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Managing the Food Security Act of 1985

The Current Strategy
and Two Alternatives

FAPRI Staff Report #3-87
July 1987

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Executive Summary

The performance of agriculture under the base management strategy of the Food Security Act of 1985 (FSA85) is compared to alternative management options over the period 1987/88 to 1991/92. The alternative strategies provide approaches for reducing the costs of the FSA85 without significantly altering net farm income. One is an alternative U.S. management strategy, the other requires collaboration with other exporters in cooperative supply adjustment.

Base Management

FSA85 programs are managed with a high priority on reducing government stocks, increasing exports, and expanding domestic consumption.

- Net farm income averages nearly \$30 billion annually, gradually declining from the 1987 peak as government payments decline and production expenses rise.
- Government costs decline \$2 to \$3 billion annually from the peak levels reached in FY86 and FY87.
- Area planted to five major program crops declines until 1988/89 then increases as prices increase and acreage reduction programs are relaxed.
- Carryover stocks of the five major program crops decline substantially but in 1991/92 are still high relative to production and consumption levels.
- Exports respond to the more competitive policy environment and increase in volume and value. The six major crop exports increase in value by 35 percent by 1991/92 but remain below the level achieved in 1984/85.
- Total meat production rises continuously throughout the period and consumers benefit from lower retail prices. This expansion is stimulated by low feed costs in spite of the cyclical decline taking place in beef production.

U.S. Alternative Management

FSA85 programs are managed to achieve a moderately higher price path for grains by less aggressive use of payment-in-kind certificates (certs) and increasing the acreage reduction program (ARP) rate for corn. Loan rates are kept at minimum levels so the United States can revert to an aggressive management strategy, if necessary, to sustain export trade shares.

- Net farm income is only slightly lower than the base. Although producers receive higher crop cash receipts, they receive reduced payments from the government. In the livestock industry, higher feed costs result in lower profits.
- Government costs are reduced from the base by nearly \$2.5 billion annually. The cost of carrying stocks is increased, but deficiency payment rates, the quantity of production eligible for payments, and total deficient payments are substantially reduced.

- Area planted to five major program crops is not significantly altered. Corn plantings are slightly lower, with wheat and soybeans slightly higher.
- Carryover stocks of the five major program crops average about 7 percent above the base because of the dramatic reduction in the use of certs for program payments and export subsidies.
- The volume of exports is only slightly reduced from base levels if the United States maintains lower loan rates with the potential to return to the base management strategy. As a consequence, the value of exports increases about 6 percent over the base levels.

Cooperative Supply Adjustment

An initial 10 percent reduction in plantings from 1986/87 levels is required in the United States, Argentina, Australia, Canada, and the EC. This requirement is relaxed gradually over the succeeding years as stocks are brought into alignment with world production and consumption levels. The cooperative adjustment rules are arbitrary but illustrate the potential impact of foreign participation in supply reductions.

- Net farm income is only slightly lower than the base. As in the U.S. alternative strategy, higher cash receipts offset lower government payments; but livestock producers experience lower profitability because of higher feed costs.
- Government costs are reduced from the base by nearly \$5 billion annually. Because of more rapid stock reductions, stock program costs as well as deficiency payments decline.
- U.S. acreage planted to wheat and feed grains increases by an average of 6 percent over the base, as the cooperating countries reduce their plantings by about 9 percent. In all but the first year of the program, the United States is able to plant more than in the base.
- Carryover stocks are quickly and dramatically reduced. Ending stocks for the five major program crops are reduced from the base an average of 13.6 percent over the period.
- The volume of U.S. exports increases from base levels an average of 15 percent and the value increases by 24 percent. Large initial U.S. stocks make it possible for the United States to increase exports and export shares as world production levels are reduced.

The alternatives were designed and evaluated to explore ways to reduce U.S. program costs without significantly affecting net farm income. The results indicate that either unilateral management changes by the U.S. or cooperative supply efforts could achieve such a result. However, competitors would appear to have little incentive to cooperate since the United States would be the major beneficiary.

Managing the Food Security Act of 1985: The Current Strategy and Two Alternatives

Introduction

An important feature of the Food Security Act of 1985 (FSA85) is the broad discretion given the Secretary for management of major commodity markets and the U.S. agricultural sector. The strategy adopted by the Secretary for operating the FSA85 has placed high priority on reducing government stocks, increasing exports, and expanding domestic consumption.

The low market prices, high participation rates in the commodity programs, and the Conservation Reserve have reversed the trend of the early 1980s that saw stocks accumulate and exports decrease. And, a reduction in production expenses and an increase in the value of livestock inventories have contributed to an increase in net farm income, while gross receipts have been maintained at 1981 Farm Bill levels.

Loan rates for the major program commodities have been dropped to minimum allowable levels, acreage reduction requirements have been increased, and generic payment-in-kind certificates (certs) have been used to make a high proportion of government payments to farmers. These actions, along with a marketing loan for cotton and rice, have resulted in a drop in farm prices of major program commodities of 20 to 25 percent below those under the 1981 Farm Bill.

But, a major limitation of the current management strategy has been the cost of operating the program. Total government costs for the FSA85 during 1987 are projected at near \$24 billion, far in excess of the \$17 billion annual budget estimate used at the time that the FSA85 legislation was enacted.

Alternative management strategies are being suggested because government program costs are at record levels. The marked improvement in net farm income--approximately \$35 billion for 1987--has moderated resistance to cost cutting measures. And while a "stay the course" attitude seems to prevail, with little support for a radical alteration of the FSA85, approaches are being advanced for reducing government cost through tuning or modifying the current management strategy. The Secretary can change operating strategies without significantly altering the legislation.

The primary objective of this report is to compare the performance of the FSA85 under current management and two alternatives. Both of the alternatives reflect public debate on tuning the FSA85. However, neither has been specifically proposed in Congress. The strategies evaluated here provide two approaches for reducing the cost of the FSA85 without significantly altering gross farm receipts and net farm income. One is an alternative U.S. management strategy, the other requires collaboration with other exporters. Both strategies obtain a higher price path for the major program commodities.

Results of the exercise carried through crop year 1991/92, are intended to illustrate the trade-offs available to U.S. agriculture within the FSA85 framework.

Alternative Management Strategies

The three management strategies evaluated for the FSA85 are termed base management, U.S. alternative management, and cooperative supply adjustment. The base management strategy presumes a continuation of current management. It features an aggressive posture toward export markets and a high priority on reductions of high stocks levels. The U.S. alternative management option has a higher average annual farm price path, but the loan rates are maintained at minimum levels. Stocks are reduced at a slower pace, but the high stocks or potential supply are used as an implied threat to competitors that prices can be made to drop to the loan rate, impeding production increase in response to the higher market prices.

The cooperative supply adjustment strategy is motivated by the compensating actions contemplated or undertaken by major exporting countries in response to the prices generated by the current management strategy. These actions have significant budgetary implications for the respective countries and their objectives to maintain or increase export levels. Suppose that through cooperative supply adjustment, these countries along with the United States agreed to reduce planted acreage from 1986/87 levels by 10 percent. In return, the United States would agree to manage the FSA85 for higher grain prices, which would reduce U.S. and other countries' government costs. Acreage in the U.S. and cooperating countries is gradually returned to production after stocks diminish and as demand grows. Planted acreages return to near 1986/87 levels by the end of the evaluation period in crop year 1991/92.

The essentials of the three alternatives for managing the the FSA85 are summarized in Table 1. Details and parameters utilized in meeting these management objectives are provided in Appendix Table A.1. The basic concepts underlying the three management strategies are reviewed below.

Base Management

The current strategy for managing the FSA85 appears to have been motivated by deteriorating U.S. export markets and high levels of accumulated stocks largely held or controlled by the government. The FSA85, by freezing the target prices through 1987/88 and subsequently reducing them by 10 percent, guaranteed that gross receipts from crops and net farm income would remain at a nominal value comparable to that achieved on average during the 1981 Farm Bill.

Low loan rates, high acreage reduction program (ARP) rates, paid diversion rates, and heavy use of certs characterize the base strategy. The resulting low market price remains at or below the loan rates until the high stocks levels are brought into an historically more consistent alignment with U.S. and world consumption. The resulting lower market price tends to increase the size of the total export market and competitive sales of U.S. commodities in export markets. The increase in export volume occurs mainly in the centrally planned and

Table 1. Major Program Assumptions of Alternative Strategies

Policy Instrument	Base	U.S. Alternative Management	Cooperative Supply Adjustment
Target Prices	Modest declines as specified in the FSA-85	No change from Base	No change from Base
Loan Rates	Modest declines following rules specified in the FSA-85	No change in rules determining rates	No change in rules determining rates
Acreage Reduction Program	20% of corn base acres and up to 30% for wheat	25% of corn base acres and no change in wheat	See "Permitted Acreage"
Paid Diverion	Utilized through 1990 in corn none in wheat	No change except a 5% reduction in corn in 1988	See "Permitted Acreage"
Permitted Acreage	Not relevant	Not relevant	The U.S. and other major exporters limit 1987 and 1988 area to 90% of 1986 levels, with small increases thereafter
Generic PIK Certificates	Heavy usage in making program payments	Sharply reduced usage	No change from Base

developing economies. The developed economies have domestic agricultural policies that insulate their producers and consumers from world market prices. Since the base management strategy raises the actual and opportunity costs of these policies, an implicit objective of the base is to cause other developed countries to modify their policies.

FAPRI's analysis of the base is conducted under the assumption that other countries react to change in U.S. policies as they have in the past. In light of the apparent objective of the current strategy to alter the domestic agricultural policies of developed countries, it is important to emphasize this aspect of the analysis. Major competitors have taken or are contemplating retaliatory actions to the export subsidies implicit in the current management of the FSA85. These retaliatory policies could modify the supply response anticipated in the analysis for the competing countries. Also, since the major source of growth in the export markets under the base strategy is in the developing and central planned countries, the export volumes are highly dependent on projected rates of economic growth. Using assumptions of moderate macroeconomic growth and continuation of competing country policies, U.S. government costs of operating the FSA85 under the base management strategy begin to diminish significantly in FY88, and by FY90 costs are well within the target budgets estimated at the time the legislation was enacted.

U.S. Alternative Management

The U.S. alternative management departs from the base strategy by operating the FSA85 to achieve higher farm or market prices. The farm price is increased in 1987/88 from \$1.65 to \$1.90 per bushel for corn. A price of \$2.00 per bushel for corn is established in 1988/89, with the average annual farm price for corn increasing at 2 cents per bushel per year through crop year 1991/92. The market or farm prices of the other program crops are increased similarly. Ratios of the corn price to the prices of other program commodities are established using historic averages adapted to balance the responses in the modeling system. For corn to wheat the ratio is 1 to 1.4 and for corn to soybeans 1 to 2.65. These market prices are achieved by using higher corn ARP rates and reducing the use of certs. Instead of moving stocks to the market rapidly, as in the base, they are released more slowly to help achieve the desired farm price.

As in the base, loan rates are set at minimum levels. It is presumed in the analysis that the foreign countries make production and consumption decisions on the expectation that the probability is one-in-five that the United States will revert to the base management strategy. This results in a lower expected price for the major participants in world commodity markets. Given this presumed expectations behavior, supply response to the higher U.S. grain prices is diminished and demand in these countries is increased. U.S. domestic consumption is also conditioned by this expected market price.

The United States would be required to hold high stocks or have an idled acreage reserve to maintain the threat of reversion to the base management strategy. If the United States did not have surplus stocks or production capacity, world grain prices would likely be at or above the levels in the U.S. alternative strategy. Thus, the threat would be neither necessary nor possible.

Cooperative Supply Adjustment

In response to the budget and domestic farm policy pressures created in other countries by the U.S. base management strategy, various proposals have been suggested for selected countries to cooperatively reduce planted acreage. For the cooperative supply adjustment option, it has been assumed that allowed planting in 1987/88 would be 90 percent of the 1986/87 crop year level for all of the major competitors in U.S. export markets. These countries include Argentina, Australia, Canada, and the EC. How to achieve the specified reduction in allowed planting is not outlined in this analysis. Given the domestic agricultural policies of the competing countries, this planted acreage adjustment would be implemented differently in each country.

The 10 percent reduction in planted acreage from the 1986/87 level for the exporting countries is maintained until the stocks position is reduced or brought into an historical alignment with production and consumption (Appendix Table A.20). From the United States' perspective, this strategy consists of asking its major competitors in export markets to participate in the supply adjustment necessary to reduce the high present stock levels and increase average annual farm prices. The 10 percent reduction is an arbitrary rule applied for illustrative purposes and is not suggestive of what could realistically emerge from a negotiated agreement.

The planted acreage restriction in the U.S. is implemented by use of reduced acreage provisions for program participation and by paid diversions. These acreage reductions, however, are appreciably smaller than for the base strategy since acreage for the U.S. in 1987 is already more than 10 percent below 1986 levels.

Results

Results of the three alternative management approaches for the FSA85 are presented in this section. Consequences are summarized for net farm income, government costs, planted acreage, ending stocks, exports, and livestock prices. More detailed information on the outcomes is provided in the appendix tables. Sectoral aggregates are presented in Appendix Tables A.2 through A.7; supply and use tables for major crops in Appendix Tables A.8 through A.12; livestock and dairy information in Appendix Tables A.13 through A.16; and, world trade and production in Appendix Tables A.17 and A.20. This summary contrasts performance variables across management strategies and briefly indicates reasons for differences obtained.

The same macroeconomic conditions are assumed for all three strategies: slightly higher projected rates of economic growth and inflation than are presently being experienced by the developed and developing countries. The macroeconomic scenario for the evaluation was provided by Wharton Econometrics and is based on their spring 1987 long-term forecast. These macroeconomic assumptions for key variables affecting production and consumption levels for agricultural commodities are summarized in Appendix Table A.21. FAPRI commodity and trade models are applied in making the evaluation.

Net Farm Income

Average net farm income for the 1987 through 1991 calendar years for all three management strategies is approximately \$29 billion (Table 2). The base management option yields an average income that is about 2 percent above that for the other two strategies.

Table 2. Estimated Net Farm Income by Strategy (\$ billion)

Strategy	1987-91 Average	% Difference
Base	\$29.6	
U.S. Alternative Management	\$29.0	-2.1%
Cooperative Supply Adjustment	\$29.1	-1.8%

Source: Appendix Table A.2

Net farm income declines over the period of analysis for each program evaluated. This is attributed primarily to reductions in government payments and increases in production expenses. After falling between 1984 and 1987, production expenses grow at about the inflation rate from 1988 forward. Government payments account for approximately 50 percent of net farm income throughout the evaluation period for the FSA85 or base program.

The U.S. alternative management strategy, with a higher market price, generates greater crop cash receipts, which are, however, offset almost equally by a fall in government payments. Gross receipts for livestock are affected, but only moderately, by the higher prices. The net farm income increase in 1987 is largely due to an inventory reevaluation using the crop prices.

For the cooperative supply adjustment strategy, crop receipts increase slightly more than government payments fall, and total crop receipts are up slightly. Production expenses are higher, largely due to increases in feed costs and increased planted acreage. Net receipts from livestock are similar to those for the U.S. alternative strategy, since average annual farm prices for the two approaches are about the same.

Government Costs

The total government cost estimate for FY87 is near \$24 billion. For the base FSA85 program, estimated government costs for fiscal years 1988 through 1992 average \$16 billion, declining from around \$21 billion in FY88 to \$14 billion in FY92. The majority of the costs are deficiency payments for feed grains and wheat. Conservation Reserve costs are included, reaching about \$1.7 billion in FY92. (These costs are included even though they are scheduled to go off the CCC budget in FY88.) The baseline FSA85 costs decline, reflecting lower target prices, higher market prices as a result of stocks depletion, lower participation rates, and reduced loan program costs.

Casual observation of Appendix Table A.3 indicates that corn accounts for a disproportionate share of total government program costs. While this is true, the estimated cost for the corn program is exaggerated. Generic certificates issued for wheat are often used to redeem corn loans, since the corn price provides a more favorable redemption premium, especially in the first years of the evaluation.

Table 3. Estimated Government Costs by Strategy (\$ billion)

Strategy	FY88-FY92 Average	% Difference
Base	\$16.2	
U.S. Alternative Management	\$13.7	-15.6%
Cooperative Supply Adjustment	\$11.4	-29.8%

Source: Appendix Table A.3

Both of the management alternatives result in sharply reduced government costs. The estimated average government costs for the period FY88 through FY92 are \$13.7 billion under the U.S. alternative management option and \$11.4 billion under cooperative supply adjustment. These are rather significant downward adjustments of approximately 16 and 30 percent from those incurred under the base FSA85 program.

Costs under the alternative management strategy are significantly reduced because of lower deficiency payment exposure. As market prices increase over FSA85 base projections, the deficiency gap narrows and participation rates decline. These savings offset the additional costs, which are incurred by holding stocks, since CCC and farmer-owned reserve stocks are held longer and incur higher storage charges. The subsidy for certs (the difference between the market and the loan rates) is eliminated, however, as market prices for all program commodities beginning in FY88 are above the loan rates.

Under the cooperative supply adjustment option, government costs are further decreased. The major difference between the U.S. and cooperative options involves stocks. Due to the reduction in planted acreage by major foreign producers, stocks are reduced more rapidly and storage costs are lowered. The higher market prices decrease both participation and deficiency payment rates.

Planted Acreage

Average plantings for corn, wheat, soybeans, rice, and cotton are expected to be very similar under the base and the U.S. management strategy (Table 4). Planted acreages under the U.S. alternative strategy are held down in competing countries by the continuing possibility of U.S. actions that would drive grain prices to or near loan rates. U.S. area planted is higher under the cooperative strategy since other countries are participating in the supply adjustment. Soybean and rice acreages are nearly the same under the three alternative management approaches.

Table 4. Estimated Planted Acreage by Strategy (million acres)

Strategy	1987-91 Average	% Difference
Base	204.9	
U.S. Alternative Management	205.2	0.1%
Cooperative Supply Adjustment	211.3	3.1%

Source: Appendix Table A.4

In the base, U.S. planted area declines until 1988/89 then gradually increases. This time path is related to the implementation of the conservation reserve, ARP, and paid diversions as well as to crop prices. Total Conservation Reserve acreage increases from 17 million in 1987/88 to 30 million in 1988/89, 40 million in 1989/90, and 45 million in 1990/91, and is assumed to be identical across all the management alternatives.

Planted acreage for the U.S. alternative management option is higher in the earlier years of the evaluation and lower in the later years of the evaluation than for the base, reflecting the decision to introduce the stocks into the market at a less rapid pace.

A major change in acreage planted occurs under the cooperative supply adjustment option. Since the U.S. already has substantial acreage reductions under the base strategy, the cooperative approach to supply adjustment allows the U.S. to plant more while the planted acreage of cooperating exporters declines (Table 5). Over the five-year period, U.S. area averages about 6 percent higher for wheat and feed grains while area planted in the other four countries declines by nearly 9 percent. The time path of this adjustment is important. In 1987/88 the United States already has achieved a 10 percent cutback from 86 planting levels for wheat and corn, while the others have not. As the 10 percent rule is relaxed over the subsequent years, U.S. acreage increases, while plantings in the other countries are below base levels for the entire period.

Table 5. Wheat and Feed Grains Harvested Area by Strategy (million ha.)

Country/Strategy	1987-91 Average	% Difference
EC, Canada, Australia and Argentina		
Base	76.8	
U.S. Alternative Management	76.9	0.2%
Cooperative Supply Adjustment	70.1	-8.8%
U.S.		
Base	57.7	
U.S. Alternative Management	57.6	-0.1%
Cooperative Supply Adjustment	61.0	5.9%

Source: Appendix Table A.20

The way that acreages are increased over time under the cooperative supply adjustment approach needs comment. For the United States, existing programs are employed and participation rates are decreased. However, U.S. program management needs to be monitored to achieve a balanced phase-in of the idled acreage between the U.S. and the cooperating countries. The acreage is phased in to meet overall price and stock objectives. No investigation has been made of how the acreage programs would be managed in other countries.

Ending Stocks

Average ending stocks for the three program management alternatives are summarized in Table 6 for crop years 1987/88 to 1991/92. The summary figures represent an important difference in the management philosophies among the three alternatives. Stocks are sharply reduced under the cooperative supply adjustment option, largely due to the reduced acreages in competing countries. Stocks are increased on average for the U.S. alternative strategy since the U.S. manages the market price in part by holding more stocks off the market than in the base management strategy.

Table 6. Estimated Ending Stocks by Strategy (million acre-equivalents)

Strategy	1987-91 Average	% Difference
Base	80.7	
U.S. Alternative Management	86.5	7.2%
Cooperative Supply Adjustment	69.7	-13.6%

Source: Appendix Table A.5

Details regarding the time path of stocks are shown in Appendix Table A.5. Under the base strategy, wheat and corn government stocks are released onto the market primarily through the use of certs. Despite sharp declines in stock levels compared to 1987/88, stocks remain high relative to historical ratios to production and consumption.

For the U.S. alternative strategy, the government holds more stocks off the market as one of the methods of achieving the higher grain prices. The other method is, of course, expanded and/or sustained use of acreage reduction and paid diversions. The stocks are held off the market by reducing the number of certs issued. It has been assumed that the certificate rules discourage redemption of the certs for CCC stocks. Clearly, the stocks policies under the U.S. alternative would have to be very carefully monitored to achieve the price levels indicated by the analysis.

Fewer stocks are held under the cooperative approach because major producers reduce planted acreage early in the evaluation period. Many certs remain in circulation and are exchanged for CCC stocks, because there is less incentive to use them for loan redemption. The sharpest reductions in stocks occur for wheat. Final stock levels under the cooperative option are more

consistent with production and consumption levels than under the other two alternatives.

Exports

The volume of U.S. exports increases almost 30 percent under the base with corn and wheat leading the way. This increase in U.S. exports is evidence that the base strategy, emphasizing the recapture of the market shares for the United States is achieving one of its objectives. The lower market prices in the base to promote a substantial increase in the volume of exports, although the increase is not as dramatic as was hoped.

The value of major crop exports does not increase as rapidly under the base as implied by the volume figures. Between crop years 1986/87 and 1991/92 the value increase is approximately 35 percent. Thus, for the United States over the evaluation period, there is a 30 percent increase in the volume of exports but only a 35 percent increase in the value of major crop exports. Despite this increase, the value of exports in 1991/92 is still well below the 1984/85 level.

Comparisons of the volumes and values of exports between the base and the two alternative management approaches are provided in Table 7. Comparing the U.S. alternative management approach to the base, it is important to note that the corn price is much higher relative to the base price than is the case for wheat. Thus foreign feed grain supply and demand and U.S. corn exports are much more severely impacted. Corn prices are artificially depressed in the base because certs are heavily used. Due to the short run inelasticity of U.S. export demand, the value of exports increases under the U.S. management alternative. The average volume of exports declines only slightly over the evaluation period while the value of exports increases by 6.4 percent.

Table 7. Estimated U.S. Exports by Strategy

Variable/Strategy	1987-91 Average	% Difference
Volume (million metric tons)		
Base	113.0	
U.S. Alternative Management	111.4	-1.4%
Cooperative Supply Adjustment	129.7	14.8%
Value (\$ billion)		
Base	\$15.8	
U.S. Alternative Management	\$16.8	6.4%
Cooperative Supply Adjustment	\$19.6	24.0%

Source: Appendix Tables A.6 and A.7

The difference between the cooperative strategy and the base is that the former results in lower world production and higher grain prices. Under the cooperative alternative, world trade falls due to the higher market prices. But, competitor exports fall while U.S. exports rise because competing countries are reducing production which reduces export supply. Under this approach, the

United States is a major gainer in terms of export volume and value. The value of exports increases even more than proportionally to the volume. The foreign supply reduction causes an upward shift in the demand for U.S. exports. Thus volume and prices of exports are increasing together. The competitor supply reduction permits the United States to obtain a larger share of the expected growth in the export market.

Livestock

Livestock sector results for farm prices, commercial production, consumption, and retail prices are contained in Appendix Tables A.13 through A.15. Production and price projections for beef, pork, and broilers are influenced by the initial condition of the industry in 1987, the production cycles for these livestock commodities, and the prices of corn and soybeans. Under the base, a major adjustment occurs for pork in crop years in 1989 through 1991. Inventory and production capacity buildups that occur as a result of the low feed grain prices are reversed as feed prices increase and the industry corrects to the overadjustment. These same adjustments occur but more slowly in the beef industry. Broiler prices response to development in the beef and pork industries as well as to the lower feed prices under the base alternative.

Adjustments under the two alternative strategies, are relatively minor. As feed prices increase, livestock prices also rise, since production levels are decreased. The higher price path for the cooperative approach results in higher average livestock prices than for the U.S. alternative.

The production, consumption, and farm price projections for pork, broilers, and beef are not modified significantly by the higher feed prices under the two management alternatives to the base. Adjustments in these industries are already under way, responding to the lower feed prices in 1986 and 1987. Incentives to overexpand are moderated under the two alternative management strategies because profits are lower in the early years. Under the alternative management strategies livestock industry profits are affected more than are prices and quantities.

The Trade-Offs

As with any set of policy options or strategies considered by governments, there are trade-offs involved in the management strategies that have been evaluated above. Groups within the United States and abroad are impacted differently under these alternatives. A prime consideration in designing the alternatives evaluated was to explore ways to reduce U.S. program costs without significantly affecting net farm income. The results of this evaluation indicate that either unilateral management changes by the U.S. or cooperative supply efforts could achieve such a result. There probably exist numerous other ways to achieve these limited policy goals--all of which would have somewhat different impacts on consumers, producers, trade, and government costs.

Final consumption of retail food and the well being of U.S. consumers would not be significantly impacted in any of these alternative strategies. There would be slight increases in meat prices over time as the livestock industry adjusts to

a higher feed price path, but these changes would be quite small relative to changes that affect the producers and taxpayers as a group.

The government cost savings indicate that a major beneficiary of either of these options would be the taxpayer, as average annual expenditures are reduced by \$2.5 to \$5 billion. Even the smaller reduction obtainable under the U.S. alternative strategy would exceed those being contemplated in current budget resolution discussions in Congress.

From the producer standpoint, the impacts vary by industry. The results indicate that wheat and feed grain producers would offset their loss in government payments through an increase in cash receipts from market sales, leaving their net position about the same. This holds for both alternatives although under the cooperative strategy producers can plant larger areas. This expansion would have a positive effect on land values and rental rates to cropland owners. This is less likely under the U.S. alternative strategy, since larger surplus stocks and production capacity would continue to exist. Livestock producers would be expected to receive only slightly higher cash receipts as the cost of feed inputs increases under both alternatives. Profitability in the livestock industry would be reduced especially during the first few years. These effects are stronger in the cooperative approach.

The agricultural trade picture is not substantially different under the U.S. alternative strategy since surpluses are held as a threat to moderate foreign supply response. However, the cooperative approach puts the United States in an advantageous position because of the current of large surplus stocks. Although a negotiated agreement among the exporting countries would certainly differ from the arbitrary rule assumed here, it is almost inevitable that the United States would stand to gain from an agreement by foreign producers to share control of world production. The differing impacts on the participating countries (Appendix Table A.19) indicates that something other than an across-the-board percentage reduction would emerge. The United States carries the majority of excess stocks. Asking competition to reduce production until these stocks are depleted actually allows the United States to gain market share. This expected consequence would certainly receive close scrutiny at a negotiation table.

Conclusions and Limitations

Can the FSA85 be maintained but slightly modified to achieve the desired objectives of (1) budget reduction guidelines, (2) sustaining net farm income, (3) maintaining a strong competitive position in world trade, (4) providing adequate food supply at reasonable costs and (5) reducing current excess capacity? To answer these questions one needs to examine the consequences of FSA85 under the current management strategy conditioned by expected world economic conditions. The assessment contained in this report suggests that the program is achieving the above desired objective; costs, however, substantially exceed initial program budget targets. These additional costs have reduced the government's ability to deal with an additional national problem--farm financial pressure.

Given these consequences, FAPRI researchers evaluated whether the desired objectives could still be obtained under a modified management strategy. A U.S. alternative management strategy and a more radical cooperative supply adjustment strategy are compared to current management of the FSA85. Under current management, government costs are projected to decline \$2 to 3 billion annually from the peak levels reached in FY86 and FY87. The two alternative strategies represent ways to reduce these costs more rapidly while maintaining comparable levels of net farm income.

Estimated consequences under the first alternative suggest that a slight moderation in management strategy might achieve desired objectives plus save considerably on government costs. Net farm income remains at approximately FSA85 levels, exports are moderately reduced, government costs are significantly reduced, and profitability decreases slightly in the livestock industry.

Of greatest concern was the possibility that higher prices might jeopardize export markets. The analysis incorporates the concept that lower loan rates and higher stocks would continue to discourage supply response abroad despite higher market prices.

The second alternative examines the consequences of a cooperative supply adjustment with major competitors. This theme has gained recent attention especially with the current U.S. posture of maintaining low market prices to discourage foreign production. The majority of excess world stocks are held by the United States. As competitors cut production under the cooperative strategy, stocks decline rapidly and the United States captures more of the growth from importing regions. Therefore, the United States gains substantially in an environment where cooperative supply adjustments are implemented. Government costs and stocks are cut substantially, while net farm income is maintained near base levels.

There are pitfalls apparent in the alternative strategies that need to be weighed against the expected cost savings. In the U.S. alternative, the key assumption is that the United States is able to maintain a credible threat over foreign supply with lower loan rates, high levels of stocks and excess production capacity. The United States is currently demonstrating its capability to utilize its surpluses in this way. At issue is how long the foreign response will continue to be inhibited if the current management strategy is modified.

The cooperative adjustment strategy is a radical departure from past policies, although one which is periodically suggested as a way to share U.S. supply adjustment responsibilities. Since the United States stands to be the major net beneficiary of the cooperative approach, the incentive for other exporters to concede such an arrangement is hard to identify. The more the United States unilaterally undertakes a supply adjustment role, the less incentive there is for other countries to participate in a cooperative approach.

APPENDIX TABLES

Table A.1. Major PROGRAM ASSUMPTIONS under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
CORN:									
Target Price (\$/bu)	All	\$3.03	\$3.03	\$2.97	\$2.88	\$2.74	\$2.74	\$2.87	---
Loan Rate (\$/bu)	All	\$1.92	\$1.82	\$1.73	\$1.65	\$1.56	\$1.49	\$1.65	---
ARP Rate (% of Base)	BASE	17.5%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
	US ALT		20.0%	25.0%	25.0%	25.0%	25.0%	24.0%	20.0%
	COOP		20.0%	20.0%	20.0%	19.0%	19.0%	19.6%	-2.0%
Diversion Rate (% of Base)	BASE	2.5%	15.0%	15.0%	10.0%	10.0%	0.0%	10.0%	
	US ALT		15.0%	10.0%	10.0%	10.0%	0.0%	9.0%	-10.0%
	COOP		15.0%	5.5%	2.5%	0.0%	0.0%	4.6%	-54.0%
% Deficiency Payments in PIK	BASE	50.0%	50.0%	50.0%	50.0%	25.0%	10.0%	37.0%	
	US ALT		25.0%	10.0%	10.0%	10.0%	10.0%	13.0%	-64.9%
	COOP		50.0%	50.0%	50.0%	25.0%	10.0%	37.0%	0.0%
Allowed Planting as % of 1986	COOP	100.0%	90.0%	90.0%	91.0%	92.0%	93.0%	91.2%	---
WHEAT:									
Target Price (\$/bu)	All	\$4.38	\$4.38	\$4.29	\$4.16	\$3.95	\$3.95	\$4.15	---
Loan Rate (\$/bu)	BASE	\$2.40	\$2.28	\$2.17	\$2.06	\$1.95	\$1.86	\$2.06	
	US ALT		\$2.28	\$2.17	\$2.06	\$2.07	\$2.07	\$2.13	3.2%
	COOP		\$2.28	\$2.17	\$2.31	\$2.31	\$2.32	\$2.28	10.4%
ARP Rate (% of Base)	BASE	22.5%	27.5%	30.0%	25.0%	25.0%	20.0%	25.5%	
	US ALT		27.5%	30.0%	25.0%	25.0%	20.0%	25.5%	0.0%
	COOP		27.5%	30.0%	24.6%	18.5%	15.5%	23.2%	-8.9%
Diversion Rate (% of Base)	BASE	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	US ALT		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	---
	COOP		0.6%	0.4%	0.0%	0.0%	0.0%	0.2%	---
% Deficiency Payments in PIK	BASE	55.0%	50.0%	25.0%	25.0%	25.0%	10.0%	27.0%	
	US ALT		25.0%	10.0%	10.0%	10.0%	10.0%	13.0%	-51.9%
	COOP		50.0%	25.0%	25.0%	25.0%	10.0%	27.0%	0.0%
Allowed Planting as % of 1986	COOP	100.0%	90.0%	90.0%	93.3%	96.7%	100.0%	94.0%	---
SOYBEANS:									
Loan Rate (\$/bu)	All	\$4.77	\$4.77	\$4.53	\$4.50	\$4.50	\$4.50	\$4.56	---

Table A.2. NET FARM INCOME under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		1986	1987	1988	1989	1990	1991	87-91 Avg.	% Diff.
(Billion Dollars)									
Crop Cash Receipts	BASE	\$62.7	\$58.3	\$60.6	\$63.4	\$65.8	\$67.9	\$63.2	
	US ALT		\$59.3	\$63.5	\$66.4	\$68.1	\$70.4	\$65.5	3.7%
	COOP		\$59.9	\$64.8	\$68.2	\$71.2	\$73.8	\$67.6	7.0%
Livestock Cash Receipts	BASE	\$69.7	\$71.5	\$70.1	\$70.4	\$69.6	\$69.2	\$70.1	
	US ALT		\$71.4	\$69.8	\$71.0	\$70.4	\$69.6	\$70.4	0.4%
	COOP		\$70.6	\$69.7	\$71.1	\$70.4	\$70.6	\$70.5	0.5%
Government Payments	BASE	\$11.4	\$17.2	\$16.8	\$15.6	\$13.1	\$11.5	\$14.8	
	US ALT		\$16.5	\$14.2	\$12.5	\$10.5	\$9.0	\$12.5	-15.5%
	COOP		\$15.9	\$13.4	\$11.7	\$9.3	\$7.9	\$11.6	-21.6%
Other Receipts	BASE	\$16.0	\$13.9	\$13.9	\$14.2	\$14.3	\$14.4	\$14.1	
	US ALT		\$14.0	\$13.9	\$14.2	\$14.4	\$14.4	\$14.2	0.1%
	COOP		\$13.9	\$13.9	\$14.2	\$14.4	\$14.6	\$14.2	0.5%
Total Receipts	BASE	\$159.7	\$160.9	\$161.3	\$163.5	\$162.8	\$162.9	\$162.3	
	US ALT		\$161.1	\$161.4	\$164.1	\$163.4	\$163.4	\$162.7	0.2%
	COOP		\$160.4	\$161.8	\$165.1	\$165.3	\$166.9	\$163.9	1.0%
Production Expenses	BASE	\$129.0	\$123.4	\$127.0	\$133.2	\$137.0	\$139.9	\$132.1	
	US ALT		\$123.8	\$128.8	\$134.9	\$138.2	\$141.2	\$133.4	1.0%
	COOP		\$123.6	\$129.6	\$136.2	\$140.7	\$143.2	\$134.7	1.9%
Inventory Change	BASE	(\$2.5)	(\$2.1)	(\$0.6)	\$0.3	(\$0.5)	\$0.1	(\$0.6)	
	US ALT		(\$0.2)	(\$0.4)	(\$0.2)	(\$0.5)	\$0.1	(\$0.2)	---
	COOP		(\$0.4)	(\$0.6)	(\$0.1)	(\$0.1)	\$0.5	(\$0.1)	---
Net Farm Income (Nominal)	BASE	\$28.3	\$35.5	\$33.8	\$30.6	\$25.3	\$23.1	\$29.6	
	US ALT		\$37.1	\$32.2	\$29.0	\$24.7	\$22.3	\$29.0	-2.1%
	COOP		\$36.4	\$31.6	\$28.9	\$24.5	\$24.1	\$29.1	-1.8%
Net Farm Income (Real)	BASE	\$9.4	\$11.6	\$10.6	\$9.2	\$7.4	\$6.6	\$9.1	
	US ALT		\$12.2	\$10.1	\$8.7	\$7.2	\$6.4	\$8.9	-1.9%
	COOP		\$11.9	\$9.9	\$8.7	\$7.1	\$6.9	\$8.9	-1.8%

Table A.3. GOVERNMENT COSTS under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		FY-87	FY-88	FY-89	FY-90	FY-91	FY-92	88-92 Avg.	% Diff.
(Million Dollars)									
Feed Grains	BASE	\$12,687	\$11,742	\$8,730	\$7,563	\$5,984	\$6,224	\$8,049	
	US ALT		\$9,570	\$7,532	\$5,608	\$3,745	\$3,843	\$6,060	-24.7%
	COOP		\$8,570	\$6,516	\$4,695	\$3,047	\$2,689	\$5,103	-36.6%
Wheat	BASE	\$3,165	\$3,304	\$3,289	\$3,126	\$2,449	\$2,435	\$2,921	
	US ALT		\$3,085	\$2,783	\$2,574	\$2,071	\$2,019	\$2,506	-14.2%
	COOP		\$1,694	\$1,324	\$1,185	\$1,064	\$1,155	\$1,284	-56.0%
Soybeans	BASE	\$655	(\$744)	(\$842)	(\$536)	\$11	\$16	(\$419)	
	US ALT		(\$856)	(\$668)	(\$240)	\$60	\$144	(\$312)	---
	COOP		(\$773)	(\$996)	(\$464)	(\$53)	(\$32)	(\$464)	---
Cotton	All	\$1,310	\$977	\$990	\$862	\$767	\$826	\$884	---
Rice	All	\$951	\$869	\$702	\$554	\$484	\$433	\$608	---
Cons. Reserve	All	\$450	\$804	\$1,050	\$1,150	\$1,125	\$1,688	\$1,163	---
Dairy	All	\$1,582	\$1,326	\$923	\$591	\$579	\$588	\$801	---
Net Interest	BASE	\$1,283	\$847	\$568	\$454	\$287	\$198	\$471	
	US ALT		\$512	\$233	\$177	\$110	\$133	\$233	-50.5%
	COOP		\$537	\$332	\$240	\$136	\$89	\$267	-43.3%
Other Net Costs	ALL	\$1,732	\$1,732	\$1,732	\$1,732	\$1,732	\$1,732	\$1,732	---
Total Government Costs	BASE	\$23,815	\$20,858	\$17,143	\$15,497	\$13,419	\$14,139	\$16,211	
	US ALT		\$18,020	\$15,277	\$13,009	\$10,673	\$11,406	\$13,677	-15.6%
	COOP		\$15,736	\$12,573	\$10,546	\$8,881	\$9,169	\$11,381	-29.8%

Table A.4. PLANTED ACREAGE under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
		(Million Acres)							
Corn	BASE	76.7	67.6	64.0	65.5	65.6	69.7	66.5	
	US ALT		67.6	64.2	64.2	64.4	67.9	65.7	-1.2%
	COOP		67.6	69.0	69.8	70.6	71.3	69.7	4.8%
Wheat	BASE	72.0	65.1	62.8	63.9	62.7	66.7	64.2	
	US ALT		65.1	63.4	65.0	63.8	67.4	64.9	1.1%
	COOP		64.8	64.8	67.2	69.6	72.0	67.7	5.4%
Soybeans	BASE	61.5	57.9	58.2	59.9	62.2	63.0	60.2	
	US ALT		57.9	58.6	60.9	62.4	63.3	60.6	0.6%
	COOP		57.9	57.7	59.7	62.1	62.5	60.0	-0.4%
Cotton	All	10.0	10.4	11.9	11.5	11.6	11.6	11.4	
Rice	All	2.4	2.3	2.5	2.6	2.6	2.6	2.5	
<hr/>									
5-Crop Total	BASE	222.6	203.3	199.4	203.4	204.7	213.6	204.9	
	US ALT		203.3	200.6	204.2	204.8	212.8	205.2	0.1%
	COOP		203.0	205.9	210.8	216.5	220.0	211.3	3.1%

Table A.5. ENDING STOCKS under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
		(Million Acre-Equivalents*)							
Corn	BASE	42.9	40.8	33.7	28.5	23.8	22.5	29.9	
	US ALT		42.1	36.2	31.2	26.8	25.4	32.4	8.4%
	COOP		39.0	33.1	27.6	23.0	19.5	28.4	-4.7%
Wheat	BASE	53.7	49.1	42.1	36.8	29.9	27.0	37.0	
	US ALT		48.6	42.7	38.9	33.4	30.8	38.9	5.2%
	COOP		42.1	30.7	23.7	20.6	20.4	27.5	-25.7%
Soybeans	BASE	17.6	14.8	10.9	8.9	9.0	9.2	10.6	
	US ALT		14.8	11.6	10.7	11.1	11.6	12.0	13.2%
	COOP		14.9	10.8	8.8	9.0	8.9	10.5	-1.0%
Cotton	All	4.5	2.7	2.7	2.6	2.4	2.4	2.5	
Rice	All	1.1	0.8	0.7	0.7	0.7	0.7	0.7	

5-Crop Total	BASE	119.8	108.2	90.1	77.5	65.9	61.7	80.7	
	US ALT		109.0	93.8	84.1	74.4	70.9	86.5	7.2%
	COOP		99.5	77.9	63.4	55.6	51.9	69.7	-13.6%

* Ending stocks divided by yield for each commodity

Table A.6. VOLUME OF U.S. EXPORTS under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
		(Million Metric Tons)							
Wheat	BASE	27.9	32.1	35.5	36.9	37.8	37.6	36.0	
	US ALT		32.6	35.3	36.5	37.4	37.8	35.9	-0.2%
	COOP		39.8	43.7	42.8	40.9	39.9	41.4	15.1%
Corn	BASE	36.8	40.6	44.5	44.4	45.3	49.3	44.8	
	US ALT		39.1	43.1	43.0	44.0	47.7	43.4	-3.2%
	COOP		49.0	55.2	56.3	58.0	62.2	56.1	25.3%
Soybean- Equivalent*	BASE	26.5	26.7	27.7	28.3	29.2	30.5	28.5	
	US ALT		26.7	27.6	28.2	29.1	30.4	28.4	-0.3%
	COOP		26.7	27.7	28.3	29.1	30.4	28.4	-0.1%
Rice	All	3.6	3.6	3.7	3.7	3.8	3.9	3.7	---
Total Grains & Soy	BASE	94.8	103.0	111.4	113.3	116.1	121.3	113.0	
	US ALT		102.0	109.7	111.4	114.3	119.8	111.4	-1.4%
	COOP		119.1	130.3	131.1	131.8	136.4	129.7	14.8%
Cotton Exports (Million Metric Tons)	All	1.5	1.5	1.6	1.5	1.5	1.5	1.5	---

*Soybean-equivalent exports equal soybean exports plus the soybean equivalent of soymeal exports

Table A.7. VALUE OF U.S. EXPORTS under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
(Million Dollars)									
Wheat	BASE	\$2,886	\$3,389	\$3,671	\$3,914	\$4,109	\$4,217	\$3,860	
	US ALT		\$3,752	\$4,279	\$4,477	\$4,634	\$4,718	\$4,372	13.3%
	COOP		\$5,073	\$5,964	\$5,949	\$5,901	\$5,838	\$5,745	48.8%
Corn	BASE	\$2,641	\$3,147	\$3,635	\$3,800	\$3,879	\$4,085	\$3,709	
	US ALT		\$3,502	\$4,084	\$4,118	\$4,262	\$4,671	\$4,127	11.3%
	COOP		\$4,442	\$5,212	\$5,483	\$5,792	\$6,436	\$5,473	47.6%
Soybean	BASE	\$3,665	\$3,822	\$3,984	\$4,384	\$4,337	\$4,348	\$4,175	
	US ALT		\$3,921	\$4,226	\$4,326	\$4,361	\$4,407	\$4,248	1.8%
	COOP		\$3,853	\$4,096	\$4,527	\$4,369	\$4,631	\$4,295	2.9%
Soymeal	BASE	\$1,070	\$1,120	\$1,191	\$1,298	\$1,377	\$1,407	\$1,279	
	US ALT		\$1,132	\$1,228	\$1,305	\$1,360	\$1,406	\$1,286	0.6%
	COOP		\$1,122	\$1,202	\$1,323	\$1,389	\$1,436	\$1,294	1.2%
Cotton	ALL	\$1,843	\$2,174	\$2,129	\$2,127	\$2,177	\$2,115	\$2,144	---
Rice	ALL	\$398	\$381	\$521	\$649	\$717	\$758	\$605	---
Total	BASE	\$12,503	\$14,033	\$15,131	\$16,172	\$16,596	\$16,930	\$15,772	
	US ALT		\$14,862	\$16,467	\$17,002	\$17,511	\$18,075	\$16,783	6.4%
	COOP		\$17,045	\$19,124	\$20,058	\$20,345	\$21,214	\$19,557	24.0%

Table A.8. CORN Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
Base Acreage (mil ac)	ALL	82.4	81.7	81.3	80.6	80.3	80.3	80.8	---
Cons. Reserve (mil ac)	ALL	0.2	2.5	4.5	6.0	6.6	6.6	5.2	---
Participation Rate (%)	BASE	85.0%	87.8%	82.4%	77.2%	70.9%	70.6%	77.8%	
	US ALT		87.8%	72.6%	67.9%	65.0%	64.9%	71.6%	-7.9%
	COOP		87.8%	75.7%	70.7%	64.9%	64.8%	72.8%	-6.4%
Planted Ac. (mil ac)	BASE	76.7	67.6	64.0	65.5	65.6	69.7	66.5	
	US ALT		67.6	64.2	64.2	64.4	67.9	65.7	-1.2%
	COOP		67.6	69.0	69.8	70.6	71.3	69.7	4.8%
Yield (bu/ac)	BASE	119.3	116.2	118.2	119.3	120.4	121.3	119.1	
	US ALT		116.2	118.2	120.0	121.1	122.0	119.5	0.4%
	COOP		116.2	116.8	118.1	118.9	121.1	118.2	-0.7%
Production (mil bu)	BASE	8,253	6,997	6,745	6,951	7,034	7,521	7,050	
	US ALT		6,997	6,761	6,865	6,950	7,374	6,989	-0.9%
	COOP		6,997	7,173	7,330	7,463	7,684	7,329	4.0%
Domestic Use (mil bu)	BASE	5,730	5,770	5,757	5,782	5,779	5,728	5,763	
	US ALT		5,678	5,686	5,700	5,717	5,642	5,685	-1.4%
	COOP		5,649	5,672	5,722	5,710	5,604	5,671	-1.6%
Exports (mil bu)	BASE	1,450	1,600	1,753	1,749	1,784	1,940	1,765	
	US ALT		1,540	1,697	1,694	1,734	1,877	1,708	-3.2%
	COOP		1,928	2,173	2,216	2,282	2,448	2,209	25.2%
Ending Stocks (mil bu)	BASE	5,115	4,743	3,979	3,400	2,871	2,724	3,543	
	US ALT		4,896	4,274	3,747	3,246	3,103	3,853	8.7%
	COOP		4,536	3,865	3,258	2,730	2,364	3,351	-5.4%
Farm Price (\$/bu)	BASE	\$1.54	\$1.65	\$1.73	\$1.81	\$1.81	\$1.75	\$1.75	
	US ALT		\$1.90	\$2.00	\$2.02	\$2.04	\$2.06	\$2.00	14.5%
	COOP		\$1.91	\$1.98	\$2.04	\$2.09	\$2.16	\$2.04	16.3%
Participant Net Returns (\$/ac)	BASE	\$163	\$153	\$146	\$134	\$119	\$110	\$132	
	US ALT		\$153	\$137	\$127	\$113	\$107	\$127	-3.6%
	COOP		\$154	\$145	\$132	\$116	\$116	\$133	0.3%
Non-Partic. Net Returns (\$/ac)	BASE	\$43	\$48	\$53	\$55	\$49	\$37	\$49	
	US ALT		\$77	\$85	\$82	\$78	\$76	\$80	64.0%
	COOP		\$79	\$80	\$80	\$79	\$87	\$81	66.5%
Government Costs (\$ mil, 86/87 = FY87)	BASE	\$11,109	\$10,576	\$7,746	\$6,794	\$5,212	\$5,458	\$7,157	
	US ALT		\$8,538	\$6,662	\$4,882	\$3,207	\$3,416	\$5,341	-25.4%
	COOP		\$7,652	\$5,757	\$4,172	\$2,721	\$2,458	\$4,552	-36.4%

Table A.9. WHEAT Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
Base Acreage (mil ac)	All	91.3	89.6	86.4	84.1	82.8	82.9	85.2	---
Cons. Reserve (mil ac)	All	0.6	4.5	9.0	12.0	14.0	14.0	10.7	---
Participation Rate (%)	BASE	84.0%	83.4%	80.4%	81.5%	78.3%	79.2%	80.6%	
	US ALT		83.4%	78.0%	77.1%	74.6%	76.3%	77.9%	-3.3%
	COOP		83.4%	72.0%	69.7%	68.9%	68.4%	72.5%	-10.0%
Planted Ac. (mil ac)	BASE	72.0	65.1	62.8	63.9	62.7	66.7	64.2	
	US ALT		65.1	63.4	65.0	63.8	67.4	64.9	1.1%
	COOP		64.8	64.8	67.2	69.6	72.0	67.7	5.4%
Yield (bu/ac)	BASE	34.4	37.1	38.8	39.1	39.8	39.9	38.9	
	US ALT		37.1	38.8	39.1	39.8	39.9	38.9	0.0%
	COOP		37.2	38.8	39.1	39.2	39.5	38.8	-0.5%
Production (mil bu)	BASE	2,087	2,116	2,131	2,187	2,183	2,329	2,189	
	US ALT		2,116	2,151	2,224	2,221	2,355	2,213	1.1%
	COOP		2,108	2,199	2,297	2,387	2,491	2,296	4.9%
Domestic Use (mil bu)	BASE	1,134	971	1,016	1,031	1,048	1,068	1,027	
	US ALT		970	1,008	1,023	1,044	1,071	1,023	-0.4%
	COOP		937	974	994	1,009	1,032	989	-3.7%
Exports (mil bu)	BASE	1,025	1,181	1,305	1,356	1,389	1,381	1,322	
	US ALT		1,198	1,296	1,341	1,373	1,388	1,319	-0.2%
	COOP		1,461	1,606	1,572	1,503	1,465	1,521	15.0%
Ending Stocks (mil bu)	BASE	1,848	1,820	1,634	1,439	1,191	1,077	1,432	
	US ALT		1,804	1,656	1,521	1,330	1,230	1,508	5.3%
	COOP		1,567	1,190	927	806	805	1,059	-26.1%
Farm Price (\$/bu)	BASE	\$2.40	\$2.44	\$2.39	\$2.45	\$2.51	\$2.59	\$2.48	
	US ALT		\$2.66	\$2.80	\$2.83	\$2.86	\$2.88	\$2.81	13.3%
	COOP		\$2.94	\$3.14	\$3.20	\$3.32	\$3.37	\$3.19	29.0%
Participant Net Returns (\$/ac)	BASE	\$60	\$64	\$59	\$59	\$52	\$56	\$58	
	US ALT		\$64	\$60	\$61	\$54	\$57	\$59	2.1%
	COOP		\$65	\$61	\$62	\$61	\$63	\$62	7.8%
Non-Partic. Net Returns (\$/ac)	BASE	\$23	\$29	\$28	\$27	\$28	\$28	\$28	
	US ALT		\$38	\$44	\$42	\$41	\$40	\$41	45.8%
	COOP		\$48	\$57	\$57	\$58	\$58	\$56	97.7%
Government Costs (\$ mil, 86/87 = FY 87)	BASE	\$3,165	\$3,304	\$3,289	\$3,126	\$2,449	\$2,435	\$2,921	
	US ALT		\$3,085	\$2,783	\$2,574	\$2,071	\$2,019	\$2,506	-14.2%
	COOP		\$1,694	\$1,324	\$1,185	\$1,064	\$1,155	\$1,284	-56.0%

Table A.10. SOYBEAN Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
Cons. Reserve (mil ac)	All	0.3	2.1	4.0	5.5	6.0	6.0	4.7	---
Planted Acreage (mil ac)	BASE	61.5	57.9	58.2	59.9	62.2	63.0	60.2	
	US ALT		57.9	58.6	60.9	62.4	63.3	60.6	0.6%
	COOP		57.9	57.7	59.7	62.1	62.5	60.0	-0.4%
Yield (bu/ac)	All	33.8	32.6	32.9	33.2	33.5	33.8	33.2	---
Production (mil bu)	BASE	2,007	1,842	1,866	1,940	2,032	2,080	1,952	
	US ALT		1,842	1,880	1,971	2,041	2,089	1,965	0.6%
	COOP		1,842	1,853	1,932	2,031	2,061	1,944	-0.4%
Domestic Use (mil bu)	BASE	1,248	1,248	1,265	1,267	1,282	1,310	1,274	
	US ALT		1,247	1,257	1,265	1,280	1,308	1,271	-0.2%
	COOP		1,245	1,260	1,261	1,280	1,300	1,269	-0.4%
Soybean Exports (mil bu)	BASE	700	706	724	736	746	761	735	
	US ALT		707	723	733	746	761	734	-0.1%
	COOP		706	724	734	743	759	733	-0.2%
Soymeal Exports (1000 tons)	BASE	6,500	6,582	6,968	7,272	7,747	8,517	7,417	
	US ALT		6,507	6,876	7,273	7,714	8,464	7,367	-0.7%
	COOP		6,575	6,956	7,241	7,728	8,435	7,387	-0.4%
Soybean Ending Stocks (mil bu)	BASE	595	483	360	297	301	310	350	
	US ALT		483	382	356	371	392	397	13.3%
	COOP		485	355	292	300	302	347	-1.0%
Soybean Farm Price (\$/bu)	BASE	\$4.75	\$4.91	\$4.99	\$5.40	\$5.27	\$5.18	\$5.15	
	US ALT		\$5.03	\$5.30	\$5.35	\$5.30	\$5.25	\$5.25	1.9%
	COOP		\$4.95	\$5.13	\$5.59	\$5.33	\$5.53	\$5.31	3.0%
Soymeal Price (\$/ton)	BASE	\$153	\$155	\$160	\$166	\$162	\$149	\$158	
	US ALT		\$160	\$168	\$163	\$162	\$150	\$161	1.5%
	COOP		\$156	\$162	\$171	\$162	\$156	\$161	1.9%
Soyoil Price (\$/cwt)	BASE	\$15.0	\$14.8	\$15.5	\$17.4	\$17.4	\$20.0	\$17.0	
	US ALT		\$14.8	\$16.3	\$17.8	\$17.7	\$20.3	\$17.4	2.1%
	COOP		\$15.0	\$16.2	\$18.2	\$18.0	\$21.2	\$17.	4.1%
Soybean Net Returns	BASE	\$95	\$94	\$94	\$106	\$99	\$95	\$98	
	US ALT		\$98	\$105	\$104	\$100	\$97	\$101	3.3%
	COOP		\$95	\$99	\$112	\$101	\$107	\$103	5.3%
Government Costs (\$ mil, 86/87 = FY87)	BASE	\$655	(\$744)	(\$842)	(\$536)	\$11	\$16	(\$419)	
	US ALT		(\$856)	(\$668)	(\$240)	\$60	\$144	(\$312)	---
	COOP		(\$773)	(\$996)	(\$464)	(\$53)	(\$32)	(\$464)	---

Table A.11. COTTON Supply and Utilization under all Strategies

	86/87	87/88	88/89	89/90	90/91	91/92	87-91 Average
Base Acreage (mil ac)	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Cons. Reserve (mil ac)	0.3	0.7	1.1	1.6	1.8	1.8	1.4
ARP Rate (% of Base)	25%	25%	15%	15%	15%	15%	17%
Participation Rate (%)	91%	89%	85%	89%	89%	89%	88%
Planted Acreage (mil ac)	10.0	10.4	11.9	11.5	11.6	11.6	11.4
Yield (lbs/ac)	552	596	604	611	619	626	611
Production (mil bales)	9.73	12.00	14.18	13.94	14.15	14.32	13.72
Mill Use (mil bales)	7.30	6.94	7.07	7.12	7.36	7.45	7.19
Exports (mil bales)	6.66	7.05	7.15	7.02	7.06	6.98	7.05
Ending Stocks (mil bales)	5.20	3.31	3.38	3.29	3.12	3.12	3.24
Farm Price (\$/lb)	\$0.52	\$0.58	\$0.56	\$0.57	\$0.58	\$0.57	\$0.57
Participant Net Returns (\$/ac)	\$158	\$166	\$171	\$150	\$134	\$128	\$150
Non-Partic. Net Returns (\$/ac)	\$50	\$103	\$87	\$81	\$77	\$62	\$82
Government Costs (\$ mil, 86/87 = FY87)	\$1,310	\$977	\$990	\$862	\$767	\$826	\$884

Table A.12. RICE Supply and Utilization under all Strategies

	86/87	87/88	88/89	89/90	90/91	91/92	87-91 Average
Base Acreage (mil ac)	4.20	4.22	4.22	4.22	4.22	4.22	4.22
ARP Rate (% of Base)	35%	35%	30%	30%	30%	30%	31%
Participation Rate (%)	92%	93%	93%	90%	86%	85%	89%
Planted Acreage (mil ac)	2.40	2.32	2.50	2.58	2.63	2.64	2.53
Yield (cwt/ac)	56.5	58.5	58.9	59.3	59.8	60.2	59.3
Production (mil cwt)	134.4	134.5	146.2	151.7	156.1	157.6	149.2
Domestic Use (mil cwt)	71.3	72.4	71.7	71.6	72.6	73.1	72.3
Exports (mil cwt)	80.0	79.7	81.7	82.4	85.2	86.6	83.1
Ending Stocks (mil cwt)	62.6	47.0	41.6	40.9	40.6	39.7	42.0
Farm Price (\$/cwt)	\$3.85	\$3.98	\$5.26	\$6.16	\$6.40	\$6.59	\$5.68
Participant Net Returns (\$/ac)	\$256	\$259	\$258	\$235	\$217	\$211	\$236
Non-Partic. Net Returns (\$/ac)	(\$50)	(\$39)	\$22	\$60	\$61	\$62	\$33
Government Costs (\$ mil, 86/87 = FY87)	\$951	\$869	\$702	\$554	\$484	\$433	\$608

Table A.13. BEEF Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		1987	1988	1989	1990	1991	1992	88-92 Avg.	% Diff.
Omaha Steer Price (\$/cwt)	BASE	\$64.99	\$68.08	\$68.63	\$66.83	\$62.23	\$61.18	\$65.39	
	US ALT		\$68.17	\$69.95	\$68.08	\$63.35	\$62.87	\$66.48	1.7%
	COOP		\$68.73	\$70.38	\$69.43	\$65.68	\$64.73	\$67.79	3.7%
Commercial Production (bill lbs)	BASE	22.20	21.07	20.59	21.49	22.33	23.10	21.72	
	US ALT		21.03	20.46	21.24	22.06	23.05	21.57	-0.7%
	COOP		21.04	20.34	21.02	21.94	22.83	21.43	-1.3%
Consumption (lbs/cap. retail)	BASE	73.21	69.09	66.63	68.47	70.28	71.84	69.26	
	US ALT		68.95	66.22	67.73	69.49	71.60	68.82	-0.6%
	COOP		68.91	65.79	67.03	69.10	71.03	68.37	-1.3%
Retail Price (\$/lb)	BASE	\$2.54	\$2.63	\$2.83	\$2.79	\$2.63	\$2.55	\$2.69	
	US ALT		\$2.77	\$2.95	\$2.88	\$2.72	\$2.65	\$2.80	4.1%
	COOP		\$2.75	\$3.10	\$3.09	\$2.90	\$2.80	\$2.93	8.8%

Table A.14. PORK Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		1987	1988	1989	1990	1991	1992	88-92 Avg.	% Diff.
7-Market Price (\$/cwt)	BASE	\$50.51	\$39.67	\$36.41	\$33.22	\$37.58	\$41.84	\$37.74	
	US ALT		\$39.85	\$38.50	\$36.14	\$39.70	\$43.10	\$39.46	4.6%
	COOP		\$40.28	\$38.74	\$36.30	\$39.69	\$43.89	\$39.78	5.4%
Commercial Production (bil lbs)	BASE	13.94	15.60	16.27	17.03	16.01	15.26	16.03	
	US ALT		15.54	15.93	16.80	15.68	15.12	15.82	-1.4%
	COOP		15.51	15.73	16.60	15.60	14.83	15.66	-2.4%
Consumption (lbs/cap. retail)	BASE	57.39	64.07	65.63	67.09	61.96	58.35	63.42	
	US ALT		63.81	64.40	66.24	60.70	57.84	62.60	-1.3%
	COOP		63.76	63.64	65.45	60.42	56.79	62.01	-2.2%
Retail Price (\$/lb)	BASE	\$1.84	\$1.58	\$1.52	\$1.50	\$1.59	\$1.77	\$1.59	
	US ALT		\$1.61	\$1.59	\$1.59	\$1.65	\$1.81	\$1.65	3.8%
	COOP		\$1.62	\$1.68	\$1.65	\$1.75	\$1.94	\$1.73	8.8%

Table A.15. BROILER Supply and Utilization under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		1987	1988	1989	1990	1991	1992	88-92 Avg.	% Diff.
12-City Wholesale Price (\$/cwt)	BASE	\$55.33	\$50.26	\$47.10	\$49.02	\$44.46	\$50.03	\$48.17	
	US ALT		\$51.48	\$49.14	\$50.80	\$45.78	\$51.47	\$49.73	3.2%
	COOP		\$52.62	\$53.12	\$55.52	\$51.06	\$57.22	\$53.91	11.9%
Commercial Production (bil lbs)	BASE	15.43	15.95	16.42	16.99	17.43	17.68	16.89	
	US ALT		15.82	16.27	16.88	17.33	17.54	16.77	-0.7%
	COOP		15.76	16.23	16.78	17.20	17.38	16.67	-1.3%
Consumption (lbs/cap.)	BASE	60.79	62.23	63.28	64.72	65.82	66.22	64.45	
	US ALT		61.71	62.68	64.30	65.42	65.68	63.96	-0.8%
	COOP		61.48	62.52	63.91	64.92	65.02	63.57	-1.4%
Retail Price (\$/lb)	BASE	\$0.80	\$0.77	\$0.78	\$0.74	\$0.71	\$0.74	\$0.75	
	US ALT		\$0.80	\$0.82	\$0.78	\$0.74	\$0.77	\$0.78	4.0%
	COOP		\$0.78	\$0.84	\$0.81	\$0.78	\$0.82	\$0.81	8.0%

Table A.16. DAIRY Supply and Utilization under all Strategies

	1987	1988	1989	1990	1991	1992	88-92 Average
Milk Cows (mil)	10.52	10.57	10.52	10.52	10.53	10.50	10.53
Production per Cow (1000 lbs)	13.59	13.69	13.84	14.02	14.23	14.45	14.05
Total Production (bil lbs)	143.00	144.64	145.58	147.43	149.73	151.73	147.82
Fluid Consumption (bil lbs)	53.05	53.75	54.27	54.23	54.30	54.86	54.28
Manufacturing Use (bil lbs)	81.19	82.93	84.37	86.43	88.73	90.05	86.50
Government Removals (bil lbs)	6.62	5.82	4.80	4.63	4.57	4.68	4.90
Support Price (\$/cwt)	\$11.29	\$10.60	\$10.10	\$10.10	\$10.10	\$10.10	\$10.20
Farm Price (\$/cwt)	\$12.40	\$11.90	\$11.65	\$11.60	\$11.60	\$11.40	\$11.63
Government Cost (\$ mil, 1987 = FY87)	\$1,582	\$1,326	\$923	\$591	\$579	\$588	\$801

Table A.17. WORLD FEED GRAIN TRADE under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
World Net Exports (mmt)	BASE	71.2	71.7	78.6	80.8	83.3	88.0	80.5	
	US ALT		70.8	77.9	80.4	82.9	87.3	79.9	-0.8%
	COOP		70.7	77.8	80.1	82.5	86.7	79.5	-1.2%
Argentina Net Exports (mmt)	BASE	6.6	7.9	8.1	8.4	8.7	8.8	8.4	
	US ALT		8.1	8.4	8.7	8.9	9.1	8.6	3.0%
	COOP		6.8	7.0	7.4	7.7	8.1	7.4	-11.5%
Canada Net Exports	BASE	5.8	4.1	4.6	5.3	5.6	5.9	5.1	
	US ALT		4.2	5.0	5.7	6.1	6.4	5.5	7.9
	COOP		2.5	2.5	2.6	2.8	2.9	2.6	-48.1
Australia Net Exports (mmt)	BASE	4.0	3.3	3.4	3.6	3.7	3.8	3.6	
	US ALT		3.5	3.6	3.7	3.8	3.9	3.7	3.3
	COOP		3.2	3.2	3.2	3.3	3.5	3.3	-8.4
EC Net Exports (mmt)	BASE	1.2	0.3	0.8	1.2	1.1	1.5	1.0	
	US ALT		0.3	0.8	1.2	1.1	1.5	1.0	-1.2
	COOP		-6.6	-7.3	-7.7	-8.3	-8.7	-7.7	-885.3%
Other Net Exports (mmt)	BASE	7.9	8.3	8.6	8.9	9.2	9.5	8.9	
	US ALT		8.3	8.6	9.0	9.3	9.6	9.0	0.4%
	COOP		8.3	8.7	9.0	9.3	9.6	9.0	0.6%
U.S. Net Exports (mmt)	BASE	45.6	47.9	53.1	53.5	54.9	58.4	53.6	
	US ALT		46.5	51.6	52.2	53.6	56.8	52.1	-2.7%
	COOP		56.5	63.8	65.6	67.6	71.3	65.0	21.3%
U.S. Trade Share (%)	BASE	64.1%	66.8%	67.6%	66.2%	65.9%	66.4%	66.6%	
	US ALT		65.7%	66.2%	64.9%	64.7%	65.0%	65.3%	-1.9%
	COOP		79.9%	82.0%	81.8%	82.0%	82.2%	81.6%	22.5%
Developed Imports (mmt)	BASE	21.1	23.1	23.8	24.4	24.8	25.6	24.3	
	US ALT		23.0	23.7	24.3	24.8	25.5	24.2	-0.4%
	COOP		23.0	23.6	24.3	24.7	25.4	24.2	-0.6%
Developing Imports (mmt)	BASE	37.8	33.0	38.8	38.7	40.4	43.9	39.0	
	US ALT		32.2	38.2	38.4	40.0	43.4	38.4	-1.3%
	COOP		32.1	38.1	38.1	39.6	42.9	38.2	-2.0%
Cent. Plan. Imports (mmt)	BASE	12.2	15.6	16.0	17.7	18.1	18.5	17.2	
	US ALT		15.6	16.0	17.7	18.1	18.5	17.2	0.0%
	COOP		15.6	16.0	17.7	18.1	18.5	17.2	0.0%

Table. A.18. WORLD WHEAT TRADE under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
World Net Exports (mmt)	BASE	78.1	86.0	90.7	93.7	95.9	97.7	92.8	
	US ALT		86.5	90.4	93.1	95.4	97.8	92.6	-0.1%
	COOP		84.4	87.2	89.8	92.0	94.5	89.6	-3.5%
Canada Net Exports (mmt)	BASE	19.0	22.5	20.6	21.0	21.2	22.3	21.5	
	US ALT		22.6	20.6	20.8	21.1	22.3	21.5	-0.1%
	COOP		20.7	19.2	20.5	21.8	23.1	21.1	-2.0%
Australia Net Exports (mmt)	BASE	14.5	14.1	14.7	15.2	15.7	16.1	15.2	
	US ALT		14.1	14.6	15.2	15.6	16.0	15.1	-0.5%
	COOP		12.6	12.4	12.7	13.2	13.8	12.9	-14.7%
EC Net Exports (mmt)	BASE	13.6	12.2	13.9	14.2	14.4	14.5	13.8	
	US ALT		12.1	13.9	14.2	14.4	14.5	13.8	-0.1%
	COOP		7.6	7.6	9.1	11.2	13.3	9.7	-29.5%
Argentina Net Exports (mmt)	BASE	4.5	5.1	5.9	6.4	6.8	7.2	6.3	
	US ALT		5.1	6.0	6.5	6.9	7.3	6.3	1.1%
	COOP		3.8	4.3	4.7	5.1	5.5	4.7	-25.7%
U.S. Net Exports (mmt)	BASE	26.5	32.1	35.5	36.9	37.8	37.6	36.0	
	US ALT		32.6	35.3	36.5	37.4	37.8	35.9	-0.2%
	COOP		39.8	43.7	42.8	40.6	38.8	41.1	14.3%
U.S. Trade Share (%)	BASE	34.0%	37.4%	39.2%	39.4%	39.4%	38.5%	38.8%	
	US ALT		37.7%	39.0%	39.2%	39.2%	38.6%	38.7%	-0.1%
	COOP		47.1%	50.1%	47.7%	44.2%	41.1%	46.0%	18.7%
Developed Imports (mmt)	BASE	5.3	5.9	5.9	6.0	6.1	6.2	6.0	
	US ALT		5.9	5.9	5.9	6.0	6.1	5.9	-1.2
	COOP		5.9	5.7	5.7	5.8	5.8	5.8	-4.2
Developing Imports (mmt)	BASE	51.5	58.8	62.0	63.9	65.4	66.6	63.3	
	US ALT		59.3	61.7	63.4	65.0	66.8	63.3	-0.1
	COOP		57.4	59.1	60.7	62.2	64.1	60.7	-4.1
Cent. Plan. Imports (mmt)	BASE	22.2	21.3	22.8	23.8	24.4	24.9	23.4	
	US ALT		21.3	22.8	23.8	24.4	24.9	23.4	0.0
	COOP		21.1	22.4	23.3	24.0	24.6	23.1	-1.6

Table A.19. WORLD SOYBEAN-EQUIVALENT* TRADE under the Baseline (BASE), U.S. Alternative Management (US ALT), and Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
World Net Exports (mmt)	BASE	47.4	48.2	49.9	51.4	53.0	54.9	51.5	
	US ALT		48.2	49.8	51.4	53.1	55.0	51.5	-0.0%
	COOP		48.2	49.9	51.4	53.1	54.9	51.5	-0.0%
Brazil Net Exports (mmt)	BASE	12.2	12.3	12.7	13.1	13.4	13.5	13.0	
	US ALT		12.4	12.8	13.2	13.5	13.6	13.1	0.4%
	COOP		12.4	12.8	13.1	13.5	13.6	13.1	0.4%
Argentina Net Exports (mmt)	BASE	7.0	7.4	7.7	8.1	8.7	9.1	8.2	
	US ALT		7.4	7.7	8.2	8.7	9.2	8.2	0.1%
	COOP		7.4	7.7	8.1	8.7	9.2	8.2	0.1%
China Net Exports (mmt)	BASE	1.7	1.8	1.8	1.8	1.8	1.8	1.8	
	US ALT		1.8	1.8	1.8	1.8	1.8	1.8	0.0%
	COOP		1.8	1.8	1.8	1.8	1.8	1.8	0.0%
U.S. Net Exports (mmt)	BASE	26.5	26.8	27.7	28.4	29.2	30.5	28.5	
	US ALT		26.7	27.6	28.3	29.1	30.4	28.4	-0.3%
	COOP		26.7	27.7	28.3	29.1	30.3	28.4	-0.3%
U.S. Trade Share (%)	BASE	55.9%	55.5%	55.5%	55.2%	55.0%	55.5%	55.3%	
	US ALT		55.4%	55.3%	55.0%	54.9%	55.3%	55.2%	-0.3%
	COOP		55.4%	55.4%	55.1%	54.8%	55.2%	55.2%	-0.3%
Developed Imports (mmt)	BASE	28.0	28.7	29.6	30.3	31.2	32.2	30.4	
	US ALT		28.6	29.5	30.3	31.2	32.2	30.3	-0.1%
	COOP		28.6	29.5	30.2	31.1	32.2	30.3	-0.1%
Developing Imports (mmt)	BASE	11.5	11.4	11.8	12.2	12.6	13.1	12.2	
	US ALT		11.3	11.8	12.3	12.7	13.1	12.2	0.1%
	COOP		11.4	11.9	12.3	12.7	13.1	12.2	0.1%
Cent. Plan. Import (mmt)	BASE	7.7	8.2	8.5	8.9	9.2	9.6	8.9	
	US ALT		8.2	8.5	8.9	9.3	9.6	8.9	0.0%
	COOP		8.2	8.5	8.9	9.2	9.6	8.9	-0.0%

*Soybean-equivalent trade is defined as soybean trade plus the soybean-equivalent of soymeal trade

Table A20. Wheat and Feed Grains AREA Harvested in MAJOR EXPORTING COUNTRIES Under the Baseline (BASE), the U.S. Alternative Management (US ALT) and the Cooperative Supply Adjustment (COOP) Strategies

		86/87	87/88	88/89	89/90	90/91	91/92	87-91 Avg.	% Diff.
(Million Hectares)									
EC-12 ¹	BASE	32.2	32.3	32.4	32.5	32.6	32.7	32.5	
	US ALT		32.3	32.4	32.5	32.6	32.7	32.5	0.0%
	COOP		29.0	29.0	29.7	30.4	31.0	29.8	-8.3%
Canada ²	BASE	20.2	19.9	19.8	19.8	19.7	20.0	19.8	
	US ALT		19.9	19.7	19.8	19.9	20.2	19.9	0.3%
	COOP		18.2	18.2	18.7	19.2	19.8	18.8	-5.1%
Australia ³	BASE	13.6	13.9	14.3	14.6	14.9	15.1	14.6	
	US ALT		13.9	14.3	14.6	14.9	15.1	14.5	-0.2%
	COOP		12.2	12.2	12.6	13.0	13.4	12.7	-12.7%
Argentina ⁴	BASE	9.4	9.5	9.7	9.9	10.1	10.2	9.9	
	US ALT		9.6	9.8	10.0	10.2	10.3	10.0	0.9%
	COOP		8.5	8.5	8.7	8.9	9.1	8.7	-11.7%
4-Country Total	BASE	75.4	75.6	76.1	76.8	77.3	78.1	76.8	
	US ALT		75.6	76.2	76.9	77.6	78.4	76.9	0.2%
	COOP		67.9	67.9	69.1	71.5	73.4	70.1	-8.8%
U.S. ⁵	BASE	65.8	58.8	56.3	56.7	56.8	59.7	57.7	
	US ALT		58.8	56.5	56.7	56.7	59.4	57.6	-0.1%
	COOP		58.7	59.7	61.0	62.3	63.5	61.0	5.9%
5-Country Total	BASE	141.3	134.4	132.4	133.5	134.1	137.9	134.4	
	US ALT		134.4	132.7	133.6	134.3	127.8	134.5	0.1%
	COOP		126.6	127.6	130.7	133.7	136.9	131.1	-2.5%

¹Wheat, barley, and corn

²Wheat, barley and corn

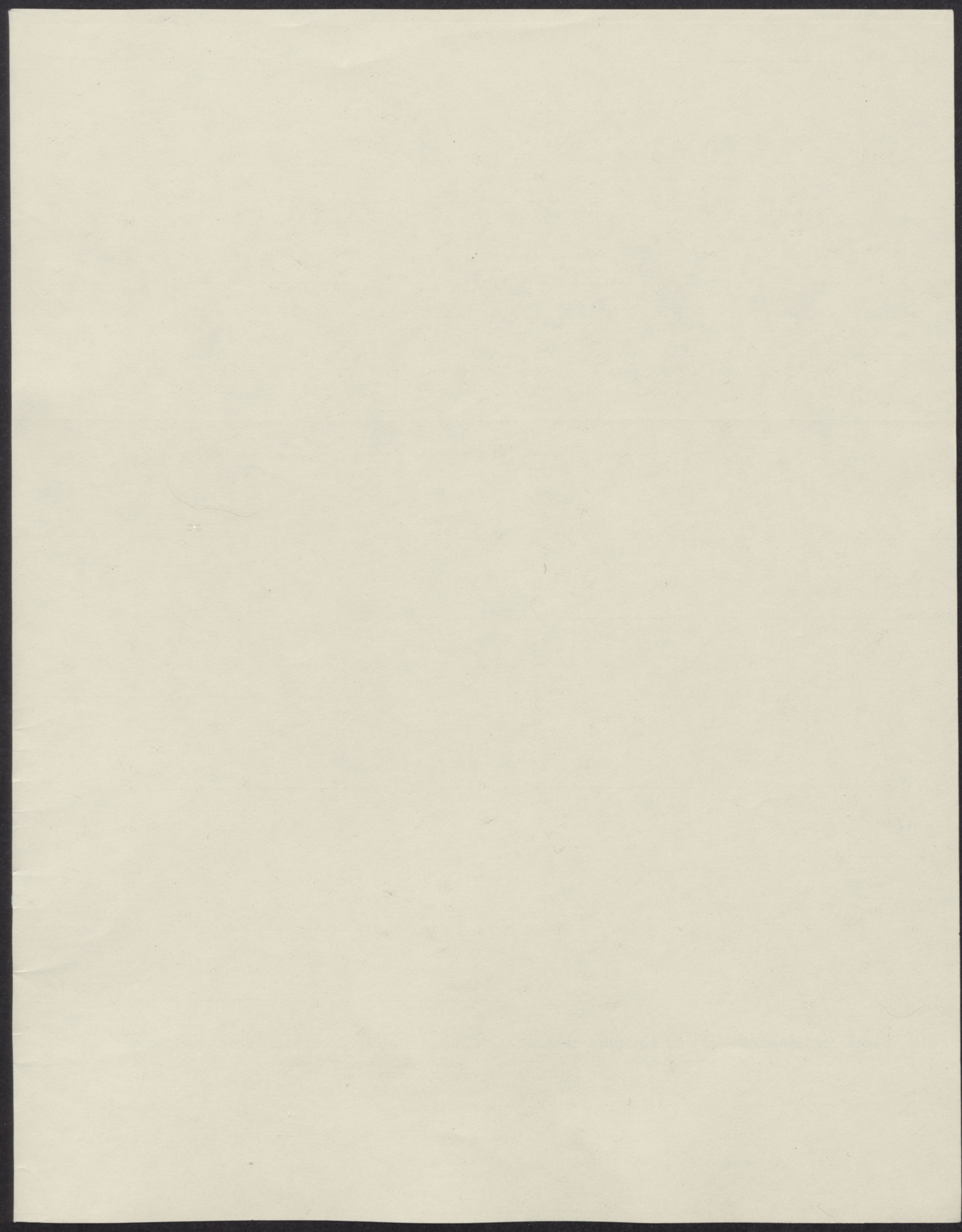
³Wheat, corn, and sorghum

⁴Wheat and barley

⁵Wheat, corn, sorghum, barley, and oats

Table A.21. MACROECONOMIC Projections under all Strategies

	1987	1988	1989	1990	1991	1992	88-92 Average
United States							
Real GDP (% change)	2.7%	3.6%	2.3%	0.6%	5.3%	2.8%	2.9%
GDP Deflator (% change)	2.8%	4.3%	4.9%	5.4%	3.9%	4.3%	4.6%
Civilian Unemployment Rate (%)	6.7%	6.3%	6.4%	7.4%	6.6%	6.0%	6.5%
3-Month T. Bill Rate (%)	5.5%	6.4%	7.3%	7.1%	6.3%	6.2%	6.7%
Moody's AAA Corporate Bond Rate (%)	8.5%	9.7%	10.4%	9.1%	8.3%	7.9%	9.1%
Federal Budget Deficit (\$ bil.)	\$179.6	\$167.7	\$188.7	\$226.5	\$187.7	\$144.8	\$183.1
Current Account Deficit (\$ bil.)	\$158.3	\$160.9	\$147.7	\$139.5	\$143.5	\$127.7	\$143.9
Foreign Variables							
Saudi Light Petroleum (\$/barrel)	\$15.0	\$16.7	\$18.5	\$21.0	\$23.5	\$26.0	\$21.1
Effective Exchange Rate (MERM % change)	-9.9%	-8.1%	-3.0%	0.3%	2.9%	2.5%	-1.1%
Real GDP (% change)							
World	2.4%	3.0%	2.6%	2.1%	3.7%	3.1%	2.9%
Africa	-1.7%	0.5%	2.6%	2.2%	2.7%	3.4%	2.3%
Latin America	0.8%	2.9%	2.5%	3.0%	3.2%	3.1%	2.9%
Pacific Basin	5.0%	5.4%	5.0%	4.5%	5.2%	5.0%	5.0%
Western Europe	2.2%	2.2%	1.9%	2.0%	2.8%	2.6%	2.3%
Centrally Planned	2.8%	3.0%	3.0%	3.2%	3.1%	3.5%	3.2%



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