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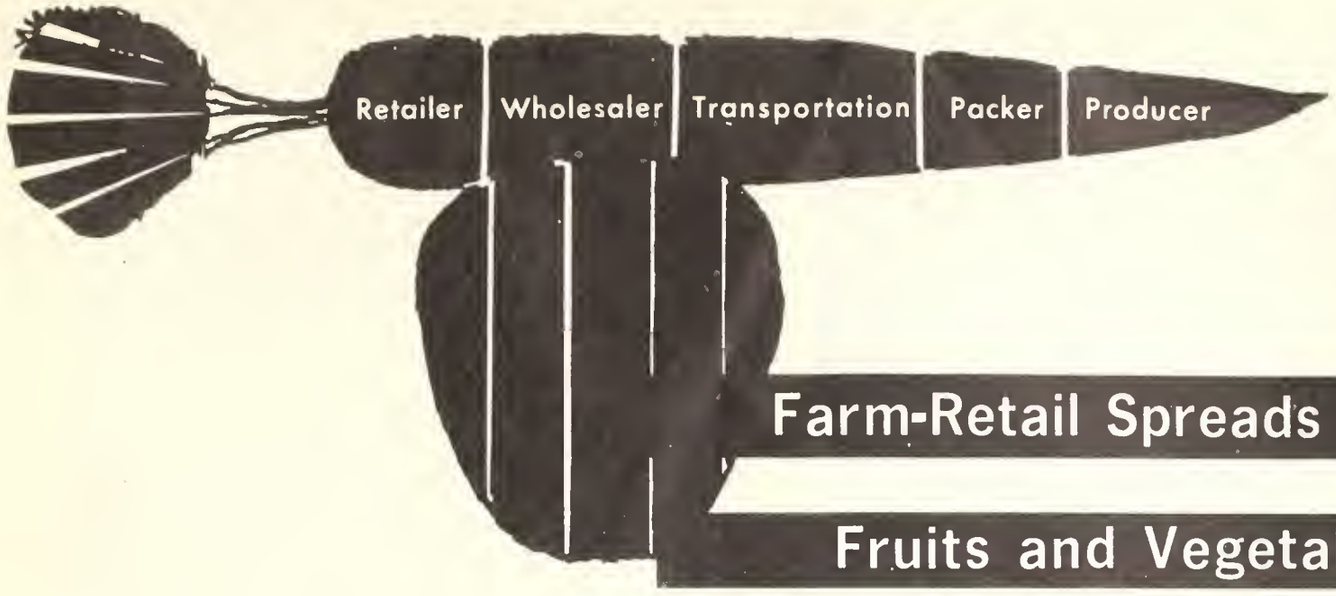

Farm-Retail Spreads For Fruits and Vegetables

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Who gets the retail dollars spent on farm commodities? Although this question is currently receiving much attention, concern in this regard is not a recent development. Early in the agricultural history of the United States the task of marketing farm products began to shift from producers to specialized marketing agents. As a consequence, producers received only a portion of the retail price and they soon had doubts as to the equity of their share. Marketing agents also became increasingly aware of their shares as the scope and complexity of marketing increased. Most recently, the President focused attention on the consumers' stake in the issue and initiated measures in their interest including the appointment of a Special Assistant to the President for Consumer Affairs and requests for Congressional support.

In response to the growing need for information on the division or sharing of the retail value of farm products, the U.S. Department of Agriculture developed a broad, continuing research program in the area of farm-retail spreads for food products. Information stemming from this program has been made available in numerous publications issued by the Department. An example is a recent release, Statistical Bulletin 340, "Prices and Spreads for Fresh Fruits and Vegetables Sold in Selected Markets, 1956-1962."

It is the purpose of this article to explain how this and similar publications are prepared and how they may be interpreted and utilized most effectively.

Farm-Retail Spreads Defined

Expenditures by consumers for food are divided between two groups—the producers, and the agents who perform the functions of marketing. In terminology adopted by the Department of Agriculture, the portion received by producers is called farm value or growers' return and the part received by marketing agents is called the farm-retail spread or marketing margin. The farm-retail spread is, therefore, the difference between the farm value of a given amount of a commodity and its retail value adjusted for loss incurred in marketing. It is the total of charges made by those who perform food product services between farms and consumers. The usefulness of this statistic may be increased by dividing it into components. This can be done on the

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Mrs. Ruth Morrison. Mrs. Morrison is a statistical clerk who has maintained the files of basic data from which fruit and vegetable margins are calculated, since the files were started in 1955.

basis of marketing services—packing, storing, transporting, wholesaling, and retailing. Or, if sufficient data are not available less detailed breakdowns may be used.

Margins should not be confused with profit. They include marketing costs plus profit or less loss.

Preparation and Use of Margin Reports

Margin data maintained on a continuing basis provide an excellent description of trends and also are well suited for more detailed economic analysis. Essential to a continuing program are dependable sources of accurate basic information from which margins can be calculated. USDA Statistical Bulletin 340 will be used to illustrate the types and sources of information required.

The basic data in this report are commodity prices reported at three levels in the marketing channel—retail, wholesale, and shipping point. Retail prices are collected by the Bureau of Labor Statistics. For the commodities in Bulletin 340, they are obtained in a sample of retail food stores in selected metropolitan areas by trained personnel who are supplied with detailed commodity specifications as to grade, size, variety, pricing unit, and other characteristics. Prices are collected on Tuesday, Wednesday, and Thursday of a week in the first half of each month. Wholesale prices are supplied by the Federal-State Fruit and Vegetable Market News Service. These prices are collected daily by Market News reporters stationed in major markets. Prices are obtained from first wholesale handlers on sales in less than carlot quantities and are reported by grade, type of container, origin, and other factors. Shipping point prices (f.o.b.) are also supplied by the Federal-State Market News Service. These are the average of daily prices received by a broad sample of shippers in representative shipping districts. They are reported by grade, size, variety, type of pack, and other relevant information. Auction prices are used for some commodities. These are an average weekly price calculated by weighting average daily prices of all auction sales in a market by the daily volume of sales in that market.

Other information collected includes auction and brokerage selling charges, rail and truck transportation rates, and costs of picking, hauling, packing, and storing. These are obtained from various private and public sources wherever available. Although cooperation in this regard has been excellent, lack of some of these data prevents a detailed breakdown of spreads for all commodities.

Method of Calculation

Ideally, all data used to calculate margins should be for a given lot of a commodity and be obtained as that lot moves through the marketing channel. The price at each point of sale should be determined as well as the charge for each service performed. With this information the allocation of the final selling price among the marketing agents and the producers would be known exactly and margins could be reported without error. However, the monetary and other resources required to apply this method to a large number of commodities, markets, and production areas precludes its use.

Instead, a satisfactory alternative is to select a typical market channel and typical marketing services for each commodity. Then a time lag between pricing dates at each level of the market channel is used that closely approximates actuality. In this report, the retail price is an average for Tuesday, Wednesday, and Thursday, the wholesale price is for Tuesday of the same week and the shipping point price is an average of the daily prices for the preceding week. All prices for each commodity are matched as to grade, size, variety, and origin. The retail price, which is obtained in consumer units such as per pound, head, or dozen is converted to a container basis and adjusted for the amount of waste and loss that occurs in the marketing process.

Spreads were calculated from these prices. The retail spread is the retail price less the wholesale price. The shipping point-retailer spread is the wholesale price less the shipping point price. This spread includes the amounts received by marketing agencies between the shipping point and the retail outlet—in most cases transportation and wholesaling. The shipping point price is the amount received by marketing agencies in the production area and the growers and is termed grower-packer spread. Each spread is shown also as a percentage of the retail price.

Uses and Application

The time required to collect basic information, make calculations and publish the results causes margin data to be historical when released. Their value is, therefore, dependent on the extent to which price and margin behavior and relationships of the past can be interpreted and applied to marketing situations of the present or future.

Through appropriate methods of analysis, these statistics reveal important information about the workings of the marketing system and as they are accumulated over longer periods of time, their worth for this purpose will increase. However, complicated methods of analysis are by no means essential for beneficial use of these data. A great deal of useful information can be obtained by mere inspection or through very simple calculations.

Table 1—Corn, fresh, yellow: Prices, spreads, and grower-packer share per crate, Minneapolis, by months, 1957-1962 [1]

Item	May	June	July	Aug.	Avg.
Prices			**Dollars**		
Retail [2]					
1957	5.40	5.06	4.38	2.24	4.35
1958	5.18	5.30	5.18	1.80	4.12
1959	5.68	4.95	4.48	1.80	4.70
1960	5.75	4.38	4.53	2.43	4.20
1961	4.58	4.59	5.54	2.12	4.00
1962	5.07	4.57	4.52	2.58	4.10
Wholesale					
1957	4.75	4.50	4.60	1.50	3.73
1958	3.25	4.50	4.75	1.25	3.13
1959	4.75	3.90	3.60	1.00	3.73
1960	4.35	3.00	4.00	2.35	3.30
1961	4.25	4.00	4.85	1.75	3.67
1962	4.75	3.35	2.75	2.25	3.25
Shipping point (f.o.b.) [3]					
1957	2.80	—	2.38	1.25	2.20
1958	1.70	2.25	2.18	1.00	1.67
1959	2.40	2.20	1.82	1.00	2.05
1960	2.50	1.25	2.74	1.90	1.80
1961	2.40	2.40	3.22	1.47	2.26
1962	2.80	1.50	1.88	2.00	2.08
Grower-packer share of retail price			**Percent**		
1957	52	—	48	56	51
1958	33	42	42	56	41
1959	42	45	40	56	44
1960	44	28	60	78	43
1961	53	52	59	69	57
1962	55	33	42	78	51
Spreads			**Dollars**		
Retail					
1957	.65	.56	.38	.74	.62
1958	1.93	.80	.43	.55	.99
1959	.93	1.05	.88	.80	.97
1960	1.40	1.38	.53	.08	.90
1961	.33	.59	.69	.37	.33
1962	.32	1.22	1.77	.33	.85
Shipping point-retailer					
1957	1.95	—	2.22	.25	1.53
1958	1.55	2.25	2.57	.25	1.46
1959	2.35	1.70	1.78	—	1.68
1960	1.85	1.75	1.26	.45	1.50
1961	1.85	1.60	1.63	.28	1.41
1962	1.95	1.85	.87	.25	1.17
Retail spread as percentage of retail price			**Percent**		
1957	12	11	8	33	14
1958	37	16	8	30	24
1959	16	21	20	44	20
1960	24	32	12	4	21
1961	7	13	12	18	8
1962	6	27	39	12	21
Shipping point-retailer spread as percentage of retail price					
1957	36	—	44	11	35
1958	30	42	50	14	35
1959	42	34	40	—	36
1960	32	40	28	18	36
1961	40	35	29	13	35
1962	39	40	19	10	28

[1] Crate of 5 dozen ears, U. S. Fancy.
[2] 6 percent allowance for loss incurred during marketing process.
[3] Origin—May and June, Florida; July, California except in 1962 from Minnesota; August, Minnesota.

A common use of margin data is for pertinent information on a specific commodity sold at a particular time and place. Table 1 is a typical example and illustrates how the statistics are presented. Prices for fresh yellow corn from 1957 to 1962 are shown at shipping point and in Minneapolis at wholesale and at retail. The retail price is broken down into the retail spread, the shipping point-retailer spread and the grower-packer share. Other information, including production area, is in footnotes.

Seasonal Patterns

These data are shown both on a monthly basis and as seasonal averages. A careful examination and comparison of monthly prices and spreads may disclose a seasonal pattern of behavior. Pronounced seasonal behavior is characteristic of commodities having a short marketing season during which supplies change quite rapidly from scarcity to relative abundance to scarcity. Prices for these commodities, and spreads also to some extent, are extremely variable. Cantaloupe and grapes are typical. For example, the September retail price for cantaloupe averaged in three markets over five seasons was only 75 percent of the June price. Similarly, the retail price for Thompson Seedless grapes in September, averaged for four markets over five seasons, was 64 percent of the July price. Consumers especially, and also marketing agents and producers, may be able to take advantage of such seasonal behavior.

To those who must cope with the problems resulting from such wide variations, general stability as displayed by, for example lemons, might seem an enviable contrast. In four markets over five seasons the seasonal average retail price of lemons varied only from $6.00 to $7.29 per carton. Within individual markets there was even less variation. Lemon margins were also very stable. Total marketing charges over five seasons ranged from 78 to 86 percent of the retail price for lemons sold in Atlanta. These charges ranged from 82 to 85 percent in Chicago, from 73 to 76 percent in Los Angeles and from 83 to 87 percent in New York City. This stability can be at least partly attributed to year-round marketing of the crop and also to a partially regulated marketing situation.

Can Disclose Trends

As monthly data can reveal seasonal behavior, so seasonal data can disclose trends. Information on the long-run changes in spreads and growers' returns is one of the most important uses of margin data. However, some precautions must be observed. Because there is typically considerable month-to-month and season-to-season variation in fruit and vegetable prices

and spreads, especially the retail spread, trends are often obscured. In most cases data covering only five or six seasons do not provide a reliable basis for determining trends. However, marketing margins for most commodities increased during the period 1956-1962. Price advances were also common but not to the extent of margin increases. Of specific commodities, potato margins were among the most definite and consistent as to trend. The retail spread as a percentage of the retail price for all varieties in nearly all markets trended upward. The general pattern was not without exceptions, however. For example, the retail margin for California celery sold in Chicago decreased from 52 percent of the retail price in 1957 to 43 percent in 1962.

Vary By Commodity

Marketing margins often vary widely among commodities. Their highly individualistic behavior is illustrated in Table 2 which contains spreads as a percentage of the retail price for eight commodities sold in New York City from 1957 to 1962. Some of their differences, as in transportation, are explained by relative weights and shipping distances. Others are related to the amount of labor and other costs involved in grading and packing operations. Some of the biggest differences, and also the most difficult to explain are in retail spreads. The reasons are at least partly related to pricing methods used in large, multi-unit firms. These firms operate in an imperfectly competitive market situation that permits leeway to individual firms in setting their prices and margins. Under such conditions prices and margins are a function of firm policy.

Table 2.—Marketing spreads as a percentage of the retail price for selected commodities sold in New York City, 1957-1962

Year	Carrots	Celery, pascal	Lettuce, Iceburg	Onions, dry yellow	Potatoes, round white, old	Potatoes, western Long White	Potatoes, western Russet	Sweet-potatoes
				Percent of Retail Price				
				Retail spread				
1957	27	45	—	—	—	41	—	—
1958	40	44	12	42	38	40	45	32
1959	33	45	16	40	59	40	49	33
1960	37	46	16	59	48	44	43	47
1961	37	41	17	63	56	51	44	45
1962	37	45	23	51	62	47	52	39
				Shipping point to retailer spread				
1957	26	26	—	—	—	39	—	—
1958	20	27	46	15	14	36	25	13
1959	25	29	46	8	14	26	27	12
1960	25	29	42	9	12	27	23	10
1961	21	31	49	7	13	32	23	10
1962	23	24	41	5	14	31	27	7
				Grower-packer spread				
1957	47	29	—	—	—	20	—	—
1958	40	29	42	43	48	24	30	55
1959	42	26	38	52	27	34	24	55
1960	38	25	42	32	40	29	34	43
1961	42	28	34	30	31	17	33	45
1962	40	31	36	44	24	22	21	54

The rationale underlying these policies varies widely. In multi-product firms such as retail food stores, pricing and margins policy is but a part of their competitive strategy. This strategy is generally developed in an over-all, firm-wide framework and then projected downward through the organization. The objectives are finally transmitted to the commodity level where pricing takes place. However, objectives that were rational and reasonable from an over-all view may appear to be neither from the standpoint of a single commodity. Firm strategy developed thus within a product-mix context and employing nonprice as well as price competition may result in prices and margins that cannot be logically explained on a commodity basis. It should be noted also that variations in the retail margin expressed as a percentage may be the result of a stable absolute margin and a widely varying retail price.

Retail Margin Large

The retail spread receives considerable attention because of its relatively large size and its variability. The average of retail spreads for fruits and vegetables included in the report *is nearly 40 percent* of their retail prices. Of the 18 commodities, dry onions had the largest retail spread during the period 1957-1962, about 52 percent. The retail margin for potatoes was also high—nearly 46 percent—but there was considerable variation both among varieties and markets. The high margins for onions and potatoes may be at least partly explained by their inelastic demand and low per unit price compared with most other commodities.

Retail spreads for lettuce and corn were at the other extreme. The retail spread for lettuce averaged about 20 percent of the retail price in six markets over five seasons. In some markets, seasonal averages were as low as 12 percent and monthly spreads below five percent were not uncommon. The retail spreads for corn were also relatively low during most seasons. In Minneapolis the range was from eight to 24 percent of the retail price and in Seattle and Washington, D. C. somewhat higher.

The Development of Research

Historically, interest in the distribution of the retail value of farm products and requests for research in this area tended to wax and wane with decreases and increases in the level of prices. One of the pioneer studies resulted from the sharp drop of farm prices in 1920-21. The 67th Congress created the Joint Commission of Agricultural Inquiry and required it to investigate and report on the agricultural crisis and related problems. Part IV of the Commission's report, which dealt with marketing and distribution, showed the proportion of the consumers' dollar taken by each distributor, manufacturer, or producer for more than 200 commodities in the period 1913-1921. The decline in farm prices that occurred during the 1930's again stimulated research on farm-retail spreads. One of the

outstanding studies of this era originated in a Congressional directive to the Federal Trade Commission to investigate and report the extent of decline in agricultural income and other problems including the distribution of the consumers' food dollars.

In the U. S. Department of Agriculture, methodology for research on farm-retail spreads was quite well developed by the early 1900's. Two statistical series of the Department date from 1913. In 1935 the Department issued a report titled, "The Margin Between Farm Prices and Retail Prices of Ten Foods." The following year coverage was expanded to 58 food items. Increased emphasis on this type of research resulted from the Agricultural Marketing Act of 1946 which, among other things, directed the Secretary of Agriculture to determine the costs of marketing agricultural products and to foster marketing methods that would reduce the price spread between producer and consumer. For a number of years, Congress has allocated funds earmarked specifically for research on marketing margins. Gradually, the research objectives of this program have broadened to include, in addition to description of size and trends, a breakdown of the farm-retail spread into components and an explanation of factors affecting the spread.

The Present Research Program

Two major statistical series have evolved from the Department's research program—the market basket and the marketing bill. These appear regularly in the "Marketing and Transportation Situation," a publication of the Economic Research Service, USDA. The market basket of farm food series consists of the retail cost, farm value, farm-retail spread, and farmers' share of the retail cost of a fixed quantity of food—the average amount bought per family for home consumption by urban wage-earner and clerical-worker families. These series measure changes in farm and retail prices and marketing charges, and changes in the shares received by farmers and marketing agents but do not account for changes in services or types and quantities of food purchased. The data are also shown by commodity groups, one of which is fruits and vegetables. This group is further divided into fresh and processed products and in addition, information is presented for 47 individual commodities.

The farm food marketing bill series, on the other hand, measures total domestic civilian expenditures for food products originating on farms in this country, the total amount received by farmers for the equivalent farm products and the total amount received by marketing agencies. This series, therefore, is affected by variations in volume marketed, unit marketing charges, and changes in marketing services associated with the food products.

Since 1956, while continuing existing series, the Department's margin program has been expanded to permit reporting in greater detail. Data collection was increased so that margins could be calculated for commodity subdivisions. For fruits and vegetables this consisted of breakdowns by varieties or types, grades, sizes, markets, and production areas. In addition, studies have been made of individual commodities or products that present a detailed breakdown of the distribution of the retail value together with some explanation and analysis. Most of the common fruits and vegetables have been the subject of at least one such study. Although these reports have the advantage of considerable detail, they have the disadvantage of being limited to a relatively short time period and do not show long-run changes.

Conclusion

Interest in the division of the retail value of farm commodities among marketing agents and producers developed concurrently with the historical shift of marketing functions from producers to specialized marketing agents. At first the interest stemmed primarily from farmers and farmer-oriented groups. Later, particularly with the advent of government agricultural programs, various economic and legislative groups required information on farm-retail spreads. In response to the general interest plus numerous specific needs, the Department developed a broad, continuing research program in the area of price spreads.

While it may be assumed that this program has contributed to adjustments and improvements in the marketing system, there yet remains the challenge of many unanswered questions. For the future is the task of increasing the accuracy of measurement plus more complex problems such as gaining a better understanding of the underlying methods and rationales associated with spreads, measuring the distribution of the retail value relative to returns to input resources or other suitable standards, and applying new knowledge so as to increase marketing efficiency.

PRICE STATISTICS IN UNITED'S LIBRARY GO BACK SCORES OF YEARS

Why anyone would want to know the wholesale price of mushrooms by months for the last 10 years; the retail price of bananas in 1919; or the farm price of potatoes in 1866 can't be explained here—but requests of this kind come in to the United library. Such prices are readily provided, or a reference given to the appropriate source. The United library maintains price series on fresh fruits and vegetables for many years, just as it maintains material, both new and old on almost all phases of marketing of these products. The library's large and continually increasing resources are at the service of United members.

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