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The Impact of the Changing Market Upon the  
Agricultural Structure of the Food Producer 1/

by

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INTRODUCTION

The functions necessary to move food from grower to consumer, such as production, processing, and all levels of selling, are becoming highly coordinated units of a single market system designed for an ever-enlarging volume of food products. Striking changes are occurring in the structure of the food market. The retailer in the past decade has assumed the position of prime mover in initiating a mass-consumption orientation of the food industry. Shifts in scale and technology has resulted in retailers developing price, brand, and promotion policies and, most important of all, have increased their ability to make these effective.

Retailing is the final step in a systematic, coordinated marketing program in which product planning, procurement, manufacture, and merchandising are integral parts.

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1/The authors express their appreciation to Professor George L. Mehren for suggestions useful in the preparation of this paper. His paper, "The Changing Structure of the Food Market," Journal of Farm Economics, vol. XXXIX, No. 2, May, 1957, pp. 339-353, gives systematic treatment to many of the economic changes whose consequences are analyzed here.

Effective retailer power means that profit determinants of the retailer are increasingly important in the description and appraisal of the entire food marketing structure. The line of effect through all industry levels is neither direct nor uniform but unmistakably present and strengthening. The purpose of this paper is to consider the impact of these changes in the food distribution system upon agricultural producers and their relationships with immediate processing and marketing agencies.

## CHANGES IN THE FOOD DISTRIBUTION SYSTEM

### Today's Retailer

Today there are approximately 400,000 retail food stores as compared with 600,000 in 1939. These 400,000 stores do an annual volume of about 47.5 billion dollars as compared with 10 billion dollars by the 600,000 stores in 1939. In 1939, 23 per cent of these sales were made by specialty stores handling but a few types of food items. Today only 10 per cent of total retail food sales are made by specialty stores.<sup>2/</sup> Annual surveys of the retail trade indicate that this trend is continuing and has accelerated during the past ten years. One-stop shopping dictates larger stores and complete food lines.

Supermarkets--those making annual sales of more than \$375,000--number only 9 per cent of the total stores, but they do 62 per cent of the business. Superettes with annual sales of \$75,000 to \$375,000 number 23 per cent of the stores but make 28 per cent of the sales. Hence, approximately 90 per cent of total food store sales are credited to only 32 per cent of the stores.<sup>3/</sup>

New supermarkets aim for at least \$30,000 in weekly sales, and of those in operation today, almost one half gross more than \$50,000 weekly. Square footage alone indicates the tendency toward volume operation. From an average

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<sup>2/</sup> The Progressive Grocer, Facts in Food and Grocery Distribution (New York, 1940 edition), pp. 2-3. The Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition), pp. 2-3.

<sup>3/</sup> The Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition,) pp. 8-9.

of 1,200 square feet 20 years ago, today's store measures an average of 15,000 square feet.<sup>4/</sup> Increased utilization of facilities through longer store hours and evening and Sunday opening has also contributed to larger store volumes. Store layout provides for faster flow of customers and less delay at check-out stands.

The number of items handled continues to increase averaging about 5,000 items today compared with less than 1,000 items 20 years ago.<sup>5/</sup> New food and nonfood products of all types account for nearly 20 per cent of sales.<sup>6/</sup> Inventory turnover has not declined even with the huge increase in number of items handled. This has been possible only through careful choice of products and merchandising methods.

Chain and independent stores both figure prominently in these developments. There has been very little change in the relative position of chains and independents in total food sales since the middle 1930's. Chains presently make 37 per cent and independents 63 per cent of total food sales.<sup>7/</sup> With expansion of store size has come the tendency to increase area of operations and total volume of business. This means multiplication of units through building new stores and through merger. During 1955, over 1,600 stores were affected by 45 transactions involving the acquisition of two or more

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<sup>4/</sup> "Retailers Tie in with C-7 Promotion," Western Grower and Shipper, vol. 27, No. 6, June, 1956, p. 52.

<sup>5/</sup> Mueller, Robert W., "Movements in the Retail Distribution of Food in the U.S.," Journal of Farm Economics, vol. XXXVII, No. 2, May, 1956, p. 339.

<sup>6/</sup> Ibid., p. 342.

<sup>7/</sup> The Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition), p. 15. Both have about the same number of supermarkets, but 53 per cent of the supermarket volume goes to chains and 47 per cent to independents. (Independents are defined to be those organizations with no more than ten units.) However, in the superette category independents make 85 per cent of the sales, and among small stores independents account for more than 99 per cent. Ibid., p. 9.

stores.<sup>8/</sup> Most of these stores were added to only nine firms.<sup>9/</sup>

There are indications that numerous "competitive" mergers occur to protect retailer market position in addition to size and other advantages gained. Often it is easier to expand to better locations through acquisition than through building new stores on available sites. Evaluation by investment institutions of the financial strength of food retailers generally indicates the definite advantage of wide geographical dispersion, large resources, and integration of manufacturing and distributive facilities. Financial requirements will probably encourage the horizontal, and possibly the vertical, expansion of medium-sized regional chains within the next ten years.<sup>10/</sup>

The vertical integration movement of the larger chains is indicated by the fact that the four largest national chains, doing about 18 per cent of the total food store business, all own and operate bakeries, milk-processing plants, coffee-roasting plants, and numerous distributing warehouses.<sup>11/</sup> Three of these own and operate canneries and general manufacturing facilities for processing and packaging bulk products. Two own and operate egg exchanges and candling plants and butter and cheese factories. At least one owns and operates laundries, bottling plants, poultry and meat dressing facilities, and produce-packing plants. The large chains have integrated purchasing departments

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<sup>8/</sup> Applebaum, William, and David Carson, "Supermarkets Face the Future," Harvard Business Review, vol. 35, No. 2, March-April, 1957, p. 129.

<sup>9/</sup> National Association of Retail Grocers, The Merger Movement in Retail Food and Grocery Distribution (Chicago: January, 1956), p. 11.

<sup>10/</sup> Applebaum and Carson, op. cit., p. 134.

<sup>11/</sup> The Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition), p. 17. Moody's Industrial Manual, American and Foreign (New York: Moody's Investment Service, 1956), pp. 1073-1074.

which operate as buying organizations in producing areas.

### Today's Wholesaler

The organization and operation of the wholesaling segment have become adjusted to changes in retailing methods.<sup>12/</sup> While large chains have tended to formally integrate the wholesaling function within their organizations, 44 per cent of the total grocery store sales in 1956 (compared with 29 per cent in 1947) were made by independents who buy through cooperative and voluntary wholesaling groups.<sup>13/</sup> These provide their members with most of the advantages of a formally integrated wholesaling function.<sup>14/</sup> Often the group name is widely used and group brands merchandised. Wholesaling can be characterized as becoming less of an independent, profit-seeking function and more of an integral part of the retail organization.

### Today's Processor

Food processors have increased greatly in their importance to total industry activity as the consumer has demanded more "built in" convenience features in food products sold at retail. Value added by manufacture to food and kindred products increased from 3.5 billion dollars in 1939 to

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<sup>12/</sup> Mueller, Robert W., "The New Look of the Wholesale Grocery Industry," address delivered before the National American Wholesale Grocers Association, Chicago, March 7, 1956. (Mimeographed.)

<sup>13/</sup> The Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition), p. 15. The voluntary group is usually sponsored by an established wholesaler. The cooperative group's facilities are retailer owned and managed.

<sup>14/</sup> A recent development in expanding the services of the wholesaler, particularly the voluntary group wholesaler, has been the increased scope of financial aid to retailers. Although extended credit to new stores has been general for some time, more direct aid in the form of guaranteeing loans to retailers, assuming building mortgages, leasing store buildings to retailers, and related types of assistance are widespread. See the Progressive Grocer, Facts in Grocery Distribution (New York, 1957 edition), p. 16.

13.5 billion dollars in 1954.<sup>15/</sup>

Processors are faced with increasing investment in equipment and facilities. Internal adjustments relating to private label products, lengthened product lines, and coordinated promotional programs are necessitated. The shift of many steps in food preparation from the kitchen to the processor, while it has vastly increased processor operations, has not had the effect of strengthening consumer-product control by processing firms.

#### Interrelationship of Retailer and Retailer-Supplier Activity

An understanding of the impact of these changes in market organization requires knowledge of the internal policies and practices now appropriate for firms at each level of the distribution process. Retail profit policy is concerned with the commodity mix sold, product differentiation, promotion and advertising, and pricing. To accomplish profit-maximization objectives, it is recognized that these interrelated retail activities must be subjected to a single authority with responsibility for the income position of the entire operation.

Commodity mix has centered on items geared to one-stop shopping, established products with new flavors, colors, sizes, or packages, and really new convenience products. More nonfood items are carried. Product differentiation tends to become store differentiation. Private labels strengthen consumer loyalty to the store--not the supplier. Retailers feel that space is best used merchandising their own brands, that better margins can be obtained for their own labels, and that the threat of underpricing by competitors

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<sup>15/</sup> U. S. Bureau of the Census, Census of Manufactures: 1947 (Washington: Govt. Print. Off., 1949), pp. 21-22. (Statistics of Industry, vol. 2.) Also, Preliminary Report, 1954 Census of Manufactures, General Statistics for the United States, by Industry Group and Industry; 1954 and 1947 (Washington: Govt. Print. Off., 1956), pp. 4-5. (Series MC-G-1.)

on the same brands is minimized.<sup>16/</sup> The national brand supplier is being forced to find new ways to combat or adjust to this trend.

No longer are retailers dependent upon point-of-sale, intrastors promotional procedures. Large-scale advertising and promotional programs reaching a wide area are techniques with which retailers can compete very effectively with other segments of the food industry. Retail pricing policies are becoming more dependent upon internal cost-volume-turnover relationships than upon supplier influence.

With the position of the retailer becoming clearly established, his procurement policies and practices have stimulated adjustments at all supplier levels. More purchasing is now accomplished on a straight price and specification basis. This has tended to decrease price negotiation and expand retailer relationships with suppliers in order to coordinate such factors as product planning, new product development, procurement, manufacturing, packaging, labeling and promotion, sales methods and organization, and market testing. The processor's control of important characteristics of consumer demand has diminished. Bulk specification items are handled by direct sale. Processors have been forced to seek products which are more effectively differentiated and methods which are not easily duplicated by retailers.

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<sup>16/</sup> A recent survey indicates that, among sectional chains and local supermarkets, 80 per cent of the stores surveyed were carrying more private label goods than five years ago. The national chains were not included in this survey, but it is assumed from past performance that they are even more inclined to use private labels. Although only 5 per cent of the firms surveyed felt that private labels draw customers better than national brands, they felt that the increased brand control and store differentiation were sufficiently advantageous. Zimmerman, R. G., "The Third Revolution in Food Distribution," Twenty-Eighth Boston Conference on Distribution (Boston: Retail Trade Board, 1956), p. 76. (Survey by Super Market Merchandising conducted in 1955 covering 99 companies controlling 1,600 supermarkets.)



## IMPACT UPON THE AGRICULTURAL PRODUCER

Changes which have occurred throughout the food distribution system have had a substantial impact on agricultural producers and their relationships with immediate processing and marketing agencies. Organization and operation of the marketing system are major determinants of farm demand. Farm level demand may be considered a "derived demand" but not in the usual, strict sense of a net price-quantity relationship. Marketing and distribution costs are not determined in a perfectly competitive market and then subtracted from the consumer-demand schedule to obtain the producer-demand curve<sup>17/</sup> Not only are there no uniquely determined processing and distribution costs to be subtracted but the dimension of demand is much more complex.

### Attributes of Today's Agricultural Market

An important change in the organization of the food market is the concentration of buying power reflecting the expansion in quantity of food purchases made by a relatively few large retail chains and groups of independents. To an increasing extent producers are not growing for an "open" market which will take whatever product happens to be offered but rather for a market where the buyer has considerable discretion over the terms of purchase.

Two changes have taken place in buying practices of the retail segment. These are represented by the trend toward direct buying and the tendency to gain closer coordination with suppliers through some type of vertical integration. Chain-buying organizations have been designed with an eye toward increasing direct purchases from growers or local assemblers such as producer cooperative associations or other first handlers. They tend to by-pass auctions, consignment markets, and wholesale commission markets and

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<sup>17/</sup> Fox, Karl A., The Analysis of Demand for Farm Products (Washington: Govt. Print. Off., 1953), p. 18. (U. S. Department of Agriculture Technical Bulletin No. 1081.)

thereby effectively shorten the marketing and distribution channel.<sup>18/</sup> Retailer requirements have come to bear much more directly on the producer.

Today's large retailer does not simply accept whatever is shipped to a terminal consignment market. Supplies available from these markets do not satisfy the requirements of mass merchandising, that is, large and stable supplies of a product of uniform and acceptable quality. The terminal market, such as the New York Fruit auction, was developed as a collection point for individual shipments from widely scattered loading points. Each lot is individually sold. Relatively small buyers, for whom these markets were developed, are able to fill their requirements of quantity and quality by careful selection among the lots presented. Each buyer's wants can be satisfied due to the wide variety of product specifications available. The large retailer cannot afford to depend upon this type

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<sup>18/</sup> These trends are indicated by the following statement from the 1956 Annual Report of the California Fruit Exchange: "The ever-growing influence of chain stores, large and small, coupled with the demands of members for f.o.b. sales, had its effect on our sales and distribution program. Of the total car movement, nearly 65 per cent of the tonnage was sold in private sale markets, and the remainder at auction in this country and in various foreign markets. The percentage of f.o.b. and private sales has been gradually increasing in recent years, while the percentage sold at auction has slightly declined. Another outstanding feature of the year's business was the heavy increase in California sales for consumption within the state and to larger chains distributing from California points of origin to destinations within and outside the state." The Blue Anchor, vol. 34, no. 1, February, 1957 p. 11.

of market to fill his demands <sup>19/</sup> The consequent market decentralization has changed institutional methods associated with price determination. Little is known about the repercussions of this on farm prices.

In order to maintain a better coordination between the retail level and the producer, the retailer has integrated with other marketing and distribution functions. As has been indicated, retailers in general and large chains in particular own and operate a wide variety of processing and handling activities. Not only does the operation of these activities give control of that particular function, but it moves the retailer that much closer to the producer and facilitates more effective influence over his activities.

The necessity to work more closely with the supplier has resulted in an altered relationship between buyer and seller. The buyer makes an active effort to influence produce specifications offered. Demand at the consumer level actually is a system of demands for a myriad of product classes where each class is defined by a set of specifications. Which of these product class demands are passed on to the farmer is affected to a large extent by the profit determinants of the retailer. As a result, farm level demand has become structured in terms of a much narrower range of product specifications since only one or very few of the product classes are chosen by the retailer to be offered to the consumer.

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<sup>19/</sup> Consider the transactions made on a terminal auction market. The buyer has no way of influencing the specifications of the products offered for sale except insofar as price conveys this information. As has been often observed, price serves very imperfectly to perform this complicated task of tailoring product specifications to what the buyer really wants. The variables other than specific physical product characteristics, such as volume offered on a particular day, weather conditions affecting consumption, or unusual transportation situations such as delay, strikes, and car shortages, exert influences on market price that cannot be interpreted with precision sufficient to govern producer activities in attempting to satisfy retailer specifications.

Product attributes desired by the retail segment are those compatible with the mass, self-service merchandising techniques used. Consumer demand characteristics are considered jointly with the cost structure of retail operations in arriving at these requirements. Important to the effectiveness of present-day retail methods is that a lesser variety of each type of product is offered for sale, and concentration is focused on volume items sold on low margins.<sup>20/</sup> For such reasons the profit position of mass food distributors has become increasingly sensitive to variations in certain product characteristics.

Important to self-service operations are pleasing appearance, desirable size, and good condition which can be maintained during expected shelf life. Attractive display is a basic tool of mass merchandising and adaptability to this device is a preferred product feature. Emphasis on self-service and impulse buying increases the value of eye appeal. Handling ease is often an issue between retailers and suppliers. Size and weight of master containers, standardized box size, and package shapes to fit store facilities are just a few of the areas having cost implications for the retailer.

High sales levels are maintained by offering continuously available supplies of those products whose characteristics have earned substantial consumer acceptance. It is not desirable to alter product offerings to the degree that extensive sales promotion methods are necessary to encourage purchases. Volume movement requires stability of supplies to avoid out-of-stock situations disruptive of the continuity of consumer purchase patterns. Uniformity of product attributes is vital for the same reason and also increases adaptability for prepackaging. Large retail buying organizations give emphasis to obtaining a high degree of stability of purchase prices over time. Variations in retail prices, in addition to having what many consider unfavorable effects on consumer purchase reactions, present a problem of store price marking

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<sup>20/</sup> Heflebower, Richard B., "Mass Distribution: A Phase of Bilateral Oligopoly or of Competition?" American Economic Review, vol. XLVII, no. 2, May, 1957, p. 275.

and accounting made major by the extremely large number of items handled.

### Integration of Farm Production and Marketing Activities

The changing retail requirements have been translated back toward the producer as a functional relationship now expanded to include a comprehensive list of product characteristics as independent variables affecting price. The most significant impact upon the farm producer of the changing demand structure of agricultural products has been to increase the dependence of his profit position upon actions taken by other producers and marketing agencies. Many of the product specifications now desired by retail organizations can be provided only as the result of a rather narrowly defined combination of actions by both producer and marketing firms. Others may be largely satisfied by the producer but only if the purchase requirements are transmitted to the farm level with sufficient precision. Satisfactory coordination of such functions physically performed by separate ownership units may best be obtained through an increase in the extent and degree of integration of these functions under some form of joint decision-making body.

This discussion will concentrate on the vertical integration of producers, which has been encouraged, with marketing agencies at the first-handler level.<sup>21/</sup> Although integration is defined in a variety of ways in economic literature, it is used here in a general sense to mean the existence of some measure of coordination of the decision-making processes of two or more stages of production. The existence of this phenomenon is obviously not new to the western region, and it did not have as its only cause the

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As used in this paper, first handler refers to marketing firms in direct contact with the producer, such as packers, processors, and other assemblers. Centralized sales departments of producer cooperatives are considered an integral part of these firms. Processors purchasing through cooperative bargaining associations are included as first handlers.

changes in market structure discussed earlier in this paper.<sup>22/</sup> These recent events, however, have intensified the desirability and, indeed, the necessity for the re-allocation of certain decision-making responsibilities between growers and first handlers.

Just as there are many reasons for these integrated relationships, there is a variety of forms which such interfirm coordination can take. Contractual arrangements exist between many vegetable crop producers and processors and freezers. Local commission merchants have expanded their operations to include financing and performance of production activities. Some fresh-market shippers have formally integrated into production and also contract early in the season with a number of growers for their output. Bargaining cooperatives have been initiated primarily for the purpose of coordinating matters of consequence to fruit and vegetable producers and processors.<sup>23/</sup> And, of course, producer marketing cooperatives are excellent examples of one form of producer-first handler integration.

Two conditions resulting from the changed methods of food distribution have given strong impetus to further integration along these lines. The first condition reflects the expansion in the list of product specifications for which actions are appropriate at the producer level. These include size, variety, appearance, and a number of other quality determining characteristics. To obtain satisfactory producer compliance, information on the particular attributes desired must be meaningfully transmitted to the grower.

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<sup>22/</sup> A more complete discussion of the reasons for integration at the growers level will be given in a forthcoming paper. See Mueller, W. F., and N. R. Collins, "Grower-Processor Integration in Fruit and Vegetable Marketing" (paper to be delivered at the American Farm Economic Association Annual Meeting, August 30, 1957).

<sup>23/</sup> U. S. Farmer Cooperative Service, Proceedings of the Conference on Fruit and Vegetable Bargaining Cooperatives held on January 12 and 13, 1957, Chicago, Illinois (Washington, D. C.), 68 p. (Mimeographed.)

The question, then, is: What is the most appropriate method for transmitting the relevant characteristics of the demand relationship? The price mechanism may seem to be the most suitable device, but by itself it cannot accomplish this task. In fact, there would be little need for many of the integrated relationships cited above if price provided the desired coordination of firm operations. The complexity of the demand function plus the uncertainties surrounding interfirm relationships in general make it difficult, if not impossible, for the producer to translate a price quotation (particularly if this is only an estimate of a future price at time of harvest) first into a set of the product characteristics which are implied and then in turn into a set of production operations to achieve these results. The more complex the set of specifications becomes for any product, the more difficult it is to reflect it to the grower in a payment system alone.

In order to obtain the desired supply response at the producer level, an integrated relationship has often been promoted in which the marketing agency is granted some decision-making power over specific production practices. A contract is usually the legal basis for such arrangements. Provisions are frequently included for control of such production methods as fertilization, irrigation, and insect control measures; planting dates; and maturity standards and harvesting techniques.

A second condition has also increased the necessity for integrating farm production activities with the operations of marketing firms at the first handler level. Many of the product characteristics which are most important to profitable retail operations cannot be achieved efficiently by actions taken independently by either an individual farm producer or marketing agency. Producer and first-handler actions must be combined in particular proportions to attain the optimum adjustment of their combined efforts. Among such attributes are uniformity of product, stability of supply, and availability of large volumes. Since farms are relatively small, the output from a large number of separate ownership units must be coordinated to supply retail requirements adequately. Vertical integration of the activities of a group of growers with those of a marketing firm is probably the most effective device to achieve desired horizontal integration or coordination at the producer level.

Without producer coordination, the grading, sorting, packing, and processing activities alone cannot satisfy the uniformity requirements. If each grower makes his production decisions independently, raw product quality, varieties, and other attributes can easily be so diverse that desired uniformity is to be achieved only at the expense of satisfactory volume. Efficient plant operation and stability of production in most processing industries are very dependent upon the characteristics of the raw product supplied. The sensitivity of the income positions of both producer and first-handler firms to the actions of the other encourages increased integration.

### Producer Cooperative Marketing Associations

There are many problems associated with implementing this increased inter-firm coordination. Of particular importance to the western region are the activities in this regard of producer marketing cooperatives. Since growers actually own and operate assembly, processing, and selling facilities, one might conclude that an ideal framework exists for adjusting producer activities to market demands. The methods and techniques employed by most cooperative organizations, however, do not seem to facilitate, much less guarantee, optimum coordination.

The attainment of decision-making control over members' production practices is not one of the historical objectives of marketing cooperatives.<sup>24/</sup> Characteristically, the member has remained largely autonomous with respect to the making of production decisions. The task of the cooperative organization, then, consists primarily of preparing the product in the most advantageous manner through grading, sorting, or processing, and then selling it for the highest possible return. A constraint is placed upon cooperative management since its function is to prepare and sell what is delivered by the members. When any element of an integrated enterprise is forced

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<sup>24/</sup> Professors Bakken and Schaars have presented a list of the "basic principles" of producer cooperative marketing associations. Control over members' production practices was not included. Bakken, H. H., and M. A. Schears, The Economics of Cooperative Marketing (New York: McGraw-Hill Book Co., 1937), p. 166.



to take essentially as "given" the actions of other elements, the total economic return will be less, and perhaps much less, than if lines of authority are instituted to coordinate the decision-making for all components.<sup>25/</sup> A reappraisal of the relationship of cooperatives with their membership is needed to determine the possibilities for better achieving this coordination within the cooperative framework.

The marketing problems facing producer cooperatives require more than the adjustment of packing, processing, and selling methods. These are important, however, and cooperatives have been and will continue to be prominent in the development of better handling procedures and facilities. The providing of product features desired by the retail segment will necessarily involve increased handling costs and increased tonnage of low-value, unsalable, or culled-out products unless correlative adjustments are made in production practices.

Within the cooperative structure, payment procedures granting premium differentials for desirable product characteristics are a usual method of influencing production practices. The weaknesses (cited above) associated with the use of the price mechanism to coordinate production decisions, of course, also apply to the use of payment differentials as a satisfactory integrating device. Certain other difficulties also present themselves. The increasing differential in selling costs between products meeting the specifications demanded by mass distributors and those for which other outlets must be found is seldom considered in cooperative payment systems. Yet, the selling expenses for disposing of small quantities of nonstandardized products are relatively greater.

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<sup>25/</sup> Along these lines, the statement of the sales manager of the California Prune and Apricot Growers Association is of interest: "Our problem this year is to find a way to persuade shoppers to purchase Mediums and Breakfast Prunes when they actually want Large or Extra Large." And ".....growers would be far better off in their total returns and our job would be a lot less difficult if they were to adopt cultural practices that favored the production of a larger proportion of prunes of carton quality and sizes." Sunsweet Standard, vol. 39, no. 9, p. 2, February, 1956.

Although payments systems are being improved along these lines, it is doubtful that information on demand characteristics conveyed in this manner can ever be adequately translated by the member in terms of the most appropriate production practices. For this reason, some cooperative organizations have taken steps to exert control over production methods. The Poultry Producers of Central California have promoted a dry brush egg program and farm refrigeration.<sup>26/</sup> Citrus associations have taken over some of the spraying and harvesting for their members. Field departments have been expanded in order that more time may be spent with growers in planning their activities. Through their supply departments, recommended varieties of rootstock and improved insecticides are offered to members. Although active control of production practices through grower cooperative organizations is not widespread at the present time, future developments in cooperative marketing will undoubtedly include achieving such integration as one of the basic objectives.

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<sup>26/</sup> Some measure of grower resistance has been encountered by the Poultry Producers of Central California and other cooperative groups when instituting such changes. One member expressed himself this way: "Good producer-Association relations are naturally important. One accepts and even seeks sound advice, but no one likes to be dictated to (even when the iron fist is wrapped in a bonus). First there was insistence on dry cleaning, now refrigeration. What next?" The cooperative management replied that, in order to "satisfy the consumer...we advised our members with respect to quality programs on the ranch, such as avoiding egg washing which was hurting our quality and causing consumer dissatisfaction, and our advocacy of farm refrigeration, which has proven generally that it can assist in delivery of quality eggs to the consumer." Nulaid News, vol. 34, no. 4, September, 1956, pp. 22 and 24.

## RESEARCH POSSIBILITIES

The implications of the changing structure of the food marketing system suggest a research approach which considers more explicitly the interdependence of firms at all levels. Answers to these kinds of questions are required: What are the effects of the various methods of integration on farm income? What is the influence on farm prices of the decreased importance of the terminal auction and consignment markets? What adjustments are appropriate in the internal organization and methods of operation of established marketing agencies if the extent of integrated interfirm activity is increased? What are the possibilities for making these adjustments within the cooperative organizational structure? Mass merchandising and related developments are raising issues which can only be specifically considered through intensive study of such problems.