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A STUDY

PREPARED FOR THE USE OF THE JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

(Pursuant to S. Con. Res. 93)



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LETTER OF TRANSMITTAL

JULY 14, 1975.

To the Members of the Joint Economic Committee:

Transmitted herewith is a study entitled "Food Prices in 1975" by George E. Brandow, Professor of Agricultural Economics at the Pennsylvania State University. The paper was prepared in December 1974 in response to a request by the Committee for an appraisal of the outlook for food prices in 1975, an evaluation of the impact of the poor crops of 1974 on prices, and an estimate of the effect of exports on food prices.

Senate Concurrent Resolution 93, adopted on August 7, 1974, instructed the Joint Economic Committee to undertake "an emergency study of the economy * * with special reference to inflation." As part of this study, the Committee under the leadership of Chairman Wright Patman and Vice Chairman William Proxmire had a number of individual study papers prepared, including the study transmitted herewith. The initial draft of this study was completed and available to the Committee at the time the Committee prepared its report pursuant to Senate Concurrent Resolution 93, entitled "Achieving Price Stability Through Economic Growth," filed with the Congress on December 29, 1974. Because of the time required for editing and printing, however, it was not possible to make printed copies of this study available until now. I believe the study will prove valuable not only for the Committee, but for all Members of Congress and for others interested in the problems of dealing with inflation in the United States.

The views expressed in this study are those of the author and do not necessarily represent the views of the members of the Joint Economic Committee or the Committee staff. On behalf of the Committee I would like to express my appreciation to Dr. Brandow for undertaking this study and to Courtenay Slater of the Committee staff, who supervised this entire study series.

> HUBERT H. HUMPHREY, Chairman, Joint Economic Committee.

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FOOD PRICES IN 1975

By G. E. BRANDOW ¹

This paper was prepared in December 1974 in response to a request for an appraisal of the outlook for food prices in 1975, an evaluation of the impact of the poor crops of 1974 on prices, and an estimate of the effect of exports on food prices.

SUMMARY

Consequences flowing from the poor crops of 1974 and prospects for continuing inflation in the economy at large dominate the food price outlook for 1975. The supply of concentrate feeds for livestock will be sharply reduced at least until 1975 crops are available. Production and consumption of all livestock products except beef and veal will be lower. Market supplies of beef and veal will increase as the rapid expansion of cattle herds slows down. The index of retail food prices may average about 10 percent higher in 1975 than in 1974 and 10-12 percent higher in the fourth quarter of 1975 than in the fourth quarter of 1974. Some price effects of the poor crops of 1974 will carry forward at least through the third quarter of 1976.

Not much more than half of the expected increase in retail food prices seems attributable to poor 1974 crops. Costs of processing and distributing food probably will continue to rise with general inflation and will be reflected in retail prices of many foods.

Grains are among the leading commercial exports of the United States and are the principal products needed for food aid for poor countries. As a rule of thumb applicable to a situation where grain production cannot be enlarged, an increase in grain exports amounting to 5,000,000 tons can be expected to raise the index of retail food prices 1.0 to 1.5 percent.

I. DETERMINANTS OF FOOD PRICES IN 1975

Demand for Foods

Consumer demand for food in the United States will, of course, influence food prices in 1975. The recession underway at the end of 1974 seems likely to extend well into 1975, and real disposable personal income per capita could well be lower in the fourth quarter of 1975 than in the not-so-good fourth quarter of 1974. Since inflation seems sure to continue, however, money income per capita was assumed for the purposes of this paper to rise five percent between the two fourth quarters. The expected inflation in nonfood goods and services in the Consumer Price Index from the fourth quarter of 1974 to the fourth quarter of 1975 was put at 10 percent.² No allowance was made for the possibility of governmental price controls on either foods or nonfoods.

¹ Professor of Agricultural Economics, the Pennsylvania State University. ² If real disposable income of consumers were to be 10 percent higher or lower than implied by these assumptions, the retail food price index might be expected to be roughly 3 percent higher or lower than estimated in section II.

A huge surge of export demand was principally responsible for the leading role played by food prices in inflation from 1972 to 1974. *Commercial* export demand will be influenced in 1975 by the size of crops abroad, by employment and income in the importing industrial nations, and by their ability to acquire dollars with which to buy in the United States. Mainly as a result of the oil situation, some important importers may have to reduce food purchases, but the timing of any such development is highly uncertain. It seems likely that export demand will be strong into the summer of 1975. After that, good crops abroad and/or exchange difficulties could materially reduce commercial export demand. Export demand could hold about level but seems unlikely to rise unless major crop reverses are experienced by countries with the wherewithal to buy abroad.

Food aid to poor countries unable to pay for substantial imports, not included in commercial exports, is an imponderable. It was assumed for this paper that food aid expected to be provided by the United States as of the end of 1974 would not be increased unless the nation's crops were good in 1975, and only modestly in that event.

Price Spreads

Farm-retail price spreads (differences between consumer prices for foods and prices paid to farmers for equivalent amounts of farm products) will influence average retail prices of some foods but not others in 1975. Given the structure of the food industry, increases in costs of processing and distributing food can be expected to be reflected in price spreads rather promptly. Though price-spread and marketingbill statistics compiled by the U.S. Department of Agriculture (USDA) are useful for showing broad changes taking place in the food sector. that statistics are not based on completely precise data, nor do they take into account lags in the system. Thus, they do not provide a detailed understanding of what is going on when prices at all stages of distribution change rapidly.

Historically, annual changes in price spreads have been geared closely to price and cost changes in the economy as a whole. For example, the path followed by price spreads from 1950 to the early 1970's was nearly the same as that followed by the implicit price deflator for the private nonfarm gross domestic product. Both were closely related to unit labor costs in the private nonfarm sector. Particularly in the first half of 1974, price spreads as measured by USDA rose sharply in relation to their usual companion, the price deflator for private nonfarm gross domestic product.

Price forecasts for 1975 are based in part on the expectation that price spreads will tend to correct for their apparent unusual advance in 1974 and will rise less rapidly in 1975 than continuing inflation in the economy would normally warrant. Price competition in the industry probably will be intensified by reduced purchasing power of consumers. Spreads computed on a month-by-month basis will continue to be distorted by any important changes in prices themselves.

Except for short intervals not exceeding a few weeks, retail prices of meats, poultry products, fresh fruits and vegetables, and some other foods will not be much influenced by the size of price spreads. The quantities of such foods on the market will depend on other circumstances, and retail prices will tend to adjust to clear the market of whatever quantities are available for sale. The size of price spreads will, however, influence prices received by farmers; and farm prices will have an effect on quantities of meat, poultry, etc., made available—and hence on retail prices—in subsequent years. For such foods as cereals, bakery products, and dairy products, prices of the farm raw materials tend to be set in international markets or (as is likely to apply to dairy products) by price supports. For such products, price spreads are added to raw material prices and directly influence concurrent retail prices.

Domestic Supply of Foods in 1975

The generally poor crops of 1974 will strongly influence domestic food supplies during most or all of 1975. This is especially true of livestock (including dairy and poultry) products, for which time periods ranging from several months to more than a year are required to increase production after larger supplies of feed crops become available. The size of fruit, vegetable, oilseed, and some other crops will influence supplies available to consumers at or fairly soon after the 1975 harvest, but some harvests come late in the year.

FEED CONCENTRATES

Feed grains (corn, oats, barley, and sorghum grain) are in seriously short supply for the feeding year October 1, 1974, to September 30, 1975, mainly because adverse weather reduced per-acre yields. A contributing factor has been the low level of feed grain stocks carried forward from 1973. Low feed grain stocks, the smallest since 1952 when utilization of feed grains was much less, reflected huge export demand in the 1972 and 1973 crop years as well as high domestic use. Highprotein feeds for livestock are also in short supply; the 1974 soybean crop was poor, though a good carryover was available from 1973.

Livestock producers fed 189 million tons of concentrate feeds (the total of feed grains, high-protein feeds, and other by-product feeds) in the 1973 feeding season and might choose to feed 200 million tons in the 1974 season at prices existing in mid-1974. Apparently, however, livestock producers will be able to feed only about 164 million tons even if (1) exports of feed grains, soybeans, and soybean oilmeal are cut (by high prices or controls) significantly below what they otherwise would have been, and (2) stocks of feed grains are reduced below the seriously inadequate amounts carried forward from 1973.

LIVESTOCK PRODUCTS

Adjustment to the reduced feed supply will be made by cutting back on cattle feeding and hog, broiler, and egg production, much of which is going on now. Dairy production probably will decline a little before 1975 is far advanced. Actual farmer marketings of livestock products will depend on numbers of animals and poultry on hand at the end of 1974 as well as on production in 1975. The author's estimates are that per capita consumption of livestock products in calendar 1975 will be reduced below calendar 1974 by the following percentages: pork, 11 percent; chicken, 8 percent; turkey, 9 percent; eggs, 3 percent; milk, 3 percent; and lamb and mutton, 12 percent. Fortunately for consumers, the overstocked position of the cattle industry will do much to offset the normal consequences of a shortage of feed concentrates. The cattle industry is cyclical. Numbers of cattle on farms have been on a cyclical upswing for several years; the high prices of recent years exaggerated incentives for producers to hold cattle for increased future production rather than to market cattle currently. Recently, cattle numbers have grown so large that consequent increases in marketings have sharply depressed feeder cattle prices. The cattle industry is entering the liquidation phase of the cycle, in which marketings will be high until numbers on farms are sufficiently reduced (or until rising demand catches up enough) to strengthen prices and start another upswing in numbers.

Because of high feed prices, the number of feeder cattle put in feedlots to be fed concentrates has been sharply reduced. Numbers "on feed" will continue to be low, and less weight than usual will be added per head. The number of cattle slaughtered without going through a feedlot will be high; so will calf slaughter.

How pounds of beef produced in 1975 will compare with 1974 is uncertain. If range conditions are poor or if producers are particularly pessimistic, there may be a flood of cattle to market; if opposite conditions hold, the number will be high but not spectacular. Weight per head will be down if only because of less feedlot production. The estimate here is that beef consumption per capita (equal to beef production per capita plus modest imports) will be 10 percent larger in calendar 1975 than in calendar 1974. Veal consumption per capita probably will be up about 20 percent.

FOOD CROPS

The 1974 wheat crop set a new high record but nevertheless was 10 percent or more below the expected level because of unfavorable weather. Supplies are tight going into calendar 1975, and stocks carried over on July 1 when the 1975 crop year begins may be the lowest in more than 25 years. With good weather, the 1975 crop could be huge, but the need to replenish stocks, the likelihood of strong commercial export demand, and pleas for U.S. wheat for food aid indicate that the supply situation during the 1975 crop year, even if eased by an enormous crop, would still not be excessive. And, of course, the crop could be hit by bad weather once again.

Good weather in 1975 would also produce a better soybean crop than in 1974, with the result that vegetable oil supplies would increase late in the year. Larger exports of soybeans (which have the strongest upward export trend of any important crop) probably will keep domestic vegetable oil supplies low enough, relative to demand, to keep oil prices at high if not peak levels. Reduced livestock production in 1975 will mean lower output of butter and lard, which will tend to increase demand for vegetable oils.

Production of most fruits and vegetables in 1975 will depend more on the effects of weather on yields per acre than on changes in acreage. Processors of several vegetables will be seeking to expand acreage in 1975. The decline in cotton prices will shift some acreage from cotton to vegetables.

II. PROSPECTS FOR FOOD PRICES IN 1975

Great uncertainty necessarily accompanies any forecast of food prices in 1975. No one knows for sure what will happen to employment and income in the United States, to the rate of inflation of the nonfood prices that affect price spreads and farmers' production costs, to commercial export demand, to shipments of food aid to poor countries, or to weather in the various crop producing areas of the country. The price estimates made in this section are considered the most likely outcomes, but substantial margins of error attach to all of them. In particular, figures for specific foods should be thought of as midpoints of ranges at least 15 percentage points wide.

Principal attention will be paid to retail food prices (which, fortunately, are usually easier to forecast than farm prices). Prospective price changes will be considered over two somewhat different time spans: (1) From calendar 1974 to calendar 1975, and (2) from the fourth quarter of 1974 to the fourth quarter of 1975.

All Retail Food Prices

It seems most likely (though far from certain) that the retail food price index included in the Consumer Price Index will average 10 percent higher in 1975 than in 1974 and that the price increase from the fourth quarter of 1974 to the fourth quarter of 1975 will be slightly greater, perhaps 10 to 12 percent. Prospects for high food prices in the fourth quarter of 1975 are traceable in part to prospects that the full impact of the short feed grain crop of 1974 will not be fully felt by retail prices of livestock products, particularly pork, until late in 1975. If crops are good in 1975, however, the stage may be set for a marked decline in the rate of food price increases in 1976.

Meats

Prices of individual meats will be affected by available supplies of each kind of red and poultry meat, by consumers' money income, and less importantly, by prices of other foods and of nonfoods. Crosscurrents will be at work, for larger supplies of beef, the most important meat, will be tending to depress meat prices, while reduced supplies of other red meats and poultry will tend to raise them.

The expected net result is that retail meat prices in 1975 will average 7 percent higher in 1975 than in 1974. Beef prices may average the same as or slightly below 1974, but pork prices may be one-fourth higher. Veal prices may decline slightly while lamb prices rise about the same as the all-meat index.

The expected increase in the all-meat price index from the fourth quarter of 1974 to the fourth quarter of 1975 is put at 13 percent. Reduced supplies of pork are expected to be particularly marked in late 1975 and to boost pork prices to one-third more than in the final quarter of 1974. Beef prices probably will rise slightly over the same period.

It may turn out that hog production will be reduced less in 1975 than indicated in this paper. In that event, pork prices would be expected to rise less than forecasted, but the limited amount of concentrate feed available for livestock would require reduced poultry or milk production or less cattle feeding. Thus, it seems likely that if pork price increases are over-estimated, price increases for other livestock products are under-estimated. If this turns out to be the case, the net effect on the index of all food prices will not be large.

Poultry Products

Prices of chicken, turkey, and eggs collectively are expected to advance 17 or 18 percent in 1975 over 1974, and the same average increase is expected to hold from the fourth quarter of 1974 to the fourth quarter of 1975. The corresponding changes for retail prices of chicken are 17 and 12 percent; for turkey, 11 and 25 percent; and for eggs, 20 percent in both comparisons.

Dairy Products

Prices of manufactured dairy products seem likely to be at or near support levels in the spring of 1975, and support prices probably will be raised for the marketing year beginning in April because parity prices will have risen. Farm prices of most milk for use in fluid form are tied more or less closely to prices of milk for manufacturing. Further advances in farm-retail price spreads for dairy products are expected. As a consequence, retail prices of dairy products collectively may rise 6 percent in 1975 over 1974 and in the fourth quarter of 1975 may exceed the level of a year earlier by 9 percent.

Other Foods

On the assumption that a larger soybean crop in 1975 will act as a check on wholesale oil prices but that price spreads will widen, retail prices of fats and oils may be roughly 8 percent higher in the fourth quarter of 1975 than in the same quarter of 1974. Because retail prices of fats and oils were much higher at the close of 1974 than at the beginning, the average increase between 1974 and 1975 may be nearly 20 percent.

Prices of farm products account for only a small portion of the retail value of most cereal and bakery products and of prepared foods. For this reason, price increases between 1974 and 1975 may be 10 or 11 percent, or about the same as the expected general inflation rate in the economy. Retail prices of sugars and sweets should recede moderately from the high level at the end of 1974 but may still average one-sixth more in 1975 than for the whole of 1974. Nonalcoholic beverages may rise 10 percent from fourth quarter 1974 to fourth quarter 1975 and average nearly 20 percent higher for all of 1975 than in 1974.

Prices of food "away from home" are strongly influenced by changes in costs of preparation and serving as well as by prices of food products. The estimated price increases for this portion of the food price index are 11 percent between calendar 1974 and 1975 and 12 percent from fourth quarter 1974 to fourth quarter 1975.

III. FOOD PRICE OUTLOOK BEYOND 1975

Food prices at the close of 1975 will not reflect the full working out of the effects of 1975 crops because some major changes in livestock marketings—if any are indicated—will not occur until 1976. Prices of food crops in the first half or more of 1976 also will be much influenced by 1975 crops.

Probably nearly all the land that farmers will crop in the next few years was in production in 1974. Comparatively small additions to cropland harvested, on the order of 1 or 2 percent of the total, can be expected in 1975 if weather does not interfere unduly with planting or lead to unusual crop failure. Supplies of some farm inputs, notably fertilizer, will be less than farmers would choose to use at customary real prices but nevertheless adequate for production of large crops. Normal-weather yields would produce perhaps 220 million tons of feed grains, 2,200 million bushels of wheat, and 1,500 million bushels of soybeans. Shifts of acreages among crops and deviations of yields from normal could, of course, lead to much different results. These figures are used, however, in speculating about prices in late 1975 and in 1976.

In the absence of another unusual surge of commercial export demand or a decision to ship large amounts of wheat and corn to poor countries for food aid, crops of the size suggested above would substantially reduce crop prices below levels reached at the end of calendar 1974. Prices of livestock products (except feeder cattle) would remain high as 1975 crops were harvested because the quantities of livestock products on the market would still reflect the short feed crops of 1974. There would, therefore, be a strong price incentive for farmers to increase production of hogs, feedlot cattle, poultry, and eggs. Important increases in quantities on the market would not appear until later, however. Supplies of broilers and to some extent eggs and feedlot cattle would increase by late fall, but the full effects would be delayed until 1976. The immediate effect of pork producers' efforts to increase hog production would be to reduce market supplies as animals were held back for breeding. Not until the latter part of 1976 would hog marketings rise and prices weaken.

Thus, good crops in 1975 would begin to put a brake on rising retail food prices in late 1975 and would have a substantial effect by the fall of 1976. Rising farm-retail price spreads as a result of continuing inflation in the economy would raise retail prices of numerous foods, particularly cereal and baking products, dairy products, processed fruits and vegetables, and beverages. The net effect on the retail food price index might be to cause it to level off rather than to fall appreciably. No calculation has been made on this point, partly because changes in other important variables such as consumers' incomes and exports are highly conjectural.

Results would be very different if crops were again as bad as in 1974. With carryover stocks near irreducible minimums, supplies of grains and soybeans would be even shorter than in the 1974 crop season. Cattle slaughter might be temporarily increased, but production of all other livestock products would be further reduced. Fats and oils would continue to be in short supply. Food prices would continue to rise strongly at least to the fall of 1976 and probably well into 1977. The United States will be extremely vulnerable to the weather in 1975. The poor crops of 1974 will have the following effects, among others: (1) Lower domestic supplies of foods and less food consumption

per capita than otherwise would be the case—about a 2 percent reduction in USDA's price weighted food consumption index.

(2) Higher retail food prices.

(3) Reduction of stocks of feed grains, wheat, and soybeans to dangerously low levels at the end of the 1974 crop year, rather than the modest increase in grain stocks and the adequate carryover of soybeans that otherwise would have been expected.

(4) Lower commercial exports of grain, soybeans, and soybean products. Because export demand may be inelastic in the short run, foreign exchange earnings from exports of the products may have been increased.

(5) Reduced ability to supply grain to deal with hunger in poor countries.

As this list makes evident, the full impact of short 1974 crops is not being absorbed entirely by reduction in food supplies available to consumers. Perhaps the reduction in concentrate feeds used in livestock production in the 1974 feeding year will be the difference between 190–195 million tons, which might have been expected with normal weather, to the 164 million tons likely to be fed under actual circumstances. The reduced market supply of livestock products resulting from the short crops of 1974 will be unevenly spread out over more than one year, at least from the fourth quarter of 1974 to the third quarter of 1976. The effects on prices will therefore be diluted.

If the changes in market supplies of livestock products resulting from poor 1974 crops were concentrated within the span of one year, the effect would be, roughly, to raise retail prices of meats as a group by 12 percent and of poultry and eggs by 19 percent. Dairy product prices probably would be affected only a little because of price supports. Prices of fish (affected by meat prices) and fats and oils would be increased more substantially.

The short crops of 1974 have also raised prices of cereals and bakery products, prepared foods, and other foods using grains or oils. The value of farm ingredients is typically a small part of the retail prices of such foods, so the impact of changes in farm prices is not great. A large proportion of the price of food consumed away from home is made up of costs other than food materials. The impact of the short crops of 1974 on the index of retail food prices over one year is estimated to be only a 6 percent rise in the index.

This estimate is not directly comparable with estimates of price changes given in Part II. It does appear, however, that only a part of the increase expected in retail food prices, perhaps not much more than one-half, can be attributed to the poor crops of 1974. For all food, including that consumed away from home, costs and profits in processing, distribution, etc., ordinarily account for about two-thirds of the consumer's dollar. Even though changes in farm-retail price spreads on several important foods are borne largely by farmers in any one year, the effect of general inflation on food prices through rising spreads for processing and distribution is large. This effect will play a significant role in the price increase expected in 1975. Exports of foods in 1975 are difficult to predict. In preparing estimates of domestic food supplies and prices for preceding sections of this paper, the writer relied heavily on the U.S. Department of Agriculture's projections of exports for the 1974 crop year.

In view of the importance of questions as to what U.S. export policy (including food aid) should be, it may be useful to have some idea of the impact of exports on domestic retail food prices. Grain exports seem particularly significant in this regard both because grains are leading commercial exports and because needs for food aid are largely concentrated on grains.

The approximate answer to the following question is sought: Suppose the U.S. exports, either in commercial trade or as food aid, an additional 5 million tons of grain.³ Suppose further that the United States is not able to increase total crop production and has no excess stocks from which the 5 million tons might be drawn; the grain must come out of domestic food consumption. Allow sufficient time—at least two years—for producers to adjust to the new situation. Other things equal, what will be the effect on retail food prices?

The answer depends to some extent on whether the additional exports are in the form of feed grains (which are also good for human food) or wheat. (Rice is not considered here because U.S. production of milled rice is less than 5 million tons.) Demand in the United States for foods made directly from feed grains and wheat is highly inelastic. If the 5 million tons of exports were to consist of feed grains, virtually all of it would be supplied by diverting grain from livestock. If the 5 million tons were wheat, farmers would have to shift acreage from feed grains to wheat. Since feed grains outyield wheat where the crops are substitutable, producing 5 million more tons of wheat would reduce production of feed grains by more than 5 million tons. The reduction in the feed grain supply would again be met by feeding less grain to livestock.

The direct but somewhat delayed impact, therefore, would be to reduce production of livestock products, to raise their prices, and to increase retail prices of cereal, bakery, and related products slightly to reflect higher prices for grains. The largest effect at retail would be on prices of meats and poultry products. The increase in the index of retail food prices might be expected to be 1.0 to 1.5 percent, depending on the kind of grain exported.

The assumption that the United States cannot increase total crop production is crucial to this answer. If higher prices resulting from larger exports caused crop production to rise, the impact on the retail food price index would be positive but less than 1.0 to 1.5 percent. If the increase in exports took place over time while farmers were increasing their productivity (as productivity has risen in the past), the higher exports would not necessarily increase prices at all. Nor would prices be increased if prices were being supported and the larger exports only took the place of quantities that otherwise would have been added to surplus stocks or withheld from production by control programs.

³ Five million tons is 2 percent of total U.S. grain production in 1973 and 6 percent of total U.S. grain exports (14 percent of food grain exports) in the 1973 crop year.

The estimated price effect given here is necessarily rough and would not be expected to hold for changes in exports that were far out of the range of the country's experience. In the short run, changes in exports might have a larger effect than estimated or implied, particularly on wholesale grain prices, because of changes in buyers' and sellers' expectations. If an increase in exports were taken to portend still larger increases in the future, grain prices might soar temporarily. Or reduced exports might have the opposite temporary effect.