

CHAPTER 4

The factors of demand; measurements of the increase in demand possible through action programs.

Present and Future Demand for Farm Products

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THE NATIONAL ECONOMY has expanded substantially during the 1950's. Total population and income per person each increased about a fifth in ten years. Both factors tend to increase the utilization of farm products and, if farm production had stood still, should have raised farm prices and incomes substantially. Actually, prices received by farmers were somewhat lower at the end of the decade than at the beginning, and stocks of corn, wheat, and cotton were accumulating in government hands from 1952 on. The total net income of farm operators early in 1960 was also below the level of the corresponding months in 1950, just prior to the outbreak of hostilities in Korea.

Evidently, during the 1950's the production of farm products in the United States exceeded their utilization, or we should not have had the big increase in government holdings of farm products. Furthermore, the amount of farm products passing into final utilization increased rapidly enough during the 1950's to reduce prices of farm products both in absolute terms and relative to the prices of things farmers buy. The supply of farm products has been outrunning the demand by an amount somewhat larger than the rate of increase in the government's holdings of price supported commodities.

Chapter 5 will appraise present and prospective supplies of farm products. The present chapter will analyze in some detail the various "normal" factors which influence the demand for farm products and their probable consequences during the decade ahead. Against this background, the potentials of various special programs to influence demand will also be appraised.

The school lunch program and the direct distribution of food to persons on public assistance are examples of programs to influence demand. Exports for famine relief and for the economic development of friendly foreign countries are others.

Producers of particular commodities express considerable faith in the effectiveness of advertising and promotion in expanding their markets. Some people express similar hopes as to the effectiveness of quality improvement on the farm or in merchandising and processing channels. Still others hope that new industrial uses will provide profitable outlets for millions of tons of farm products, or they hope to establish new crops in the United States which would displace products which we currently import.

Others look to export subsidies or other forms of multiple price systems to move current surpluses into use and to increase farmers' income from the total production.

All the above measures involve purposeful action on the part of government agencies or of producer groups.

Growth of human population in our own country and in foreign countries is looked upon by some as the ultimate solution to the problem of surpluses. In fact, they believe that at some future time we will be struggling with the problem of food scarcity.

There is a kernel of truth in nearly every one of these expectations; at least the *directions* of the effects of particular programs are correctly anticipated in most cases. What is lacking in virtually all cases is a sense of proportion — an understanding of the relative magnitudes of the potential contributions of each program to surplus removal or demand expansion.

The main purpose of this chapter is to enable intelligent laymen and professional workers in disciplines other than economics to see in proper perspective these programs to influence demand. Then our discussions, political energies, teaching, and other activities will reflect a sharper focus on the factors and programs that hold the greatest promise (on the demand side) for alleviating the current farm income and agricultural adjustment problem.

THE UTILIZATION OF U.S. FARM PRODUCTION

To understand the effects of different factors upon the demand for farm products, we look first at the relative magnitudes of the streams of farm products flowing into different final uses.

As indicated in Table 4.1, domestic uses of farm products accounted for 88 percent of the total, 77 percent as food and 11 percent as nonfood products.¹ An additional 12 percent of total utilization were exports to foreign countries and shipments to U.S. territories, including the new states of Alaska and Hawaii.²

¹ In this calculation, feed and seed are treated as intermediate goods used up in the production process. In effect, the farm value of feed and seed is subtracted from the total farm value of crop production.

² All of the production and utilization figures in Chapter 4 apply to continental United States; they do not include Alaska and Hawaii. Shipments from the mainland to Hawaii and Alaska are included in the category "exports and shipments."

TABLE 4.1
UTILIZATION OF FARM COMMODITIES, UNITED STATES, 1958

Item	Percent of total utilization 1958 *	Approximate farm value 1958 †
	(percent)	(billion)
Total, all types of final utilization *	100.0	\$30.5
Domestic use, total	88.3	27.0
Food	77.0	23.6
Nonfood	11.3	3.4
Feed for work animals	0.8	0.3
Fibers and leather	5.6	1.7
Tobacco	2.0	0.6
Alcoholic beverages	0.8	0.2
Industrial oils and soap	1.2	0.4
Other nonfood use	0.9	0.3
Exports and shipments	11.7	3.6

* Net utilization, excluding pasture. Also excludes changes in storage stocks, feed consumed by livestock (other than work animals), and seed, as these are "intermediate" uses, and their value is included in that of final utilization. Based on 1958 quantities of each commodity going into each end use multiplied by its 1947-49 average farm price.

† Subaggregates of the official USDA index number, which is calculated in terms of 1947-49 average prices for each commodity, multiplied by 0.92, the ratio of the 1958 index of prices received by farmers (all commodities) to the average level of that index in 1947-49.

Source: Agricultural Marketing Service, Statistical and Historical Research Branch. Based on revisions as of April 1960 of figures in Supplement for 1958 to Measuring the Supply and Utilization of Farm Commodities (Supplement for 1958 to *Agriculture Handbook No. 91*, September 1959).

Each demand expansion factor or program could be "tried on for size" initially in terms of the percentage of total utilization to which it might apply. For example, new industrial uses of farm products would affect some part of the fibers and leather, industrial oils and soap, and other nonfood use categories, totaling about 8 percent of all utilization.

As indicated in Table 4.2, most domestic nonfood uses declined from 1950 to 1958. Domestic food use increased about in line with population growth. Exports and shipments rose substantially from 1950 to 1958. An attempt at demand expansion might be regarded as successful if it

TABLE 4.2

CHANGES IN UTILIZATION OF FARM COMMODITIES, UNITED STATES, 1950-58
(As Percentages of Annual Average Total Utilization in 1947-49)

Item	Utilization in 1950	Utilization in 1958	Change 1950 to 1958
<i>(Percentage of annual average total utilization in 1947-49)</i>			
Total utilization excl. pasture, domestic use of feed for food, livestock, domestic use of seed, and changes in storage stocks.	101.4	113.3	11.9
Domestic use	92.1	100.1	8.0
Food	76.1	87.3	11.2
Nonfood	16.0	12.8	- 3.2
Feed for work animals	2.2	.9	- 1.3
Fibers and leather	8.0	6.3	- 1.7
Tobacco	2.3	2.3	0.0
Alcoholic beverages	1.1	.9	- .2
Industrial oils, soap	1.9	1.3	- .6
Other nonfood use	0.5	1.1	.6
Exports and shipments	9.4	13.2	3.8

Source: Agricultural Marketing Service, Statistical and Historical Research Branch. Based on revisions as of April 1960 of figures in Supplement for 1958 to Measuring the Supply and Utilization of Farm Commodities (Supplement for 1958 to *Agriculture Handbook No. 91*, September 1959).

either accelerated the growth of an expanding utilization category or slowed the decline of a contracting category relative to what would have happened in the absence of the attempt.

The amount of a commodity utilized for a given purpose will generally increase if its price is lowered and decrease if its price is raised. The ratio of the percentage change in utilization to the corresponding change in price is called "the price elasticity of demand" and a line connecting the various possible combinations of price and utilization is called a "demand curve." Price elasticities of demand are always negative or, in the limiting case, zero.

Figure 4.1 shows that the price elasticity of demand for wheat for domestic food use is extremely small — on the

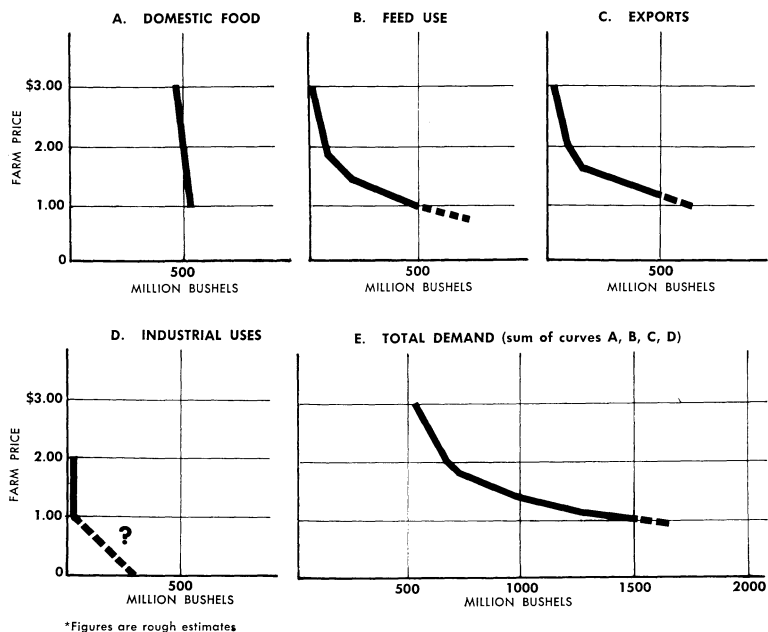


Fig. 4.1 — Total demand for wheat and demands for particular end uses. Figures are rough estimates.

order of -0.1 . Demand elasticities for wheat in export and feed uses are quite small for prices about \$2.00 a bushel, but become relatively large if the price of wheat declines to (respectively) feed grain or world market levels. Industrial uses of wheat are almost negligible when wheat prices are above \$1.00 a bushel — i.e., the price elasticity of demand is close to zero — but the quantity so used *might* expand considerably if a large and dependable supply of wheat were available at (say) 25 cents a bushel.³

³ A government support price for wheat at \$2.00 a bushel could be represented in the lower right-hand section of Figure 4.1 as a heavy horizontal line at a farm price of \$2.00. This is in effect a perfectly elastic "demand curve" which determines the price of wheat received by farmers whenever production exceeds about 700 million bushels. Quantities in excess of about 700 million bushels can be moved into export, feed, or industrial uses only by means of subsidies which reduce the price of wheat to purchasers below the support level.

Price elasticities of consumer demand for major foods range from zero to -1.0 , and the price elasticity of consumer demand for "all food" (a term to be defined shortly) is approximately -0.25 . A 10 percent increase in population normally shifts total consumer demand curves (consumption) 10 percent to the right; a 10 percent increase in average income per consumer also shifts demand curves to the right but much less than 10 percent in the cases of most foods. (The ratio of a percentage change in the quantity of a commodity purchased to the corresponding percentage change in consumer income — both variables on a per capita basis — is called an "income elasticity of demand" or, simply, an "income elasticity." Income elasticities are positive for most foods but not for all. Staples such as potatoes, sugar, cereals, and fats and oils may have zero or even negative income elasticities. (In contrast, price elasticities of demand are never positive.)

FACTORS AFFECTING U.S. CONSUMPTION OF FOOD

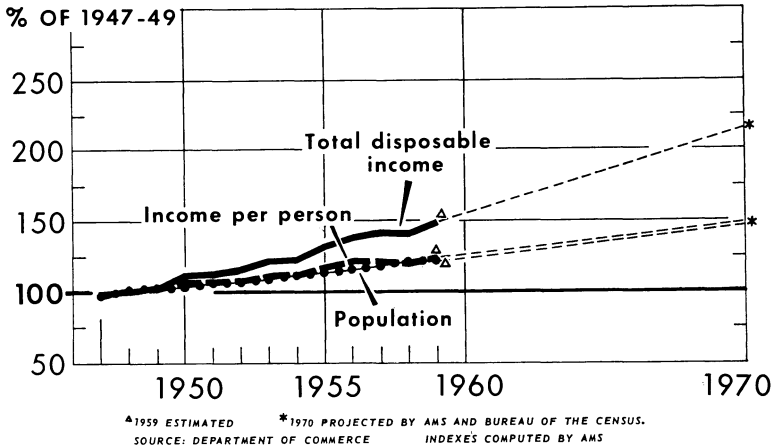
In everyday speech, the phrase "more food" has a different meaning than it has to experts in either animal or human nutrition or to agricultural economists. Does "more food" mean simply more calories? If we bought all of our calories in the form of flour and cereal products, fats and oils, and sugar, the national grocery bill would be only about one-third of what it is today, and the cash income received by farmers for marketing food products (grain, soybeans, cotton seed, sugar beets, sugar cane, etc.) would be reduced to about one-sixth of its current level!

On the other hand, if we bought all our calories in the form of livestock products, the national grocery bill would be almost doubled and the cash receipts of farmers from sales of food livestock and livestock products would rise to about two and one-half times the current level. So, an increase in the total number of calories of food consumed may or may not increase economic well-being of farmers.

The comparison in the preceding paragraph suggests some possible economic definitions of "more food." Suppose that the retail prices of all individual foods are held constant at their level in some base period (say 1947-49). Now, suppose that consumers buy enough additional livestock products to cover an additional 10 percent of their total calorie requirement, and that they reduce their purchases of flour and cereal products enough to keep their total calorie intake constant. The average retail cost per calorie would have increased about 15 percent, and the national grocery bill for a given number of consumers would have increased 15 percent without any increase in retail prices of individual foods. The total income paid out to farmers and marketing agencies would have increased by 15 percent, and it would be reasonable to say that the demand for food at retail had increased by 15 percent. The official index of per capita food consumption is constructed on these principles.

However, the farmer may not be particularly interested in an increase in demand at the retail level if all of this increase takes the form of increased charges for marketing services. If the calories in our previous example were weighted by or calculated according to the average 1947-49 prices received by farmers for each commodity and a 10 percent shift were made in the source of calories from cereals to livestock, the average cost per calorie as sold by the farmer would increase about 22 percent. As each individual price in this calculation is held constant, it is reasonable to say that demand at the farm price level has increased by 22 percent. This measure of demand is the one that is most relevant to this book, in which we are focusing on problems of imbalance and prospects for adjustment as they affect farm people and the rest of our population.

Population and income are the factors most influential in increasing domestic consumption of food. Population in



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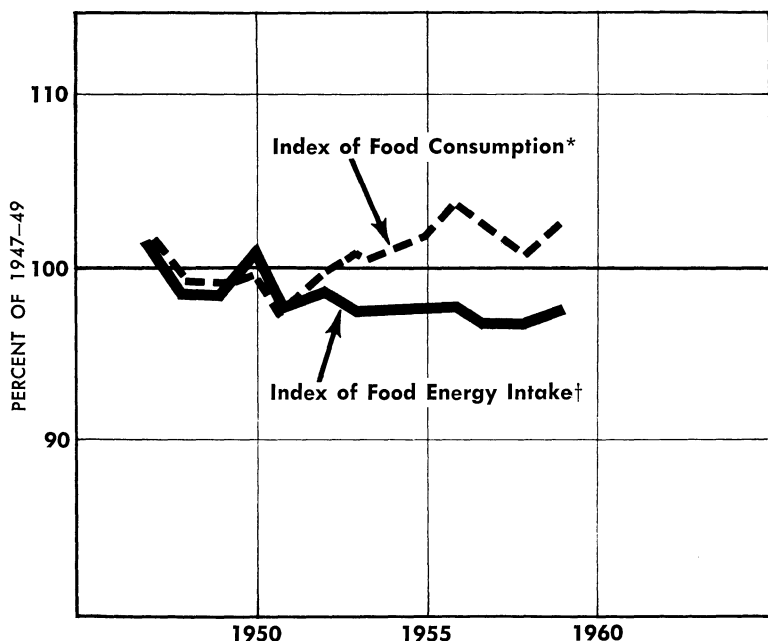
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Fig. 4.2 — Real income and population in the United States. Income is figured in 1958 dollars.

the United States from 1947-49 to 1958 increased by 18.8 percent and disposable income per person (measured in 1958 prices) increased 18.1 percent. The projections to 1970 imply a further increase of about 20 percent in each of these variables from 1959 to 1970. Other things being equal, a 20 percent increase in the consuming population would be expected to increase consumption of food by 20 percent.

Our knowledge of both animal and human nutrition would suggest that calorie requirements would increase in direct proportion to the number of consumers. This is equivalent to saying that the average number of calories of food energy per person will remain constant.

During 1957-59, the calorie consumption per person shown in Figure 4.3 averaged from 2.5 percent to 3 percent lower than in 1947-49. Whatever may be the effects of prosperity, it has evidently not led to an increase in consumption of calories!



*Per capita quantities of food purchased weighted by 1947-49 retail prices

†Per capita calories available in food as purchased

Fig. 4.3 — Index of food consumption and food energy intake in the United States.

Nutritionists would doubtless think of age distribution (as well as total population) as influencing requirements for food energy. Calculations based on dietary allowances for different age groups recommended by the National Research Council suggest that the average calorie requirement per person declined about 2 percent from 1940 to 1950 and another 1 percent from 1950 to 1960.⁴ The chief cause was

⁴ National Research Council, based on *Recommended Dietary Allowances*, Revised 1958, National Academy of Sciences, National Research Council Publication 589, 1958, p. 18. The age distribution figures for 1960 and 1970 were based on Series 2 of the projections reported in *Current Population Reports*, P-25, No. 187, cited below.

an increase in the percentage of children under ten in the total population, from 16.6 percent in 1940 to 19.5 percent in 1950 and 21.8 percent in 1960. This percentage is not expected to increase during the 1960's, and may even decline a trifle by 1970.⁵ If we assume that the 1955-57 level of birth rates will continue, there may be a microscopic increase in average calorie requirements between 1960 and 1970 — something like one-fourth of a percent.

The per capita food consumption has trended slightly upward during the past decade as indicated in Figure 4.3, increasing about 2 percent. Food consumption rose about one-tenth as much as disposable income per capita.

If we divide the value of food consumption per capita by the per capita intake of calories, we obtain an indication of average cost per calorie. In 1957-59 cost per calorie averaged 4 or 5 percent higher than it did a decade earlier. Most of the increase in expenditure by consumers per calorie can be attributed to the increase in disposable income; about 1 percent of the increase may have been due to the fact that retail prices of food increased about 16 percent over this period while all consumer prices increased more than 22 percent. The remaining increase in average cost per calorie implies an income elasticity of 0.15 to 0.20 for "all food."

Other factors not strictly economic might have influenced changes in food habits over the decade — nutritional education, changing attitudes toward overweight, further extension of central heating, and promotion and advertising of particular foods — may each have had some slight effects on total calorie intake and the average cost per calorie.

Table 4.3 illustrates what it means to increase the demand for food by upgrading the quality of the diet, or at least by increasing the average resource cost per calorie. As of 1947-49, the retail cost per calorie obtained from flour

⁵ Bureau of the Census, *Current Population Report*, Series P-25, No. 187, November 10, 1958.

TABLE 4.3

SOURCES OF CALORIES BY FOOD GROUPS, CONTINENTAL UNITED STATES,
1909-13, 1947-49, AND 1959

Food group	Relative retail cost per calorie 1947-49*	Percent of total calories obtained from each food group:		
		1909-13	1947-49	1959†
	(percent)		(percent)	
Flour and cereal products.....	30	37.2	23.8	20.8
Sugar, fats and oils (incl. butter and fat pork cuts).....	40	27.5	34.6	36.1
Dry beans, potatoes, etc.....	70	7.5	6.6	6.3
Dairy products (excl. butter).....	120	9.6	13.5	13.9
Meat, poultry, eggs, and fish.....	240	13.5	15.2	16.8
Fruits and vegetables.....	300	4.7	6.3	6.1
Tea and coffee.....	‡	0	0	0
Total or average.....	100	100.0	100.0	100.0
Average cost per calorie.....	100	88	100	103

* In terms of average retail prices of each food group in 1947-49. Calculated by dividing percentages of total retail cost of food per capita (1947-49) for each food group by corresponding percentage of total calories obtained from that group, and rounding to nearest 10 percent of the average 1947-49 retail cost per calorie for all foods.

† Preliminary as of April 1960.

‡ Contain negligible numbers of calories.

Source: Calculated from figures in Tables 40 and 47 of Supplement for 1956 to Consumption of Food in the United States, 1909-52 (Supplement for 1956 to *Agriculture Handbook No. 62*, September 1957). Preliminary figures for 1959 from Agricultural Marketing Service, Statistical and Historical Research Branch.

and cereal products was 30 percent as much as the average cost per calorie, whereas a calorie obtained from meat, poultry, and eggs was about 240 percent as expensive as the average calorie.

Over the half century from 1909-13 to 1959, the percentage of total calories obtained from flour and cereal products has shrunk tremendously while the percentage of food energy obtained from livestock products has greatly increased.

At the retail price level, the average cost per calorie over half a century increased 15 index points, or 17 percent over the 1909-13 figure. This suggests that there is a *possibility*

of expanding the demand for food products very substantially through a further shift in consumption from cereal products to meat, eggs, and dairy products.

However, the shift indicated required nearly 50 years or two generations to complete. It is much more relevant to note that the increase in average cost per calorie from 1947-49 to 1959 was only 3 percent; there is no reason to expect that the gain obtainable from this source during the next decade will be any more than 3 percent.⁶

By combining some food groups in Table 4.3 estimates can be made of average cost per calorie at the farm level. If we group all livestock products together (excepting butter and fat cuts of pork), the average cost per calorie for this group of foods at retail in 1947-49 was about 180 percent of the average for all foods. The average cost per calorie for a group of commodities including flour and cereal products, fats and oils, sugar, dry beans, and potatoes was about 40 percent of the average cost per calorie.

The farmer's share of the consumer's dollar spent for livestock products is more than twice as large as the farmer's share of a retail dollar spent for the latter group of products. Measured at 1947-49 levels of prices received by farmers, the cost per calorie of livestock products was about 240 percent of the average, while the cost per calorie of the other group of products was only about 20 percent as large as the average for all farm food products.

From 1947-49 to 1959, the percentage of calories obtained from the livestock group rose by 2 percent of total calorie intake. If this had been completely offset by a reduc-

⁶ There is no conceptual basis for the discrepancy between the estimate of 3 percent derived from Table 4.3 and that of 4 to 5 percent derived from Figure 4.3. The difference could be due largely to rounding errors, as the indexes in Figure 4.3 are published only to the nearest whole number. Note that the ratio of "104" to "100" could mean anything from

$$\frac{103.6}{100.4} = 103.2 \text{ to } \frac{104.4}{99.6} = 104.8,$$

or increases of 3 to 5 percent. Also, the relative costs per calorie in Table 4.3 are calculated with less refinement than is the USDA index of per capita food consumption.

tion in calories obtained from the low-cost calorie group (as, indeed, it was except for a slight decline in calories obtained from fruits and vegetables), the average retail cost per calorie would have increased by 2.8 percent. The average cost per calorie at the farm price level would have increased about 4.4 percent. Hence, in terms of demands made upon farm resources (and resources provided by firms manufacturing and selling production goods to farmers), increases in the average farm cost per calorie of domestic food consumption might expand farm-level demand by as much as 4 percent during the next decade.

Part of the increase in average cost per calorie between 1947-49 and 1959 may have been due to the fact that retail prices of other goods and services increased more rapidly than did those for food; if food prices held their own during the next ten years relative to other retail prices, the increase in average cost per calorie at the farm level might not be over 3 percent.⁷

What effects do increases in consumer income have upon the demand for food? The Agricultural Marketing Service surveyed purchases of food by nonfarm families in the United States as of 1955. The results of statistical analyses by George R. Rockwell based on this survey may be expressed in terms of income elasticities, namely, the percent increases in consumption or purchase of specified commodities that are associated with 1 percent increases in income per family member.⁸

Measured in terms of *expenditures* per person, the income elasticity of demand for food among nonfarm families in 1955 was about 0.20. The higher-income families prob-

⁷ When food prices fall relative to prices of other consumer goods, food consumption (as measured by a price-weighted index) tends to increase as indicated by the elasticity of demand for food.

⁸ George R. Rockwell, Jr., *Income and Household Size: Their Effects on Food Consumption*, Marketing Research Report No. 340, Agricultural Marketing Service, June 1959. See especially Table 2 and Table 3. Some of the figures in the text are based on rough, rounded calculations from data in Tables 2 and 3.

ably bought a little more marketing services per unit of food than the lower-income families. Allowing for this, the income elasticity of total consumer demand for food was about 0.15.

The income elasticity of consumption of livestock products was about 0.2, very roughly the same as that of fruits and vegetables other than potatoes and sweet potatoes.

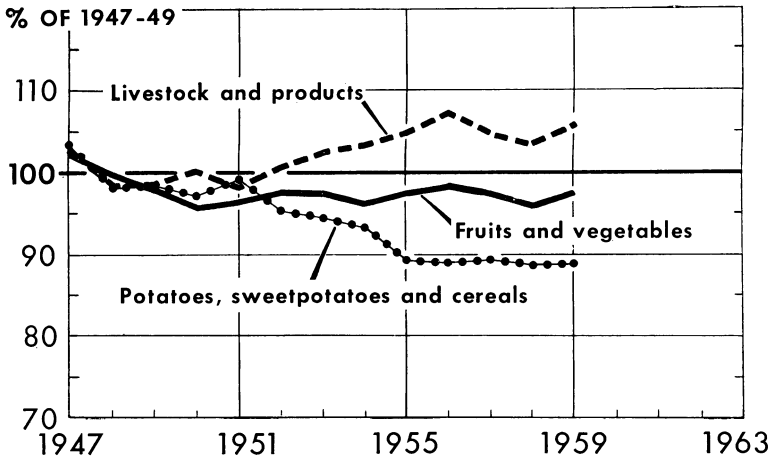
The income elasticity of demand for low-cost calories such as flour, bakery products, sugar, fats and oils, etc., appeared to be slightly greater than zero, but perhaps not significantly so.

It is clear that the response of U.S. food consumption to increases in consumer income is relatively small. Moreover, it will probably decrease as income levels rise further. When families in the 1955 study were divided into thirds, the income elasticity of food expenditures among the lowest-income third was 0.25, among the middle-income group 0.21, and among the highest-income third 0.15.

It is almost certain that the income elasticity of demand for food in the United States was considerably higher during the 1930's, when average levels of income were low and many persons were unemployed, than it is today.

The further increases in income levels expected during the 1960's should make food consumption even more sluggish in response to changes in consumer purchasing power. In an affluent society, food is among the first of the commodity groups to reach a saturation, or satiation, point for the bulk of consumers.

The income elasticity of demand for resources at the farm level is a little greater than at the retail level, as a large proportion of the farm resources used in food production are devoted to livestock products and fruits and vegetables, which have higher-than-average income elasticities of demand at retail. However, the average income elasticity of demand for farm resources used in food production as of 1955 could hardly have been greater than 0.2.



* PER CAPITA CIVILIAN CONSUMPTION, U. S. (USING 1947-49 RETAIL PRICES AS WEIGHTS)

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Fig. 4.4 — Food consumption trends in the United States.

Trends in food consumption patterns as indicated in Figure 4.4 are in a direction favorable to demand expansion, but the rate of increase is likely to be slow.

MARKETING MARGINS FOR FOOD AND THE NATURE OF DEMAND AT THE FARM PRICE LEVEL

In a number of places, we have pointed out that responses of consumers to price changes and income changes show up differently at the farm level than at the retail level.

Between the farmer and the consumer lies a vast and complex marketing system. This complexity can be reduced somewhat if we follow a unit of a particular farm product through its marketing sequence. Nevertheless, the ramifications of the marketing process as raw products are separated into different physical or chemical "fractions" or combined and blended into new forms should be kept in mind when interpreting such over-all measures as "the farmer's share of the consumer's food dollar."

It is the author's opinion that most professional workers

providing research and educational services to farmers tend to overestimate the arbitrary elements in the marketing system and to underestimate the extent to which marketing margins (over any short span of years) are influenced by relatively rigid elements in marketing costs.

In 1960, the farmer got slightly less than 40 cents of the consumer's food dollar, so superficially the opportunities for transferring income from marketing agencies to farmers look quite substantial. However, the real opportunities here (at least in the short run) turn out to be much smaller than might appear at first glance, just as the real prospect for demand expansion through shifting from low-cost to high-cost calories turns out to be much below the theoretical maximum.

The marketing margin on pork (Figures 4.5A and 4.5B)

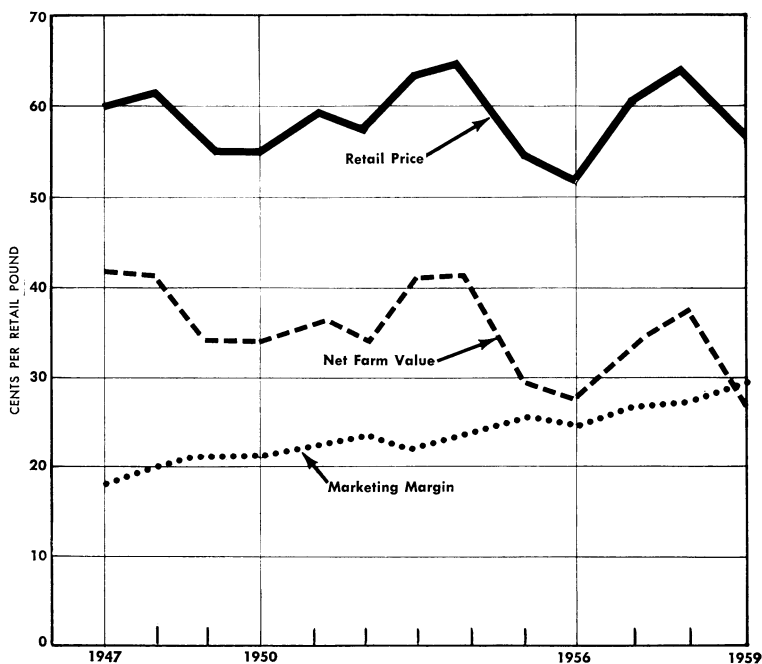


Fig. 4.5A — U.S. pork prices, 1947–59.

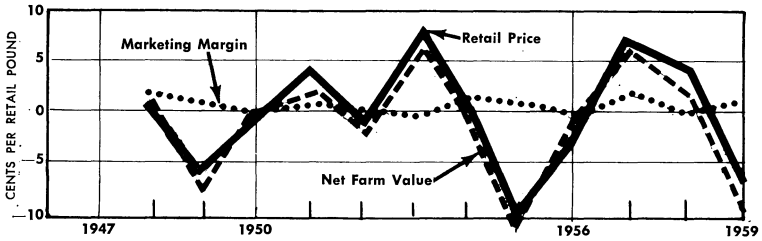
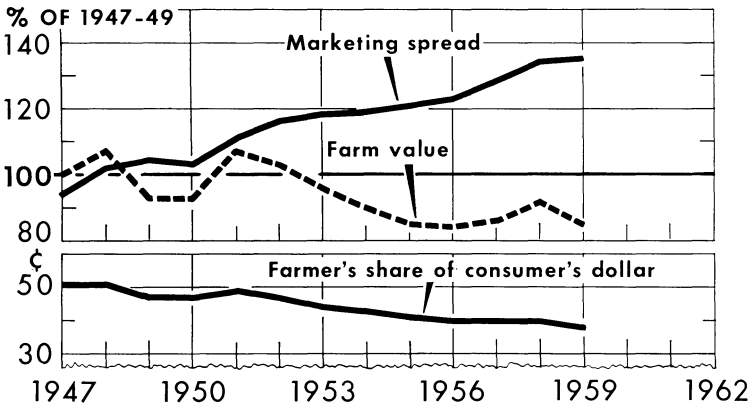


Fig. 4.5B — Year to year changes in pork prices in the United States.

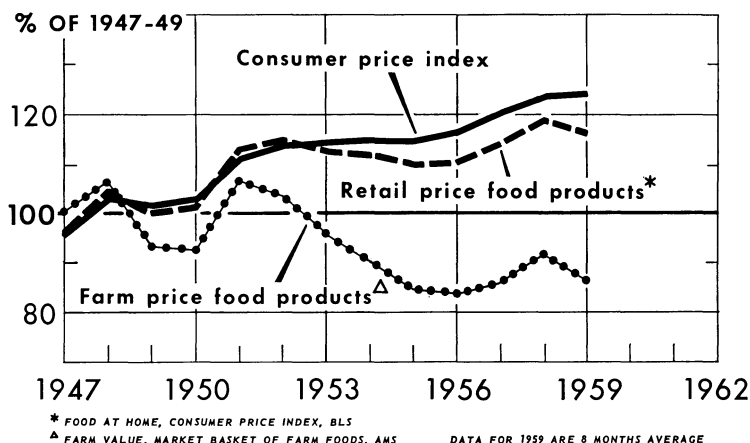
has widened at an average rate of a cent a year, but has rarely deviated from this trend by more than a cent a pound between adjacent years. The retail price of pork has changed by as much as 10 cents from one year to the next, and in most years the change in the net farm value has been nearly the same as that in the retail price. Except for the upward trend in the marketing margin, this is the pattern we would expect.

The pattern for all food products is roughly similar to



DATA ARE FOR AVERAGE QUANTITIES OF FARM FOODS PURCHASED BY URBAN FAMILIES IN 1952
1959 DATA PRELIMINARY

Fig. 4.6 — Marketing spread and farm value of market basket.



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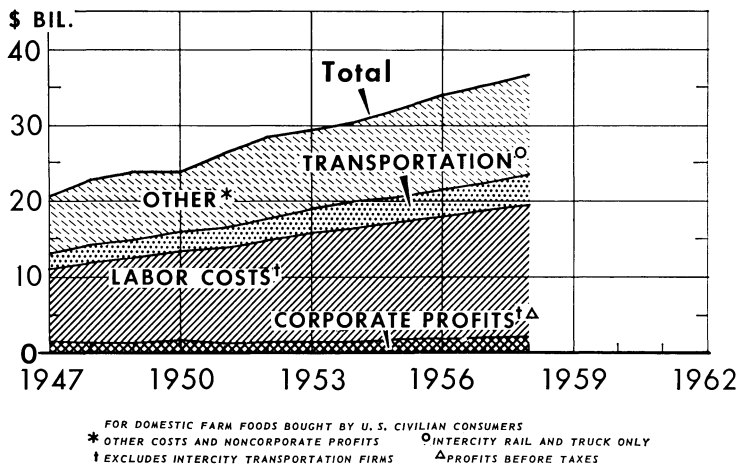
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Fig. 4.7 — Food prices and consumer price index in the United States.

that for pork (Figures 4.6 and 4.7). The marketing spread between the retail value and the farm value of the “food market basket” (based on the average quantities of farm food products purchased by urban families in 1952) shows a strong but relatively smooth upward trend, rising more strongly during the first two years of hostilities in Korea, leveling off for a time, and rising strongly again from 1956 to 1958, a period in which inflation was again a major economic problem. Apart from this trend in the marketing spread, the food price changes from year to year have been quite similar at the farm and at the retail price levels.

The pattern of the consumer price index in Figure 4.7 looks strikingly like that of the food marketing spread in Figure 4.6. The similarity suggests that increases in the food marketing spread reflect forces that operate throughout the economy.

In 1958, labor costs accounted for 47 percent of the total U.S. food marketing bill (Figure 4.8), the same pro-



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Fig. 4.8 — Total U.S. farm food marketing bill.

portion as in 1947-49.⁹ Average hourly earnings of food marketing employees increased 65 percent from 1947-49 to 1958. Despite substantial increases in the volume of products handled per man-hour, the cost of labor per unit of product marketed increased by 31 percent. All marketing charges per unit increased by 35 percent by 1958, based on preliminary figures.

Costs of rail and intercity truck transportation accounted for 11 percent of the total food marketing bill in 1958. Corporate profits made up about 6 percent of the marketing bill in 1958 as well as in 1947-49.

"Other costs and noncorporate profits" (Figure 4.8) made up about 37 percent of the marketing bill in 1947-49 and 36 percent in 1958. It includes costs of fuel, electric power, containers, packaging materials, intracity transportation, depreciation, insurance, rent, interest on borrowed capital,

⁹ Figures in this and the next two paragraphs are taken from *The Marketing Bill for Farm Food Products*, USDA, Agricultural Marketing Service, Report No. AMS-326, August 1929. See especially Table 5, p. 14, and Table 6, p. 16.

taxes other than those on income, and other items not included in the labor, transportation, and corporate profits components. It also includes the profits of unincorporated marketing firms.

We have already noted similarities in the patterns of the consumer price index and the food marketing spread. Wholesale prices of all commodities other than farm products and food showed a similar pattern, and increased 26 percent between 1947-49 and 1958.¹⁰

In summary, the evidence is that many elements of food marketing costs (materials, utilities, freight rates, wage rates, and others) are determined in markets which extend across many other sectors of the economy. When wage rates of industrial workers rise, so do wage rates of food marketing employees; when steel prices rise, so do prices of containers and most other metal products used in food marketing. Over any short span of years, cost increases of this sort, reflecting broad trends in the entire economy, exert a powerful upward pressure upon the food marketing spread.

We should not infer too much from these considerations. The time patterns shown are quite consistent with the existence of considerable inefficiencies in the food marketing system, both in the technical aspects of processing and handling and in the costs of packaging, promoting, and advertising branded products, some of which reflect particular competitive situations among marketing firms rather than the wishes of consumers. Though some sectors of the food marketing system are highly competitive, the time pattern shown by the marketing spread would be equally consistent with the existence of a considerable degree of monopoly power, exercised uniformly over a period of years.

Attempts to increase the degree of competition in particular food marketing industries *could* increase the farmer's

¹⁰ Council of Economic Advisers, *Economic Indicators*, Washington, D.C., May 1960, p. 24.

share of the consumer's food dollar. Also, given active competition in any sector of the food marketing system, new methods and techniques that reduce the marketing costs of individual firms will tend to be adopted by almost all firms performing a given operation. As a result, the farmer's share of the consumer's dollar will be increased *relative to what it would otherwise have been*.

But progress in raising farm incomes by such means will at best be slow. The basic problem of imbalance between supply and demand for farm products as an aggregate has more than offset such improvements in efficiency as have occurred in particular branches of the food marketing system during the past decade.

PROSPECTS FOR EXPANDING THE U.S. DEMAND FOR FOOD BY MEANS OF SPECIAL PROGRAMS

We have discussed above the major "normal" factors that affect prospects for expanding domestic demand for farm food products. Calorie intake per person is not likely to increase during the decade ahead. If the past trend toward consuming more of our calories in the form of livestock products and less as cereals and potatoes continues, the amount of farm resources needed per calorie might increase by as much as 4 percent during the next ten years. A projected increase of about 20 percent in disposable income per capita (measured in constant prices) would be mainly responsible for this effect if it materializes.

A projected 19 percent increase in population between 1960 and 1970 will be by far the most important force tending to increase the domestic demand for food.¹¹ Broadly speaking, the increase in population will be about five times as powerful a demand factor during the 1960's as will the expected increase in per capita income and the consequent changes in the commodity pattern of food consumption.

An increase of 4 or 5 percent in retail food prices rela-

¹¹ Based on Series II projections in Bureau of the Census, *Current Population Reports*, Series P-25, No. 187, November 10, 1958.

tive to prices of other goods and services would tend to reduce food consumption by about 1 percent (measured in terms of retail value) or as much as 1.5 percent in terms of amount of farm resources required. A further decline in farm prices relative to other prices during the 1960's would tend to increase domestic food consumption, though it would not be proper to say that reduced prices would increase "demand."

Commodity Promotion and Advertising

Our presentation so far has been in terms of national totals and aggregates, including total calories per person from whatever source. The extreme stability of total calorie intake per person, as well as the relative sluggishness of changes in average cost per calorie, should temper our expectations concerning various special programs and promotional campaigns directed toward a single commodity.

We know both from statistical analyses and from common observation that pork, beef, lamb, chicken, and turkey compete for the consumer's pocketbook and for a favored place on his table. An increase in the supply of pork in a given year not only decreases the price of pork, it also decreases the price of beef by perhaps a third as much and causes some reductions in prices of poultry meats relative to the levels they would otherwise have maintained.

If the per capita supply of pork increases by 10 percent, the retail price of pork will tend to fall about 15 percent; if the per capita supply of beef remains constant under these circumstances, the price of beef may well fall 4 or 5 percent.

Now, suppose we have a 10 percent increase in the supplies of both pork and beef: The average price of the two meats combined will drop by the average *direct* effect of the supply of each meat upon its own price and the average *indirect* effect of the supply of each meat upon the price of the other. Hence, the price change accompanying a 10 percent increase in consumption of an aggregate such as

"all meat" is greater than would be expected if we simply took account of the direct effects of the supply of each individual commodity upon its own price.

For example, the price elasticities of consumer demand for beef and pork at the retail level appear to be around -0.8 and -0.7 ; however, the price elasticity of consumer demand for all meat appears to be about -0.6 and that for all livestock products about -0.5 .¹²

Competition exists between more remotely related food products. The stability of total calorie intake per capita implies that increases in calories obtained from livestock products as a group must be offset by corresponding reductions in calories obtained from foods primarily of crop origin.

Although statistical analyses are lacking, it seems almost certain that a similar effect would take place, if demand for one meat was increased through promotional efforts. The chances are that something like one-half of the gain secured for the particular meat would be offset by decreases in the demands for competing meats and poultry products; total calorie intake might be stabilized through slight reductions in the consumption of cereal products, potatoes, and other foods.

Effects such as those just mentioned, if they occurred, would increase the average amount of farm resources required per calorie and hence the demand for farm food products. However, there has been no convincing evidence so far that promotional efforts on a commodity as important to farm income as beef or pork have actually succeeded in raising the level of national demand for the commodity.

The optimism entertained by some farm groups with respect to the effectiveness of advertising may stem from stories of successful promotion of a particular brand in competition with other brands having identical physical and chemical properties once the packaging is removed. Promotion undoubtedly can sharply increase the sales of a partic-

¹² Karl A. Fox, "Factors Affecting Farm Income, Farm Prices, and Food Consumption," *Agr. Econ. Research* 3:65-82, July 1951.

ular brand of cheese or bacon. But the author seriously doubts that the *total* demand for cheese or bacon is increased significantly by such efforts. Advertising programs concerning such major products as beef or pork will encounter an even greater sluggishness of consumer response.

Some of those who expect large increases in the demand for food products as a result of advertising seem unaware of the large volume of advertising that has been going on for many years. Supermarkets are among the most regular and active advertisers in local newspapers and often spend an amount on local advertising equivalent to 1 percent or more of gross sales.

Food processors are not bashful about mentioning their products. In 1957, total advertising expenditures for all goods and services amounted to over 10 billion dollars. Approximately 2.1 billion dollars was spent on advertising for "food and food beverages." This proportion, about 20 percent of all advertising expense, is almost equal to the proportion of disposable personal income spent for food. On the surface, at least, it would appear that food is getting a fair share of attention in the form of advertising.

The great bulk of money spent for advertising food products is spent in an attempt to shift customers from one store to another in a particular locality or from one brand of a narrowly defined product to another closely competing brand. Only a small fraction of the total advertising effort goes into promoting a commodity rather than a store or a brand. We have no evidence of successful demand expansion for a major commodity, and we know that if such an expansion did occur, it would be partly offset by reductions in the demand for other foods.

Quality Improvement

The potential of quality improvement as a means of demand expansion is also greatly overestimated by some producer groups. The narrow price differentials between grades for certain commodities, such as butter, suggest that the

economic potential in terms of price and income gains to farmers resulting from further quality improvement may be small. Improvements in quality of eggs and fluid milk over and above the minimum levels enjoined by public health authorities probably will not bring substantial price premiums from consumers. Some other commodities, such as hogs, cattle, and potatoes, show wider price differentials and, at least on the surface, appear to offer some hope of farm income gains through quality improvement.

The effects of further research directed toward quality improvement may be large relative to the cost of the research and development work going on in this field. However, the effects of quality improvement upon the total demand for food will almost certainly be small — possibly on the order of 0.1 percent per year in terms of retail value consumed.

Other Special Programs

Giving food to needy persons or providing it to them at reduced prices commends itself on humanitarian grounds. However, in the United States today, a very small percentage of the total population is poor enough to welcome such aid. In 1958, less than 4 percent of the United States' population was receiving public assistance.

This may be an unduly restrictive definition of our impoverished group; but it must be conceded that even these individuals are consuming about as many calories of food energy as they need or as they are likely to consume even with the aid of special programs. Most of them would, however, be glad to improve the quality of their diets, if means were offered.

Considering administrative and other complications, it is estimated that special programs to increase food consumption among low income families would not increase food consumption in terms of total farm resource requirements by more than 1 percent. Moreover, this net increase through programs such as the Food Stamp Plan or Food

Allotment Plan would be a one-shot affair — i.e., the demand for food might be increased by 1 percent in (say) 1961, but the year-to-year changes in demand from 1961 on would not be affected. Dropping the program any one year would mean a decline of 1 percent in demand for food.

Programs to increase food consumption by subsidized reductions in retail prices to all consumers would be conditioned by the price elasticity of demand at retail for all food, which appears to be approximately -0.25 . Total expenditures for food products at retail are about \$60 billion a year. To increase food consumption by 1 percent would require a decrease in retail food prices of 4 percent, or a subsidy of about \$2,400 million. The farm value of 1 percent of our total food consumption, as indicated in Table 4.1, would be about \$240 million.

Hence, the cost of a general subsidy to increase food consumption by 1 percent would be nearly 10 times as great as the amount paid at the farm level to buy up a 1 percent surplus of raw farm products.

Programs With Nutritional Objectives

The higher income levels of recent years have greatly reduced the dietary deficiencies that were observed in the 1930's; further increase in income will also tend to reduce the percentages of our population who are consuming less than recommended nutritional requirements.

Economists at the University of Minnesota estimated the effects on national food consumption of various diets providing minimum needs for calories, proteins, and each of the vitamins and minerals regarded as essential to health.¹³ The differences between the diets would consist in their variety and average cost per calorie. According to the Minnesota study, if all consumers followed a "liberal cost" diet plan, the net increase in total food consumption

¹³ John M. Wetmore, Martin E. Abel, Elmer W. Learn, and Willard W. Cochrane, *Policies for Expanding the Demand for Farm Food Products in the United States; Part I, History and Potentials*, Minn. Agr. Exp. Sta. Tech. Bul. 231, April 1959.

above the actual level of 1955 would be about 2.3 percent. A "moderate cost" diet would result in a net *decrease* of 5.5 percent, and a "low cost" diet in a net *decrease* of about 22 percent.

These estimates suggest that, where food is concerned, the United States is indeed an "affluent society."

The "one-third of a nation" that was ill-fed in the mid-1930's has shrunk to 5 or 10 percent of a nation if we use the same real income standard to define poverty.

FACTORS AFFECTING U.S. NONFOOD USE OF FARM PRODUCTS

Domestic nonfood uses accounted for 11 percent of total utilization of farm products in 1958. Of the various nonfood uses indicated in Table 4.1, feed for work stock is now of negligible importance and will certainly not increase. Fibers, leather, and tobacco accounted for seven-tenths of the total nonfood use in 1958, or 7.6 percent of total utilization.

Use of cotton and wool per person has decreased quite substantially during the past decade and consumption of tobacco has trended downward at least slightly since 1953

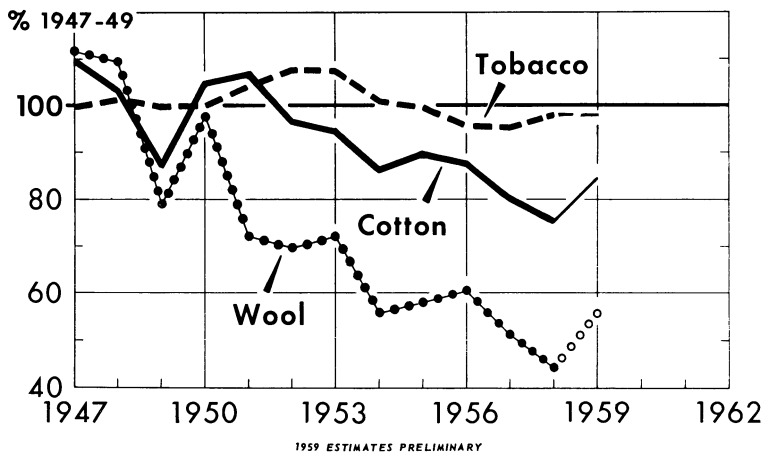


Fig. 4.9 — Use of nonfood farm products per person in the United States.

(Figure 4.9). As utilization of farm products for domestic food has increased slightly more than in proportion to population, the share of fibers, leather, and tobacco in total utilization has declined in recent years and will probably decrease in relative importance during the 1960's.

Not much of a campaign can be based upon expanding the consumption of alcoholic beverages, which account for less than 1 percent of total utilization of farm products. Domestic use of industrial oils and soap decreased in absolute as well as relative terms from 1950 to 1958. Other non-food use increased sufficiently to offset the decline in industrial oils and soap.

Recommendations and bills for converting surplus grain into alcohol and requiring manufacturers, service station operators, and motorists to use a certain percentage of the resulting alcohol in mixtures with gasoline have been introduced in Congress from time to time during the past 30 years. While the technological problems could perhaps be solved, the restrictions upon motorists, distributors, and manufacturers which would be involved run counter to our mores. If alcohol were desirable as a motor fuel additive, this alcohol could be obtained much more cheaply from petroleum by-products.

Corn would have to be priced at less than 50 cents a bushel to qualify as a "commercial" raw material for industrial alcohol.

We may make more progress in finding industrial uses (most of them of small volume relative to the total farm surplus) for the more complex and expensive molecules derivable from farm products than for the "lowest common denominators" — alcohol and starch — that have received most attention in the past. Over the next few years, positive effects of the chemical industries in finding new uses for farm products will probably not offset the effects of new competitors based on materials of nonfarm origin.¹⁴

¹⁴ Morton Smutz, "The Relationship Between the Agricultural and Chemical Industries," in CAA Report 2, *A Report of the Seminar on Demand for Farm Products*, Center for Agricultural Adjustment, Iowa State University, Spring Quarter, 1959, pp. 87-90.

Some attention has been directed toward introducing new crops, now imported from other countries, into the United States. The mutual benefits of trade according to comparative advantage are well-known, and we would obviously be worse off if we tried to raise tropical fruits and coffee in domestic greenhouses.

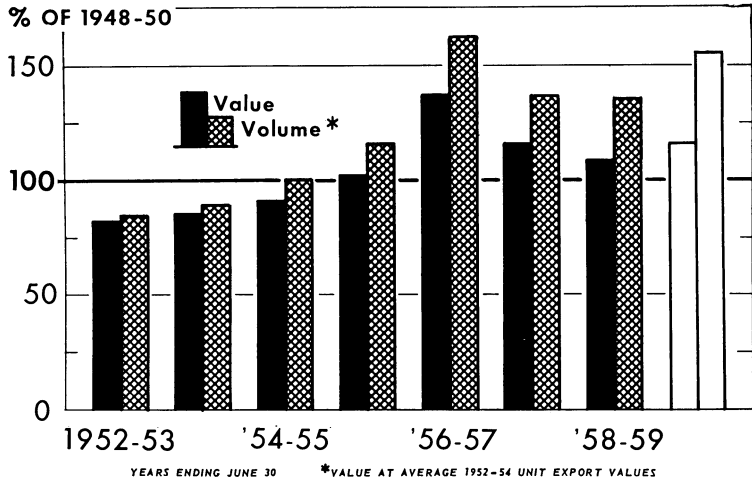
A leading agronomist in a 1959 seminar presentation at Iowa State University, listed acreage potentials for new crops at 2.5 million acres, equivalent to about 0.7 percent of our current total crop acreage.¹⁵ If these crops were successfully grown in the United States, they would for the most part displace imports which were sources of dollar exchange for friendly foreign countries who in turn import other farm products and nonfarm goods from us. The speaker also pointed out that years are required for adapting new crops to growing conditions in the United States. It seems that most research and experimentation in this area have a relatively long-term payoff and would make little contribution to the agricultural adjustment problem within the decade ahead.

In summary, it seems likely that the percent of total utilization of farm products in domestic nonfood uses will decrease somewhat further during the 1960's. While many valuable products or by-products and corresponding new uses of farm products and their derivatives may be developed, their direct effect is not likely to expand total domestic use of farm products by more than 1 percent in the next decade. This effect will probably be more than offset by further inroads of synthetic products into markets formerly dominated by fibers and other products of farm origin.

FACTORS AFFECTING FOREIGN UTILIZATION OF U.S. FARM PRODUCTS

In 1958, exports and shipments accounted for about 12 percent of our total utilization of farm products. Figure 4.10

¹⁵ I. J. Johnson, "Potentials for New Crops to Meet New Existing Demands," in CAA Report 2, *op. cit.*, pp. 91-96.



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Fig. 4.10 — Value and volume of U.S. agricultural exports.

shows clearly that the volume of farm exports has been at a high level during the past four or five years compared with the level of the early 1950's.

An appraisal of the prospects for agricultural exports from the United States during the decade ahead implicitly involves an appraisal of the entire supply and demand balance for farm commodities country by country for the entire world. An increase in our own agricultural exports, conditions in other countries remaining constant, would depress prices to some extent in almost every country in the world, except to the extent that the importing countries resort to price controls and other forms of government intervention.

In recent years, the Food and Agriculture Organization (FAO) and the Foreign Agricultural Service of USDA have made considerable progress in organizing world data on farm production and trade.¹⁶ World farm production from

¹⁶ Foreign Agricultural Trade Outlook Charts, 1960, USDA, Washington, D.C., November 1959. See especially pp. 4-16.

1956 through 1959 has averaged about 4 percent higher than the 1952-54 average level. In the major countries which buy our farm products for dollars, per capita farm production during 1956-59 has averaged 5 or 6 percent above 1952-54.

Total farm production in major competing countries (Canada, Mexico, Australia, and Argentina) has increased during the 1950's and has fluctuated with no definite trend on a per capita basis. As three of these countries export extremely large percentages of their farm production, the increase in total production is perhaps more significant than the inconclusive fluctuations in production per person.

These upward trends in world farm production are hard to reconcile with the picture many laymen entertain of a world full of starving people who would form a willing and inexhaustible disposal outlet for any amount of surplus grain or other products from the United States.

The figures on relative costs per calorie of livestock products and cereals previously cited give one clue as to the real situation. It is possible for a consumer in the United States, buying his food at retail prices and largely in the form of livestock products, to spend at least ten times as many dollars for food as might an Indian villager, particularly if the rice or wheat consumed by the latter is valued at farm prices.

According to our standards, calories are cheap. Ten or 12 bushels of wheat a year, with a farm value of \$20.00 or \$25.00, would provide enough energy to keep an average human being alive. Actual food expenditures per person in the United States run something more than \$300 per capita.

The world food surveys of recent years indicate that the majority of people in underdeveloped countries are getting as many calories as they require to maintain their body weight and customary levels of activity. Furthermore, their diets consist very largely of grains.

As economic development proceeds in such countries and standards of living rise, there is a tendency to shift

away from grain and other low-cost calories to a somewhat more varied and slightly more expensive diet, though still a low-cost diet according to U.S. standards.

Very few people in the world are anxious to increase their per capita consumption of cereal products. Yet the great bulk of our surplus of edible farm products consists of wheat, corn, and other grains which in this country are used primarily for feed. Some countries with relatively high standards of living, as in Western Europe, *might* be willing to use larger quantities of U.S. grain for livestock feed, if it were made available for this purpose at bargain prices. But this is not what humanitarians have in mind.

In countries with extremely low levels of income, the importation of U.S. grain for use as dairy and poultry feed would represent a tremendous jump in cost per calorie compared to the present basic diet of cereals. If grain were given away at the bin sites and elevators in Iowa and Kansas, the cost of transporting the grain to U.S. ports and thence overseas to Asia or Africa or Latin America would still make livestock production based upon these grains an expensive source of calories as compared with the direct food use of "commercial" grain.

These considerations do not indicate that nothing can be done to use our farm surpluses for the benefit of people in the less developed countries. Much is being done. For example, in 1959, 34 percent of our agricultural exports were made under government programs on terms extremely favorable to the importing countries.¹⁷ The other 66 percent of our agricultural exports in 1959 were paid for in dollars, but some of these products were sold at considerably less than the domestic U.S. price. In general, the most favorable terms of all were made to the least developed countries.

Countries such as Canada, Denmark, Australia, and Argentina view with disfavor our use of subsidies to promote commercial exports. Their officials no doubt sympa-

¹⁷ *Ibid.*, p. 8.

thize with our desire to help underdeveloped countries through grants and loans. Under the terms of our Public Law 480, imports of farm products in connection with such grants and loans are supposed to be in addition to normal imports. In practice, there is no doubt some increase in total imports and also some displacement of commercial imports. The latter effect is a matter of concern to other exporting countries. Some permanent shifts in consumption and exports may result from subsidies to promote U.S. exports, especially where economic development takes place.

With the aid of the devices and programs just mentioned, we increased our exports (in physical terms) by more than 50 percent from 1954-55 to 1956-57. Exports declined moderately in 1957-58 and 1958-59, but in 1959-60 they will probably equal the 1956-57 peak. The commodity composition of our exports is shown in Figure 4.11. World agricultural exports leveled off in the years 1956 and 1957 at around \$28 billion and declined slightly in 1958. Agricultural exports from the United States have accounted for about one-sixth of the world total during these years.

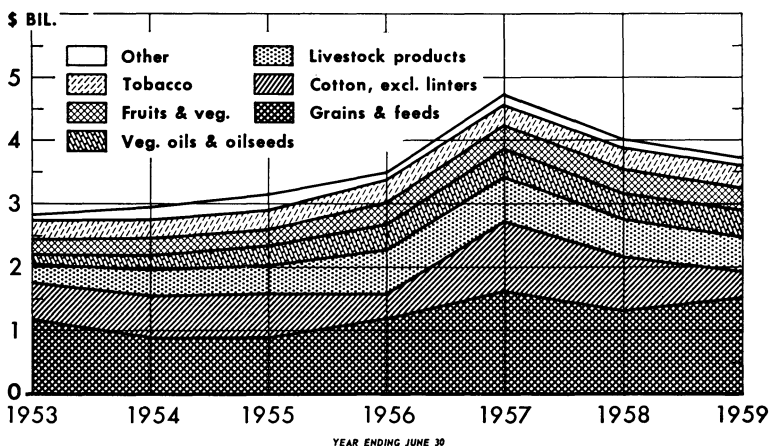


Fig. 4.11 — Commodity composition of U.S. exports.

There is essentially no more magic in the export market than there is in the domestic marketing system. The more obvious or plausible opportunities for expanding exports have been recognized and pursued by the U.S. government since World War II, and efforts were considerably increased with the passage in 1954 of Public Law 480.

Buyers and sellers throughout the world are in daily contact with one another. Eleven commodities make up two-thirds of total world agricultural trade, and 72 percent of U.S. agricultural exports (in 1958-59) went to 14 countries.

World trade seems mysterious because most of us have not given it serious thought. We can readily visualize an Iowa ham being transported to Chicago, displayed and sold in a supermarket, and cooked and served by a Chicago housewife. If a second Iowa ham were sold and served in London, England, we would have entered the mysterious world of foreign trade — yet the only physical operation that has been added is another 4,000 miles of transportation services.

It is even easier to visualize the import side of foreign trade when we see canned hams from Denmark and the Netherlands displayed for sale in a Los Angeles supermarket. The attitudes and responses of U.S. consumers and U.S. hog producers to these imports may help us to sense the probable reactions of consumers and producers in other countries.

Experience of the 1950's demonstrates that we cannot export our farm surplus problem in its entirety. But there are possibilities for some further expansion of exports along two different lines.

The first of these lies in the implementation of large scale programs of economic aid to underdeveloped countries. The following arithmetic may be useful in getting a rough notion of the magnitudes that could be involved:

1. Our exports of wheat from the United States in the 1957-58 crop year amounted to 400 million bushels. This

would provide enough calories to maintain about 60 million people at the consumption levels prevailing in Southeast Asia.

2. Underdeveloped countries in the non-Communist world have a combined population of about 1 billion persons. This population is growing by something like 2 percent a year, or by 60 million people within three years.

3. The 400 million bushels of wheat we exported in 1957-58 were equivalent to 3 percent of our total farm production, or somewhat less than the net increase in private and government inventories of farm products (including livestock on farms) in each of the years 1958 and 1959.

If all underdeveloped countries were to get *all* of their increased calorie requirements from the United States, the increase in exports would catch up with our present rate of surplus production sometime between 1965 and 1970.

The arithmetic just presented may raise unrealistic expectations concerning the volume of exports that will actually be made in the 1960's to further economic development abroad. For example, it might be more economical for us to ship fertilizers to underdeveloped countries than to ship grain. It might be even more desirable to ship steel, cement, and machinery to these countries so that they can build factories and produce their own chemical fertilizers. And it might be even more economical and more desirable from a long-run standpoint if we simply "exported" several thousand engineers, management experts, extension and experiment station specialists, and other key personnel to help the countries to help themselves so that, even during their period of heaviest capital investment, they do not become unduly dependent upon gifts or loans of food from the United States.

In the short run, say five or ten years, overzealous promotion of wheat shipments to Asia could even have the effect of transferring part of our surplus problem to the rice-exporting countries, which are financially much less able than we are to sustain low prices for their major export

crop. To some extent, wheat calories could simply displace rice calories.

Over a period of ten to twenty years, however, successful economic development would raise per capita incomes and encourage a shift toward higher cost calories. This "second wave" could exert a significant pull upon farming in the exporting countries, but the bulk of the increased demand would have to be met through farming improvements in the currently underdeveloped nations themselves.

Another possibility that has received less public attention would be an expansion of agricultural imports by the industrialized nations of Western Europe. These countries have greatly improved their industrial facilities in recent years and have had considerable success in expanding their exports of manufactured goods to the United States and other nations. Some of the most populous countries in Western Europe are producing part of their wheat and other farm products at very high unit costs. They have done this in part for reasons of national security and also because of difficulties in financing imports from the United States and other Western Hemisphere countries during much of the period since World War I. But since 1957, the "dollar shortage" has apparently turned into a "dollar surplus," and the economic reason for restricting agricultural imports has lost much of its force.

On economic grounds, the countries of Western Europe would now be justified in reducing their tariffs, in liberalizing or removing their import quotas on farm products, and in reducing their price support guarantees to their own farmers. The latter adjustment especially is politically difficult, and might take many years to accomplish under the most favorable conditions. World political developments during the next few years may or may not weaken the national security argument for maintaining high cost food production in some countries.

These factors are not likely to affect our exports very much before 1965. Under the most favorable circum-

stances, our exports of wheat, feed grains, oilseeds, and other products to Western Europe could expand significantly in the late 1960's and early 1970's. But an increase of one-third in such exports would be equivalent to only 2 per cent of our total farm output.

PROBLEMS IN DEALING WITH EXISTING SURPLUS STOCKS

Stocks of corn have increased in each successive year from 1952 through 1960 (Figure 4.12). Despite vigorous attempts to restrict acreage and production of wheat, as well as to expand exports, we have accumulated more than a year's supply of wheat (almost three years' supply in terms of domestic food use only).

We reduced our stocks of cotton rather substantially from 1956 to 1958, but the carryover has changed very little during the past two years.

There is little justification, either economic or strategic, for having year-end stocks greater than 400 million bushels of wheat, 500 to 800 million bushels of corn, and perhaps 5 million bales of cotton. The estimated carryovers in 1960

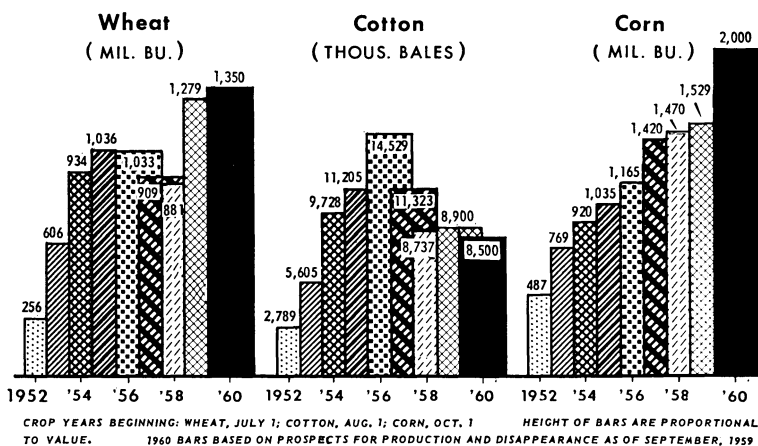


Fig. 4.12 — Carryover of major U.S. farm commodities.

are approximately 1,350 million bushels of wheat, 2,000 million bushels of corn, and 8.5 million bales of cotton.

The surpluses of these three commodities above desirable levels would have a farm value of about 4 billion dollars, equivalent to 12 or 13 percent of total farm production in 1959. If we set out to eliminate these surpluses by 1970, the annual rate of utilization during the 1960's would have to be increased about $1\frac{1}{4}$ percent on this account.

The existence of surplus stocks will be discussed more fully in Chapter 5. They are mentioned at this point to emphasize the total job that needs to be done to achieve a balance between supply and demand for farm products and to help us consider more realistically the extent to which demand expansion can be expected to restore this balance.

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