

# Wheat Supplies & Exports

## Have Little Effect on Price of Bread

by C. Curtis Cable, Jr., and Elmer L. Menzie\*

A three-year grain sale agreement with the U.S.S.R. was announced by U.S. government officials on July 8, 1972. This agreement created considerable late-summer and early-fall activity in U.S. grain markets. Domestic prices for some grains increased appreciably, and these increases further kindled the controversies relative to causes for rising U.S. food prices.

For example, the market price for wheat in the U.S. rose from \$1.32 per bushel on July 15 to \$1.51 on August 15.<sup>1</sup> Apparently, because of this relative sudden and sharp increase in wheat prices, newspapers and other news media carried stories on the likelihood that retail bread prices would rise significantly in the U.S. Supposedly, the higher wheat prices were caused by a feared shortage of wheat resulting from the sale agreement with the U.S.S.R.

Budget-conscious consumers reacted negatively to the prospects of higher bread prices, and to the reported reasons for justifying the increase. However, as would be expected, most U.S. grain farmers reacted favorably to the grain sale agreement.

Will the grain sale agreement with the U.S.S.R. result in a severe wheat shortage in the U.S.? And, is the recent July-to-August increase in wheat prices a sound economic justification for an appreciable increase in retail bread prices?

In an attempt to answer these questions and provide some insight on the issues involved, this article (1) summarizes the provisions of the grain-sale agreement and the reported sales as of mid-September, (2) analyzes the impact of these sales on current U.S. wheat supplies, and (3) discusses the historical relationship between wheat supplies and U.S. retail prices for flour and bread.

### *The Grain Sale Agreement*

This agreement provided that (1) the U.S.S.R. would buy, from private U.S. grain dealers, \$750 million in grains over a 3-year period, (2) \$200 million worth would be purchased in the first year, (3) the U.S. would extend credit up to the total amount of the purchase but no more than \$500 million would be outstanding at any one time, and (4) interest would be 6 $\frac{1}{8}$  percent and repayment of principal and accrued interest would be made in three annual installments.

According to a news release,<sup>2</sup> at the time of the announcement of this agreement, the U.S. government expected most of the purchase would involve feed grains.

Although the U.S.S.R. had a poor wheat crop, U.S. officials apparently did not expect large purchases of wheat.

However, by the end of the first week in September, the U.S.S.R. had purchased about 400 million bushels of wheat, and total purchases approximated \$1 billion. Obviously, the rate of purchase is about four times that anticipated by U.S. negotiators.

### *Changes in Wheat Supplies and Uses*

On July 1, the beginning of the wheat-marketing year, the U.S. had about 865 million bushels of wheat on hand (Chart 1). This was the second largest "beginning stocks" since 1964, and was equal to domestic needs for approximately one year.

In addition to these stocks, the indicated 1972 U.S. wheat crop of almost 1.6 billion bushels is the third largest on record. As shown in Chart 1, the two largest crops were in 1968 and 1971, and there has been a pronounced but irregular upward trend in production since the early 1960s. However, during most of the past quarter-century, U.S. wheat production has fluctuated between about 1.0-1.5 billion bushels annually.

Adding production, and a small volume of imports, to the stock on hand gives the total available wheat supply for the year. This supply reached an all-time peak of more than 2.6 billion bushels in the early 1960s, then declined steadily to about 1.8 billion bushels in 1966. Since then, however, annual supply has increased fairly steadily to about 2.4 billion bushels at the beginning of the present wheat-marketing year.

U.S. domestic use of wheat this year is expected to total slightly more than 800 million bushels, which is down from last year's use of almost 900 million bushels (Chart 2). Uses for food are expected to remain at past year levels of 500-525 million bushels, and seed at about 60 million bushels. Wheat for feed, which fluctuates more than other uses, is expected to drop below last year's high because of adequate supplies of feed grains and relatively higher wheat prices.

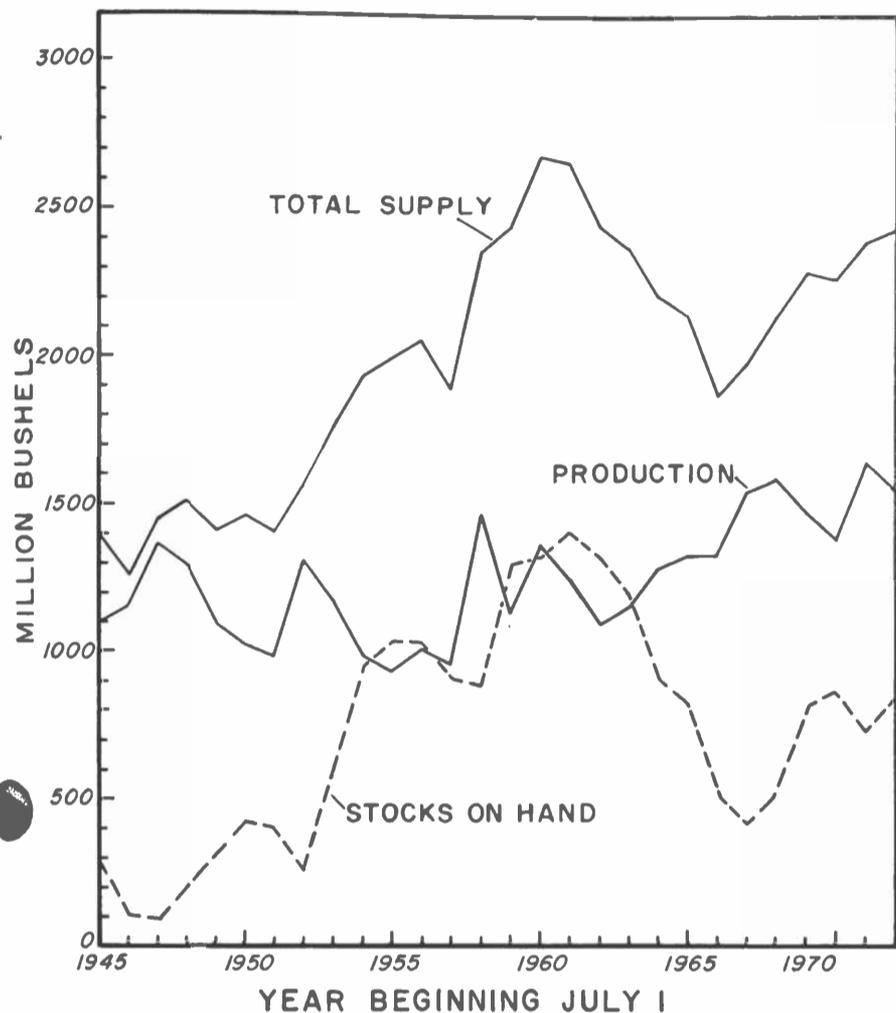
Exports of U.S. wheat, which have fluctuated substantially during the past 20-25 years, are expected to rise above last year's 632 million bushels. How much they will rise, however, is still in doubt. In the August *Wheat Situation*, 1972-73 exports were projected at 800 million bushels.<sup>3</sup> But, the very recent "more-than-expected" wheat

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purchases by U.S.S.R. may increase this year's exports to an all-time high of more than one billion bushels.

Adding strength to prospects for increased U.S. exports are increased requirements in Eastern Europe and China, and lower available supplies from Canada, Australia, and Argentina.

Chart 1. Stocks on Hand, Production and Total Supply of U. S. Wheat, 1945-72<sup>1</sup>.



<sup>1</sup>Total supply includes stocks on hand and production, plus imports which have been 5 million bushels or less annually since 1962, and have not exceeded 32 million bushels since 1944.

Source: U. S. Dept. of Agric., Food Grain Statistics Through 1967, Statistical Bulletin 423, Economic Research Service, April, 1968; and appropriate issues of Wheat Situation, U. S. Dept. of Agric.

Assuming U.S. exports in 1972-73 total 1.2 billion bushels, which is 50 percent greater than the projection in the August *Wheat Situation*, and 800 million bushels are used domestically, total disappearance will reach an all-time high of 2.0 billion bushels. Deducting this amount from the 1972-73 projected supply would leave stocks of about 400 million bushels as of July 1, 1973.

This would be the smallest "stocks on hand" figure since 1952, but would still be sufficient to fulfill about 6 months of domestic requirements. This quantity is only slightly less than the stocks on hand at the beginning of the 1967-68 wheat-marketing year, and exceeds stocks available during 1945-52.

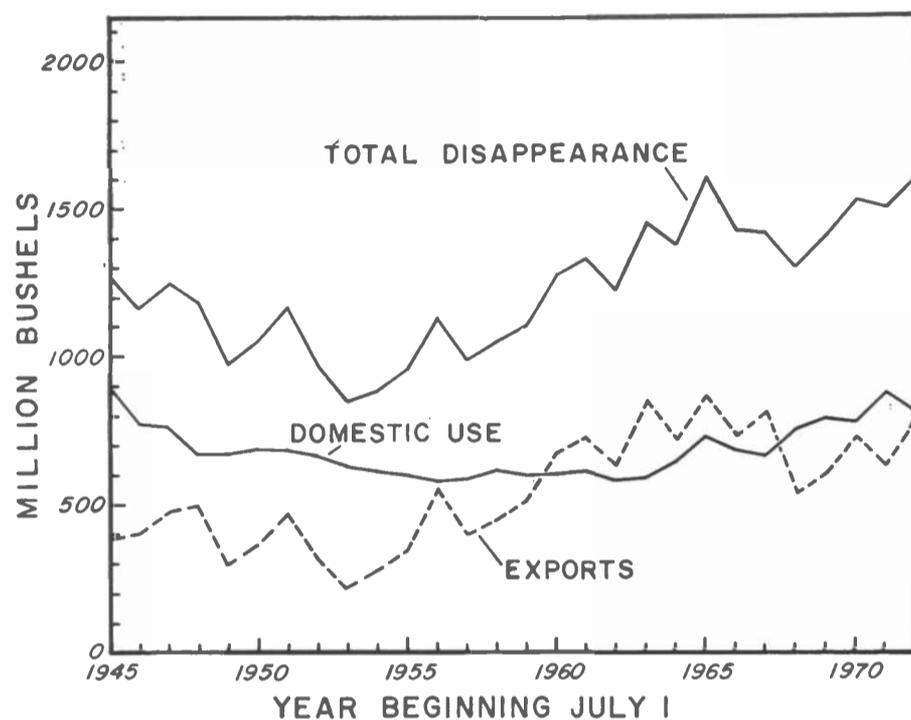
### Steadily Rising Retail Prices for Bread and Flour

Average retail prices for bread and flour have risen most yearly during the past quarter-century. In 1947 the average retail price for one pound of white bread

was about 12½ cents — by 1971 the price had doubled to 25 cents (Chart 3). For the same period, the average retail price for 5 pounds of general purpose white flour increased from 48 cents to 60 cents (Chart 4).

In contrast to these *steadily rising* retail prices for bread and flour, U.S. wheat prices have been relatively unstable, but at a fairly constant level for the past 25 years. The farm value of wheat used in making a 5-pound bag of flour has held fairly steady near the 20-cent level since 1947 (Chart 4).

Chart 2. Domestic Use, Exports and Total Disappearance of U. S. Wheat, 1945-72.



Source: U. S. Dept. of Agric., Food Grain Statistics Through 1967, Statistical Bulletin 423, Economic Research Service, April, 1968; and appropriate issues of Wheat Situation, U. S. Dept. of Agric.

### Do Retail Bread Prices Reflect Wheat Supplies?

Comparing the data in Charts 3 and 4 with data in Chart 1, a number of observations can be made relative to supply-price relationships between wheat, flour and bread.

During the past 25 years, stocks and total available supplies of U.S. wheat have ranged from relatively high to relatively low, and have either been rapidly increasing or declining (Chart 1). However, during this period, the farm value of wheat used in a 5-pound bag of flour has fluctuated but remained near the 20-cent level (Chart 4). In contrast, there has been an irregular but a very pronounced upward trend in the retail price for a 5-pound bag of flour (Chart 4). There were short-term periods when the farm value of wheat in flour, and the retail flour price were both rising. However, there were other short-term periods when the retail flour price was rising while the farm value of wheat was holding steady or declining.

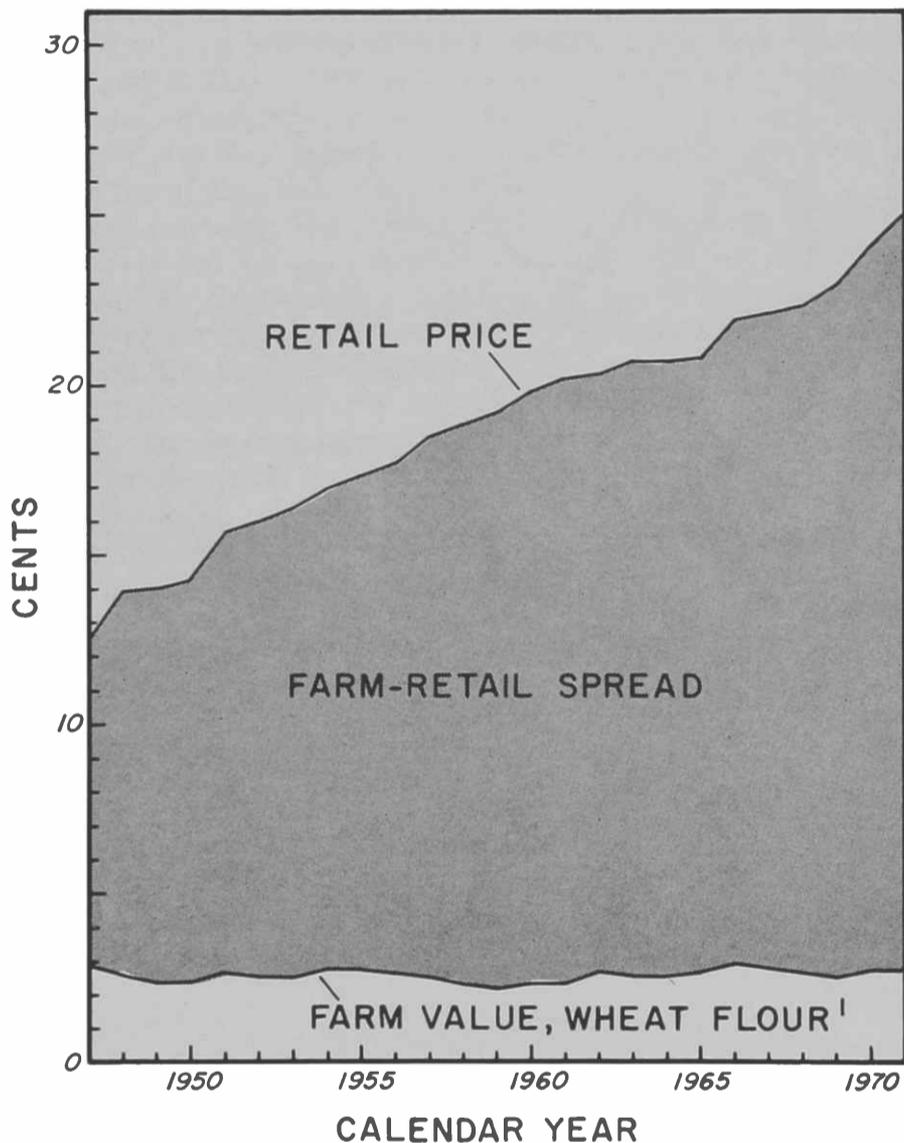
Throughout this 25-year period of relatively large up-and-down changes in wheat stocks and supplies, the retail price of a 1-pound loaf of bread rose steadily higher

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(Chart 3). In contrast to this year-to-year rise in bread prices, the farm value of flour used in one pound of bread fluctuated slightly but remained very near 2½ cents. Obviously, then, retail bread prices were rising even during short-term periods when the farm value of wheat was declining.

The question these observations raise is, "Since wheat is the major raw material used in the manufacture of bread and flour, why are not changes in wheat supplies and the farm value of wheat more closely reflected in retail prices for bread and flour?"

Chart 3. Retail Price, Farm Value of Wheat, Flour and Other Ingredients, and Farm-Retail Spread for A Pound of White Bread, U. S., 1947-70.



<sup>1</sup>Gross farm value has allowance for by-products.  
Source: Forrest E. Scott and Henry T. Badger, *Farm-Retail Spreads for Food Products*, Miscellaneous Publication 741, Economic Research Service, U. S. Dept. of Agric., January, 1972.

### What Does Retail Bread Price Include?

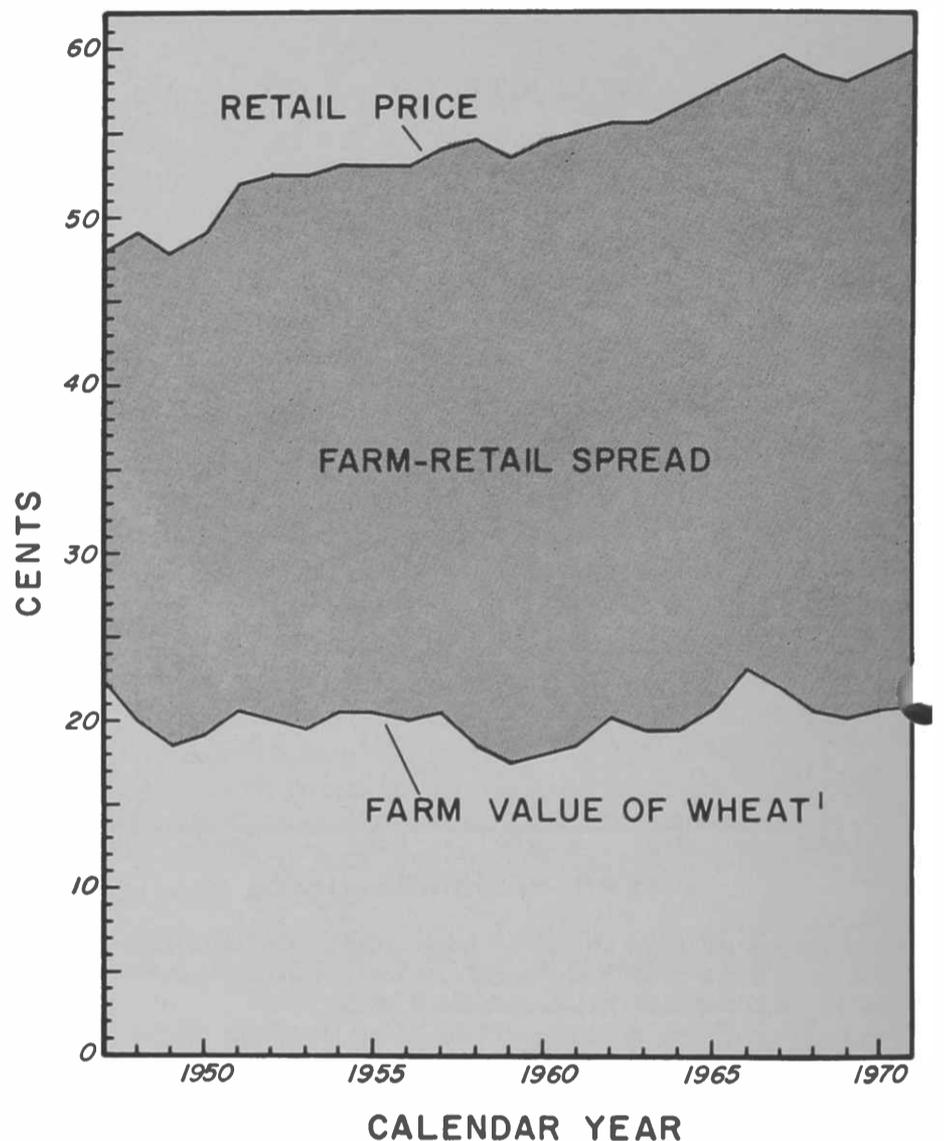
There is a basic reason behind the steady increases in retail bread and flour prices, which was ignored in the above comparisons. This was purposely done to illustrate a common error made by a majority of consumers, farmers, politicians, other public officials and the public in general.

The above comparisons failed to recognize the common-sense, economic fact that retail prices for bread and

flour — and for all other consumer products — must cover ALL costs for raw materials plus processing and distributing the final product. If consumers will not pay a retail price which covers these costs, including profit, the product will soon be discontinued.

Although wheat is the major raw material used in flour and bread, the value (cost) of the wheat is relatively

Chart 4. Retail Price, Farm Value of Wheat, and Farm-Retail Spread for Five Pounds of General Purpose White Flour, U. S., 1947-70.



<sup>1</sup>Gross farm value less allowance for by-products.  
Source: Forrest E. Scott and Henry T. Badger, *Farm-Retail Spreads for Food Products*, Miscellaneous Publication 741, Economic Research Service, U. S. Dept. of Agric., January, 1972.

small compared to the total of all other costs for materials, processing, distributing, and displaying these consumer products. For example, the farm value of wheat used in a 5-pound bag of flour has accounted for only about 20 cents of the total retail price ranging from 48 to 60 cents, over the past 20-25 years (Chart 4). The cost (price) of the wheat has remained fairly stable, whereas the retail price for flour has risen to cover cost increases for other items.

The farm value of wheat used in a pound of white bread has remained fairly stable at about 2½ cents since the late 1940s (Chart 3). But, the retail price has doubled in order to cover cost increases for other products.  
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Chart 6. Fresh Fruits and Vegetables.  
Changes in Retail Price & Per Capita Consumption in U. S. Since 1950.

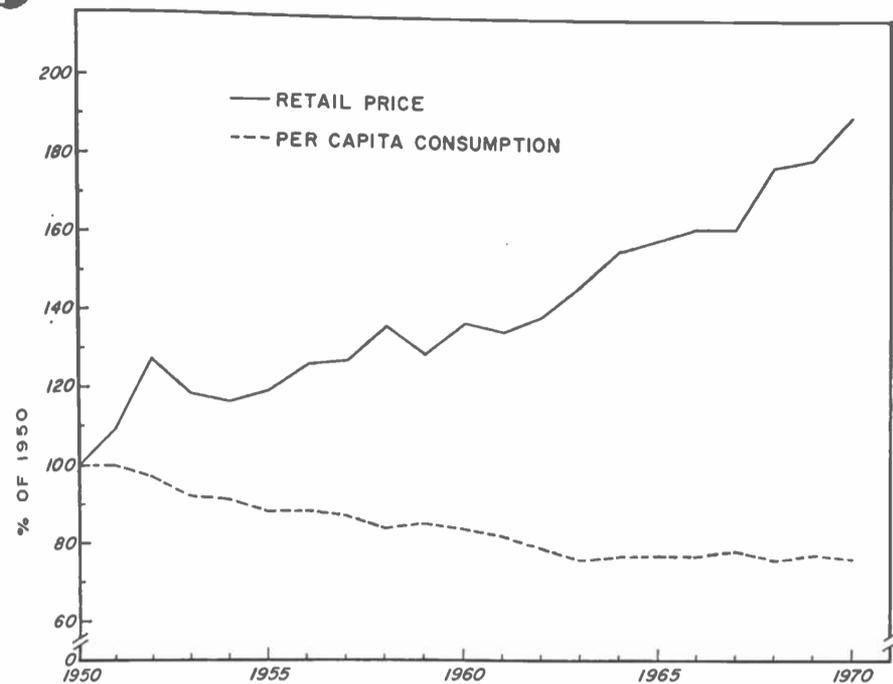
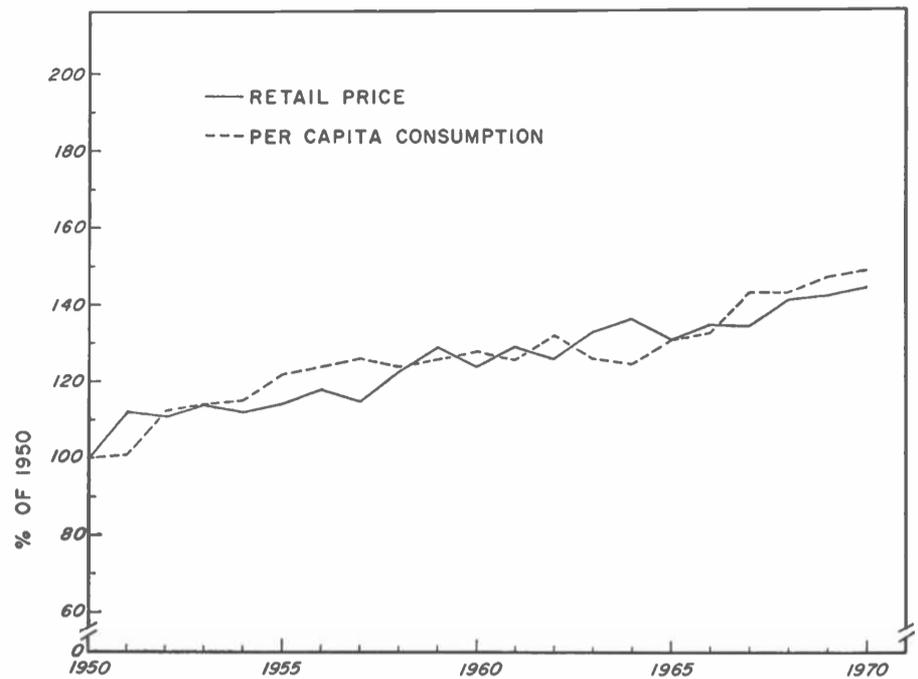


Chart 7. Processed Fruits and Vegetables.  
Changes in Retail Price & Per Capita Consumption in U. S. Since 1950.



holds, and further increases in percentage of meals served in public establishments, the convenience of processed foods will encourage their use. Also, the current concern about the "rising cost" of food may further discourage the use of the relatively higher priced fresh vegetables.

Labor requirements for production and harvesting of many vegetables has stimulated imports — especially fresh winter vegetables from Mexico. Favorable weather, adequate production resources and a substantial supply of relatively low-cost labor provides Mexico with some strong competitive advantages over U.S. growers.

Increases in yield per acre, and in a minor way the increases in import, have made it possible to increase production from a declining acreage. Overall, then, there is no apparent and immediate need for more U.S. farm land to be planted in vegetables.

It is possible, because of changes in cost and efficiency between areas, that vegetable acreage may move from one state or region to another.

Also, the increased experimentation and development of vegetable production in greenhouses and similar facilities may further reduce land requirements for some crops. However, it is not expected that these developments will have an appreciable effect on land requirements in the next ten years.

The steady upward trend in per capita consumption of processed vegetables, and the steady declining trend in use of fresh vegetables has many implications and presents some challenges for U.S. vegetable producers.

For example, can producers of fresh vegetables reduce the rate of decline in U.S. consumption of their product? How? Can the cost of production and marketing be lowered by adoption of

more efficient methods, and thereby lower retail prices? Would greater promotional efforts to encourage use of fresh vegetables pay off in more net dollars? Do foreign markets offer any potential for increasing sales and profits for U.S. producers of fresh vegetables?

Perhaps fresh vegetable growers have the answers to these and similar questions, and have concluded that the downward trend in per capita consumption for most fresh vegetables is inevitable. If so, will the increase in population offset the decline in per capita use, and thereby maintain total fresh vegetables sales near the current level?

If the current level of sales and consumption of fresh vegetables cannot be profitably maintained, many present-day growers may soon have to shift their production from fresh to processed market outlets.

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tion and marketing inputs. The value of wheat accounted for 23 percent of the retail price of a 1947 loaf, but by 1971 wheat accounted for only about 10 percent.

### Conclusions

Retail prices for bread and flour may be raised in the near future, and "justified" on the basis of "larger than expected" export sales. However, the fact of wheat has not been the major determinant of retail bread prices for

at least 25 years, and is becoming less and less important. Also, there has been little evidence of any severe shortage of wheat in the U.S. in the past 25 years. Therefore, it is not too surprising to find but little apparent relationship between retail bread prices and wheat supplies and prices.

Wheat supplies, stocks, exports and total disappearance — in the U.S. and worldwide — along with government programs have been the major determinants of wheat prices. An al-

most entirely different set of factors have been major determinants of retail bread and flour prices.

There is little evidence to indicate that there will soon be an appreciable change in this situation.

### Footnotes

<sup>1</sup>U.S. Dept. Agric., *Agricultural Prices, Statistical Reporting Service, August 30, 1972.*

<sup>2</sup>*New York Times News Service, Tucson Daily Star, September 10, 1972.*

<sup>3</sup>U. S. Dept. Agric., *Wheat Situation, Economic Research Service, August, 1972.*