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MARKET DEVELOPMENT IN AGRICULTURE

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IMPORTANCE OF MARKET DEVELOPMENT

A persistent problem during most years since 1921 has been the imbalance of agricultural output and profitable markets for farm products. Farm output has increased greatly because of marked developments in technology. For example, a farmer can now produce about 40 percent more on an acre of land than he could in 1950. Milk production per cow has increased 50 percent during the same period. Output per farmworker has also risen sharply. In 1950, one farmworker could produce enough for about 15 people. In 1965, one farmworker could produce enough for 33 people.

These gains in productive capacity have greatly benefited society but they have also enabled farmers to increase output at a faster rate than that of domestic population growth. This relationship is a basic market expansion variable. Between 1950 and 1965, farm output increased about 35 percent, and population increased 28 percent.

As a result, price depressing overcapacity has recurred. Public measures have been enacted in an effort to deal with the overproduction problem and thus support farm income. During the past decade, the U.S. Department of Agriculture purchased more than $2.5 billion worth of products per year to clear the market of excess supplies (51). 1/ The persistent excess capacity of agriculture to produce, and the accumulation of large inventories of certain commodities, make market expansion a fundamental and serious necessity for agriculture.

Until fairly recent years, economists did not give much thought to stimulating aggregate demand. They had accepted the fundamental proposition of Say's law, that supply or production created its own demand. Then Keynes in his classic, "The General Theory of Employment, Interest and Money," showed that effective demand did not automatically remain at levels high enough to insure prosperity, but sometimes needed to be primed (35). Since Keynes, economists have concerned themselves with alternative policies for generating effective demands as a means of sustaining economic prosperity, and the need for policies or programs to sustain a reasonably high level of demand has become widely recognized.

Just as demand is important to national economic policy, so is it important to the well-being of an industry and of a firm. Many industries using techniques such as product innovation, advertising, and personal selling give considerable attention to maintaining and stimulating demand. A few farmer-supported groups have carried on similar activities for many years, but until recently they generally have not concerned themselves with generating demand for their products, mainly because of the nature of their products and the market in which they sell. Individual farmers sell in almost purely competitive markets where there are relatively many small sellers and where there is near perfect substitution of one product for another within the same commodity class. Under these circumstances, the rewards resulting from individual efforts to stimulate demand most likely would be shared by the

1/ Underscored numbers in parentheses refer to Literature Cited, p. 82.

entire industry rather than being restricted to the individual producer. Nevertheless, farmers, like other entrepreneurs, depend on reasonably good demand for their products in order to receive adequate wages for their labor and their skill in organizing and using productive resources. Good markets are also needed for farmers to obtain a reasonable rate of return on capital invested in land, machinery, and other equipment. Therefore, there have been many private and public programs aimed at strengthening the market for farm products.

THEORY OF MARKET EXPANSION

The objective of market expansion is to increase aggregate sales in order to improve returns to those who produce and market agricultural products. While market expansion implies an increased quantity of food sold and consumed; it often takes the form of improved quality, as in substitution of livestock products for corn meal or cereals.

The problem of market development has many dimensions. It pervades the entire marketing system and extends all the way back to the farmer. Market development begins with farmers producing the right products of the highest possible quality. The marketing system is expected to aid farmers in doing this by operating an efficient pricing mechanism and utilizing market reseach to guide production along desired lines. Moreover, the system is expected to move farm products from producer to consumer in an orderly manner at reasonable prices while maintaining quality. This involves a whole range of marketing activities, such as standardizing and grading, sanitation, processing, transportation, and marketing research. The coordination of all of these activities is an important part of the market development process.

This discussion focuses mainly on those aspects of market development relating to sales promotion, and food assistance programs.

Level of demand for a commodity is commonly thought to be determined by consumers' scales of preference, consumers' incomes or purchasing power, prices of other commodities, expectations about future prices, and number of buyers (12). Effective programs for market expansion must be aimed at influencing one or more of these variables. Some of these obviously cannot be readily manipulated and largely must be taken as given. Others, however, can be influenced.

Increasing overall purchasing power of consumers is one way of increasing demand. Most consumers in the United States have high enough incomes to purchase adequate food. For this group, the main effect of an increase in income would be an improvement in the quality of food consumed, which, of course, would have a beneficial effect on agriculture. Greater purchasing power among poverty-stricken or needy persons--nearly 20 percent of the nation's families--would both increase the quantity and improve the quality of food consumed. Deficiencies in diets of the needy pose serious social problems, and weaken the demand for farm products. Increasing the purchasing power of this group would serve the dual purpose of improving the health of children and needy persons through better nutrition, and improving the plight of the farmer by strengthening the market for his products.

The first step in increasing purchasing power is to maintain high employment at good rates of income. Beyond this, effective demand for food can be increased by special programs designed to help disadvantaged groups increase their consumption.

The Food Stamp Program, which operates through normal trade channels, is one of the public assistance measures designed to ease the purchasing-power restraint on food consumption. Disadvantaged families, through the exchange of dollars for stamps, are enabled to buy larger quantities of food and to have more nutritious diets. The Special Milk Program is another public program designed to increase consumption through increased purchasing power. Under this program school children are offered milk at reduced prices, and the Federal Government subsidizes the program to make up the difference. This program, too, is operated through normal trade channels. Other public programs designed to ease the income restraint on food consumption include the National School Lunch Program and the Direct Food Distribution Program. Recipients of food under these programs are able to eat more varied and nutritious food than before. Thus, when they begin earning better incomes, they are likely to be better customers for farm products. Although these long-range or carryover effects are difficult to measure, they should not be ignored.

Another way of increasing demand is to change consumers' scales of preference for foods. A consumer's scale of preference is the order in which products rank in terms of his want or desire for them. The market for a product can be expanded if consumers can be persuaded to shift the product to a higher level on their scales of preference.

Business enterprises have made extensive use of sales promotion--merchandising and advertising--as a means of shifting the position of a product on the consumer's scale of preference. Advertising, display of point-of-purchase materials, and other promotional techniques are used to increase consumer desire by communicating the characteristics of a product to masses of people and informing them how they may benefit from its use or consumption.

Business firms also give attention to the manner in which products are offered to buyers at various levels of the marketing system. They consider matters such as how the product is packaged, displayed, and priced; product quality and appearance; size of pricing unit; store layout; and product location within the store. Marketing firms attempt to combine these merchandising variables in optimum proportions to stimulate maximum purchases by consumers.

PROMOTION AS A MARKET DEVELOPMENT TOOL

The use of promotion as an aid in developing markets has a long history in the United States. For many years, advertising and other forms of promotion have been basic tools for aiding large-scale production and distribution in our competitive economy. Indications are that these tools have become even more important with the passage of time. In 1964, nearly $14 billion was spent for advertising--about 75 percent more than the amount spent 10 years earlier. In the past decade, advertising expenditures increased faster than the gross national product.

Extent of Promotion in Agriculture

Firms marketing agricultural products advertise actively. It is estimated that corporate food organizations alone spent over $2 billion for advertising in 1964. They spent only $398 million in 1947 (13). Thus, between 1947 and 1964 promotion expenditures by corporate food organizations increased about fivefold.

In 1964, manufacturers spent 64 percent of the total expenditures by corporate firms for food marketing promotion, wholesaling firms spent 5 percent, and retailers

31 percent. For many years, retailers' share of total advertising expenditures has been increasing. This change in food advertising expenditures at retail reflects changes in the number and size of corporations retailing food, and an increased emphasis on advertising as an aid to distribution.

The above promotional expenditures are those of corporations engaged in food manufacturing, wholesaling, and retailing. They do not include advertising expenditures by noncorporate firms, trade associations, or producers' cooperatives, which might be considerable.

Organizations promoting specific commodities and State agricultural commissions representing farmers, processors, and shippers also spend a significant amount to promote food products. A recent survey showed that there are nearly 1,200 of these organizations. They spent about $86 million on promotion in 1962, and had budgeted $92 million for 1963 (50). Thus, promotion has become a major marketing activity among American food enterprises.

Some Broad Questions About Promotion

Although promotion is used to a great extent by American enterprises, there is no unanimity of opinion as to its proper role in society and especially in agriculture (44). There are some who feel that promotion will not be effective in increasing total consumption of agricultural products. They believe that the power of promotion to influence demand increases as it moves downward from the aggregate to the specific. This is based on the belief that the cross-elasticity of demand between food products and non-food products is low and that it is therefore unlikely that promotion has the power to shift the complex relationship between two diverse families of products (36).

Proponents of food promotion feel that total consumption can be increased due to the fact that thousands of individuals and families have diets that do not provide them food adequate in quantity or quality. It is further pointed out that the agricultural problem should be defined in terms of excess productive resources rather than excess volume of production alone. It is possible to increase utilization of resources considerably without increasing the total pounds of food consumed per capita. An increase in consumption of foods which require more resources in their production, such as red meats and poultry, would have this result. Six to seven times as much land is needed to produce a given number of food calories in the form of meats, eggs, milk, and dairy products as to produce them in the form of wheat, vegetable fats, sugar, potatoes, and beans (4). Nutrionists indicate that there are limits in this direction, too, but promotion still can be beneficial to many whose diets are clearly deficient in animal products.

Ideas vary as to what programs are needed to bring about the desired shift in consumer eating habits, but proponents of promotion feel that it has a role to play (11). One writer pointed out that the problem of obtaining an adequate diet was one of education, and showed that food products are out advertised by other products (39). Another claimed that promotion has a great potential in agriculture because so many people do not eat the food they need, and because an increasing population creates additional selling opportunities (43). He said that agricultural products must compete with industrial products in price, quality, and promotion, and that in the vital area of promotion, agriculture is falling far short (43).

It is clear that consumers' eating habits have changed and that these changes have had a significant impact on farm income. Before World War II, food purchases

absorbed about 23 percent of per capita disposable income. Americans still are spending about 18 1/2 percent of their income for food although there has been a rapid rise in real income (14). Had the average diet not shifted during this period toward consumption of more resource-using and therefore higher priced foods, consumers today would be allocating only about 14 percent of disposable income for food--spending $298 per capita for food rather than the actual $401--and gross farm income would be far lower than present levels.

It is not known how much of this shift in consumption was caused by promotion. Other important factors include increased purchasing power of consumers, changes in composition by the labor force, decreased home production, and more processing and product innovations. But promotion, by setting before consumers the goal of better foods and nutrition, and accelerating the acceptance of new products, such as frozen concentrated juices, has had some impact. Promotion has helped to influence people to change their eating habits and thus improve their diets, and to accept and use new and better products as they appear on the market.

Moreover, it appears that promotion will have a similar role to play in the future. In today's dynamic economy, many new products, both food and nonfood, are constantly vying for consumer favor. Consumers whose wants exceed their incomes are confronted with the problem of how to allocate their expenditures. High resource-using foods are usually relatively high priced, and thus are likely to be greatly affected when the family budget is adjusted to accommodate additional nonfood wants. A shift by consumers to lower priced foods would release agricultural resources for additional output, and might magnify the overproduction problem.

Promotion alone, of course, will not solve the excess food problem. However, it is one of several tools which may be used to attack the complex task of market expansion.

Promotional Procedures and Practices of Farm Commodity Groups

Farm groups spend about $86 million each year for promotional purposes. These self-help efforts by farmers are designed to contribute to the orderly marketing of agricultural products by bringing demand more closely in line with supply and minimizing the need for Government price-support and surplus-removal programs.

Agriculturally oriented groups engaged in promotional activities may be broadly classified into two categories--commodity-promotion groups and marketing cooperatives. One of the major characteristics of commodity groups is that promotion is usually their only function. Since they generally do not perform other marketing activities involved in moving the product from producer to consumer, they have the advantage of specialization, but they are at a disadvantage in the task of integrating their activities with other important elements of marketing strategy, such as deciding on price, quality, and supply, which are related to the success of promotion (9).

Another characteristic of commodity-promotion groups is that they mainly conduct nonbrand promotion--that is, they attempt to increase demand for a product class. About 75 percent of the promotional expenditure is made on a nonbrand basis. The remaining 25 percent is used to promote increased demand for specific products grown in particular States or regions (50). This type of promotion stresses virtues of products of the State or area as compared with similar products from other areas. Many people interested in marketing believe that, because similar products with different brands can be more readily substituted for each other than products of

different kinds, it is easier to increase demand for a brand than for a product class. This is true, perhaps, when other things remain constant. But other things do not always remain constant. Promotional expenditures for one brand may lead competitors to retaliate by increasing promotion for their brand. Under these circumstances, the sales response to brand promotion might assume the characterisites of the sales response obtained from product promotion.

Another feature of commodity-promotion groups is that many have limited power over the size of their promotional budgets. Funds may come from producers of the product to be promoted or from combinations of producers, processors, and shippers who contribute on a voluntary basis. Funds may also be obtained through some type of direct assessment, or by a checkoff system whereby the amount contributed depends on the volume marketed, or from legislative appropriations. In each instance, management groups must take the budget as given, with little latitude for adjustment in light of expected profits, promotional objectives, and other considerations which would affect the optimum expenditure.

Marketing cooperatives differ in many respects from commodity groups. They more nearly resemble private commercial firms who distribute and promote agricultural products. One distinction from commodity groups is that they usually emphasize brand promotion. About 85 percent of promotional expenditures of marketing cooperatives are made for branded products. Moreover, cooperatives do not confine their activities to promotion, but perform many of the marketing functions involved in moving products from producer to consumer. Also they are more closely connected with the supply side of the products they promote than are commodity-promoted groups. Marketing functions performed vary from one cooperative to another, but may include such activities as standardization and grading, quality control, packaging, buying and selling, and selection of channels of distribution. By performing some of these functions, marketing cooperatives have a much greater opportunity to coordinate promotion with other elements of marketing strategy.

Both commodity-promotion groups and marketing cooperatives engage in all types of promotional activity. They conduct media advertising, utilizing television, radio, newspapers, magazines, and billboards. They distribute printed matter such as recipe booklets, sponsor consumer contests, participate in fairs and shows, and sponsor educational activities. Part of their activity is directed at the distributive trade to obtain its support in the marketing of the product. Many commodity groups, especially the larger ones, maintain a field force or dealer service organization that assists the trade in merchandising the product. They distribute instore point-of-purchase materials, build special displays, and conduct educational programs on merchandising. The extent of involvement in each of these areas varies depending upon the organization's budget and the emphasis management chooses to give to each area. Marketing cooperatives make more extensive use of advertising allowances than commodity groups (16).

The organizational structure for carrying out promotional activities is not uniform for either commodity groups or marketing cooperatives. However, commodity groups, being organized primarily for the purpose of promotion, and averaging larger promotional budgets than marketing cooperatives, tend to formulate promotion policy at higher levels in the organizational structure. The boards of directors, in most cases, play key roles in formulating promotional policies. In a cooperative, the chief executive is likely to be the key figure in establishing promotion policy. Among the larger organizations, especially the large commodity groups, specialists handle specific areas of promotion such as media advertising, public relations, dealer service, and marketing research. Some organizations have managers or

directors for each of these areas. In general, size of the promotional budget is likely to determine the extent of specialization in conducting the promotional program.

Techniques for Measuring Effectiveness of Promotion

The marketing of farm products has long been a matter of public interest because of its importance to both consumers and farmers. This interest was heightened by passage of the Agricultural Marketing Act of 1946, which provided for market research aimed at contributing to the orderly marketing of farm products. Creation of demand for farm products by means of promotion contributes to the orderly marketing process by helping to balance supply and demand and, therefore, has been the subject of market research by State and Federal agencies. These agencies have conducted market research studies and analyses for many farmer-supported organizations to measure the effectiveness of their programs and to provide information that will help them do a more effective job of promotion. These studies are useful in formulating general theories and principles on the promotion of farm products. Such principles serve as guidelines in making more effective decisions on promotional procedures and practices.

One of the serious problems in developing new knowledge on promotion is devising techniques for measuring effectiveness of promotional activites. Considerable attention is being given to this problem (18). It is difficult to measure the net benefits gained from a specific promotional campaign because, at any given time, consumer purchasing behavior is the result of many factors other than promotion. Availability and price of the product, competitive behavior of substitute products, seasonal factors, income, and that most elusive element, psychological whims of the consumer, are but a few of the many factors influencing purchasing behavior.

Many attempts have been made to measure the effects of promotion. These range from surveys of consumers' awareness and attitudes to various kinds of analyses of sales data. Consumer studies are usually designed to measure the number of people reached by the promotion, the degree of their awareness of the program, and the resulting changes in their attitudes. These studies help to improve the promotional approach, but they are limited in that very little is known about translating consumer awareness or attitude changes into sales and price response, which is the ultimate objective of promotion. Therefore, the trend has been to give more emphasis to various kinds of sales and price analyses.

The crux of the problem of measuring effectiveness of promotion is devising a means of determining what sales would normally have been during the promotional period without the advertising or merchandising effort. This information is never known; it must be estimated. Therefore, the basic requirement is to develop a technique whereby reliable estimates can be made of the normally expected volume of sales during a given period. Differences between actual and expected sales indicate the effectiveness of the promotional campaign.

The methods used to measure the effect of market promotion on sales may be categorized into four main groups: (1) Use of the subdivided time series, (2) comparison of test and control markets, (3) multiple regression analysis, and (4) controlled rotational experiments. In addition to these techniques, consumer surveys and other qualitative measures have been used on occasion to complement the quantitative approach (19, 33). 2/

2/ Henderson, Peter L. Methods of Evaluating the Sales of Agricultural Commodity Promotional Programs. Paper presented to the 1960 National Mktg. Serv. Workshop, Biloxi, Miss., Nov. 17, 1960.

Subdivided Time Series

When the subdivided time series method is used, sales of the selected product in a sample of stores in a test market are recorded before, during, and after the promotion period. Sales of the selected product during the three periods are compared. The prepromotional or base period provides an estimate of what sales would have been in the absence of promotion. It is assumed that all factors affecting sales other than the advertising and merchandising stimuli remain constant during the three periods. This approach is appropriate only for those commodities which normally have stable marketing conditions. It usually is not appropriate for studying the effect of promotional activities on the sale of most fresh produce items and livestock products because rapid changes in such factors as quality, supply, and price frequently occur.

A study of the effect of a promotion campaign on the sale of lamb in Sacramento, Calif. illustrates how the analysis can become complicated when the assumption of stable marketing conditions is not met (19). During the promotion period, the supply situation changed, and prices for lamb rose. Furthermore, sufficient data to make precise adjustments for this change were not available, so that it was difficult to analyze and interpret the results.

In using the subdivided time series technique, the study period should be kept short to minimize the probability of the entrance of extraneous factors. In recent years, the trend has been to avoid the use of this technique because of the complications, which may arise.

Matched Cities or Test and Control Markets

In the technique involving test and control markets, cities are grouped in matched pairs. One city from each pair is selected at random to be the test city, and the other is used as a control.

This research method lacks some of the limitations involved in use of the subdivided time series. One particular advantage is that it is not necessary that all factors affecting sales, except promotion, remain constant from one time period to another. However, factors which do change from one period to another must change at the same time, in the same direction, and to the same degree in the test and control cities. To meet this requirement, both test and control cities must be as evenly matched as possible in terms of those factors affecting the demand for the product. Thus, a study of the demand for the product helps to provide a basis for matching cities. Criteria frequently used for matching cities include population, predominant religious affiliation and national origin of the people, per capita disposable income, types of industries, geographic location, and supply and price conditions.

In spite of attempts to match cities as closely as possible, some variables may not remain constant or may not change to the same degree in both cities, even for a short period of time. Because of this possiblity, data should be collected in both the test and control cities which will permit statistical adjustments to be made, if necessary, by use of such techniques as multiple regression analyses.

The matched cities were used to appraise the influence of an intensified promotional campaign in selected areas on the sale of cottage cheese in the spring of 1958 (38). One control city and two test cities were used in this study. Substantial changes took place in some variables, especially the level of employment. This

demonstrates the difficulties which can arise when using this technique. It also points up the need for having an adequate number of test and control cities and giving close attention to comparability of socio-economic characteristics of cities.

Multiple Regression Analyses

Regression analysis is the mathematical determination of the functional relationship between two or more series of data. Multiple regression analysis may be used to measure quantitatively the change in sales associated with changes in such variables as promotional expenditures, prices, and income. Data on sales and factors affecting sales for several years are usually required. If data are available on promotional expenditures for the period covered in the analyses, they are introduced directly into the analysis as one of the independent variables. The result shows the change in sales associated with given changes in level of advertising expenditures. When advertising expenditures are just being initiated or were not made during the period covered by the historical data, a somewhat different procedure may be followed. The equation developed from the historical analysis is used to estimate the sales of a commodity that would be expected without promotion. This estimate is then compared to the actual sales taking place when the product is advertised to determine the effectiveness of the promotional program.

The basic assumption underlying this approach is that the functional relationship between causative factors and sales determined for the base period continues to hold except to the extent by which it is changed by the promotional effort. This technique can be used when accurate data on a recent time period of sufficient length is available and there are logical reasons for including each of the causative factors in the estimating equation. The technique was used successfully in a study of the effect of promotion on sales of lamb in Cleveland, Ohio (33). This approach was further refined in a study evaluating a nationwide special promotional campaign for frozen concentrated orange juice in the fall of 1959. In this study, covariance analysis was used in combination with multiple regression analysis to make nonquantifiable adjustments for year-to-year shifts in demand (24).

When multiple regression analysis has been used, it has provided a fairly accurate tool for appraising promotional programs. But a long series of historical data for the relevant variables is needed to make this appraoch feasible. Many times such data cannot be obtained.

Controlled Rotation Experiment

As the economic and marketing conditions associated with a product become more volatile and complex, more sophisticated analytical approaches are required. Controlled rotation experiments used in conjunction with covariance analysis have proved to be useful under these circumstances. This method overcomes the inadequacies sometimes found in historical information on the variables affecting sales, and it overcomes the difficulties encountered in obtaining enough financial support from producer groups to select the required number of test and control cities.

Several types of experimental designs have been used to study the effectiveness of promotional activities (33). A simple Latin square design shows the special features of this technique. Assume that a commodity promotional group is interested in determining which of the three package types has the greatest impact on sales of a particular product. The experiment might be set up in a Latin square design as shown in table 1. The letters represent the package type.

Table 1.--A Latin square design to test the relative sales effectiveness of three types of packages

Time periods	Stores		
	1	2	
	Package type		
1	A	B	C
2	B	C	A
3	C	A	B

In such an experiment, each package type is tested in each store so that the effects of certain nontest variables on sales--differences in size and type of store, differences in preferences of customers among stores, and competition from other stores--are equalized. The effects of differences in seasonal demand on sales are equalized by testing each package type during each time period. Furthermore, by coordinating activities with the management of the retail stores, other variables affecting sales, such as price, size and location of display, and promotion policies of the store, are held constant. With this procedure, the researcher can measure and assign the existing variation in sales to specific components, thereby isolating the impact of package types on sales (31).

This technique requires exceptionally close cooperation between the advertising agency and the researchers, and exceptionally close supervision and control of field activities in connection with the research. It appears that this is one of the most refined and effective techniques, and will yield the most reliable results if the requirements mentioned previously can be adequately met.

It is not desirable to use any of the measurement methods indiscriminately. Each measurement problem usually has different characteristics which require that the research be tailored to fit the particular situation. Application of these measurement methods without judicious consideration of the specific problem would add further confusion and doubt to a subject beset by uncertainties (30).

Though the problem of evaluating the results of advertising and merchandising is complex, substantial progress has been made in improving present techniques and devising new ones. With the new analytical dimensions being made possible by continued improvements in electronic computer technology, there is promise that further advances will be made.

What Has Been Learned About Promotion of Farm Products

Several studies to evaluate the effects of specific promotional programs on sales of farm products have just been cited to illustrate measurement techniques. Many others have also been reported. Efforts are being made to fit the results of these studies into a framework of principles concerning promotion of farm products.

The pioneering effort to develop generalizations regarding advertising effectiveness was done about 1940 (5). Several generalizations were developed on the basis of analyses of the effectiveness of advertising programs for a cross section of consumer goods, including several products of agricultural origin. The results substantially influenced many of the popularly held views concerning the effectiveness of commodity promotions, and still provide hypotheses for further research.

Opportunities for successful advertising were said to be greatest when:

1. There is a favorable demand trend for the product.
2. The product is differentiated from others.
3. The product is associated with powerful emotional buying motives.
4. The promotion budget for the product is large enough to make its impact felt in the market.
5. The product has tangible intrinsic qualities not readily appraised.

These conclusions were reached only partly from analyses of promotional programs for farm products, and were formulated some 20 years ago. There is some question as to how well they reflect the experience of present-day commodities and emotional groups. Among the broad questions which prospective advertisers of farm products would like to have answered are: How may these conclusions be refined or expanded to enhance their usefulness? What direction should future research take to increase knowledge in this area?

Favorable Primary Demand Trend

Primary demand is the total demand for a product class, as contrasted to a brand item, line, or type of product within the product class. A favorable primary demand trend is considered a necessary prerequisite for effective promotion. When this trend is present, advertising can be used to strengthen the existing preferences for the commodity and to accelerate the rate of consumer acceptance of it.

An example of a successful promotional program for a product experiencing a favorable primary demand trend is described in a 1965 study on frozen orange concentrate by Henderson and Thigpen (28). Frozen orange juice concentrate has been steadily gaining in consumer acceptance since its introduction into the market. The percentage of U.S. households purchasing it increased from 34 percent in a 6-month period in 1949 to 52 percent in a 6-month period in 1962, the latest year of normal supply (34). Against this favorable background, an intensive promotional program increased sales by about 11 percent (28).

On the other hand, research results from other studies suggest that in the short-run, the long-term trend does not necessarily determine the ability to increase demand for a product by means of promotion. Evidence on this point was obtained from a study on apples conducted by the U.S. Department of Agriculture in cooperation with the Washington State Apple Commission (27). Though per capita consumption of apples has trended downward for a number of years, it was found that intensive 4-week promotional campaigns increased sales over 30 percent.

Research has not been done to appraise what the long-term influence would be if promotion were continued over a number of years. Findings on the short-term effects, however, suggest that even when a declining trend in demand is evident, a short intensive campaign may be quite effective and useful in moving unusually heavy seasonal supplies or a temporary surplus at more profitable prices.

A great deal of additional study is needed to properly assess the ability of product promotion to reverse a declining trend over time. It may be hypothesized that it is not the declining trend per se which determines promotional opportunities, but the reason behind the trend. Where these reasons are tied to or anchored in strong trends in eating habits and use patterns of consumers, or social and technological factors, it is probably true that promotional opportunities are not very

promising. On the other hand, where declining trends are related to milder influences, promotion perhaps would be more effective. The declining trend in consumption of apples probably is not the result of a major change in eating habits or social mores. Rather, it may be the result of an economic factor, that is, greater competition from other fruits, such as pears, bananas, and grapes, brought about by increased availability of these commodities.

The implications are that economic studies of the buying behavior of consumers must become more penetrating. Rather than taking consumer attitudes and preferences as given, searching analyses are needed to establish the basis or origin of consumer attitudes and preferences, and their intensity. Such findings would provide clues to the feasibility of reversing a declining trend in demand for a product by means of promotion.

Product Differentiation

Some have held that brand identification is the only feasible means of product differentiation, and thus is a necessary prerequisite for effective promotion. It is true that brand promotion is less complicated than product promotion. But does this preclude the possibility of carrying out effective product promotion? Evidence on this subject was obtained from a study conducted on the effectiveness of a promotional program for lamb (26). In this campaign, the produce was not identified by brand or other characteristics such as region or State of origin. Yet, sales increased 10 percent with one promotional approach and 26 percent with another during comparable promotion periods. The promotional program for frozen orange concentrate referred to earlier was also on a nonbrand basis.

It appears that the primary consideration with respect to differentiation is whether the product can be differentiated from other commodities with which it competes. It appears that this competition is not restricted to brands but also includes competition among products all of which are not necessarily food products. With the upswing in installment buying and in mortgages on future earnings, nonfood items may lay first claim on consumer income, so that purchases of certain food items must be foregone to remain within limits of the family budget. Thus, the fact that a product is a food item may, in some instances, be a sufficient basis for differentiating it from nonfood competitors. This would appear to be particularly true in the case of expensive, high resource-using foods, which are usually the first items cut when the family budget is reduced because of nonfood purchases.

Size of Promotion Budget

Another important aspect of promotion is the size of the promotion budget Promotional expenditures must be maintained at some minimum level to be effective.

This requirement raises the question of whether some producer groups should be attempting promotion at all. A survey revealed that a large number of producer groups were attempting promotion on relatively small budgets--in some cases, only a few hundred dollars (17, 50). It appears reasonable to question the value of making these expenditures under such circumstances.

The intensity with which promotional compaigns can be waged depends not only on the total advertising budget, but also the number of markets to be covered. Thus, some organizations with rather large promotion budgets may dissipate the effectiveness of their expenditures by trying to cover too many markets.

Questions of desirable size of promotion budgets, advertising intensity, and number of markets to cover are not easily answered. Perhaps in many cases decisions must be made on a judgment basis. But researchers are beginning to push into the area of the effects of different levels of advertising intensity and advertising expenditures, and should provide some insights on these matters.

Product Qualities Important to Consumers

Another factor that is believed to affect advertising effectiveness is whether products have qualities of importance to the consumer that are not readily apparent from inspection. These attributes may be associated with healthfulness, effect on the user's appearance or social status, etc. External qualities are important in the consumer's selection of perishable commodities but are less significant in the selection of processed items. Even so, some fresh products would appear to possess hidden attributes which could be effectively promoted--for example, special uses or special nutritional values. An example of a successful promotion of this type was reported in the apple study mentioned earlier (25). In this promotion, two types of sales appeals were used, both stressing internal attributes of the product. One stressed the health benefits accruing from apple consumption and the other emphasized various ways in which apples could be used. Sales resulting from each approach were compared with sales when there was no promotion. Both approaches increased sales significantly, but appeal emphasizing apple use was the more effective of the two. These results demonstrate that even for fresh commodities internal qualities can be promoted as effectively as external appearance.

Other Factors Related to the Effectiveness of Product Promotion

In addition to the hypotheses already discussed, others of a general nature are suggested by studies of the effectiveness of various producer-sponsored promotion programs. One of these hypotheses relates to the selection of market targets. In intensive, short campaigns aimed at achieving a quick and perhaps temporary increase in demand, promotion will be more effective if directed at those consumers who are acquainted with the product and are light to moderate users. The product has already gained acceptance by these consumers; there are no social or institutional barriers to overcome, and there is a potential for increasing consumption.

The findings of three studies appear to bear this out. One is the study of promotion of frozen orange concentrate discussed above (p. 68). Another was a study of a short intensive promotion of cottage cheese (38); and the third was on the promotion of sales of lamb. All three studies revealed that sales increased more when consumption was already relatively high (26). For example, analysis of consumer purchase data on frozen orange concentrate revealed that increases in sales of this product were primarily accounted for by an increase in purchases by light and moderate users. This type of promotional approach might be particularly useful when a producer organization is faced with a temporary heavy supply.

When the aim is to obtain a more permanent increase in demand, the object of the promotion should be aimed at creating a favorable image of the product and informing consumers as to uses and best methods of preparation.

Research results have also emphasized that marketing institutions strategically located in the channels of distribution have an important bearing on the results obtained from promotion. In a study of retail sales of broilers, covariance and multiple regression analyses revealed that 75 percent of the variation in broiler tonnage was

accounted for by changes in retail display areas, prices, newspaper advertising, and total store volume (6). Similarly, a regression model developed to predict and explain month-to-month variation in sales of lamb in the Cleveland market indicated that retail merchandising, as reflected by newspaper advertising, was the second most important factor affecting sales (33). When newspaper advertising was included in the model as an independent or explanatory variable, the standard error of estimate was reduced 26 percent.

These results show why a significant part of the promotional effort should be directed at influencing behavior of marketing institutions--especially retailers--to get support for merchandising activities, and to assure that adequate supplies are available at the point of purchase. These problems are compounded for commodity groups, which usually do not take title to the goods they promote, or control their movement to market.

Thus, a prerequisite for effective promotion of a product is an understanding of the total marketing process for that product. This includes an understanding of the extent of distribution of the product, the rate of flow of the product into consumer channels, the characteristics of consumers, the nature of the markets, and level of consumer demand. These factors affect the timing and coordination of promotion with supplies, the selection of market targets, and the development of the overall promotional approach. Information of this type is available from such sources as consumer panels, market news agencies, and perhaps an organization's own field staff.

Future Directions of Promotional Research

Much has been learned about effective promotional procedures and practices. But there still are a vast number of unsolved problems which need to be investigated. It would appear that theoretical formulations and field investigations must together constitute the basic analytical framework within which researchers must work to solve these problems. Theory is important in providing creative guideposts. It gives direction to actual investigations. Field investigations, in the form of market research, discover reality. In combination, these methods provide an effective analytical approach to the development of systematic knowledge that will help answer some of the questions concerning promotion of farm products.

Perhaps the most fundamental problem concerns the basic attributes of a product which make it promotable. What is needed is a closer examination of the origin and stability of consumer preferences. If consumers' preference patterns are as subservient to advertising and promotion influences as some people seem to believe, they are not very stable. One student of the subject believes it might be worthwhile to view the consumer's preference scale as being composed of permanent and transitory components (32). The permanent component would reflect the hard core preferences, which remain relatively stable over time; the transitory component would reflect the temporary and more highly variable preferences. The transitory components probably would be more susceptible to change resulting from promotion than the stable components. Clearly, if such a distinction can be made, a great step will have been taken toward answering such questions as, Should we promote? and How difficult will it be to shift the demand curve for our product?

Another vital question concerns the precise amount to be spent on promotion to realize maximum profits. For many years, economists did not incorporate advertising costs into theories of industry and the firm. The first theoretical contribution along this line was made by Professor Chamberlin in his "Theory of Monopolistic

Competition" (8). In his analyses he varied price, keeping advertising constant, and then varied advertising, keeping price constant. Buchanan improved upon Chamberlin's analyses by varying price and advertising simultaneously (7). Boulding and others made further contributions, so that, at least theoretically, the optimum combination of price, output, and advertising can be projected tentatively.

These theoretical formulations, though ingenious in their development and solution, are difficult to apply in the real world. This, however, does not diminish their usefulness as a guide to thinking and research. The analyses are based on the assumption that sales increase as selling costs increase, and that the industry or firm has rather specific knowledge of the cost output function and the effect of advertising on sales volume and prices. But there is no reason why one can automatically assume that increased selling costs will shift the demand curve or that they will shift it by any given amount. Quantitative investigation is the only means by which this can be determined.

At this point, simple models would appear to be useful in studying optimum advertising outlays for producer promotion groups, at least in the short run. As a practical matter, the researcher need not concern himself with incremental production costs in the short run, since there is evidence to show that these could reasonably be considered constant over the range that is significant for determining advertising policy. With this simplification, market research can make a valuable contribution to the evaluations of how much to spend on advertising, if it can provide reasonable estimates of the effect of advertising on sales volume.

This was done in a study of how increased levels of promotional expenditures affected sales of fluid milk and net returns to producers (10). The study was a controlled experiment conducted over a 2-year period in cooperation with the American Dairy Association. Because of the Association's limited budget, it was necessary to restrict the experiment to the current level of expenditure and two additional levels. Thus, three levels of promotion were investigated--the current level of promotion expenditure by the Association (2 cents annually per person in the study area), a medium level (15 cents per person above current levels), and a high level (30 cents per person above present levels). While this procedure did not provide enough observations to develop a general statement of response to promotion, it did indicate which of the two levels of increase was optimal. The results showed that net returns to producers were highest for the medium level of promotion and that sales increased further when promotional expenditures were increased to the highest level but total net profits declined.

A closely related question concerns the nature of the advertising response function. Frederick V. Waugh theorized, and later verified by empirical investigation, that the advertising response function can best be described as a distributed lag, at least for some products (40). In essence, this is to say that sales in the current period are a function of promotional expenditures in the past as well as in the present period. The basic rationale for this conclusion is that advertising is effective for a much longer period than that in which the advertising is done. The advertisement, according to this formulation, gradually loses its impact in succeeding periods. Waugh illustrated this gradual diminution of the advertising charge by a "decay curve" (53). Nerlove and Waugh in a later statistical investigation studied distributed lags in connection with advertising in the orange industry (42). The analysis gave a higher value to the current expenditure and a relatively equal value to a finite number of past expenditures. Thus, sales in the current period were affected by advertising in the current period and that in the 10 years before.

In the milk study mentioned above, provisions were made in the experimental design for measuring the carryover influence of promotion. The results showed that carryover effect accounted for 38 percent of the effects of promotion at the medium level of promotion and for 41 percent at the high level. Thus, the evidence now available indicates that promotion can have an enduring effect that lasts beyond the period in which expenditures are made. Further investigations are needed to learn more about the precise nature of the advertising response function for different promotional approaches and different agricultural products. These studies will be complex and difficult to do but information is needed in order to fully evaluate the profitability of promotion.

An almost totally neglected area is that of a comprehensive approach designed to explain how the total advertising process works to induce consumers to purchase. For example, What is the role of consumer believability of the promotion theme and how important is it? Is it really necessary to change consumer attitudes in order to induce a purchase response? In general, is there a particular segment of the population that is more susceptible to the influence of promotion than others? These are only a few of the unanswered questions on promotion, but our knowledge will increase as more research is done in this area.

Merchandising

Market development is not limited to promotional campaigns, but includes many other activities, especially merchandising. Merchandising of foods is the process of offering products to buyers at the various levels of the marketing system. Research in merchandising is concerned with the way products are packaged, displayed, and priced; the variety, color, and quality of products offered; space allocation and retail store layout; location of departments; use of display fixtures; product arrangement; and instore promotional materials used. 3/

The retail food store is an important area of merchandising because it is the point of purchase--the focal point of consumer purchase decisions. How a product is merchandised determines in large measure how much of it will be bought or whether it will be bought at all. Farmers and groups representing farmers have a direct interest in the merchandising practices employed by retailers of their products because of the impact of these practices on consumer demand and market expansion.

The need for retailers to adopt the most effective merchandising techniques has been accentuated by sweeping changes taking place in the distribution of food. A principal change has been the shift to self-service. At present, probably 80 to 90 percent of all retail food sales are made on a self-service basis compared with about 25 percent 20 years ago. This shift to self-service has largely eliminated the behind-the-counter sales person who once urged consumers to purchase specific products, or pointed out the merits of one commodity over another. Now, each product is its own salesman and the sales depend upon whether the product is available in the right variety, condition, price, package, appearance, and location. Whether or not these conditions are met may not be readily apparent to the producer, the processor, or even the retailer--the closest link in the distribution process. With the change to self-service, and the widening gulf between producer and consumer,

3/ Havas, N. Merchandising Research on Evaluation and Store Layout. Paper presented to a food merchandising class at American University, Washington, D. C., Mar. 19, 1963.

the consumer has less opportunity to express directly to anyone his preference for a particular commodity. Yet, a product may never reach its full sales potential if it is not marketed in accordance with consumer desires. Merchandising research provides a means for bridging the gap between marketing agencies and consumers. It helps to communicate quickly and directly the preference patterns of consumers to producers, processors, and retailers. It helps to avoid consumer dissatisfaction, and the resulting decreased consumption and low market prices.

Another change which has increased the importance of good retail food merchandising is the increase in the number of nonfood items now stocked in abundance by most retail food stores. Nonfood items are in closer proximity to food, and compete more directly and sharply with it for the consumer dollar.

Sometimes farm marketing groups, shippers, processors, and related groups have particular merchandising problems or have ideas for new merchandising methods which appear to have promise of moving more products into consumption. Increasingly such ideas are tested through research, using the retail store as a laboratory, because it is in the retail store that the solution must be found and applied. Furthermore, the final test of value is the reaction of the consumer (21). 4/

Contributions of Research to Solution of Merchandising Problems

A number of studies have been done on merchandising because of special problems confronting a particular producer or marketing group. However, in the process of solving these problems, attempts frequently are made to fit findings into a broader framework out of which will come information that will contribute to the formulation of general merchandising principles.

Several studies have indicated that variety is an important merchandising component affecting sales. One study which supports this generalization was conducted for the Oregon-Washington-California Pear Bureau to determine which of several merchandising techniques registered the greatest impact on sales of winter pears (40). Retailers had made it a practice to offer consumers only medium-size pears, which made it difficult for producers to move large and small pears into the fresh market. The experiment indicated that sales increased 26 percent when medium-size and large pears were offered in combination and in a variety of package sizes. A study of apples in the same market indicated that sales increased 75 percent when apples were presented in a combination display of bulked apples and apples in 5-pound bags, rather than all bulked or all bagged (48). Sales increased still more when the bagged apples were offered in varying weights of 2 to 6 pounds. In another experiment, it was found that sales of natural cheddar cheese could be increased by providing consumers with an opportunity to purchase both instore packaged and prepackaged cheese, rather than prepackaged cheese alone, and by making cheese available in packages ranging in size from about 6 ounces to 2 pounds (48). Finally, a study on carrots showed that consumers bought 15 percent more carrots when they were displayed in both 1- and 2-pound polyethylene bags instead of 1-pound polyethylene bags alone (47).

Variety in retail food merchandising has grown in importance because of fundamental changes in the retail distribution of food. Retail stores have steadily grown fewer in number and larger in size during recent years. With fewer and larger

4/ Brown, Sidney E. Accomplishing Effective Merchandising. Paper presented to the National Broiler Council's retail seminar, New York, Feb. 6, 1964.

stores, customers are drawn from a wider area and possess more diverse socio-economic characteristics. Wide differences in incomes, family size, and tastes and preferences generate a diverse set of wants and purchase patterns among consumers.

Product appearance is generally recognized as a factor influencing customer purchase response. Carefully planned and executed experiments have helped to assess in rather precise terms the extent of consumer purchase resistance to variations in appearance, and to establish levels of tolerance that can be imposed without unduly damaging market demand.

A study of customer buying response to variations in the color of Red Delicious apples showed that retail sales of highly colored apples (from 75 to 100 percent good red color) were 50 percent greater than sales of partly red apples (50 to 75 percent good red color) (49).

The Florida citrus industry has been concerned about the appearance of its fruit for many years. The industry spends about $750,000 annually to color oranges. Because of this expense and because of recent legal problems concerning color additives, some producers would prefer to market fruit in its natural color. But a precise appraisal of the role of coloring and its effect on consumer buying was needed. A test in Philadelphia showed that oranges in the natural color sold as well as colored oranges. This was attributed to the work of the distributive trade in educating consumers to the fact that the colored and the natural oranges were equally good in quality. In Cleveland, however, sales of colored oranges were more than 25 percent greater than sales of oranges of natural color (23).

An experiment involving mushrooms showed that mushrooms in packages permitting a view of the stems did not sell as well, in general, as those in packages showing only the mushroom tops, since stems are unattractive and since browning first occurs in the stems (37). The demonstrated impact that product appearance has on market demand reemphasizes the fact that improved production and cultural and harvesting practices are desirable goals for producers.

Closely related to product appearance is product visibility, which simply refers to the ability of the consumer to see the product in its container. Product visibility varies, of course, according to the type of packaging materials used. But a general principle is that the more important the factor of product appearance to the consumer, the more effective is product visibility in stimulating sales. Appearance and product visibility are very important where sanitation, stage of maturity, and product deterioration are matters of special concern to the consumer. This applies to fresh meats and many produce items; most processed products, such as canned and frozen foods, are exempt from these considerations. The importance of product visibility was brought out in a study on the merchandising of tomatoes. An experiment was conducted in which fresh tomatoes were displayed in the standard cardboard tubes and in plastic tubes which permitted a more complete inspection of the product. Although the tomatoes in plastic tubes were priced at a 3-cent premium, sales of tomatoes in plastic tubes were nearly 10 percent greater than sales of tomatoes in cardboard tubes (45).

Merchandising studies have also helped marketing firms to understand better the sales effects of merchandising components such as retail price, display space, and newspaper advertising. Many studies have revealed that these components are not additive but multiplicative, that is, when they are combined in one promotional effort, their joint effect on sales is greater than the sum of the gains observed when

each is used separately. A study on pears showed that price, display space, and newspaper advertising combined, rather than any one factor alone, resulted in increased sales (29). Similar findings were noted in a study of 30 promotions in a sample of 12 food supermarkets in the Northeast (20). This study covered several canned fruit and vegetable products and mayonnaise and salad dressing. When newspaper advertising, price reductions, and special displays were used together, gains in sales were greater than the sum of the gains made when each promotional method was used separately. Likewise, use of a combination of any two of the methods was accompanied by a larger increase in sales than when the same two methods were used separately. Thus, the retailer maximizes sales gains per unit of promotional expenditures by using these promotional methods jointly rather than independently. This finding is of significance to producer groups who often solicit the support of retailers for their promotional programs.

The store itself is a merchandising instrument--especially its layout. Store layout refers to the placement of various food departments and products within departments in the store. The goal of store layout is to arrange and locate food departments in a way that encourages customers to shop the largest area possible, because a significant relationahip has been found between dollar value of purchases and distance traveled by customers through a store's selling area (22). From an economic viewpoint, increased product exposure causes increased sales per store and contributes to increased efficiency, lower marketing costs per unit, and increased market expansion.

As stores have become larger and self-service has become dominant, problems of store layout and product exposure have intensified. Many new ideas in store layout and fixtures are being tried by retailers to achieve greater product exposure (52). 5/ Research on traffic patterns is the tool used to learn the most effective arrangement of departments and products within department. In this research, an enumerator observes and records on store layout forms the paths taken by a sample of customers entering the store. He may also record other pertinent information, such as number of purchases made and time spent in the store.

A study of traffic patterns taken in a sample of 13 supermarkets in New England indicates how the results of this research may be applied to make the retail store a more effective selling instrument. 6/

The shopping patterns revealed that customers were exposed to about 64 percent of the store's displays, spent less than 23 minutes shopping, made 13 purchases per store visit, and spent an average of 56 cents per purchase, for a total of $7.28. On the average, the number of purchases increased at the rate of about 6 for each additional 15 minutes spent in the store.

About 30 percent of the customers observed used a shopping list. Customers using a shopping list averaged 4 more purchases, spent about 3 minutes longer in the store, and spent approximately 4 to 6 cents more per minute than customers not using one.

5/ Van Dress, M. G. Store Layout and Product Location: Vital Factors Affecting Food Store Sales. Paper presented to Fourth Ann. Food Distrib. Res. Conf., Mich. State Univ., Oct. 22-23, 1963.

6/ For these findings see Havas, N., Customer Instore Shopping Behavior and Store Layout, a paper presented to the National American Wholesale Grocers Association's seminar on store planning, Memphis, Tenn., May 27, 1963.

DOMESTIC FOOD AID PROGRAMS

A recent trend in market expansion is greater utilization of domestic food aid programs. These programs aim to improve nutritional levels and make more effective use of agricultural resources.

Domestic food distribution programs consist of the National School Lunch Program, the Special Milk Program, the Direct Commodity Distribution Program, and the Food Stamp Program. These programs now reach one in every five Americans. During the year ending June 30, 1964, approximately 2.1 billion pounds of foods donated by the Federal Government were distributed throughout the United States and its territories. An additional $249 million in Federal funds was made available to schools and needy persons for the purchase of food through local commercial channels.

The first domestic food aid programs were initiated during the depression of the 1930's. During the earlier years of these programs, primary attention was given to making foods obtained through Federal price-support and surplus-removal programs available to eligible persons. Since that time, increasing attention has been given to the dietary needs of recipients. This trend has culminated in the concentrated effort in the 1960's to provide food aid programs which will improve nutrition while providing an expanded outlet for agricultural products.

The Commodity Distribution Program

The commodity distribution program, one of direct distribution of food to needy persons, institutions, and schools, provides the domestic outlet for foods acquired under Federal price-support and surplus-removal programs. Commodity distribution is an integral part of the major programs designed to increase farm income.

Commodities donated by the Federal Government reach the kitchens of needy families totaling over 5 million persons. To receive these commodities, families must meet standards established by their States. The standards relate mostly to family income, and conform generally to those already being used in existing State and local welfare programs. Food aid is available not only to persons who cannot work to full capacity, such as aged, disabled, and blind persons, and mothers with dependent children, but also to the families of low-paid or unemployed workers who, in many cases, have incomes as low as or lower than those of persons receiving Federal-State public assistance grants.

Federal commodities are also used in charitable institutions and by groups preparing school lunches for nonprofit school lunch programs throughout the Nation. Most of the approximately 70,000 children receiving school lunches participate in the National School Lunch Program. During 1963-64, approximately 710 million pounds of food, valued at $173 million, were distributed through this program. About 1.4 million needy persons in institutions and 18 million school children were the ultimate recipients.

Through the 1950's, the commodity distribution program was tied to the distribution of products in Federal inventories. There were continuing supplies of flour, cornmeal, and other cereals. Changes in supplies affected the availability of processed dairy products from year to year. Kinds and quantities of other products obtained through surplus-removal programs also varied each year. In general, the foods available for distribution were those which were already being used in quantity by the persons

eligible to receive them. Often they were foods that increased caloric intake, but did not do much to correct protein and ascorbic acid deficiencies.

Other programs have been developed which should have a substantial impact on this problem. These include the Special Milk Program, the National School Lunch Program for children, and the Food Stamp Program for needy persons. Through these programs, Federal funds are provided to supplement local funds for the purchase of fluid milk or the variety of foods needed to meet the overall nutritional requirements of the school child or needy person. These programs are focused on nutritional needs. The farmer benefits through the resulting expansion of commercial markets for his products.

The National School Lunch Program

Federal assistance for school food service first became available during the early 1930's. Development of this project was accelerated by enactment of Federal legislation in 1935, whereby commodities purchased with funds under Section 32 of the legislative act making Federal assistance available were made available by the Department of Agriculture to schools serving free lunches.

The National School Lunch Act, which became effective June 4, 1946, made the program permanent. The basic purpose of the program, as spelled out in the legislation, is to safeguard the health and well-being of the Nation's children by encouraging them to eat more nutritious foods. Federal funds are provided to assist schools in the operation of nonprofit lunch services.

Each year approximately 1 million additional school children have access to noonday lunches under the National School Lunch Program. The level of expansion in the National School Lunch Program is reflected in the fact that about two out of three public school children were enrolled in schools affiliated with the program during 1957-58. Five years later, three out of four children were in schools affiliated with the program.

In 1965-66, an estimated 18 million children are receiving lunches each day under the program. Approximately 2.7 billion school lunches will be served this year. Of these, 1 in 10 will be served free or at a reduced price to needy children.

Currently the Federal Government is paying around 4 1/2 cents for each Type A lunch served. This lunch consists of 1/2 pint of fluid whole milk, 2 ounces of a protein-rich food or its equivalent, 3/4 cup of fruit or vegetables, a serving of whole grain or enriched bread, and 2 ounces of butter or fortified margarine. Without this food aid, the average price per meal would be substantially above the 25 to 30 cents now paid by the children.

States in which the average income is low are compensated at a relatively higher rate per lunch than those in which incomes are high. The purpose of this differential is to provide additional assistance to schools where the need for low-priced lunches and free lunches for needy children is greatest.

The Special Milk Program

Under the National School Lunch Program, plate lunches include a half-pint of fluid whole milk. Additional impetus for expanding milk consumption in schools came with the initiation of the Special Milk Program in 1954, pursuant to Public Law 690. In that year, Congress amended a price-support provision of the Agricultural

Act of 1949 to include milk service in public and private schools. The purpose of the legislation, as expressed in the act, was "....to increase consumption of milk by children in nonprofit schools of high school grade and under." In fiscal year 1955, $50 million was authorized for the program; in subsequent years this amount was increased to an annual level of approximately $100 million. In fiscal year 1957, the Special Milk Program was broadened to include summer camps, nursery schools, orphanages, and similar child care institutions. While the Special Milk Program began as primarily a program of price support for fluid whole milk, the concept has changed to one of nutrition, with increasing emphasis on the nutritional needs of the needy child.

Approximately 95 percent of the children enrolled in public and private schools are served milk at reduced prices under the Special Milk Program. This year (1965-66), 3.0 billion half-pints of milk are being consumed by children in schools and other institutions such as orphanages, day nurseries, and summer camps. This is in addition to the 2.9 billion half-pints of milk served with the Type A lunch. The combined amount is equivalent to over 5 percent of the total nonfarm fluid milk consumption in the United States.

Food Stamp Program

In mid-1961, the Food Stamp Program, a new approach to market expansion and a means of providing assistance to families with low incomes, was introduced for a 3-year trial period in eight selected areas. It was later expanded to 43 areas in 22 States. The Food Stamp Act of 1964 provides for progressive expansion of the program to all areas that desire to participate. In July 1965, 116 areas in 31 States and the District of Columbia were participating and about 640,000 persons were receiving assistance. The average recipient receives each month free or bonus coupons valued at $6.29.

The Effectiveness of the Programs

Program operators and legislators are concerned with whether these programs are effective and how they might be improved to better meet nutritional needs and benefit the farmer. In general, studies have shown that the Food Stamp Program is expanding the market for food in terms of physical volume and dollar expenditures. One study of a sample of households participating in the program revealed that recipients of food coupons in Detroit consumed food with a money value 34 percent higher than the value of food consumed during the preprogram period. Among rural recipients in Fayette County, Pa., the increase was 9 percent (42). In another study, an audit of retail food store sales was conducted in eight test areas where the pilot Food Stamp Program was initiated to determine the impact of the program on the total market (15). This study showed that after adjustment for seasonal variation, dollar sales of retail stores for the market as a whole were 8 percent above sales reported before initiation of the program. These studies also showed that demand for higher resource-using foods was strengthened by the Food Stamp Program. The full program has not been in effect long enough to gauge its ultimate impact on agriculture. But the evidence already available indicates it is effective in increasing the utilization of agricultural resources.

A study was conducted in Los Angeles and St. Louis to evaluate the effect of certain factors, including a sharp reduction in prices, on milk consumption in elementary and secondary schools during the 1954-56 school years (2). In both cities, a

marked increase in the average daily milk consumption per pupil in the public schools serving milk took place after introduction of the Special Milk Program. In the high schools, the average daily consumption of milk per pupil more than doubled in both cities. In the St. Louis elementary schools, daily consumption rose by 50 percent, and in the Los Angeles schools it rose by 68 percent. For the most part, the Special Milk Program tended to equalize the level of milk consumption among children from the different income areas of the two cities. Increases were most substantial among children attending schools in districts where the educational level of adults was low or average.

The case study in Los Angeles and St. Louis was followed by a nationwide study on the participation of schools and children in the National School Lunch Program and in the Special Milk Program (1). This study was designed to ascertain the extent to which schools and children participated in school lunch and milk programs, and the factors associated with participation or nonparticipation. It was found that in the survey month, March 1957, approximately two-thirds of the 33 million pupils in public elementary and secondary schools of the United States were enrolled in schools participating in the National School Lunch Program and one-tenth were in schools having no lunch service. Although a large percentage of children attended schools with a food service program, only about one-third of the pupils enrolled in the public schools below college level participated daily in school food services.

A subject of keen interest to program operators and those responsible for policy formulation is the net impact of the Special Milk Program on milk consumption and farm income. There are several important things to be considered in appraising the impact of this program on market expansion. In essence, the program establishes a dual price system in which students are faced with one price at school and another price at commercial outlets. The question is, to what extent do students shift from consumption of milk at home to consumption at school? Stated another way, is milk purchased in schools under the Special Milk Program substituted for milk which otherwise would have been drunk at home? Another question is, how much of the milk sold under the Special Milk Program replaces milk that students were drinking at schools which had a milk service before the program was adopted? A final question is, to what extent did the Special Milk Program make milk available in schools which previously had no milk service at all? In this last situation, almost all of the milk consumed under the Special Milk Program would represent a net increase in consumption.

The first two subjects were investigated in a study conducted in the Northeast (3). The results showed that children attending schools participating in the program drank slightly more milk at home than children attending nonparticipating schools, which indicates that no substitution was being made. Furthermore, students of schools participating in the Special Milk Program consumed 30 percent more milk at school than children in nonparticipating schools. When schools that are now participating in the Special Milk Program but which previously had no milk service are considered, it is apparent that school milk consumption has increased considerably.

Future Prospects

Despite rapid and continuing gains, there are pockets of nonparticipation in the domestic food aid programs. These trouble spots, in most cases, are those where nutritional needs are greatest. New procedures and approaches are required if these pockets of nonparticipation are to be removed. Research can help to develop more effective approaches to this problem.

There are more than 1.5 million children in public schools who do not have access to a school lunch service. In many schools, lack of kitchens and dining facilities is the major problem. Over time, new schools, complete with lunchrooms, will reduce these problems. However, methods must be developed that will make possible the use of central kitchens and the distribution of lunches to urban and rural schools where installation of kitchens is not feasible. Information on establishing and operating central kitchens was obtained in a study of eight selected food service systems using central kitchens (41). This study provides a systematic procedure for evaluating several alternatives for extending the school lunch program to older schools and should be helpful to administrators who are confronted with this problem.

Over the next several years, it is anticipated that more of the Federal food aid to needy families will be shifted from the Direct Commodity Distribution Program to the Food Stamp Program. The Food Stamp Act authorizes annual expenditures of up to $100 million in 1965-66, and up to $200 million in 1966-67. Program projections indicate that if within 5 years the program could be expanded to full scope, approximately 4 million persons could be receiving food coupons at an annual cost to the Federal Government of about $375 million.

Commodity distribution to needy families will continue at a reduced level. More than a thousand counties have chosen not to participate in the current commodity distribution program. In many of these counties, the number of needy persons is too few to warrant establishment of the administrative machinery. Some of the needy persons in these counties are being served by other means. However, in several hundred low-income counties, there is an unmet need for food assistance.

In the future, the emphasis will be on complex problems without easy solutions. We will be dealing with the exceptions that do not respond easily to the regular programs. Yet, within these problem areas lie some major trouble spots.

Domestic food aid programs have the dual objective of raising nutritional levels and making more effective use of agricultural resources. By providing food supplements to persons who otherwise would not receive them, these programs result in increased use of farm products and hence in higher incomes for farmers.

It should be emphasized that the average U.S. citizen is well fed. However, there are weak spots in the diets of some citizens.

SUMMARY

Market development programs have received increased emphasis in recent years. These programs represent efforts to deal with surplus production in agriculture, which has been a persistent problem for the past 45 years. The problem of market development has many dimensions: it starts with the producer and pervades the entire marketing system. However, this discussion has been focused primarily on those aspects of market development which relate to promotion and to food assistance programs in marketing. As a whole, these programs approach the problem of market development from the standpoint of both demand and supply.

Food assistance programs contribute to market development by enhancing effective demand where income is a restraint on consumption. These programs have the goal of improving the diets and the well-being of underconsuming groups--families with low incomes; inmates of charitable institutions; and children in schools, summer camps, and child-care centers.

Another area of market development is the promotional activity of farmer-supported organizations to create wants and preferences for more and better foods. Currently, there are about 1,200 agriculturally oriented organizations that are promoting farm products. They spent $86 million for promotional purposes in 1962, and budgeted $92 million for 1963. As these expenditures increase, many searching questions arise. For example, What is the impact of these expenditures on demand and how can it be measured? How can these funds be spent more effectively? These are difficult questions to answer, but research is helping to increase our understanding in this area.

Programs to develop and increase efficiency in the marketing system also are important. Increased efficieny enables marketing firms to lower prices to consumers and increase prices paid to farmers.

Market development programs, as discussed here, are not expected to solve completely the problem of overcapacity in agriculture. However, they are among the tools which may be used to reduce the magnitude of the problem.

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