery stocks attempts to

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[17]The application of Poisson distribution to the control of grocery stocks was developed by William S. Peters, Montana State University, for discussion at the First Annual Management Seminar for the Montana Grocery Industry.

establish a stock control system which minimizes store inventories but includes a cushion against unforeseen fluctuations in week-to-week demand. The Poisson distribution can be applied to stock control through consideration of the number of time intervals during which various quantities of goods are demanded from the retail store.[18]

The Poisson distribution depends only on its mean, and the whole range of chance variations in weekly demand can be predicted by knowing only the average demand. A manager, by determining the average weekly movement and the desired stock turnover rate, can determine the amount of initial stock necessary to provide a safety stock allowance that will limit the risk of a "stock-out" to one in a hundred over an interval corresponding to the number of weeks's sales present in the average display quantity.

The initial stock figure would be obtained from a table providing a summary of Poisson distributions for various levels of average weekly demand.[19]

Although this method of controlling stocks could undoubtably be an effective means of determining space allotments, it would create a definite problem in communications. Using the table is a relatively simple matter.

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[18]William S. Peters, "Control of Stocks in Grocery Retailing," The Journal of Marketing, XXXI, No. 2 (October, 1957), p. 149.

[19]Ibid., p. 150. The table was compiled by Peters for grocery stocks in the food store. The original source of information was: E. L. Grant, Statistical Quality Control (New York: McGraw Hill Book Co., 1951).

However, understanding the table requires some measure of study. It would be difficult to create an understanding of the method's functioning, and a great deal of time and effort would be necessary to achieve a high degree of comprehension among store personnel.

The success of this approach to item space allocation would depend on the use of correct average weekly movement figures; and to be effective, these figures should be determined over an extended period of time; preferably fifty-two weeks.

The time required to accumulate average movement figures and the difficulty that may be encountered in communications reduces the value of the plan for retail level application.

A United States Department of Agriculture Study. The United States Department of Agriculture conducted a study on the sales and inventories of eleven retail food stores. The purpose of the study was to aid food retailers in determining better methods of allocating shelf selling space. One of the specific objectives was to "develop a stocking plan for the allocation of selling space in relation to item sales performance."[20]

The value of the information obtained from the study is extremely limited. Only fifteen to nineteen product

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[20]"Space Allocation of Grocery Items in Food Stores," op. cit, p. 1.

groups were analyzed giving a rather small, and possibly distorted, picture when applied to the entire operation. However, the methodology used to develop the plan for determining correct item space allocation merits attention.

The Plan--The researchers performing the study first determined the sales in physical units for each store by:

1. Obtaining at the beginning of a four week period an opening inventory (shelf and back room) of the items in each category studied.
2. Recording all deliveries of these items to the store during the period and added them to the opening inventory.
3. Obtaining an inventory at the end of the period and subtracting this closing inventory of each item from cumulative totals.[21]

This information was entered on a record form which contained columns for each of the following: description (product, brand, and size), number of shelf rows, number of units on the shelf when fully stocked, number of units sold during the test period, number of turnovers desired, and the proposed number of units necessary on the shelf to meet desired turnover.

At the end of the test period the researchers had at their disposal a record which gave a quick comparison of the actual number of units sold to the number of units stocked in the shelf selling position. The current turnover figure was determined from this data.

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[21] Ibid., p. 2.

Next, the researchers met with management to establish policies concerning desired turnover rates. The following policy decisions were made consistent with what management considered to be good merchandising and stocking practices.

1. Very fast moving items. . .less than one week's supply was stocked to obtain more than 52 turnovers per year.

2. Fast moving items. . .between one and two week's supply was stocked to obtain 26 turnovers per year.

3. Medium moving items. . .about two week's supply was stocked to obtain about 26 turnovers per year.

4. Slow moving items. . .a minimum display was stocked.[22]

Some modification in applying the plan was necessitated by such considerations as (1) store size in relation to total sales and number of items carried, (2) stocking full rows, (3) marginal differentials, (4) shelf position, and (5) number of units packed in a case.

The creation of these policies permitted the researchers to determine the number of units necessary on the shelf to obtain a higher degree of balanced movement.

Even though this study was conducted by persons considered professional researchers; the methodology used has definite possiblities for manager or store personnel application.

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[22]Ibid., p. 6. A definition of the words fast, medium, slow, and minimum, was not given in the study. These are value judgments by management and may differ between organizations.

A Major Disadvantage--The plan requires constant action by store personnel over the prescribed period of time. A precise inventory must be taken at the opening and closing of the test and all stock additions in the intervening period entered on the form. The requirement for keeping special records could discourage store managers and result in errors, ommissions, or failure to complete the plan.

An Advantage--The plan was based upon item movement. Such factors as gross margin and percentage of markup were not taken into consideration during the test period. These factors were, however, placed as considerations for modifying the test results to fit company merchandising policies.

The Kroger Plan[23]

The Indianapolis Division of The Kroger Co. developed a plan that has been of great value in promoting good item space allocation in company stores. The plan was originally developed for use in trimming the inventories of smaller stores; however, the plan was applied to all classes of stores after management reviewed the results achieved through application of the plan to the smaller stores.

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[23]The material for discussion of The Kroger Plan was obtained from three sources: (1) The plan, (2) Personal interviews with J. M. Mullen, Vice-President and Harold Offer, Grocery Merchandiser, both from the Kansas City Division, The Kroger Co.; and several Kroger store managers, and (3) the writer's experience with the plan.

The basic factor responsible for the plan's gaining almost company-wide acceptance was the desire of management to reduce inventories. Where the plan has been properly applied, this has been accomplished and a marked increase in merchandise turnover has resulted.

The plan was designed as a guide for the allocation of space to grocery items in individual stores. The entire functioning of the program is based on item movement. The actual positioning of specific brands, in relation to other brands of related items, is determined to a large extent by company policy.

Some degree of similarity exists between the methodology used in the Kroger plan and the plan formulated by the United States Department of Agriculture. The greatest difference is the simplicity of the Kroger plan. The plan can be understood and applied by store personnel and may be applied in one commodity section or in all sections simultaneously.

The plan can be completed in a short period of time; however, the re-allocation of space to items in the sections is a slower process.

Advance planning necessary. Only two items of physical property are necessary to initiate the project. (1) A history of quantities ordered and received over a reasonable period of time must be obtained. This information is

used to determine average weekly movement of each item, i.e., average number of item units sold. The Kroger plan used figures obtained from past ordering over an eight week period. However, a longer period might yield more exact results. (2) A simple form must be constructed for use in compiling pertinent data.

In addition, a policy decision is required to establish a figure for the desired item stock level. This decision is essential to determine the maximum quantity of an item that may be placed on the shelf. The illustration describing the Kroger plan uses a maximum supply of fourteen days. In some instances this figure might be altered to allow stocking full case lots. The decisions on turnover described in the United States Department of Agriculture study could be applied to this plan, and might improve the over-all value of the plan.

The Indianapolis guide.[24] A detailed description of the Indianapolis Space Allocation Guide illustrates the practicability, simplicity, and usefulness of this type of program.

The most important tool in using the plan is the grocery ordering guide, or record, which indicates the past performance of each item in the store.

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[24]"Guide Plan for Space Allocation and Inventory Control," Indianapolis Division, The Kroger Co., 1957 (unpublished).

The following steps are taken to accomplish the plan's objectives.

Step 1. A section within the grocery department is chosen for analysis and all items are plotted on a sectional diagram work sheet.[25] The information plotted describes the existing condition of the section. This is a recording function and no analysis is necessary at this point. A good practice is to complete the recording of one shelf before proceeding to the next.

The line titles on the sectional diagram work sheet indicate the information desired. The following procedure is followed to record this information:

1. Enter a complete description of the item, including brand and size, in the box titled "Item."
2. Enter the present unit retail price of the item in the box titled, "Retail."
3. Enter the number of facings the item has on the shelf in the box titled, "Facings."
4. Enter the total number of units on the shelf in the box titled, "Stock." This figure represents the total number of units in the shelf display position when the item is fully stocked.

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[25] A reproduction of the Sectional Diagram Worksheet appears as Figure 1, page 64. Item information has been entered to further clarify the correct use of the form.

JELLY AND PRESERVE SECTION

	Item	"A" Peanut Butter 5 oz	"B" Peanut Butter 9 oz	
Top Shelf	Retail	23¢	39¢	
	Facings	4	4	
	Stock on shelf	100	60	
	Wkly Movement	15	12	
	Wks. Supply	6+	5	
	Unit Pack	24	24	
	Dollars	$23.00	$23.40	
	Item	"C" Peanut Butter Crush	"A" Peanut Butter Crush	
2nd Shelf	Retail	47¢	39¢	
	Facings	3	3	
	Stock on Shelf	45	36	
	Wkly Movement	6	3	
	Wks. Supply	7	12	
	Unit Pack	24	24	
	Dollars	$21.15	$23.04	
	Item	"A" Peanut Butter 18oz	"D" Peanut Butter 13oz	
3rd Shelf	Retail	49¢	43¢	
	Facings	5	5	
	Stock on Shelf	50	90	
	Wkly Movement	12	46	
	Wks. Supply	4	2	
	Unit Pack	24	36	
	Dollars	$24.50	$38.70	
	Item	"B" Peanut Butter 2 lbs.	"A" Peanut Butter 2 lbs.	
Bottom Shelf	Retail	75¢	65¢	
	Facings	4	3	
	Stock on Shelf	48	42	
	Wkly Movement	9	15	
	Wks. Supply	5	3	
	Unit Pack	12	12	
	Dollars	$36.00	$27.30	

Figure 1. Sectional Diagram Worksheet

Thus far, the necessary information has been obtained through observation of the product on the shelf. After completion of this portion of the worksheet, personnel can withdraw from the sales floor. The task of completing the remainder of the paper study is both faster and easier if performed in an area containing some form of desk type surface.

Step 2. Determine the average weekly movement of the item. The total number of units ordered and received over a given period is determined from the grocery order guide. A period sufficient to minimize the effect of weekly sales fluctuations should be used. Average weekly movement is obtained by dividing the total number of units (cans or packages) received, by the number of weeks in the stipulated period. If surveyed or special sales merchandise is ordered from, and entered on, the regular grocery ordering guide, an unusual movement would result on certain items. Such entries on the order guide should not be considered in computing average weekly movement.

The average movement is entered on the sectional diagram worksheet in the box titled, "Weekly Movement."

Step 3. Compute the number of week's supply of the item stored in the shelf display position. This figure is obtained by dividing total stock on the shelf by the average weekly movement. Both figures are obtained from the

worksheet. The week's supply figure is entered in the box titled, "Week's Supply."

Step 4. Determine the unit pack, i.e., units per case, of the item. This information is taken from the grocery order guide. Unit pack is necessary to establish the minimum space required for a case of units on the shelf. Unit pack is entered on the worksheet in the box bearing that title.

Step 5. Determine the dollar investment in item shelf stock. This figure is obtained by multiplying the number of units, when the shelf is fully stocked, by the unit retail.[26] Dollar investment in item stock is entered in the box titled, "Dollars."

The dollar investment figure is not essential to the successful completion of the plan, however, after completion of the revised worksheet the dollar reduction in inventory can be easily computed. Personnel performing the re-allocation usually realize the importance of their work when this comparison is made.

Completion of the sectional diagram worksheet provides the store manager with a set of facts to critically analyze the complete section. From this analysis, a revised worksheet is compiled.

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[26]This is not the true dollar investment in stock since the computation uses retail values. Total retail value is used to represent investment since all transactions with the store managers are figured at retail, and the retail method of inventory is used.

Earlier considerations have resulted in decisions stipulating the maximum quantity of product desired on the shelf. The store manager, guided by this decision, can determine from average weekly movement the quantity of units to be placed on the shelf and the necessary number of facings to accommodate this quantity.

Some items, due to their size or movement, cannot be given the amount of space necessary to avoid frequent re-stocking. These items should be displayed in sufficient quantity to meet the heaviest period of consumer demand. The quantity is usually determined from the manager's experience of store traffic.

Several other considerations should be made during the process of completing the revised sectional diagram worksheet.

1. Consider whether the adjustment or addition of shelves would greatly improve stock conditions.
2. Consider the possibility of using shams. This would allow for a greater number of facings without an excessive amount of stock.
3. Consider the possibility of regrouping items in a more logical pattern and the desirability of some related item merchandising.
4. Consider the possibility of discontinuing slow moving or duplicating items based on their movement.

5. Consider the addition of new items which may be available but are not now stocked by the store.

After reviewing these considerations the store manager completes the new sectional diagram worksheet. Allocation of shelf space to items is now based on item movement in this one particular store. There remains only the task of making the physical changes on the shelf based on the projected layout.

The importance of store personnel acceptance. As in any successful endeavor, proper persuasion must be used when communicating the plan to store personnel. The store manager, or the person delegated the authority and charged with the responsibility of operating the store, must be convinced of the value embodied in the plan. A store manager's complete acceptance is essential before the plan can be successful.

The store manager's bonus plan may be an incentive for gaining his cooperation. Companies which have incorporated the bonus incentive plan have found that almost any major operational change can be more easily achieved if related to the resultant effects on the manager's bonus.[27] The correct application of the space allocation plan can increase sales and lower operating expenses; resulting in a possible bonus increase for the manager.

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[27]Mullen, op. cit.

The manager must in turn generate the necessary enthusiasm within his subordinates to make them realize the merits of the plan and gain their understanding support. The importance and need for constant review of changing movement patterns requires the cooperation of every employee within the operation.

Results of the Kroger plan in operation.[28] The results achieved through application of the plan vary with each store. There is no guarantee that any two stores will have identical results. However, an examination of the results achieved in one operation can serve to indicate the results possible. The following results were gained by application of the plan to a 10,300 square foot store operating with a budgeted sales figure of $20,000 per week.

The store was originally stocked with items preferred in the local trade area. This was accomplished by conducting a survey of local competition to determine what items appeared in demand. As a result, 474 items available from the company's central warehouse were not originally stocked. In addition, fifty-five items received by direct delivery were deleted making a total reduction in opening stock of 529 items.

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[28]This information was taken from material incorporated in the presentation of the plan to key management personnel of all Kroger Divisions.

After approximately nine full months of operation management decided to review their earlier decisions. The space allocation plan was used to determine the possibility of eliminating additional duplicating and non-producing items from store shelves. As a result of this formal application of the plan, eighty-five additional items were discontinued. This made a total of 614 items not being stocked by this store. The estimated total savings in inventory was $5,700.

This, of course, is an example of the item space allocation plan being applied to a test store. The earlier application of inventory reducing techniques from the pre-store opening survey does not give a true picture of what the plan can do. However, the existence of the plan was responsible for management's early consideration of space allocation, and the plan could have succeeded in causing the total reduction in items had the earlier techniques not been applied.

A reasonable objective should be that the plan will reduce the total number of items handled in most stores by a considerable amount. To avoid the question of variety at this point, the statement might be rephrased to state that the total number of items will be stocked in relation to movement, and inventory will be reduced through limiting the stock of slow turnover items. One important point which should be noted before concluding this illustration

is that 98 of the 614 items were considered duplications of other items carried. This duplication can be noticed in most every food store in operation today.

Summary and Conclusions

The costs of operation in today's supermarkets are a matter of serious concern. Management, in its attempt to continue operations on a low markup basis, has applied a multitude of expense cutting techniques.

Management's concern over holding its competitive position, locating additional space for the many new items introduced yearly, and trimming non-producing products from the shelves has caused the consideration of planned item space allocation. There have been a number of articles written expressing individual and industry concern over the problem of space allocation, yet there does not appear to be a great number of comprehensive plans for accomplishing successful and systematic space allocation.

The plan developed by the Indianapolis Division of The Kroger Co. has proved to be a workable and simplified method of obtaining good space allocation. A plan such as this, based on product movement, applied and combined with good merchandising practices has every chance to improve the retail grocery operation.

Any item space allocation plan must be accepted and applied at store level. To be completely successful it must be conducted on an individual store basis. A plan

which does not have manager acceptance and is not applied on an individual store basis is most surely destined for failure.

A test was conducted in the Kansas City market involving four supermarkets of varying volume and physical size.[29] Movement of items within the grocery department was charted over a twelve week period. At the conclusion of the test 103 items were discontinued from these stores. The test was conducted by a professional research staff without gaining complete manager understanding and acceptance.

Three months after the completion of the test, an average of 66 of the 103 discontinued items had been reordered by the managers. Another check at the end of five months revealed that thirty-three more of the discontinued items had been re-installed on the shelves.

The results of three months concentrated effort by a centralized research team resulted in the trimming of an average of four items from the stores' stocks. The reason for this complete failure was found to be the lack of manager understanding and the complete disregard for the individuality of the stores. "Managers consider one request for an item as sufficient reason for carrying a case on the shelf."[30]

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[29]The study was conducted by the Research Department of The Kroger Co., 1956.

[30]Statement by Harvey Seaman, Research Department, The Kroger Co., March 28, 1958. Personal interview.

CHAPTER V

SUMMARY AND CONCLUSIONS

The retail food distribution industry is confronted daily with higher operating costs, increased industry competition, and signs of market saturation in various areas. This situation has developed in an expanding economy and an expanding industry. As an example, there are sixty percent fewer families per supermarket today than there were ten years ago.

A major problem of retail food distribution organizations is to continue realizing a satisfactory return on investment in a maturing industry. There are indications that operating expenses have received the major managerial emphasis in combating this problem. However, other strategy must also be applied before acceptable solutions are discovered.

Store space has always been another of the supermarket operator's problems. The present trend to larger markets is not the only solution. Regardless of store size, operators constantly seek more space for non-selling functions, new products, more displays, and et cetera. An approach to solving the problem may lie in the control of existing store space rather than constantly seeking additional space.

The effective utilization and control of store space can be approached through the control of merchandise inventory levels. This is a difficult and often frustrating task. The many items in the grocery section of the supermarket forces management to use something more than instinct and observation as a control measure.

Planned space allocation can help solve many of these problems for management of retail food distribution organizations. Management can expect planned space allocation to result in increased gross profit dollars from each linear foot of shelf space and/or each square foot of floor space. This increase evolves with a minimum of labor expense.

To gain an understanding of the importance of planned space allocation, management should examine the proven advantages of optimum stock turnover. Planned space allocation can provide the requirements necessary for increasing stock turnover, i.e., increased sales and/or reduced inventory levels.

Among the many advantages of planned space allocation are:

1. Increased sales through the proper presentation of product, and the presentation of those items in demand.
2. Control out-of-stock conditions by reducing the errors made in store ordering; and, provide a means for determining the proper quantity of product necessary to meet consumer demands.

3. Control inventory levels by causing an awareness in management of item movement characteristics.
4. Improve store appearance through the effect of more fully stocked shelves.
5. Aid in identifying items which are not contributing to sales, gross profit, or variety.
6. Aid management in holding or bettering the organization's competitive position within the industry.

There does not appear to be a valid reason why space allocation to individual items should be a problem. Even though the task is great, successful plans can be developed that do not require the use of elaborate tabulating and calculating equipment to be successful. The problem lies with management, not with the difficulty of performing the task.

Planned space allocation is a complex problem requiring certain executive level management decisions and considerations. Without these considerations, store managers attempt to solve problems beyond their scope of authority. Questions on variety, maximum stock levels, shelving, shams, reserve storage area, and et cetera, should be discussed and clarified before implementing the plan.

Not all organizations appear to have a plan for determining the space requirements of individual items. Those methods or plans that do exist are usually based on informal procedures. There is a need in all organizations for planned space allocation based on formal procedures.

The Kroger Co. has developed a plan which offers a method of obtaining sufficiently accurate and detailed information to improve item space allocation. Yet, the method is neither difficult nor costly. The plan has proven successful in many of the Kroger store operations and can accomplish the objectives of planned space allocation for operators desiring to improve their operations.

The writer feels the methodology used in the Kroger plan is extremely sound. However, as a result of this study certain additions and/or modifications may further improve expected results.

The incorporation of policy decisions concerning desired turnover rates formulated in the United States Department of Agriculture Study could improve the results of the Kroger plan. This would require management definition of the terms used in the study to describe item movement categories; thereby, resulting in a more realistic approach to the control of various item stock levels. The end result of this change may still reflect an average inventory supply of a certain number of days. However, the quantity of item units will be related more closely to movement.

The present plan gives no indication of methods for maintaining item space assignments once they have been determined. These methods should be incorporated into the plan and should be considered essential to its continued

success. One means through which this control might be realized, is to establish a color code for use on the ordering guide. The code would identify the movement characteristics of individual items. As an example, slow moving items could be identified and ordered only for stocking directly to the shelf thus eliminating unnecessary reserve stocks.

Another method for maintaining allotted item space would be to assign responsibility for this function in each grocery section to a store employee. Every section would then have the close supervision of at least one person.

Any plan for item space allocation should be based on product movement. Other factors may be considered; however, the largest producers of gross margin dollars are frequently those items enjoying a high movement rate. Thus, any plan which has as its foundation something other than item movement, will not be realistic.

The item space allocation plan should be applied in individual stores. Customers determine the items which sell, and customer habits and desires vary from one locale to another. Any attempt to apply the findings on item movement in one store, or group of stores, to all other stores would not meet with complete success.

The application of a plan to individual stores places complete responsibility for the plan's success on the store manager. Achieving store manager acceptance and full

cooperation is the most difficult and important aspect of a plan's use. Without manager acceptance and understanding, the advantages of planned item space allocation will never be realized. Therefore, management should make every effort to successfully sell the plan to the managers responsible for its application.

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