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# MINNESOTA farm business NOTES



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## Low Food Cost—A Consumer Benefit from Agricultural Efficiency

Frank Smith, S. A. Engene, and Dale C. Dahl

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*The high cost of government programs for agriculture has been widely publicized. The public has been rightly concerned about it. But, the consumer has another important stake in the farm situation that needs emphasis.*

*Increased production in agriculture, without similar increases in demand, caused low farm prices. As a result, consumers received important benefits. They had more and better food, at prices that rose less rapidly than for most other commodities. This issue of Minnesota Farm Business Notes is devoted to this development.*

For example, this factory worker spent only 24 minutes to earn enough to buy 1 pound of choice beef in contrast to almost 32 minutes during 1947-49.

Another measure of the real cost of food is the proportion of disposable income spent for food. In recent years, this proportion declined. In 1947-49 the average family spent 26 percent of its income after taxes on food. By 1960

**Table 1. Quantities of food 1 hour of factory labor would buy, 1947 to 1960**

Item	1947 to 49	1960
Beef, choice (lb.).....	1.9	2.5
Pork cuts (lb.).....	2.2	3.6
Milk, fluid (qt.).....	6.5	8.1
Eggs (doz.) .....	1.8	3.6
Bread, white (lb.).....	9.6	10.1

Most people notice a rise in the prices of the things they buy. This is particularly true for food, because they buy it frequently and it is an important part of the family budget.

same period, the prices of all other consumer goods and services rose by 30 percent (see figure 1).

This less-than-average increase in food prices saved the consumer in his food bill. Consider these price increases in terms of the cost of all food—the total U.S. food bill.

In 1960 consumers paid about \$60 billion for domestically-produced food. If food prices rose to 130 percent of the 1947-49 level, as was true for nonfood commodities, the 1960 food bill would have been about \$65 billion. In other words, this slower rise of food prices saved the consumers \$5 billion in 1960. This was an average of \$100 per family of four.

this dropped to 20 percent. This drop came in spite of shifts toward the consumption of more expensive foods and those including more marketing services.

**Marketing Costs**

The prices discussed are for food at the retail level. At this level the food dollar pays for two things:

1. Raw materials—the nutrients—as they come from the farm.
2. Processing, transportation, storage, and selling costs necessary to bring the product to the consumer when, where, and how he desires. Thus, the food dollar buys not only food, but food services as well.

The food raw materials are often only a small part of the total cost. A 1 pound

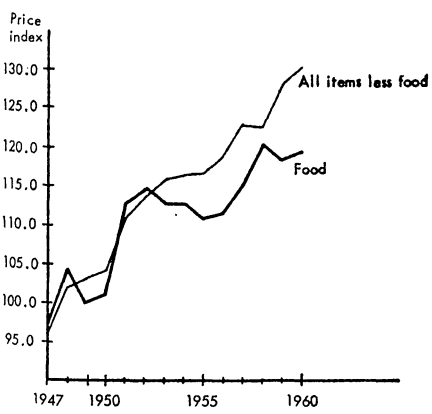


Fig. 1. Consumer price indexes, by special groups, for city wage earner and clerical worker families, 1947 to 1960 (Indexes: 1947-49=100).

Despite an upward trend in prices, food remained a good buy for the American consumer compared to non-food items. Food prices, including food purchased in restaurants, increased 20 percent since 1947-49. However, in the

**Real Cost of Food**

Increased prices alone do not measure the real cost of food to the consumer. Price increases can be offset by more rapid wage increases. A better measure is the amount of food that can be bought with 1 hour of labor at different times (see table 1).

Wages increased faster than food prices. Therefore the real cost of food declined. In 1960 1 hour's wages (factory labor) bought more food than it did in the late 1940's.

**Table 2. The farm food market basket: retail cost, farm value, farm retail spread, and farmer's share of retail cost, 1947 to 1960**

Year	Retail cost	Farm value	Farm-retail spread	Farmer's share
	dollars	dollars	dollars	percent
1947-49 average .....	940	466	474	50
1953 .....	1,003	445	558	44
1957 .....	1,007	401	606	40
1960 .....	1,052	408	644	39

Source: *The Marketing and Transportation Situation*, Economic Research Service, USDA, Washington, D.C., July 1961, p. 5.

loaf of white bread is an extreme example of this. In 1960 this loaf cost an average of 20.3 cents. Where did the money go?

	(cents)
To the farmer .....	2.8
To the miller, grain handler, and transporters .....	2.2
To the baker .....	11.9
To the retailer .....	3.9
Total .....	20.3

The farmer's share was only 14 percent of the price. The marketing margin absorbed the remainder. The marketing margin size varies from commodity to commodity. This depends on the degree of processing necessary, the distance transported, storage, and other requirements. In 1960 off-farm services for all food commodities purchased in retail stores absorbed an average of 61 cents of every consumer dollar spent for food. This ranged from about 35 cents for eggs to about 86 cents for bread.

### The Market Basket

What has happened to these two parts of retail food cost—the price of basic material as supplied by the farmer and the marketing charges added in getting it to the consumer? One way to

study this is to look at the cost of a “market basket” of food.

The *market basket* is a measure of the value of typical quantities of 60 domestically-produced farm foods purchased by urban families in 1952. The average quantities purchased are fixed. Therefore, changes in the value of the basket represent price changes (see table 2).

The annual expense of the typical urban family for the same quality and quantity of food in this basket rose about 12 percent from 1947-49 to 1960. This measure of food price increase is less than the 20 percent cited earlier. This is because it does not include many additional food products or foods purchased at eating places. It also does not account for any changes in food quantities.

The actual retail cost of the market basket rose from \$940 in 1947-49 to \$1,052 in 1960. None of this increase, however, was due to increases received by the farmer. Instead, the farm value of the market basket actually *declined* from \$466 in 1947-49 to about \$408 in 1960.

The higher cost of the market basket was due solely to an increase in the farm-retail spread, usually called “the marketing margin.” The marketing margin rose \$170 from the late 1940's to 1960. This more than offset the \$58 reduction in the cost of the farm products.

A large part of the marketing margin increase was due to higher wages for workers who process and distribute farm food products. Other factors included higher material and transportation costs, larger rents, and higher interest payments.

The increase of \$170 in the typical family's annual cost of marketing services included only the part due to rising prices. To this must be added the cost of the increased services consumers get along with their food.

### More Food Services

The American family not only wants good food, but also convenience in food preparation. The household maid service of yesteryear mainly has been replaced by built-in maid service in the food itself. Some cutting, cleaning, and preparing of a meal is now done by processors before the products reach the consumer.

Many of these additional services did not increase food cost to the consumer. The extra expense of processing and packaging was partially offset by reductions in spoilage, storage, and reduced shipping and handling costs.

Another shift in food consumption was the increase in the number of meals eaten outside the home. Higher incomes, more wives working, and increased travel away from home probably partly caused this shift.

**Table 3. Volume of farm marketings, United States. (Indexes: 1947-49=100)**

Year	Livestock and live-stock products	Crops	Total
1940-42 .....	86	75	81
1947-49 .....	100	100	100
1957-59 .....	128	116	123
1960 .....	134	130	133
1961 .....	139	123	132

Source: *The Farm Income Situation*, July 1961, table 2.

A large “marketing margin” is added in meals eaten out, because this involves personal service in food preparation and serving. In 1960 the total sum spent for meals eaten out was \$5.2 billion more than would have been spent for the same amount of retail food bought for home preparation.

The quality of food purchased during this period improved. The proportion of fruits, vegetables, and meat increased while the proportion of starchy foods declined. This shift was generally to higher priced foods. The total cost of the diet, therefore, increased. This is reflected to the consumer by a higher priced market basket.

If these, and other, shifts in food costs were included in the market basket (see table 2) the increase from 1947-49 to 1960 would be larger. Most of the extra increase would be in the marketing margin. The total cost of this mar-

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### NOTES

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gin might be as high as \$750 for a typical family.

### Division of Food Dollar

Consumers can see their relationship to agriculture and other sectors of the economy more clearly if they know where their food money goes.

The total food bill for domestic farm foods in the United States in 1960 was about \$60 billion. Of this, \$20 billion, or one third, went to farmers in payment for food products. Another third, or \$19 billion, went as wages to workers directly involved in processing and marketing the food. Another \$19 billion paid for transportation, containers, advertising, electrical power, fuel, interest, and rent. A little less than \$2 billion was profits for the companies concerned in the marketing process.

These figures can be summarized in another way. One third of the food bill paid by U.S. consumers in 1960 went to farmers for the food materials. The other two thirds was paid to town and city residents for their services rendered.

None of the increase in cost of a typical urban family's food budget in the last decade went to farmers. All of it went to town and city workers and businessmen.

### Farm Productivity Increased

The increase in food consumption with lower prices was possible because of the sharp rise in the productivity of agriculture. Data on the volume of farm marketings are presented in table 3.

**Table 4. Prices received by farmers, realized gross income, United States. (Indexes: 1947-49=100)**

Year	Prices received*	Realized gross income†
1940-42	47	42
1947-49	100	100
1957-59	89	107
1960	88	112

\* Source: Agricultural statistics.

† Source: *The Farm Income Situation*, July 1961, table 1H.

Most of the increased volume came after 1950. Increased population offset part of this. However, production per capita increased by about 8 percent since 1947-49.

It is difficult to measure the total quantity of resources used in farming.

**Table 5. Gross income, expenses, and net income of farmers, United States, 1949 to 1960**

Item	1949-51	1952-54	1955-57	1958-60
	dollars	dollars	dollars	dollars
Total realized gross income*	34	35	34	38
Farm production expenses	20	22	23	26
Net income†	14	14	12	12
Net income per person employed	1,717	1,831	1,803	2,014

\* Cash receipts from marketing, government payments, value of home consumption, and rental value of dwellings.

† Inventory changes were minor.

Source: Farm income, state estimates, 1940-60, August 1961.

Nevertheless, it seems that there was only a small change during the last decade. Most of the increase in production was due to increased productivity—mainly higher crop yields and greater livestock efficiency.

This increased production decreased prices received by farmers in recent years. The demand for most farm products is of such a nature that if marketing increase 1 percent, price falls by more than 1 percent. This would be true unless total demand increases (e.g. population growth).

The index of prices received by farmers more than doubled during the 1940's. This was in line with the general rise in prices during the period. It resulted from the rise in domestic and foreign demand for food in the war and immediate postwar period.

Since 1947-49 prices fell 12 percent (table 4). Total marketings increased by 32 percent since 1947-49. But, a part of the potential income from this larger volume was offset by lower per unit prices. As a consequence, gross income received by farmers increased only 12 percent.

However, increases in production expenses more than offset the increases in gross income. Net farm income, therefore, declined from \$14 billion in the early 1950's to \$12 billion in more recent years (table 5).

Net income pays for the labor and management of the farmers and their families, and the use of the capital invested in the farm. Because the number of farms and farm families declined during this period, the total farm income was divided into fewer parts in 1960 than in 1949. This resulted in a higher net income per farm operator and a general increase per farm worker.

For example, the average net income per farm worker increased from \$1,717 in 1949-51 to \$2,014 in 1960.

During this period net income per worker increased by 17 percent. But, prices paid by consumers for all consumption items rose about 27 percent. Thus, the real income of farm workers declined.

### Summary

The revolution in farming, plus additional services from the marketing sector, brought more and better food to the consumer. This shift also brought lower income to many farmers and caused them problems of readjustment. It, however, reduced the real cost of food to the consumer.

The typical consumer spends less time now than before in earning money for groceries. He also spends a lower proportion of his income for food.

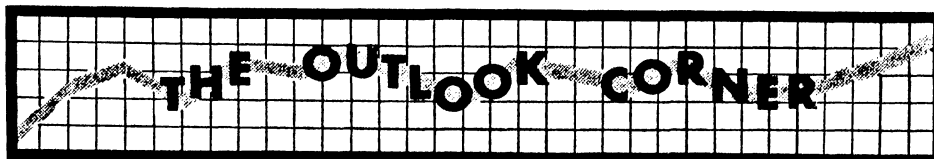
This shift in food costs is an important factor to consider when discussing our farm problem and possible programs. The consumer gained from the downward movement of farm prices. He must consider this gain as well as the costs involved in a farm adjustment program.

### RECENT PUBLICATIONS

Elefson, R. Vern and Raup, Philip M. *Financing Farm Transfers with Land Contracts*, Minn. Agr. Expt. Sta. Bul. 454, April 1961.

Learn, Elmer W. and Houck, James P., Jr. *An Evaluation of Market Development Projects in West Germany*, Minn. Agr. Expt. Sta. Bul. 455, June 1961.

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## TRENDS IN THE FAMILY FOOD BILL

Dale C. Dahl and Marguerite C. Burk

Projections of what the family food bill will be in future years must be based on at least five historical trends: (1) the general rise in food prices due to increased marketing charges, (2) the shift in consumption from cheaper to more expensive foods, (3) the increased number of meals eaten away from home, (4) the increased services added to foods before they reach the consumer, and (5) a relative decline in farm prices for food products.

### Increased Marketing Charges

Two factors caused the general increase in the cost of marketing a fixed amount of farm-produced food. First, *general inflationary* trends in the economy largely explain why labor, transportation, and other costs rose in the past several years. A continued rise in *all* retail prices will cause food prices and the family food bill to increase. Much of this will come in the form of higher marketing charges.

Second, *decreased consumption of home produced foods* caused marketing cost additions to the food bill. The commercial handling of formerly home produced foods accounted for over 10 percent of the \$17 billion increase in the total food marketing bill from 1947-49 to 1960.

The movement of farm families to urban areas meant that some foods previously produced and consumed on the farm had to be bought through the marketing system. This development came with an increased use of commercially processed food products by farm families themselves. This increase in marketing charges will probably continue, causing a higher grocery bill for both urban and rural families in future years.

### More Expensive Foods

The grocery bill may increase by a greater amount than the rise in food prices. This is due to a change in the qualities of food consumed—from less

to more expensive food products. This is the general pattern of all food consumption.

For example, the consumption of potatoes fell from 114 pounds per person in 1947-49 to 102 pounds in 1960. On the other hand, the average consumer ate 148 pounds of meat in 1947-49, and 161 pounds in 1960.

### More "Eating Out"

Eating more meals out of the home also added to the family food bill. A larger amount of food reached the consumer in this manner. Moreover, the markup of eating places increased due to rising labor and other costs in the serving of food to consumers.

From 1947-49 to 1960 the additional amount paid for food eaten away from home was \$2 billion greater than the cost of this same food at retail. This additional payment will probably continue to rise as "eating out" becomes a more important consumption habit.

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Cooperating, Skull Rutherford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

### Increased Services

In addition to the rural-to-urban shift, the U.S. population has been concentrating in the coastal areas. Midwest-produced farm food products, therefore, have to be shipped greater distances. This causes greater transportation costs and increased losses from spoilage and damage.

Moreover, foods are being processed more than before. The food processor now does tasks once performed by the housewife. These additional marketing services add to food cost. Some of this cost is offset by greater marketing efficiency. However, it has meant a higher food bill for the family.

These two trends will undoubtedly add to the family food bill in the next several years.

### Farm Prices—Up or Down?

The general decline in farm prices in the past decade contributed to lower relative food prices. Nevertheless, it is difficult to project a continued future decline.

Regardless of the farm programs designed to stabilize farm prices, a rise in the family food bill can be expected. This will come from the shift to more expensive foods and a rising marketing bill alone.

If farm prices continue to decline, it will mean lower food prices relative to nonfood items . . . this will be a benefit to the consumer from agricultural efficiency.

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