UNSTABLE FARM PRICES: ECONOMIC CONSEQUENCES AND POLICY OPTIONS*

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The external environment confronting both farmers and policymakers obviously has changed dramatically over the past 3 years. Grain surpluses in the hands of the government have disappeared, drought has cut crop production in several important areas, and the news media have rediscovered the fact that a high proportion of the world's population subsists on diets which even in good crop years are only marginally adequate. In the U.S., food prices, and especially the prices of grains, have risen to levels thought highly improbable only 3 or 4 years ago. Does the new environment call for equally dramatic shifts in policy? This is the question I have been asked to discuss.

I am under no illusion that one more paper on the subject of U.S. agricultural policy will significantly alter the course of human events. In a world of shortages, however, it is reassuring to know there is still a surplus of at least one item, namely advice on policy matters. The threat of redundancy obviously looms large over anyone who has the temerity to accept an invitation to address the Association on this topic. Whoever does so must expect to operate in an area where the marginal utility of additional information is very low; my hope is that I have been able to identify an area where it is still positive.

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The subsequent analysis is based on the premise that price instability in grains rather than the threat of shortages or surpluses will be the dominant issue facing policymakers in the United States over the next few years. I will argue: first, that price instability is not all bad, or to put it slightly differently, that within the profession there is a tendency to overvalue price stability as an objective of policy; and second, that only modest changes in our existing institutions and policies are required to deal with the current situation.

The discussion will be confined mainly to problems associated with instability in the prices of grains and soybeans. Cotton, tobacco, peanuts, rice, sugar and perishable commodities will be ignored except insofar as they are affected by policies adopted for grains. There are compelling political as well as economic reasons for doing so. Agricultural policy debates in Washington have been dominated for over 50 years by the question of what to do about the prices of a small group of commodities, principally wheat, corn, cotton and dairy products. Recent events have not altered this situation. Congress lost interest in trying to deal directly with the prices of perishable commodities in the late 1940s following the disastrous experience with support programs for potatoes and eggs. In the intervening years, administrators as well as politicians have shown great reluctance to take on new programs involving perishable commodities because of regional conflicts among producers, resistance to the acceptance of effective controls, and concern about the potential high costs of government intervention. Furthermore, there is the practical problem of what can be done to stabilize the prices of such commodities as potatoes, onions, apples and eggs. In theory, it might be possible through the use of such instruments as marketing orders to reduce fluctuations in prices, or to even out

returns to producers (although not market prices) by taxing commodities in high-priced years to build up a fund out of which payments might be made in low-priced years, but in practice, such programs would be difficult to implement even if sufficient support could be mobilized to get the necessary enabling legislation enacted.

In contast, with storable commodities such as grains and cotton, a well-tested array of policy instruments is available which could be used to moderate price instability including a public storage program, price-support loans, and various methods of adjusting or controlling supply. Political reality dictates that we focus attention on those commodities for which we have available the necessary policy instruments and a strong base of political support for government intervention. Dairy products as well as grains fall in this category, but because both the issues involved in attempting to stabilize dairy prices and the policy instruments are somewhat different, they, too, will be ignored. Policies adopted with respect to grains obviously do influence the prices of livestock products and substitute crops as well. These secondary effects will be considered, but the important point to keep in mind is that most policy discussions, now as in the past, focus on grains and tend to ignore the rest of agriculture. I plead guilty to following this well-established tradition.

Nature of the Problem

For much of U.S. agriculture, the price situation, apart from an accelerated rate of inflation, has not been radically altered by recent events. Growth of internal demand has been relatively stable and predictable. Sudden shifts in export demand combined with general inflation

and the elimination of excess storage holdings are mainly responsible for the turn-around in farm prices. Wheat, feed grains and soybeans have been most directly affected. Prices of these commodities now fluctuate more within a few weeks than they did during the entire decade of the 1960s. For example, over the past year, harvest-period futures prices for wheat have ranged from less than $3 to over $5 per bushel and soybean prices from under $5 to over $8 per bushel. As long as present provisions of the Agriculture and Consumer Protection Act of 1973 remain in effect, such instability is likely to persist. The Act was designed deliberately to avoid the accumulation of large reserve stocks in the hands of the government by keeping loan rates for wheat, feed grains and cotton at relatively low levels.

The hazards of forecasting future prices under present conditions are well known to this group. I have no new information or insights which would enable me to improve on our generally poor record of performance over the past 3 years. I am not persuaded, however, that actual market prices will fluctuate around a generally rising trend of real prices as suggested by Cochrane a year ago. If this were true, it would create a relatively comfortable environment for those advocating a build-up of stocks. But if real prices decline once again as they did during the 1960s, losses incurred either by private traders or the government could be substantial, I prefer a neutral stance. In this respect, my views closely parallel those of Brandow. He concluded a year ago that "it would be disastrous to make a specific forecast, to prepare a deal with one outcome, and to find ourselves locked in when a very different outcome in fact develops" (p. 1099).

The problem as I see it is not one of potential physical shortages, at least not for U.S. consumers or for that matter most of the countries that buy from us, but rather one of unstable prices. The U.S. has sufficient productive capacity to meet any anticipated changes in effective demand over the next 5 to 10 years. Avoiding shortages is simply a question of providing adequate incentives for producers. Even temporary shortfalls in production need not prove disastrous for American consumers. The absolute supply of grain per person is so large that physical shortages are extremely unlikely. Livestock output provides a very flexible buffer to cushion the effects of changes in domestic supply or external demand for grains. Prices will effectively ration the available supply in years of short crops and high demand, just as they have done with corn and other feed grains during the past year. The chief disadvantage of relying solely on market forces to allocate supplies and guide production is that this may lead to extremely unstable prices, with accompanying cobweb effects on livestock output, consumer protests when prices escalate and possibly a depression in agriculture if farmers over-react to temporary high prices. In short the current mix of policies may well produce results which are beyond the limits of political acceptability. This is the critical policy question. Should we attempt to reduce the potential amplitude of price swings by altering existing policies? Before attempting to answer this question, I believe it appropriate to examine more fully the consequences of increased price instability both for producers and consumers.

Economic Consequences of Price Instability

Price changes during the past 3 years have been overwhelmingly in one direction. Consequently we have not had a full test of what might

happen if present policies (which permit market forces to reign) were maintained over a period of years. One of the important effects thus far has been to redistribute income from grain users to grain producers. Income transfers to grain producers over the past 3 years far exceed those resulting from government programs adopted during the 1960s. One has only to look at the changes in average net farm income since 1972 in grain-producing states such as North Dakota relative to grain-consuming states such as New York to be conscious of the power of relative prices to redistribute income.

The high level of grain prices also has achieved what advocates of meatless days failed to do last year, namely reduce meat consumption. This was brought about simply by making it unprofitable for livestock feeders to maintain per capita production of fed beef and pork. Altering price relationships is an extremely effective method of reducing the amount of grain fed to livestock and making more available for human consumption.

Effects on Agricultural Output and Efficiency

One of the standard arguments advanced in favor of attempting to stabilize grain prices is that this will lead to greater stability in livestock output and consequently more stable livestock prices as well. My own conclusion, based on an analysis of price behavior over the past decade is that, while stabilizing grain prices may be a necessary condition, such a policy by itself is not sufficient to produce stability in livestock output or prices. Our policies were successful in stabilizing prices of feed grains over the period from 1960 to 1971 to a far greater degree than in any preceding decade. Season average corn prices over a period of nearly 15 years ranged from a low of just under $1.00 per bushel to a high

of $1.33. The ratio of high to low prices in the 1960s was only 1.33. In contrast, during the period from 1921 to 1929, about the only other period I could identify with a reasonably comparable degree of stability in overall demand, the ratio of high to low season average prices for corn was 2.04 (table 1). But the degree of instability in the prices of hogs and eggs in the more recent period was not reduced to the same degree. In fact, egg prices were slightly more unstable in the 1960s than in the 1920s despite more stable corn prices in recent years, or at least up to 1972. Alternative measures of price instability including the coefficient of variation in season average prices and the ratio of high to low prices for each of the 2 periods produced similar results.

While this is a relatively crude test of the linkage between feed grain and livestock prices, the evidence is sufficiently strong to make one cautious in assuming that stabilizing grain prices will automatically stabilize livestock prices. It is certainly plausible to argue that the amplitude of fluctuations in livestock output will be less with stable grain prices, but it is clear from an examination of time-series data that cycles in egg and pork production persisted in the 1960s much the same as in the more distant past despite more stable feed costs. Prices of livestock products continued to fluctuate with changes in production. Stabilizing the denominator of the livestock/feed price ratio did not lead to stability in output. This is not an argument against stabilizing grain prices, but rather an admonition not to expect too much from stabilizing feed prices alone.

One additional interesting fact emerges from the analysis of season average prices for wheat in the same 2 time periods. Both measures of

variability (the ratio of high to low and the coefficient of variation) were slightly higher in the most recent period than in the earlier period (table 1). Average market prices for wheat were more unstable than those for corn in the decade of the 1960s because of changes in policy. The assumption often made by advocates of government intervention that such intervention will automatically lead to more stable prices is not always correct. Changes in policy or in administrative decisions can produce as much instability as market forces. Government intervention, unless carefully circumscribed and managed, can become a destabilizing factor in pricing farm products, as dairymen learned to their dismay in 1974.

Another familiar complaint against unstable prices is that this leads to capital rationing, thereby reducing output and efficiency. It is difficult to test the theory empirically because, in most cases, the assumption that other factors influencing output and efficiency remain the same is not fulfilled. The availability of new technology and the level of prices in relation to costs probably are more important variables than is price stability per se. The dominance of these other factors is clearly illustrated in the fruit, vegetable, egg and poultry industries. Large capital investments and rapid improvements in technology have been made in recent decades despite highly unstable prices.

There has been a tendency in the profession to accept too uncritically the argument linking capital rationing to price uncertainty put forward so convincingly by D. Gale Johnson nearly 3 decades ago. Conventional wisdom now holds that unstable prices inhibit capital investment in agriculture. Empirical observation, however, suggest the possibility of an alternative hypothesis linking capital investment positively with price instability. The chain of

reasoning is as follows. A substantial part of investment in agriculture occurs in years of high prices since such years provide both the capacity to invest and the incentive, partly because farmers are notorious "tax avoiders". Farmers have a high propensity to invest out of retained earnings which, of course, are positively correlated with prices. Recent sales figures of farm equipment dealers lend support to this hypothesis. Thus, it is possible that the sum of investments over a period of years may be greater with unstable prices and incomes than with more stable prices although the evidence obtained by Girao et al. who examined the investment behavior of a sample of Minnesota farmers is far from conclusive on this point.

The effect of periodic low prices on efficiency also must be considered. Efficiency is partly a function of forcing managers to make changes in their business, or weeding out those with inferior ability. Gains in efficiency, as Leibenstein has emphasized, are achieved, not so much by changing the output mix along the production possibility frontier, or by altering factor proportions, but rather by moving from well inside the boundary toward the frontier, or simply by producing more output with the same set of resources. This he calls "X-efficiency". Improvements in "X-efficiency" are likely to be associated with occasional periods of low prices. During such periods, farmers who use resources inefficiently are forced to make changes. If not, their creditors usually suggest they consider alternative ways of earning a living.

What I have suggested is a cyclical theory of changes in investment and efficiency in agriculture. Investment comes in lumpy forms and is facilitated by high prices; inefficiency is squeezed out in periods of low

prices. Stability can lead to complacency rather than to efficiency although this certainly is not always the case.

Among the more serious repercussions of unstable prices are the potential adverse effects on the farm equipment industry and the inflationary impact of high commodity prices on land values. Occasional booms in farm equipment sales, followed by periods of depression compound the problem of trying to achieve a tolerable degree of stability in nonfarm sectors of the economy. Unstable prices also can have a ratchet effect on land values. I am reminded of Professor S. W. Warren's observation on the behavior of potato farmers who obviously have operated under an unstable price regime for many years. After a trip to Aroostock County, Maine, he summed up the situation this way: "In a poor year, farmers go into debt, while in a good year, they buy another farm." This tendency to overcapitalize the good years puts a floor under costs that may be difficult to live with in the future. I am told that in some areas of the Midwest recent land sales and rental rates which reflect these prices now make the land cost of growing corn close to a dollar a bushel. This puts young farmers and creditors in a very vulnerable position.

Effect on Consumers

In theory, the effect of unstable prices on consumers is to reduce total utility (Johnson) but to increase consumer surplus (Waugh) as compared with stable prices. The different effects are produced by slicing the area under the conventional downward sloping demand curve in two directions. If one slices the area vertically, so that successive segments represent changes in total utility then it is obvious that increments in utility associated with low prices are smaller than those associated with

high prices. But if the area is sliced horizontally so as to represent changes in consumer surplus, each segment becomes larger as one moves down the vertical axis. This means that consumers gain at low prices more than they lose at high prices. Whether or not consumers are better off with stable or unstable prices thus depends in part on what is to be maximized: total utility or consumer surplus. Theoretical arguments for and against price stability become even more complex if net changes in producer surplus are taken into consideration as well as changes in consumer surplus.[1/]

In practice, consumers are concerned mainly with the threat of high prices. They want protection against escalation in food costs. Flexibility on the downward side in average farm prices is frequently offset by rising nonfarm costs of processing and distribution thus consumers usually are unaware of price decreases at the farm. Most were oblivious of the fact that average prices received by farmers for livestock and livestock products dropped 35 per cent between August 1973 and June 1974.

Food prices have become more politically sensitive in the past few years. As a result, changes in the food component of the Consumer Price Index are now given disproportionate attention by the news media. Earlier this year, optimism over the course of inflation was attributable mainly to a slower rate of increase (and even a brief decline) in food costs; the turn-around in the food component of the CPI in the past 2 months has precipitated fears that a new round of inflation is imminent. What most commentators fail to realize is that changes in marketing costs and the farm prices of beef, sugar, fruits and vegetables, all items over which we have relatively little control at present, contribute far more to inflation or deflation in food prices than Russian grain deals or other developments

that have a major impact on the price of grains and soybeans. An examination of the relative importance of commodity groups included in the food component of the index makes this abundantly clear. Products derived from grain are given a weight of less than 3 per cent in the total index whereas perishable items account for about 12 per cent (table 2).

In order to isolate the effect of farm level prices changes on the Consumer Price Index, I have taken the analysis a step further and calculated farm level weights. This has been done by multiplying each retail component by the appropriate farmer's share ratio derived from USDA's market basket statistics. For grains, the estimated farm weight in the CPI is only 6 tenths of 1 per cent (table 2). Even a doubling of grain prices would now add less than 1 per cent to the overall index. If all farm prices were doubled, with no changes in marketing costs, the CPI could be expected to rise somewhere between 7 and 8 per cent.

An alternative way of estimating the effect on consumers of changes in grain prices is to calculate multipliers which show the indirect effect (through livestock) as well as the direct effect on average per capita food expenditures of a unit change in prices. This can be done by applying incremental changes in prices to per capita disappearance figures. Aggregate domestic disappearance figures for wheat, feed grains, soybean oil and soybean meal have been converted into per capita estimates. Direct use includes the amounts which go into alcoholic beverages, corn syrup, and even starch as well as flour and breakfast foods. Indirect use includes all grains used in feeding livestock. The per capita disappearance figures have been multiplied by an assumed change in the unit value of each product of 2 cents per pound. This multiplier was selected because it represents

a change of around $1.00 per bushel in the average price of grains ($1.12 for corn and $1.20 for wheat and soybeans).

These multipliers indicate that a change of slightly more than $1.00 per bushel in average grain prices at the farm will change per capita food expenditures directly by no more than $8 per year. This is probably an overestimate since no adjustment has been made for by-product credits. If wheat alone were to rise, the effects would be even less. For example, if Russian purchases were assumed to add as much as $1.00 per bushel to the price of wheat the direct effect on consumers would amount to no more than $3 per capita. This is less than the effect on consumers of a 5 cent per pound change in the price of raw sugar, a product whose price has varied over a much wider range than wheat during the past 12 months.

The potential indirect effects of changes in grain prices are much greater. Indirect grain use per person (that is, consumption of grain through livestock) amounts to about 5 times the direct use. Thus, if increases in grain prices were fully reflected in the prices of livestock products, the average increase in food costs associated with a 2 cent per pound increase in grain prices would amount to about slightly more than $30 per person. Lags in adjustment to changing feed costs obviously will affect the timing of changes in livestock prices. In any one year such changes will not correspond closely to changes in feed costs. What the multipliers indicate is how much a given change in feed costs is likely to affect livestock prices in the long run, assuming non-feed costs remain the same.

The full effects (combining the direct and indirect costs) of a $1.00 change up or down in grain prices are not likely to exceed $40 per person per year. This is equivalent to less than 1 per cent of per capita

disposable income. Thus, reducing price variability in grains by as much as a dollar per bushel, while perhaps politically important, can make only a modest contribution to the objective of achieving overall stability in consumer expenditures for food. Again, it may be worthwhile to do so, but we should be cautious about promising too much.

In my view one of the more compelling reasons for attempting to reduce price swings in grains is not to protect American consumers, but rather to preserve our export markets. Periodic high prices can be accomodated quite readily (if not willingly) by domestic consumers simply by altering the composition of their diet, but threats of unavailability or high prices may lead importing countries to seek substitutes elsewhere or to adopt still more protectionist policies in an effort to encourage home production.

Food aid also may become a victim of price instability if the demand for food aid rises at a time when grain prices are already high. Past experience suggests a positive correlation between our willingness to offer food aid and the size of surplus stocks. At present we lack flexibility in being able to respond promptly and positively to the needs of developing countries simply because there are no readily available stocks on which we can draw. I deplore making food aid dependent on the presence of surplus stocks but recognize the political risks are involved in offering more aid at a time when inflation in food prices is a sensitive issue.

Policy Recommendations

In the foregoing analysis, I have tried to identify the consequences of continuing the existing set of policies which simply means relying mainly on market forces to guide production and consumption. The policy

question raised earlier still remains to be answered. Do we need a new set of policies designed to curtail potential price instability and to increase government-held reserves of grains? My answer is yes, but the changes I am about to suggest are relatively modest and do not deviate in principle from those adopted in the past, except for the manner in which we handle food aid. I am persuaded (a) that farmers do need some protection against very low prices; (b) that they should be encouraged to increase production; and (c) that both farmers and private traders should be offered incentives to carry larger stocks than in the past since this is the only real protection consumers have against continued escalation in food costs. I would not be unhappy to see the government acquire modest amounts of grain in protecting farmers against a sudden decline in prices, but I do not think it necessary to go into the market and buy stocks to hold. Finally, I think it essential to modify food aid policies so as to provide more flexibility. I believe acceptable compromises can be devised which will achieve these objectives at very little increase in cost to the government and/or to consumers. The elements of such a policy are as follows:

(1) a system of support prices for all grains, linked to a single commodity such as corn or wheat and adjusted annually to reflect changes in non-land costs of producing that commodity;

(2) a government storage program for grains, but with a much wider range between acquisition and selling prices than in the past;

(3) standby provisions for adjusting land use if necessary;

(4) increased flexibility in commiting funds for the purchase of commodities to meet food aid requirements.

Congress is more likely to give favorable consideration to modifications which build on past experience than to proposals which might lead off

in new directions. For this reason, I would argue strongly in favor of retaining something like the old price-support loan and storage program. The system served the interests of both producers and consumers reasonably well during the decade of the 1960s although at considerable public cost. We can improve on the system by maintaining supports at a modest level and by widening the range over which prices are permitted to fluctuate in response to market forces.

One requirement of an improved price policy is to devise a better system of determining support prices or loan rates for individual commodities. The existing parity formula does not provide a reasonable basis for establishing floor prices. I would like to suggest the possibility of linking support prices for all grains, soybeans and cotton to a single commodity through the use of appropriate price ratios, and then to adjust prices up or down on the basis of changes in non-land costs of producing the key commodity. For purposes of illustration, I have selected corn as the key commodity. To establish the base, I have made some rough calculations of changes in non-land costs of growing an acre of corn in the Midwest, taking into account increases in the cost of fertilizer, seed, fuel, machinery and labor. When divided by the estimated yield, this turns out to be 60 cents per bushel higher than in 1972. This figure when added to the loan rate prevailing before the recent export boom comes to $1.65 per bushel. Farm management studies indicate the current non-land costs of producing a bushel of corn are somewhere in this neighborhood. To provide additional incentive for farmers to maintain production, one might consider raising the loan rate to somewhere between $1.70 and $1.80 per bushel. It should then be adjusted upward in subsequent years on the basis of changes in non-land costs. By excluding land costs, I would hope to avoid capitalizing current land values into support prices.

Too little consideration has been given in the past to establishing reasonable price relationships among commodities. Floor prices should be established at a level which will permit substitution of one grain for another in feeding livestock. In the case of wheat, this will occur in areas where wheat is abundant and corn or other feed grains are scarce when the national average price of wheat is around 20 per cent above the price of corn. The relative profitability of growing substitute crops also must be considered. A recent study of the relationship between soybeans and other crops by Boutwell et al. indicates that with a price of corn of about $1.80, the price of soybeans should be close to $4.50 per bushel (2.5 times the price of corn) in the Midwest to yield equal returns per acre above variable costs. Studies of this kind also could be used to determine an appropriate floor price for cotton by tying it to the price of soybeans.

For illustrative purposes, I have calculated a set of price-support loan prices that I think would be appropriate, based on current input costs and historical price relationships (table 4). The latter are not necessarily the most appropriate ratios to use, but they might serve as a useful guide. The resulting floor prices (per bushel) are $1.80 for corn, $2.14 for wheat; and $4.16 for soybeans. Keep in mind that these are simply the lower boundaries. Actual market prices in most years should exceed these levels and by varying amounts for different commodities.

The Commodity Credit Corporation presumably would acquire surplus commodities at the loan rate, just as in the past. In the 1960s, however, the CCC was authorized to sell commodities it had acquired at 15 per cent over the loan rate. This spread is much too narrow. To provide an incentive for farmers and traders to hold grain for up to 3 or 4 years, resale prices should be at least 50 to 60 per cent above the newly established

loan rates. I would suggest that the margin for grains be maintained at not less than $1.00 per bushel. Carrying storage stocks is expensive and consumers should expect to pay for this service regardless of who holds the stocks. With this much spread between the floor price and the resale price, farmers, traders and possibly even importing countries would be much more willing to hold stocks than in the past. They did not do so in the 1960s because there was little prospect of earning a profit from private storage. Modest changes in the rules of the game should be sufficient to restore incentives and provide the flexibility we need to cope with unstable export demands. Thus, we need not embark on a massive new purchase program with specific acquisition targets in mind.

It also seems to me appropriate to provide some assistance to farmers in adjusting production if our projections of demand turn out to be incorrect. Farmers are being asked to supply a residual market which can be extremely unstable. A strong case can be made for socializing some of the potential cost of providing the needed flexibility in production. This can be done by retaining the option of paying farmers to keep land idle if storage holdings again become too large.

Finally, we need to divorce food aid from support operations and to devise a more flexible method of funding so that we can respond promptly to changes in food needs of developing countries. There is no justification in my view for asking farmers to subsidize food aid indirectly by producing surpluses at low prices, nor is it morally responsible for the U.S. to tie food aid to the availability of surplus stocks.

Food aid requirements are likely to be highly unstable from year to year, and difficult to predict. But in total the amount of grain required

over a period of years is likely to be small in relation to overall production and the amount of grain exported commercially. During the past 2 years, for example, food aid shipments have accounted for less than 3 per cent of total U.S. grain production and only about 5 per cent of exports.

The essential element in providing additional food aid is to increase appropriations so that purchases can be made on the open market whenever needed. We can rely on market forces to achieve the necessary diversion of supplies. The price and income effects on consumers of any additional diversion required are not likely to be very large. To provide additional flexibility, a new institution might be created with the authority to borrow against future appropriations. Alternatively, Congress might authorize expenditures over a period of years, but not require those administering the program to commit all the funds in any one year. I would hope the expenditure ceiling could be raised without getting side-tracked by arguments over whether food aid should be used primarily to achieve strategic or humanitarian objectives, to foster economic development, or promote new markets for U.S. farm products. I am more concerned with increasing the size of the pie than in deciding in advance how it should be divided.

You will note the omission of any reference thus far to export controls or target prices. The short-run interests of consumers in holding down domestic prices are less important than the long-run interest of the U.S. in maintaining markets and earning foreign exchange. We should not jeopardize our reputation as a reliable supplier of farm products by imposing export controls.

There is insufficient time to discuss fully the merits or demerits of target prices and deficiency payments. I have strong reservations, however,

regarding their use as a device to support farm incomes. These reservations are based on considerations of cost and equity. There is danger that target or guaranteed prices will be established at a level which will necessitate large income transfers. Furthermore, as long as benefits are tied to particular commodities, and bases are historically determined, the distribution of benefits will be highly skewed. If we need to supplement the incomes of farmers, I hope that more equitable means of doing so can be devised.

Conclusion

The policy recommendations I have put forward are based on the implicit assumption that there exists an optimum degree of price variability. I am not sure just where the optimum lies along the scale between zero and infinity, but our experience over the past 2 decades suggests the mix of policies we had in the 1960s fell short of the optimum, while the policies embodied in the 1973 Act are likely to exceed the optimum. Reduced to its simplest form, my argument is that we should not abandon the principle of establishing upper and lower boundaries to price fluctuations for important export commodities such as grains and soybeans, but that we should widen the range over which market forces are permitted to operate as compared to the 1960s. We can improve on existing policies by devising a more satisfactory method of adjusting support prices; by increasing the spread between Commodity Credit Corporation acquisition and resale prices; and by providing more flexibility in commiting funds for food aid.

Table 1. Relative Stability in Annual or Season Average Farm Prices of Selected Commodities, 1921-29 and 1960-71

	Coefficient of Variation		Maximum/Minimum Price Ratio	
Commodity	1921-29	1960-71	1921-29	1960-71
Wheat	.15	.18	1.55	1.65
Corn	.18	.08	2.04	1.33
Eggs	.07	.08	1.22	1.28
Hogs	.18	.16	1.70	1.54

Source: USDA, Agricultural Statistics

Table 2. Relative Importance of Food and Farm Products in the Consumer Price Index

Component	Relative Importance At Retail Dec. 1974	Farmers Share [a/]	Est. Wt. of Farm Products in CPI
	per cent	per cent	per cent
Food at home			
Cereals and bakery products	2.9	20.6	.6
Meat, poultry and fish	6.1	54.7	3.3
Dairy products	2.9	46.2	1.3
Fruits and vegetables	3.1	26.7	.8
All other	4.6	29.4	1.4
Total -- Food At Home	19.7		7.4
Food away from home	5.1		
Non-food items and services	75.2		
	100.0		

a/ Based on USDA market basket of farm foods using the farm value of each category divided by the retail cost.

Sources: U.S. Department of Labor

USDA, Marketing and Transportation Situation

Table 3. Approximate Direct and Indirect Effect on Annual Average Per Capita Food Costs of a 2 Cent Per Pound Change in the Price of Wheat, Feed Grains and Soybeans

Commodity Group	Effect on Annual Per Capita Food Cost	
	Direct[a/]	Indirect (livestock)[b/]
	$/person	
Wheat	$3.00	$ .80
Feed Grains	2.68	29.00
Soybeans	2.04	2.62
Total	$7.72	$32.42

a/ Based on 1973/74 per capita disappearance of grain for domestic food and industrial use, including use in alcoholic beverages, corn syrup and starch.

b/ Based on 1973/74 per capita use of grains in feeding livestock.

Source: USDA, Wheat Situation and Feed Grain Situation

Table 4. Illustrative Price-Support Loan Rates Based on Corn Prices Adjusted for Changes in Non-Land Costs Since 1972 and Intercommodity Price Relationships Prevailing in the Period 1966-71

Commodity	Prices Relative to Corn, 1966-71	Price-Support Loan Rates
		$/bu.
Corn	1:1	$1.80
Wheat	1.19:1	2.14
Soybeans	2.31:1	4.16

FOOTNOTES

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1/ The literature on this topic and the conditions under which consumers and producers can expect to gain from price stability are well summarized in a recent article by Turnovsky.

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