Possible Economic Consequences of Reverting to Permanent Legislation or Eliminating Price and Income Supports

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ABSTRACT

If the agricultural legislation expiring in 1985 is not replaced, farm price
and income supports will revert from the programs provided for in the
Agriculture and Food Act of 1981 and subsequent legislation to the programs
provided for in the permanent support statutes. Reverting to the permanent
support programs, dating back in some cases to the 1930's, would raise price
and income support levels significantly and greatly reduce the role of market
forces in determining farm returns. Conversely, if all price and income
supports were eliminated in 1985, Government intervention in the market would
end and supply and demand forces would determine farm returns. Adopting either
of these two outerbound policy alternatives would have significant and
far-reaching impacts on farm operations, the agribusiness sector, the general
economy, and ultimately the world market for farm products.

Keywords: agribusiness, agricultural trade, conservation, crops, economy,
          elasticity, farm inputs, farm policy, finance, food costs, land
          use, land value, livestock, parity, permanent farm legislation,
          price support

PREFACE

The Federal Government will consider new farm legislation in 1985 to replace the expiring Agriculture and Food Act of 1981. In preparation for these deliberations, the Department of Agriculture and many other groups throughout the Country are studying the operation of the 1981 law and earlier farm legislation. The Economic Research Service (ERS) prepared this report to evaluate two very different approaches to farm price and income support programs: reverting to the large-scale programs provided for in the permanent support statutes originally enacted in the 1930's and eliminating price and income supports entirely. While neither of these outerbound alternatives is likely to be adopted, analyzing their impacts provides valuable insights into the general operation of support programs for use in evaluating the options that are considered.

Other reports in USDA's series of background papers deal with the major program commodities, the farm industries that produce them, and the farm programs under which they are produced. These commodity papers are available from EMS Information, Room 1470-S, USDA, Washington, D.C. 20250, (202) 447-7255. They include Honey (AIB-465), Wool and Mohair (AIB-466), Wheat (AIB-467), Tobacco (AIB-468), Peanuts (AIB-469), Rice (AIB-470), Corn (AIB-471), Soybeans (AIB-472), Oats (AIB-473), Dairy (AIB-474), Sorghum (AIB-475), Cotton (AIB-476), Barley (AIB-477), and Sugar (AIB-478). Background papers are also available on Federal Credit Programs in Agriculture (AIB-483), the History of Agricultural Price Support and Adjustment Programs, 1933-84 (AIB-485), Foreign Exchange Constraints to Trade and Development (FAER-209), Financial Constraints to Trade Growth: The World Debt Crisis and its Aftermath (FAER-211), and the Impacts of Policy on U.S. Agricultural Trade (ERS Staff Report No. AGES840802).

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NOTE

Detailed projections for a number of farm and nonfarm indicators were developed in the course of this study. They are cited here not as official USDA forecasts but as indicators of the magnitude and general direction of the changes likely with a move toward more or less Government intervention in the market.

The data and assumptions used in preparing this report and the results reported on here are based on information available as of September 1, 1984.

<p style="text-align:center">CONTENTS</p>

LIST OF TABLES

SUMMARY

Concern with the financial well-being of the farm sector, its growing
dependence on costly Federal programs, and the changing agricultural trade
environment have combined since 1981 to generate widespread interest in
reevaluating price and income supports when the current program expires in
1985. Views on the direction that future support programs should take vary
widely. They range from expanding the Government's role in determining farm
prices and incomes--possibly by reverting to the interventionist programs
provided for in the permanent support legislation originally enacted in the
1930's--to eliminating supports entirely. Implementing either of these
outerbound alternatives when the Agriculture and Food Act of 1981 expires
would have a significant impact on agriculture, the general economy, and
ultimately the world market for farm products.

Reverting to the programs provided for in the permanent support statutes would
increase the Government's role in setting commodity prices and farm incomes
substantially. Such a reversion would take place automatically in 1985 if no
new legislation were enacted and the 1981 Act were not extended. Congress has
typically avoided reverting to the permanent support programs in the past by
suspending them--rather than repealing or modifying them--with the passage of
new but temporary farm legislation every 4 years.

While their specific provisions differ somewhat from commodity to commodity,
the permanent support programs generally provide for minimum producer prices
for the basic commodities, set without reference to supply or demand
conditions in the market. 1/ Government-supported prices would be set high
enough to guarantee producers some minimum level of income by ensuring parity
between the prices farmers receive for their products and the prices they pay
for production inputs and living expenses. 2/ The Secretary of Agriculture
would be required in most cases to set commodity price supports high enough to
guarantee producers 50 to 90 percent of parity using the 1910-14 ratio between
the prices farmers paid and received as the benchmark.

This use of the 1910-14 ratio, unadjusted for subsequent productivity growth,
as the benchmark has worked over time to push up sharply the income support
provided for in the permanent statutes. With increased productivity tripling
farm output per unit of input since 1914, guaranteeing producers the same

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1/ The program commodities include wheat, corn, barley, rye, oats, sorghum,
rice, cotton, cottonseed, peanuts, soybeans, tobacco, sugar, milk, honey, wool,
and mohair. Honey, cottonseed, peanuts, wool, and mohair are not dealt with
in detail in this report.

2/ The concept of parity was originally defined in the Agricultural
Adjustment Act of 1933. The Act specifies that Congress will "...establish
and maintain such balance between the production and consumption of
agricultural commodities, and such marketing conditions thereafter, as will
reestablish prices to farmers at a level that will give agricultural
commodities a purchasing power with respect to articles that farmers buy,
equivalent to the purchasing power of agricultural commodities in the base
period. The base period in the case of all agricultural commodities except
tobacco shall be the prewar period, August 1909-July 1914. In the case of
tobacco, the base period shall be the postwar period, August 1919-July 1929."

ratio between input and product prices as was in effect 70 years ago would generate roughly three times the real net income. Guaranteeing producers the same buying power as in effect 70 years ago would require a parity ratio of only 30 to 40 percent. Real commodity prices have tended to reflect this productivity growth over time and are currently 30 to 40 percent of the real 1914 level. Hence, even with supports set at the lower end of the 50- to 90-percent parity range called for in the permanent statutes, commodity prices would rise sharply above recent market-clearing levels and increase 4 to 6 percent per year thereafter regardless of market conditions.

The U.S. Department of Agriculture (USDA) would operate nonrecourse loan or direct purchase programs to support parity-linked prices in periods of surplus and would dispose of excess stocks if open-market prices moved above support levels. The direct link between the U.S. commodity market and the world market would effectively extend USDA support activities to underwriting international trade prices as well as domestic prices in periods of excess supply. With exports accounting for more than one-half of the demand for many program commodities, reverting to permanent legislation would put USDA in the position of manipulating U.S. stocks and exports in order to balance world import demand and export supply at parity-linked price levels.

Conversely, eliminating price and income support programs would take the U.S. Government out of the commodity markets. While several transition programs would be needed to ease the Government's exit, particularly in areas such as stockholding, farmers would ultimately depend entirely on market supply and demand forces to set prices and incomes.

Alternative Market Settings

The impact of adopting either of these two policy options would vary widely in alternative U.S. and world market settings.

If the no-growth market setting of the early 1980's were to continue, high price supports on the one hand or no supports on the other would move U.S. agriculture in fundamentally different directions. Reverting to the permanent support programs would generate a sizable increase in farm output that the market would be unable to absorb at parity-linked prices. Much of the expanded output generated by permanent legislation's higher prices would ultimately have to be acquired by USDA in order to clear the market. On the other hand, eliminating supports in this setting would lead to a significant contraction in the farm sector as production of the program commodities was scaled back, possibly one-third or more initially, to meet effective demand. The impacts under either alternative would be significant enough to spread quickly from the farm and agribusiness sectors to the general economy and the world market.

In a rapidly expanding market, however, differences between the permanent legislation and no-support scenarios for most of the agricultural and macroeconomic indicators analyzed in this report would narrow. In a sustained tight supply setting reminiscent of the mid-1970's, the open market could generate farm prices and incomes comparable to, or possibly above, returns for most of the program commodities under permanent legislation.

This study assumes that the U.S. and world agricultural economies recover from the slump of the early 1980's, but do not grow fast enough through 1990 to tighten supplies and put upward pressure on commodity prices and farm

incomes. 3/ In this setting reminiscent of the abundant supplies and weak
prices of the 1960's, permanent legislation would move the farm sector toward
increased dependence on Government programs to support incomes well above
market-clearing levels. On the other hand, operating without supports in this
setting would lead to serious financial problems for agriculture for several
years, possibly into the 1990's, as sharply lower returns led to contraction
in the sector and a large-scale revaluation of farm assets. In the long run,
however, the agriculture that emerged would be in a stronger position than
under permanent legislation to compete domestically with other sectors of the
economy for resources and internationally with other exporting countries for
markets.

Impacts of Reverting to Permanent Legislation

A decision to revert to permanent legislation in the slow-growth market setting
assumed in this study would initially affect only the program commodity
producers. Its impacts would quickly spread, however, through the rest of the
farm and agribusiness sectors to the general economy.

Program commodity prices would increase sharply at the start of the 1986
marketing year, both in absolute terms and relative to the prices of other
farm products, and would rise 4 to 6 percent per year thereafter. The
nonrecourse loans and direct purchases used to support parity-linked prices
would guarantee producers an outlet for their products, in most cases with
little or no effective restriction on the volume they produced.

This combination of high support prices and a guaranteed outlet for their
products would encourage program commodity producers to expand output without
regard for effective market demand. Their existing capacity to produce would
be used more intensively while new, often higher cost, capacity would be
developed. Program commodity output could increase two-fifths or more from
1986 to 1990 despite substantially slower growth in effective demand for the
commodities in question in the domestic and export markets. Farm operators
producing commodities not eligible for support would face increased competition
for land and other inputs from program commodity producers. Livestock
operators other than dairy producers would be the most seriously affected.
With meat prices unsupported, higher feed costs would reduce returns and result
in lower meat and poultry output after operators adjusted to permanent
legislation's higher cost structure.

Permanent legislation would also work among program commodity producers to
shelter inefficient operators and force efficient operators to compete with
them for production inputs. The resulting bidding up of input prices, combined
with the added input demand associated with developing new capacity, could
generate significant increases in production expenses offsetting as much as

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3/ While it is difficult to assign probabilities, the scenario highlighted
here was thought to be the most likely by the analysts involved. The
probability of a weak enough or strong enough market setting to change the
general conclusions of this study are very limited. Given the experience of
the last two decades, the probability of a strong enough market to narrow
differences between scenarios or a weak enough market to increase differences
between scenarios significantly would be less than 3 in 20. However, this
uncertainty about future market settings emphasizes the need to focus on the
study's general conclusions rather than specific results.

two-thirds of the increase in farm receipts likely under permanent legislation. As a result, farm income gains would be appreciably smaller than increases in producer prices would suggest. Moreover, income improvements would come at least partially at the expense of operators producing commodities not eligible for program benefits but faced with higher input costs. Differences in growth in output and receipts between program commodity producers and other farm operators would widen over time, leading to an increasingly uneven distribution of income among farmers.

The asset appreciation and equity gains likely under permanent legislation would ultimately overshadow income gains. With higher price support levels capitalized into asset values, asset appreciation and growth in equity could return to the rapid pace of the 1970's. The asset losses experienced since 1981 could be reversed in 1 to 2 years and asset values could be as much as 50 percent higher by 1990. But gains in this area would also be unevenly distributed along tenure and equity lines. Many of the major beneficiaries of a reversion to permanent legislation would be landowners not directly involved in farming.

Much of the increased farm output likely under permanent legislation would accumulate as Commodity Credit Corporation (CCC) stocks as higher support prices encouraged growth in production and discouraged growth in demand. Domestic demand for farm products could drop as much as 10 percent from 1980-83 levels by 1990. Foreign demand for U.S. farm products could weaken even more sharply as higher export prices discouraged growth in world import demand and weakened the U.S. competitive position in the world market. Reverting to permanent legislation would signal a willingness to sacrifice export market share and accumulate whatever stocks were necessary to balance world import demand and export supplies at support price levels. Given this dual domestic and world market balancing act, CCC stocks of grains and cotton could grow to several years' use by 1990.

Accumulating stocks to support parity-linked prices, particularly in the absence of effective production controls, would make permanent legislation a costly program. In effect, roughly $3 would be spent to acquire sufficient stocks on the open market to tighten supplies and boost commodity prices enough to raise net farm income less than $1. By 1990, operating nonrecourse loan programs to support commodity prices could cost taxpayers $50 billion annually. Most of this $50 billion would, in theory, be recoverable. The commodities acquired by the CCC could be resold during periods of short supplies and high prices to recoup loans and any other costs incurred by USDA. But, with supports set well above likely market-clearing levels and CCC sales possible only if market prices moved above support levels, the probability of any large-scale resale would be remote.

Consumers would also face $20 billion per year in added food costs by 1990 as a result of permanent legislation's higher commodity prices. In this regard, permanent legislation would resemble the support program in place in the European Community--minus the export subsidy provisions. Both involve large-scale public expenditures aimed at boosting domestic farm prices that, ultimately, raise food prices.

Permanent legislation would benefit some industries associated with agriculture but harm others. Stronger demand for purchased inputs would allow the fertilizer and machinery industries in particular to operate their currently underutilized plants more fully. In some cases, farm demand for inputs could

be strong enough to strengthen real input prices. Other agribusinesses such as the food transportation, processing, and marketing industries would fare less well. Higher commodity prices would slow growth and reduce the volume of products moving through the system to the domestic and export markets. This reduced activity beyond the farm gate would more than offset increased activity in farming and the input industries.

The impacts on the Federal budget of reverting to permanent legislation would also be significant enough, if the policy were pursued for any length of time, to affect the performance of the general economy. Financing $50 billion annually of added Federal expenditures by 1990 would raise inflation if the Federal Reserve decided to expand the money supply to cover the added deficit. On the other hand, Government borrowing on the open market to finance the $50 billion would raise interest rates.

Higher food prices, combined with the inflation generated by monetizing the cost of the permanent legislation program, could add 1 to 2 percentage points per year to the inflation rate. Borrowing to cover the permanent legislation deficit could add 1 to 2 percentage points to the interest rate. In either case, real economic activity and employment for the economy as a whole would grow more slowly, possibly as much as 1 percentage point less per year by 1990.

Impacts of Eliminating Price and Income Supports

The effects of eliminating price and income supports on the agricultural sector, the general economy, and the world market would be no less significant than the effects of reverting to permanent legislation.

Given the market setting assumed in this study, eliminating supports would force program commodity producers to gear output to market demand for their products. Production of program commodities would be as much as one-third lower than under permanent legislation. Operators producing commodities not eligible for support, however, would experience lower input prices and less competition for inputs from program commodity operators. As a result, livestock output in particular could increase slightly faster than under permanent legislation.

With no supports and market prices lower and more variable, program commodity producers would shift production patterns in an effort to reduce cash expenses while keeping output and receipts as high as possible. Farmers would tend to reduce use of purchased inputs such as fertilizers, fuels, and machinery. Adjustments would also be made in land use. As much as 30 million acres of the more marginal, higher cost land cultivated under permanent legislation would not be cultivated if supports were eliminated. While not all of this acreage would be highly erosive land, the smaller acreage planted would help ease agriculture's resource conservation problems significantly.

With market forces likely to push commodity prices lower under the no-support scenario, demand for farm products would be considerably stronger. Differences in demand between scenarios would be most pronounced in the export market. The decision to operate without price supports would signal U.S. unwillingness to continue to support world prices through CCC stock adjustments. It would also signal the United States' intent to become more price competitive in an effort to expand its share of the world market. Combined exports and domestic use of program commodities could be as much as one-fourth higher with the elimination of supports than under permanent legislation.

However, the higher marketings likely without price supports would fall short of combined marketings and loan placements under permanent legislation. As a result, farmers' gross receipts would grow more slowly than under the permanent legislation scenario. Differences in net farm incomes between the two scenarios would be narrower than differences in receipts imply, however, because of the lower production expenses likely with the elimination of price supports. Even with lower production expenses, however, net farm income could average roughly one-half the levels likely under permanent legislation.

The value of farm assets and farmer equity could decline more sharply than income with the abolition of supports, possibly to the extent of reversing the appreciation of the 1970's in 1 to 3 years' time. Land values would fall sharply initially to reflect their reduced income-earning capacity. Over the 5-year period analyzed here, land values could average one-half the level likely under permanent legislation. Farmers dependent on mortgaging last year's appreciation to finance this year's operations could find declining asset values an even more serious problem than lagging income.

This pressure on asset values and equity would reflect the decapitalization of past program benefits and a shift toward pricing assets according to their capacity to generate income. As the transition progressed, many of the sector's less efficient and highly leveraged operators would be forced into liquidation. After several years of declining asset values and large-scale changes in ownership, asset values would tend to stabilize in real terms and increase gradually in nominal terms. The rate of return on new investment in lower priced assets could rise by the early 1990's to levels that compare favorably with returns in the rest of the economy.

The farm input industries would experience an initial drop and slower growth in sales of their products in this environment. Demand for farm machinery in particular would drop sharply and further weaken the outlook for an industry already operating well below capacity. However, eliminating price supports would work to expand economic activity and employment in other areas of the agribusiness sector. For example, the transportation, processing, and marketing industries would benefit from the increase in marketings likely with lower commodity prices. This mix of gains and losses would lead to higher economic activity and employment for the agribusiness sector as a whole with supports eliminated than under permanent legislation.

Eliminating supports would also reduce farm program costs well below the levels likely under permanent legislation. With no loans or purchases to finance, Government expenditures would be limited to financing disposal of the stocks held by the CCC or in the farmer-owned reserve at the start of the 1986 marketing year. The cost of operating the transition reserves assumed in this study would would average less than $500 million per year through 1991 and would pay for themselves thereafter with resale receipts until stocks were exhausted in the mid- to late-1990's. 4/

4/ The assumptions made here regarding USDA's disposal of CCC and farmer-owned reserve stocks minimize the possibility of swings in food supplies and prices early in the transition period while the private sector adjusts to carrying larger stocks. It was assumed that USDA would hold the CCC and farmer-owned reserve stocks on hand at the start of the 1986 marketing year off the market until commodity prices moved above 110 percent of the average for the previous 5 years. Without such a reserve in place, fluctuations in food supplies and prices could widen initially until the private sector took on the stockholding functions currently provided by USDA.

With commodity prices rising more slowly under the no-support scenario, food prices would increase at possibly two-thirds the pace likely under permanent legislation. This slower growth in retail food prices would translate into a $20-billion lower food bill by 1990.

The consequences of operating without supports could prove strong enough over time to affect the operation of the general economy. The smaller Federal deficit likely with reduced agriculture-related spending would work to lower interest and/or inflation rates. This improved financial setting, combined with slower increases in food prices and expanded economic activity in the agribusiness sector, could accelerate growth in both gross national product and employment by as much as 1 percentage point per year by 1990.

Longer Term Impacts

The longer term, post-1990 effects of adopting either of these two support programs could prove more significant than their short- and medium-term impacts highlighted here.

After 5 years of permanent legislation and the changes in farm structure likely to accompany it, the agricultural sector would find it difficult to operate without continued large-scale public support. Program commodity producers would depend on price and income supports for as much as one-third of their gross incomes and over one-half of their net incomes. Their asset and equity positions would depend even more heavily on continued public support and the capitalization of program benefits into land values. On the other hand, withdrawal of support after 1990 would result in a sharp contraction in the sector and even greater financial adjustments than those described here under the no-support scenario.

Continuing the permanent support programs, however, would lead to even greater dependence on the Federal Government as the 1990's progressed. The sector's competitive position in the world market would deteriorate further, while domestic demand for high-priced farm products would grow slowly, if at all. As a result, farmers would look to CCC as the outlet for an increasing share of their expanding output while rapidly rising production expenses limited any improvement in their net incomes. Program costs would also rise at an increasing pace and possibly double from 1990 levels before mid-decade.

After 5 years without price and income supports, the farm sector would have contracted significantly. Many of its less efficient and highly leveraged operators would have been forced out of business and possibly 30 million acres of land would have been abandoned. However, return on new investment in lower priced assets would approach, and possibly exceed, returns under permanent legislation. The sector would also have shifted to a lower cost structure. This lower cost structure, combined with stronger growth in demand for lower priced farm products, would narrow differences in net farm incomes between scenarios significantly by the mid-1990's. In short, the farm sector would have made a difficult transition, but would have emerged in a stronger position to compete with other sectors in the economy for resources and with other exporters internationally for export markets.

Possible Economic Consequences of Reverting to Permanent Legislation or Eliminating Price and Income Supports

INTRODUCTION

Concern with the financial well-being of the farm sector, its growing dependence on costly Federal programs, and the changing agricultural trade environment have combined since 1981 to generate widespread interest in reevaluating price and income supports when the current program expires in 1985. Views on the direction that support programs should take in 1985 vary widely and range from expanding the Government's role in setting farm returns—possibly by reverting to the interventionist programs provided for in the permanent support statutes initially enacted in the 1930's—to eliminating price and income supports entirely.

This report analyzes the impacts of adopting either of these two outerbound support policy alternatives on the farm sector, the general economy, and the world market over the remainder of the 1980's. While neither alternative is likely to be adopted in the simplified form assumed here, analyzing their impacts provides insights into the general operation of support programs that will be helpful in evaluating the policies that are ultimately considered.

Alternative Support Program Provisions

The price and income programs currently in place were authorized in the Agriculture and Food Act of 1981 and subsequent legislation as temporary amendments to the permanent support statutes originally enacted in the 1930's. Congress has typically avoided reverting to the permanent support programs by suspending them—rather than repealing or modifying them—with the passage of new, but temporary, legislation every 4 years. If no new legislation is passed in 1985 and agreement is not reached to extend the 1981 Act, farm support programs would automatically revert to those called for in the permament statutes.

While their provisions vary somewhat by commodity, the permanent support programs provide for minimum producer prices, set without reference to supply or demand conditions in the market, for the basic commodities. 1/ Government-supported prices for these commodities would be set high enough to guarantee producers some minimum level of income by insuring some minimum degree of parity between the prices farmers receive for their products and the prices

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1/ The program commodities include wheat, corn, barley, rye, oats, sorghum, rice, cotton, cottonseed, peanuts, soybeans, tobacco, sugar, milk, honey, wool, and mohair. Honey, cottonseed, peanuts, wool, and mohair are not dealt with in detail in this report.

they pay for inputs and living expenses. 2/ The Secretary of Agriculture would be required in most cases to support commodity prices at high enough levels to guarantee producers 50 to 90 percent of parity using the 1910-14 ratio as the benchmark.

This use of the 1910-14 ratio, unadjusted for growth in productivity over the last 70 years, works to push the real income support provided for in the permanent programs up sharply over time. With increased productivity tripling farm output per unit of input since 1910-14, guaranteeing producers the same ratio between prices paid and received as was in effect 70 years ago would generate roughly three times the real net income. Guaranteeing farmers the same buying power they enjoyed in 1910-14 would require a ratio of prices paid to received of less than 40 percent.

Real commodity prices have tended to fall over time, reflecting this growth in productivity, and are currently less than 35 percent of the 1910-14 level. Hence, even with supports set at the lower end of permanent legislation's 50- to 90-percent parity range, commodity prices would rise sharply above recent market-clearing levels and increase 4 to 6 percent per year thereafter in nominal terms regardless of market conditions. The U.S. Department of Agriculture (USDA) would be charged with operating a nonrecourse loan or direct purchase program to support parity-linked producer prices in periods of surplus and could dispose of excess stocks if market prices moved above support levels.

Given the support prices in question, commodity prices would be high enough to virtually isolate U.S. agriculture from domestic and world market forces. Producers would become increasingly dependent on nonrecourse loans or direct purchases to support incomes well above market-clearing levels and to dispose of the growing share of their expanding output that the market would not absorb at parity-linked prices.

If, on the other hand, no new legislation were enacted in 1985 and the permanent statutes were repealed, all Government intervention in the market to support farm prices and incomes would end. Provision would have to be made for the disposal of the sizable Commodity Credit Corporation (CCC) and farmer-owned reserve stocks on hand at the start of the 1986 marketing year. But commodity prices and farm incomes would be set by market forces rather than by Government programs.

Report Scope and Organization

This report is organized into nine sections and three appendices. The first section of the report summarizes the major provisions of the permanent support statutes and the assumptions made under the no-support scenario regarding the Government's withdrawal from the market. The second section summarizes the

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2/ The concept of parity was originally defined in the Agricultural Adjustment Act of 1933. The Act specifies that Congress will "...establish and maintain such balance between the production and consumption of agricultural commodities, and such marketing conditions thereafter, as will reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy equivalent to the purchasing power of agricultural commodities in the base period. The base period in the case of all agricultural commodities except tobacco shall be the prewar period, August 1909-July 1914. In the case of tobacco, the base period shall be the postwar period, August 1919-July 1929."

2

assumptions made regarding the U.S. and world market setting over the remainder of the 1980's and the role that setting plays in shaping policy impacts. The third section discusses the impacts of the two scenarios on crop and livestock producers and provides the basis for the financial analysis summarized in the fourth section.

The fifth section of the report evaluates natural resource and conservation impacts, while the sixth section summarizes broader agribusiness impacts. International trade impacts and effects on Government expenditures, food prices, and the general economy are dealt with in the seventh and eighth sections of the report. The ninth section of the report is made up of concluding notes and is followed by three appendices. The first appendix reports on the effects that fluctuations in yields and exports could have on the commodity prices, farm incomes, food prices, and Government expenditures projected under the two scenarios. The second appendix reports in greater detail on the elasticities used to estimate trade impacts. A glossary of agricultural terms used in the report appears in the third appendix.

Given the extent to which support programs affect the farm sector and the general economy, projections for a broad range of indicators were developed in the process of completing the study. While many of these projections appear in the text, they are cited not as official USDA forecasts, but as general indicators of the direction and magnitude of the changes likely with more or less Government involvement in the market.

PROGRAM PROVISIONS UNDER THE PERMANENT LEGISLATION AND NO-SUPPORT SCENARIOS

While the general directions of policy under the permanent legislation and no-support scenarios are clear, the specific program provisions in effect are subject to debate. Many of the permanent support provisions could ultimately require judicial interpretation. How the Government would withdraw from the market under the no-support scenario is no less important, and also open to question. This section summarizes the program provisions assumed to be in place under each of the scenarios analyzed in this study.

Permanent Legislation Program Provisions

Legislative authority for most of the support programs currently in place is contained in the Agriculture and Food Act of 1981, the Omnibus Budget Reconciliation Act of 1982, the Dairy and Tobacco Adjustment Act of 1983, and the Agricultural Programs Adjustment Act of 1984. These acts suspended the support programs provided for in the permanent statutes, including the Agricultural Adjustment Act of 1933 (as amended), the Agricultural Act of 1949 (as amended), the Commodity Credit Corporation Charter Act of 1949 (as amended), and the Agricultural Trade Development and Assistance Act of 1954. Congress has traditionally suspended--rather than repealed or modified--these permanent statutes by enacting a new but temporary farm bill every 4 years. More recently, Congress has also tended to pass annual farm bills that suspend or modify provisions of the latest 4-year farm bill as well.

Should the 1981-84 acts and their amendments not be replaced or extended when they expire in 1985, most of the support programs currently in place would continue, but as provided for in the appropriate permanent statute (table 1). Of particular concern for this study are the permanent legislation provisions affecting grain, cotton, soybean, peanut, tobacco, sugar, wool and mohair, milk, and honey prices and incomes--provisions commonly referred to

3

collectively as the commodity programs. The major commodity program provisions are summarized below in two sections, the first dealing with mandatory commodity programs and the second dealing with programs operating at the discretion of the Secretary.

Mandatory Commodity Programs

Many of the commodity programs would change substantially with a reversion to permanent legislation and specific support provisions would vary more widely between commodities than under the current program. The programs in place for wheat, upland cotton, tobacco, and peanuts in particular would be far more complex than for the other program commodities. This reflects concern when the permanent statutes were initially enacted with surplus problems with these four commodities that did not extend to the rest of the sector.

In the case of wheat and upland cotton, permanent legislation would provide for price supports set at 50 to 90 percent of parity. Even with the link between support levels and parity set at the lower end of the 50- to 90-percent range,

Table 1--Status of program authorities upon expiration of the Agriculture and Food Act of 1981 and subsequent legislation

Program	Reverts to permanent legislation	Expires
Extra-long staple cotton	X	
Upland cotton 1/	X	
Dairy:		
Base plans		X
CCC donations to military and veterans hospitals		X
Indemnity program		X
Minimum price support	X	
Feed grains 1/	X	
Peanuts	X	
Rice 1/2/	X	
Soybeans 1/2/	X	
Sugar 2/	X	
Tobacco	X	
Wheat 1/	X	
Wool and mohair	X	
CCC minimum sales price	X	
Food stamps		X
Payment limitation		X
P.L. 480 (Titles I and II)		X
Set-aside		X
Farmer-owned grain reserve	X	

1/ Although there is permanent legislative authority for wheat, feed grain, upland cotton, and rice programs, authority for major features of existing programs, such as target prices and set-asides, expires.

2/ These programs would become discretionary with the expiration of the 1981 Act. As noted below, however, the Secretary is assumed to offer the producers in question a program comparable to the program mandated for feed grains.

4

wheat and cotton support prices would move up sharply above recent market-clearing levels. USDA would operate nonrecourse loan or direct purchase programs to dispose of any excess supply that might result and could otherwise overhang the market.

The wheat and upland cotton statutes also provide for what appears to be considerable Government control over supply through acreage allotments and marketing quotas. However, this supply control is more apparent than real. A minimum 16-million-acre allotment for cotton is required by law; recent cotton plantings have averaged 10 to 12 million acres. While no acreage allotment minimum is specified for wheat, any reduction in wheat acreage has to be tied specifically to reducing excess CCC stocks rather than to improving the overall state of the market. These two acreage provisions severely limit the Secretary of Agriculture's ability to limit plantings. Similarly, the producer referendums required before wheat or cotton marketing quotas become effective also limit the Secretary's ability to influence the volume of products moving on the market. Comparable programs providing for higher price supports but stronger restrictions on plantings and marketings would be in place for peanuts and tobacco.

The programs in place for the other commodities are far less complex and reflect permanent legislation's overriding concern with boosting lagging farm returns rather than limiting supply. Supports set at 50 to 90 percent of parity would be in effect for corn, sorghum, barley, oats, rye, wool, mohair, and (at the Secretary's discretion) rice, sugar, and soybeans. There would be no provision for acreage allotments or marketing quotas. Milk purchases would be made at 75 to 90 percent of parity, and dairy farmers would be free to market as much milk as they wished. Nonrecourse loan or direct purchase programs open to all producers would be used to dispose of any surplus that might otherwise dampen producer prices.

Hence, higher price and income supports--rather than mandatory controls on acreage or marketings--would be the most significant change in policy involved in a reversion to permanent legislation. Detailed descriptions of the individual commodity programs follow.

Wheat: Several of the basic elements of the current wheat program would continue with a reversion to permanent legislation. Price and income support would continue through USDA operation of a nonrecourse loan or direct purchase program. However, the parity-linked prices, acreage allotments, and marketing quotas in place under permanent legislation would differ substantially from current program provisions.

Permanent legislation ties wheat price supports directly to parity. The specific level of support in effect would range from 50 to 90 percent of parity, depending on the program options chosen by the Secretary and by producers voting in referendum. Wheat acreage programs are tied to allotments that specify the maximum acreage a producer can plant in wheat but do not restrict acreage use in any other manner. This contrasts with current voluntary and paid acreage programs that require producers to put idled wheat acreage into conserving use in order to qualify for program benefits.

The Secretary can also announce wheat marketing quotas that, with producer approval, would make acreage allotments mandatory and limit the volume of wheat producers could market. The quota program also provides for different loan rates for wheat marketed for domestic food use, for other domestic uses,

and for export. But such a program could not be implemented without the approval of two-thirds of the wheat producers voting in a referendum.

The permanent wheat support legislation provides for the following sequence of events:

1. The Secretary of Agriculture announces a national acreage allotment for wheat and announces whether marketing quotas will be in effect for the upcoming crop year by no later than April 15 of each year--for example, by April 15, 1985, for the 1986 crop.

    a. Marketing quotas are announced if the Secretary determines that, in the absence of quotas, the total supply of wheat in the coming marketing year would be excessive.

    b. A national acreage allotment for wheat apportioned into allotments for individual farmers must be announced regardless of whether or not quotas are announced.

2. If marketing quotas are proclaimed, a national referendum of wheat farmers must be held by no later than August 1 of the year prior to the marketing year in which quotas will apply--for example, by August 1, 1985, for the 1986 crop.

3. If marketing quotas are approved by two-thirds or more of the farmers voting in the referendum, permanent legislation provides for:

    a. mandatory restrictions on the wheat acreage producers can plant;

    b. land-use penalties for exceeding acreage allotments;

    c. no paid diversion program unless the national acreage allotment is less than 55 million acres;

    d. operation of a farmer-owned reserve; and

    e. a wheat marketing certificate program that provides for different support levels for wheat for domestic food use, other domestic uses, and export. The marketing certificate program stipulates that:

        (1) loan rates for wheat for domestic food use accompanied by marketing certificates be set at no less than 65 percent nor more than 90 percent of parity;

        (2) loan rates for wheat for domestic nonfood uses and for wheat accompanied by export certificates be set at a level not in excess of 90 percent of parity, taking into account world market prices and wheat's feed value relative to corn; and

        (3) exporters must purchase export certificates and domestic processors must purchase domestic certificates, with the proceeds payable to cooperating farmers. In both cases, the value of the certificates would be equal to the difference between the loan rate for wheat accompanied by domestic marketing certificates and the price of wheat not accompanied by certificates.

4. If marketing quotas are not approved in referendum, there would be:

   a. no penalties for planting in excess of allotments;

   b. no wheat marketing certificates;

   c. no diversion payments; and

   d. price support through nonrecourse loans or direct purchases at no less than 50 percent of parity to producers who plant within their allotments. The Secretary could also authorize loans at not more than 50 percent of parity to producers planting in excess of their allotments.

5. If marketing quotas are not announced, permanent legislation provides for:

   a. no mandatory restrictions on marketings and no penalties for planting in excess of allotments;

   b. no wheat marketing certificates;

   c. no diversion payments;

   d. price support through CCC loans or direct purchases at 75 to 90 percent of parity to producers who plant within their allotments; and

   e. operation of a farmer-owned reserve for producers who plant within their allotments.

It was assumed for this study that the Secretary would conclude at the start of the 1986 marketing year and in subsequent years that the supply of wheat (carryover plus expected production) in the coming year would be excessive. Having so determined, the Secretary would announce a small enough national acreage allotment to prevent the buildup of excessive CCC stocks and a marketing quota designed to improve returns to producers planting within their allotments. It was further assumed that a Secretary, mindful of high program costs, would set the loan rate for wheat accompanied by domestic food certificates at the minimum 65 percent of parity. The Secretary was also assumed to set the loan rate for wheat for other domestic uses and wheat for export low enough to make wheat competitive domestically as a feed grain and internationally in the export market.

Given these loan rate assumptions, more than one-third of the wheat producers would be likely to vote against a marketing quota and prevent its implementation. Producer returns would be higher and risk lower with the loan rate set at 50 percent of parity for all wheat produced on allotment acreage than with support at 65 percent of parity for domestic food wheat and essentially at the open market price for the remainder of the crop. Moreover, the geographic distribution of the wheat allotments using the 1977 base (the last complete listing of individual farm acreages on record) for apportionment could also work against referendum approval. Farmers in the Southeast who currently produce 8 to 10 percent of the wheat crop would be apportioned less than 3 percent of a national acreage allotment. Most of these producers would likely vote against any referendum that restricted them to planting a small fraction of the wheat they have grown accustomed to planting in their wheat-soybean operations. The producers in question account for more than one-third of eligible voters.

The wheat projections used in this study assume that producers would vote against marketing quotas and that farmers who planted within the allotment announced by the Secretary would be eligible for loans at 50 percent of parity for all they produced--$3.89, $4.08, $4.26, $4.45, and $4.65 per bushel, respectively, for the 1986 through 1990 wheat marketing years.

Upland Cotton: The upland cotton program under permanent legislation would be similar to the wheat program. Authority for target prices and deficiency payments would expire but authority for nonrecourse loan and direct purchase programs would continue. The Secretary would be required to announce a national cotton acreage allotment, but set at no less than 16 million acres. The Secretary could also announce a cotton marketing quota subject to approval by two-thirds of producers. Price support levels would be set at 65 to 90 percent of parity if quotas were approved or at 50 percent of parity if not approved. The level of support would be set between 65 and 90 percent of parity if the Secretary, after reviewing the supply-demand situation for the coming year, decided not to announce marketing quotas.

The cotton program would operate as follows:

1. The Secretary announces a national acreage allotment for cotton of not less than 16 million acres and announces whether or not a marketing quota will be in effect for the coming year by no later than October 15--for example, by October 15, 1985, for the 1986 crop.

   a. A quota is announced if the Secretary determines that, in the absence of quotas, supply would exceed "normal" levels. Normal supply is defined as domestic consumption plus exports for the coming year plus a 30-percent carryover.

   b. A national cotton acreage allotment apportioned into allotments for individual farms must be announced regardless of whether a quota is announced.

2. If marketing quotas are announced, a national referendum of cotton producers must be held by no later than December 15 of the year prior to the marketing year in which quotas will apply--for example, by December 15, 1985, for the 1986 crop.

3. If a marketing quota is approved by two-thirds or more the cotton producers voting in a referendum, permanent legislation provides for:

   a. a mandatory cotton marketing quota and acreage allotment;

   b. no diversion payments;

   c. price support to producers who comply with the allotment through loans or direct purchases at no less than 65 percent nor more than 90 percent of parity; and

   d. penalties equal to 50 percent of parity on production over and above the allotment.

4. If marketing quotas are not approved, permanent legislation provides for:

   a. no marketing quotas and no penalties on plantings in excess of allotments;

8

b. no diversion payments; and

c. price support at 50 percent of parity through nonrecourse loans or direct purchases from producers who comply with their allotments.

5. If marketing quotas are not announced, permanent legislation provides for:

a. no mandatory restrictions on marketings and no penalties on. excess production;

b. no diversion payments; and

c. price support to farmers planting within their allotments at 65 to 90 percent of parity as determined by the Secretary. Farmers planting in excess of their allotments are to receive support not in excess of the levels provided program compliers. The Secretary can require compliance with allotments as a condition for eligibility for price support.

6. There is no authority to sell, lease, or transfer cotton allotments.

It.was assumed in this study that the Secretary would decide at the beginning of the 1986 marketing year and in subsequent years that cotton supplies were likely to exceed normal levels in the upcoming year. The Secretary would consequently announce the minimum 16-million-acre allotment as well as marketing quotas. While some of the geographic factors at work in wheat would also work against producer approval of cotton quotas, the higher loan rate in place with a marketing quota would be applicable to all, rather than only part, of the cotton produced on allotment acreage. This would probably convince producers to approve marketing quotas.

Assuming referendum approval, marketings would be legally restricted and plantings could not exceed 16 million acres. Loan rates would be set at the minimum of 65 percent of parity or at $0.90, $0.94, $1.01, $1.09, and $1.17 per pound for the 1986 through 1990 cotton marketing years.

Extra-Long Staple Cotton: The provisions of the Extra Long Staple Cotton Act of 1983 would remain in effect with the expiration of the 1981 Act if no new legislation were enacted. The law provides for extra-long staple loan rates set at 150 percent of the upland cotton loan rate and extra-long staple target prices set at 120 percent of the extra-long staple loan rate. Loan rates by 1990 could exceed $1.70 per pound with target prices above $2 per pound.

The law does provide, however, for the continuation of voluntary acreage reduction programs at the discretion of the Secretary. Eligibility for program benefits would be tied to compliance. It is assumed here that the Secretary would use acreage reduction programs to keep extra-long staple supplies in balance with effective market demand, making it unnecessary for the CCC to acquire large stocks.

Feed Grains: Little of the current feed grain program, other than nonrecourse loans and authority for direct purchases, would continue with a reversion to permanent legislation. Authority for target prices and deficiency payments would cease along with authority for acreage programs. Section 330 of the Agricultural Adjustment Act of 1938, as amended, provides that acreage allotments not be established for the 1959 and subsequent corn crops. No acreage allotments have ever been authorized for barley, oats, sorghum, or rye.

9

Under permanent legislation, corn prices would be supported through nonrecourse loans or direct purchases at not less than 50 percent or more than 90 percent of parity. Support levels would be set within this range by the Secretary so as to prevent the accumulation of excess CCC stocks. The other feed grains would be supported according to their feed value relative to corn.

For purposes of this study, it was assumed that the Secretary would set corn loans at 50 percent of parity or $2.91, $3.00, $3.17, $3.37, and $3.56 per bushel for the 1986 through 1990 corn marketing years. Sorghum, oats, and barley loan rates would be set at 95 percent, 51 percent, and 81 percent, respectively, of the corn loan rate.

Peanuts: The peanut program under permanent legislation would not differ substantially from the current program. The 1986 program would begin with the Secretary's announcement of a national marketing quota of not less than 1.61 million acres times normal yield. If two-thirds of producers approved the quota in a referendum, it would be effective for the 3 following marketing years. The permanent peanut support program also provides for penalties for farmers marketing peanuts in excess of their quota and for farmers marketing peanuts from any farm without an allotment. If the quota was approved, price supports would be set between 75 and 90 percent of parity. If the referendum was not approved, support would be set at 50 percent of parity and all farmers would be eligible for loans or direct purchases. It was assumed here that the quota was approved and loan rates for peanuts would be set at 50 percent of parity or 39.3 cents, 40.8 cents, 42.2 cents, 44.1 cents, and 45.8 cents per pound for the 1986 through 1990 peanut crops.

Dairy: A reversion to permanent legislation would leave the structure of the dairy program unchanged, but would increase support prices significantly. The support price for milk would be set between 75 and 90 percent of parity at the discretion of the Secretary. It was assumed that the Secretary would set support at 75 percent of parity or the equivalent of $17.65, $19.16, $20.57, $22.18, and $24.17 per hundredweight for manufacturing milk for the 1986 through 1990 marketing years. These higher dairy support provisions would become effective October 1, 1985.

Tobacco: Contrary to the other major commodities, tobacco's current support program was passed by Congress as a revision of the permanent support statute. Hence, the program would continue unchanged with the expiration of the 1981 Act. The program currently provides for a marketing quota of 647 million pounds for burley tobacco with a national average loan level of $1.75 per pound. For flue-cured tobacco, the marketing quota is set at 887 million pounds with a national average loan level of $1.70 per pound. The program also provides for a flue-cured acreage allotment of 457,516 acres.

It was assumed for this study that the acreage allotment and quotas would continue at these levels through 1990. It was also assumed that import restrictions under Section 22 of the Agricultural Adjustment Act would be used to minimize the stockholding by the CCC and cooperatives necessary to support tobacco prices at parity-linked levels.

Discretionary Commodity Programs

Permanent legislation also includes provision for Secretarial discretion in deciding whether or not to operate price and income support programs for soybeans, sugar, rice, and wool and mohair. The assumption made for these commodities are summarized below.

Soybeans: The Secretary of Agriculture has had discretionary authority to implement a loan and purchase program for soybeans since 1949 but has generally not been required to do so. If the 1981 Act expires, the Secretary would continue to have discretionary authority to operate a loan and purchase program under Section 301 of the 1949 Act. It is assumed for this study that the Secretary would implement a soybean price support program comparable to the minimum support programs mandated for the other basic commodities. This would involve offering producers a loan program with support levels set at 50 percent of parity. Loan rates would be set at $7.18, $7.41, $7.64, $7.95, and $8.27 per bushel for the 1986 through 1990 crop years. Given the strong relationship between corn and soybean prices, the increase in soybean prices likely as a result of the Secretary's decision to opt for price supports would be minimal. Government costs could prove significant, however, with the CCC rather than the private sector bearing the cost of most soybean stockholding.

Sugar: The Secretary also has discretionary authority under Section 301 of the 1949 Act to operate a support program for beet and cane sugar at levels not in excess of 90 percent of parity. It was assumed for this study that the Secretary would continue the current program to protect domestic producers from low and highly variable world market prices. The Secretary was assumed to set support levels at 50 percent of parity but to use import restrictions to rule out any large-scale CCC support activity. The sugar loan rates would be 25.6 cents, 26.4 cents, 27.2 cents, 28.4 cents, and 29.5 cents per pound for the 1986 through 1990 marketing years.

Rice: Specific authority for the Secretary to operate target price and deficiency payment programs for rice would expire with a reversion to permanent legislation. Section 601 of the Agriculture and Food Act of 1981 repealed those provisions of permanent legislation relating to acreage allotments and marketing quotas for rice. As a result, no price support or production control programs would be authorized. It is unclear, however, whether the Secretary would be required to operate a rice program under the general authority provided for in Section 101 of the Agricultural Act of 1949 or under the CCC Charter Act.

It was assumed here that, since rice has traditionally been treated as a program commodity, the Secretary would decide in favor of a support program comparable to the feed grain program. Loan rates would be set at 50 percent of parity or $11.05, $11.60, $12.11, $12.65, and $13.20 per hundredweight for the 1986 through 1990 rice marketing years.

Wool and Mohair: After December 31, 1985, the Secretary would have discretionary authority under Section 301 of the 1949 Act to support the price of wool and mohair at not more than 90 percent of parity. There is no statutory authority for payments to be made directly to producers. In keeping with the assumptions made for the other commodities with discretionary programs, it was assumed here that wool and mohair would be supported through nonrecourse loan programs at 50 percent of parity. Loan rates would be set at $2.44, $2.54, $2.66, $2.78, and $2.92 per pound for wool produced from 1986 through 1990. Mohair loan rates would be set at $7.72, $8.06, $8.41, $8.80, and $9.24 for the 1986 through 1990 marketing years.

Honey: The permanent support program for honey was originally authorized in the Agricultural Act of 1949. The Secretary is required to support honey prices at between 60 and 90 percent of parity. It is assumed here that honey would be supported at 60 percent of parity through 1990 using nonrecourse loan programs rather than direct purchases. The loan rate for honey would be set

11

at 70.8 cents, 72.6 cents, 74.4 cents, 77.4 cents, and 80.4 cents per pound, respectively, for the 1986 through 1990 marketing years.

Payment Limitations and Grain Reserves

The Agriculture and Food Act of 1981 sets a limit of $50,000 on the total payment any producer can receive annually under the 1982-85 wheat, feed grain, cotton, and rice programs. There would be no such limitation under permanent legislation, although elimination of deficiency payments (except for extra-long staple cotton) and the channeling of support through nonrecourse loans would tend to keep direct payments relatively small.

The authority to operate a grain reserve would continue under the provisions of Section 110 of the 1949 Act. The continued operation of a reserve is an important assumption in this study since much of the increase in production generated by permanent legislation's higher prices would ultimately accumulate as Government stocks.

Other Programs

Several other programs, including the food aid, export credit, and food stamp programs, would be affected by a reversion to permanent legislation. While these programs are not normally considered part of the price and income support system, they were treated in this report because of their impact on demand for farm products here and abroad and in turn on producer prices and incomes. CCC minimum sales price and cottonseed-soybean support provisions would also be affected by a reversion to permanent legislation. The specific assumptions made in these areas are summarized below.

The Food Aid Program: No new agreements under Title I or assistance programs under Title II of P.L. 480 could be negotiated after December 1985. It was assumed for this study, however, that P.L. 480 would be continued through special legislation with funding at the recent $1.5- to $1.7-billion level.

Export Credit Programs: The export credit programs originally authorized under the CCC Charter Act would continue with a reversion to permament legislation, but with their funding levels undetermined. It was assumed for this study that the United States would fund $4.5 to $5 billion in export credits per year through 1990, but with the bulk--possibly 95 percent--of the activity concentrated in credit guarantees rather than direct credit. This would represent a drop of $1 to $2 billion in real terms from the 1983-84 level but would be in line with longer term credit levels.

The Food Stamp Program: Funding for the food stamp program would expire if no new legislation were passed by September 30, 1985. It is assumed in this study that funding through 1990 would continue at the $11- to $12-billion level.

CCC Minimum Resale Prices: Effective for the 1986 crop year, the CCC minimum resale price for wheat, feed grains, and other program commodities would be 115 percent of the support rate plus reasonable carrying charges. If a wheat marketing quota is in effect, the support rate is defined as the loan rate for wheat accompanied by domestic marketing certificates. If a grain reserve program is in effect, the resale minimum for wheat and feed grains would be 110 percent of the loan rate.

<u>Cottonseed-Soybean Support Price Relationship</u>: Permanent legislation provides
that if prices of either cottonseed or soybeans were supported, the Secretary
would be required to support the price of the other to allow them to compete
on equal terms in the market. Since it is assumed that a soybean program
would be in effect, it was also assumed that a cottonseed program would be
implemented. Supporting cottonseed prices at 50 percent of parity would
require loans or direct purchases at 6.5 cents, 6.7 cents, 6.8 cents, 7.1
cents, and 7.4 cents per pound for the 1986 through 1990 marketing years.

Program Provisions and Assumptions with Supports Eliminated

The program provisions assumed to be in effect under the no-support scenario
are far simpler than provisions under the permanent legislation scenario. All
price and income support is assumed to cease with the end of the 1985 marketing
year. No loan or direct purchase programs would be in effect for 1986 crops
or for milk produced after October 1, 1985. No deficiency payments would be
made and no acreage or other supply control programs would be in effect. The
decision to operate with no supports was assumed to have been reached early
enough in 1985 to allow producers to plan 1986 operations fully aware that
open-market forces would determine commodity prices and producer returns.

A number of assumptions had to be made, however, as to how the Government would
withdraw from the market so as to ease such a transition. The assumptions made
regarding management of the CCC and farmer-owned reserves (FOR) on hand at the
end of the 1985 marketing year were critical. It was assumed that USDA would
buy out the farmer-owned reserve at the end of the 1985 marketing year and
that these stocks, combined with CCC holdings, would be isolated in a special
transition reserve. This transition reserve would be drawn down only if
open-market prices rose 10 percent above the moving average market price for
the previous 5 years. Given the relatively small amount of commercially held
stocks left on the market for many of the major program commodities, this
assumption would lend strength to producer prices early in the transition
while protecting consumers from fluctuations in prices and supplies until the
private sector adjusted to its expanded stockholding role.

Given the normal weather conditions assumed in this study, much of the stocks
(with the exception of dairy products disposed of largely through assistance
programs) isolated in this special reserve would remain in the reserve beyond
1990.

THE 1986-90 MARKET SETTING

The impacts of reverting to permanent legislation or operating with no price
and income support programs in 1985 are often described as if clear cut.
Their effect on the farm sector and the general economy could vary widely,
however, depending on the market setting over the remainder of the 1980's. A
market characterized by strong growth in demand relative to supply, for
example, could generate high enough prices and incomes to narrow differences
between the permanent legislation and no-support scenarios. Conversely,
however, a market setting characterized by stronger growth in supply than
demand would work to widen differences between scenarios in all the variables
highlighted in this study.

This section summarizes the assumptions made regarding the market setting
likely for the rest of the decade and the macroeconomic, resource and
productivity, input, and trade factors shaping it. In general, the

13

assumptions suggest that the 1986-90 period will be one of continued strong
growth in agriculture's capacity to produce, slow growth in domestic demand
for farm products, and stiff competition abroad for export markets. In this
setting, market-determined farm prices and incomes would normally fall over
time until enough resources had moved out of agriculture to bring the sector's
capacity to produce and demand for its products back into closer balance.

The 1986-90 outlook is uncertain enough and the market volatile enough,
however, that normal year-to-year swings in supply or demand could temporarily
reverse this situation. As a result, the 1986-90 market environment is
probably best described as uncertain but tending toward excess supplies and
weakening returns that would increase rather than decrease differences between
the two scenarios.

The Economic Setting

The U.S. Macroeconomic Outlook

Concern with maintaining noninflationary growth in the face of large-scale
Federal deficits is likely to continue to dominate the U.S. macroeconomic
outlook for the rest of the 1980's. This study assumes that the Federal
Reserve Board expands the money supply fast enough to prevent a recession but
slowly enough to prevent an inflationary surge. Fiscal policy would remain
expansionary, but monetary policy would fluctuate somewhat, tightening when
inflation accelerated and expanding when recession threatened.

Table 2 summarizes the outlook for the major macroeconomic indicators likely in
this tight-rope environment. In general, the economy is assumed to perform
better than during the 1970's but not as well as during the 1960's. The
economy follows a dampened 3- to 5-year business cycle with no major booms or
busts. Economic recovery, strong in 1984, would slow in 1985 and bottom out
in 1986 before recovering again in 1987 through 1989. Real growth for the
rest of the decade as a whole is projected to average 2.5 percent, 0.5
percentage point above growth in the 1970's, but 1.5 percentage points below
growth in the 1960's.

Even with growth averaging 2.5 percent per year, economic activity at the end
of the decade would still lag below longrun trend levels. Labor and product
markets, for example, would continue to operate below full capacity, with
unemployment averaging 7 percent. Growth in the money supply is assumed to
average 8 percent, down from the 10-percent rate of the 1970's, but almost
twice the pace of the 1960's. Inflation is assumed to average 5 percent, down
from 7 percent in the 1970's, but up from 4 percent in the 1960's. Real
interest rates would continue to be relatively high by historical standards.
The prime rate, for example, is assumed to remain near 12 percent, down
slightly from the 1970's but up from the 6-percent average of the 1960's.

The International Macroeconomic and Financial Outlook

The macroeconomic outlook abroad is assumed to follow the general recovery
pattern projected for the United States after provision is made for finance and
trade-linked leads and lags of 2 to 8 quarters. Foreign economic activity is
projected to accelerate compared with the 1970's but continue below the pace of
the 1960's. Real growth could average 2.5 to 3 percent per year, compared with
less than 1 percent since 1979, as recovery in the United States and several
other developed countries spreads through trade and finance linkages to the
rest of the world. However, protectionist trade policies and lingering debt

14

problems in many middle income countries are likely to keep the recovery weak compared to past upturns and hold activity in most of the world below longrun trend levels.

In this global economic setting, the value of the U.S. dollar is likely to continue high by historical standards, although somewhat below the record set in 1984. While short-term fluctuations in the value of the dollar in response to movements in U.S. interest rates are likely, the value of the dollar is unlikely to weaken significantly without a different mix of U.S. monetary and fiscal policies. Even with a large and growing trade deficit, the dollar is unlikely to depreciate more than 15 to 30 percent over the rest of the decade without significantly lower interest rates. Given the 50-percent appreciation experienced since 1981, this would still leave the value of the dollar high enough to encourage capital inflows and growth in imports while discouraging exports.

Table 2--Projected U.S. macroeconomic indicators and historical comparisons 1/

Item	1980	1981	1982	1983	1984	Averages 1964-73	Averages 1974-83	Averages 1985-90
				Percent change				
Real gross national product	-0.3	2.5	-2.1	3.7	7.5	4.2	2.1	2.5
Real disposable income per capita	- .6	1.5	- .3	2.5	5.7	3.6	1.4	1.5
GNP deflator	9.2	9.6	6.0	3.8	3.7	4.0	7.4	5.6
Population	1.2	1.2	1.2	1.0	1.2	1.1	1.1	1.0
Money supply	1.2	1.2	1.2	1.0	7.6	8.2	9.8	8.0
				Percent				
Unemployment rate	7.1	7.6	9.7	9.6	7.3	4.6	7.5	7.2
Prime interest rate	15.3	18.9	14.5	10.8	12.4	6.2	11.4	12.3
				Billion dollars				
Federal deficit	61	64	148	179	164	7	68	208
				Percent change				
Foreign gross domestic product	3.2	6.0	2.5	2.6	2.7	1.3	.8	1.0
Foreign exchange value of the U.S. dollar	0	14	17	10	11	-2	4	-1

1/ Projections based on a consensus of projections by Chase Econometrics, Wharton Econometric Forecasting Associates, and Data Resources Incorporated as of mid-1984. They are not official U.S. Government projections.

Farm Sector Resource and Productivity Assumptions

Given the very different roles the Government would play in managing commodity supply under the two scenarios, the assumptions made regarding growth in the sector's capacity to produce are critical. The resource and productivity assumptions made in this study and highlighted below suggest that growth in agriculture's capacity to produce at constant or even declining real prices could outdistance growth in demand. If such an excess supply situation materialized, the difference between scenarios would be clear cut. Market forces would work under the no-support scenario to move resources out of agriculture to balance growth in supply and demand, while permanent legislation's support programs would work to maintain, and possibly expand, the resources committed to agriculture.

Agriculture's Natural Resource Base

This study assumes that agriculture's natural resource base will continue to expand slowly, possibly at 0.3 percent per year, over the remainder of the 1980's. Changes in product or input prices might accelerate or slow this growth, but past farmer behavior suggests that the change would be small without a dramatic deviation from the postwar trend of slowly declining real product and input prices.

Much of this growth in the resources committed to agriculture is likely to be concentrated in expanding the acreage cropped and in raising cropland productivity. As much as 35 million acres could be added to the cropland base by 1990 with relatively little investment in development. Soil Conservation Service surveys done in 1977 and 1982 identified 25 to 35 million acres of meduim- and high-potential land currently not being cultivated but well suited for regular cropping. Conversion of even half of the high-quality acreage currently used as pasture to cropping could add another 10 to 15 million acres to the base.

Continued investment in doublecropping and irrigation would also expand the sector's production base by raising cropland productivity. While the acreage involved would be small, with land in the two categories increasing possibly 10 to 15 million acres by 1990, increases in these categories would have a marked impact on production potential because of the substantially higher yields involved.

These factors in combination indicate that agriculture's land base could expand to 480 to 490 million acres by the end of the decade with trend product and input prices (table 3). Of this total, 400 to 410 million acres would likely be cropped in the absence of acreage reduction programs or a sharp drop-off in producer returns. This compares with a record cropped area of 390 million acres in 1981 and with 334 million acres in 1983 when large-scale Government programs idled more than 60 million acres. Given the fixed-cost nature of most producers' land expenses, sharply lower returns would be necessary to generate any significant drop in the cropland base. Conversely, a sustained upturn in returns could expand the base, possibly to 520 million acres with 430 to 440 million acres available for cropping.

Productivity Growth in Agriculture

Although increased acreage has played a major role in expanding farm output since 1972, most of the production gains realized during the past 30 years were the result of productivity growth linked to increased mechanization and

16

Table 3--U.S. cropland base, 1969-83 and 1990 projected

Cropland use	1969	1972	1974	1976	1978	1979	1980	1981	1982	1983	1990
					Million acres						
Crops harvested	290	294	328	337	337	349	352	366	365	303	--
Double cropped	4	5	6	7	7	9	10	14	14	10	--
Cropland harvested	286	289	322	330	330	340	342	353	351	293	--
Crop failure	6	7	8	8	7	7	11	6	7	6	--
Summer fallow	41	38	31	31	32	32	31	31	30	35	--
Used for crops	333	334	361	369	369	379	384	390	388	334	--
Idle cropland	51	--	21	--	26	--	--	--	--	65	--
Total cropland excluding pasture	384	--	382	--	395	--	--	--	--	395	400-410
Cropland used for pasture	88	--	83	--	76	--	--	--	--	75	--
Total cropland	472	--	465	--	471	--	--	--	--	470	480-490

-- = Not available.

Source: Agricultural Statistics, U.S. Department of Agriculture, various issues from 1964 through 1983.

17

greater use of purchased inputs (table 4). It is assumed here that this productivity growth trend will continue with gains averaging 1.5 to 2 percent per year through 1990. This growth is assumed to take place as a result of expanded use of higher yielding crop varieties, more efficient use of fertilizer and pesticides, and gains in feeding technology and animal husbandry. The backlog of crop and livestock technology awaiting adoption, combined with growing farmer interest in adopting the latest technology available to increase output and control costs, tends to support this assumption.

A sector-wide 1.5- to 2-percent productivity growth rate would translate into widely differing rates of gain across commodities and between the crop and livestock sectors. Productivity growth in the crop sector, for example, is likely to increase faster than in the livestock sector--particularly if compared with productivity growth in nondairy livestock operations. Rates within the crop sector are also likely to vary widely. Given historical relationships, a 1.5-percent sector-wide productivity growth rate would translate into corn yield gains of 2 percent per year (2 bushels per acre). Growth rates for wheat, soybeans, and cotton would be somewhat lower at 1.25

Table 4--Agricultural productivity growth rates and characteristics

Year	:	Productivity index 1977 = 100	:	Growth rates and characteristics
1959	:	74	:	Compound annual growth, percent
1960	:	77	:	1959-82 = 1.6
1961	:	78	:	1959-70 = 1.5
1962	:	79	:	1971-82 = 2.0
1963	:	82	:	
1964	:	82	:	Standard error
1965	:	86	:	
1966	:	83	:	1959-82 = 2.85
1967	:	86	:	1959-70 = 1.95
1968	:	87	:	1971-82 = 3.85
1969	:	88	:	
1970	:	87	:	Coefficient of variation, percent
1971	:	94	:	
1972	:	94	:	1959-82 = 3.15
1973	:	95	:	1959-70 = 2.35
1974	:	90	:	1971-82 = 3.85
1975	:	99	:	
1976	:	98	:	1990 trend values (1977 = 100)
1977	:	100	:	
1978	:	102	:	1959-82 trend = 124
1979	:	106	:	1959-70 trend = 122
1980	:	101	:	1971-82 trend = 128
1981	:	115	:	
1982	:	116	:	
1990	:	122-28	:	

Source: Economic Indicators of the Farm Sector, Productivity and Efficiency Statistics, 1982, ECIFS 2-5, Economic Research Service, U.S. Department of Agriculture, Feb. 1984.

18

percent, 0.75 percent, and 0.9 percent per year, respectively, generating yield increases of 0.4 bushel, 0.2 bushel, and 5 pounds per acre, respectively.

Trend gains in livestock productivity have been and are assumed to continue to be slower than crop gains. Livestock productivity gains have typically related to improvements in animal husbandry as well as improvements in the production and use of feed and fodder. These factors in combination worked to raise feed conversion rates more than 100 percent over the last three decades. Biogenetic technologies have also been at work more recently to improve feed conversion but also to promote developments such as twinning in beef cattle and larger litter size in hogs. This study assumes that trend growth in livestock productivity of 1.0 to 1.25 percent per year will continue through 1990. The study also assumes, however, that increases in dairy productivity will continue to outdistance gains elsewhere in the livestock sector and match or exceed productivity growth in the crop sector.

Any significant improvement in producer returns could raise these trend productivity growth rates significantly. The experience of the 1970's suggests more favorable returns could increase productivity growth to 2 to 2.5 percent per year. Conversely, a sharp drop in returns could lower productivity growth, although not to the same extent as likely with stronger returns. Weaker returns could work at least initially to encourage producers to adopt new technology, particularly cost-saving technology, faster. But with significantly lower returns over any long period of time, changes in input use would slow growth in productivity as much as one-half percentage point per year.

This assumption of trend growth in productivity depends on continued input supplies and prices as well as producer prices. Given current and planned industry capacity, input supplies are assumed here to be large enough and price favorable enough to support continued, albeit possibly slower, growth in input use.

Given the experience of the last decade, changes in the mix of inputs used could prove as important as changes in the volume of inputs used. Adoption of improved farm resource management practices, such as conservation tillage, has enabled farmers to substitute agrichemicals for labor, fuel, and machinery to hold down input costs while maintaining productivity levels. Changes in product prices of the magnitude likely under either scenario could generate further shifts in input mixes. Adjustments under the no-support scenario could be particularly marked as farmers worked to lower operating costs while maintaining productivity and output.

It is important to note, however, that a changing input mix does not necessarily mean significantly slower growth in agricultural productivity. The experience with changing input mixes since the mid- and late-1970's, while admittedly not readily transferable, has actually been one of accelerating growth in total productivity.

For further information on prospects in this productivity area in particular, see the recent USDA publication, Agriculture in the Future: An Outlook for the 1980's and Beyond, AIB-484.

World Market and U.S. Trade Assumptions

Growth in the World Market

While reverting to permanent legislation or operating without farm price and income supports in the United States would affect the day-to-day operation of the world market, neither decision is likely to change the basic market environment significantly. It was assumed here that this basic market environment over the remainder of the 1980's would be one of slow recovery from the stagnation in demand and trade experienced since 1981. The support programs in place would work against this backdrop first and foremost to strengthen or weaken the U.S. competitive position in the market and only secondarily to speedup or slow the pace of recovery.

This recovery assumption is based on expectations that population growth and the return to upgrading diets in middle income countries that is likely with stronger economic activity will boost lagging growth in world demand for farm products. Much of this stronger growth in demand for farm products, however, is likely to be met by increases in local production or left unmet as financial constraints rule out large-scale importing to augment local production.

Investments made in many countries to expand food production during the mid-1970's are reaching maturity and accelerating growth in agricultural production. Slowed growth in demand since 1981, combined with trend growth in production, has also put many importing countries in a stronger position to meet their food needs locally and to reduce dependence on imports. Moreover, some countries with the fastest growing import demand will have to limit or rule out purchases abroad until their foreign exchange and debt positions improve.

These factors in combination are likely to keep the recovery in trade likely over the next 4 to 5 years slower than past rebounds. Growth in world agricultural import demand of 4 to 5 percent per year--roughly two-thirds the pace of the 1970's--is compatible with this view of the market. It is important to note, however, that the expansion in trade likely over the next decade would still be large. For example, trade in grains and oilseeds during the 1970's increased 130 million tons. Grain and oilseed trade expanding at the lower rate assumed here, but from the higher base of the early 1980's, would increase 70 to 90 million tons by 1990.

Competition for markets in this financial and trade environment is likely to intensify. Competition among exporters hoping to expand their share of the world market in order to compensate for slower growth in world import demand (and possibly in their own domestic markets as well) is likely to strengthen. Importing countries are also likely to become increasingly sensitive to differences in prices between alternative suppliers and to search out the best buys.

Growth in U.S. Exports

U.S. farm exports have traditionally grown more slowly than world trade during periods of slow growth in world import demand and intensified competition for market share. Aggressive marketing by the other exporters has generally worked to make the United States even more of a residual supplier than in periods of balanced or short supply. Past U.S. performance in gaining and holding market share in a slow-growth market setting suggests that U.S.

exports could expand 3 to 4 percent per year, or at about the pace of the
1960's.

With a continued strong dollar, however, growth in U.S. exports could drop 1 or
more percentage points below this 3- to 4-percent pace. A strong dollar would
discourage importers from buying dollar-denominated farm products in general
and U.S. products in particular. Equally important, a continued strong dollar
would also stimulate competitor production for sale abroad and intensify
competition for export markets.

Supply and Demand Implications for U.S. Agriculture

Viewed together, the study's economic, resource and productivity, and trade
assumptions have several important implications for U.S. agriculture over the
remainder of the 1980's independent of the support decision made in 1985.

The assumptions viewed together suggest that growth in domestic demand for
farm products through 1990 is likely to be slow by historical standards,
possibly little more than 1 percent per year. With per capita consumption of
many farm products in the United States approaching saturation levels, even
the stronger economic growth and higher employment likely with economic
recovery would do little to expand domestic demand appreciably faster than
population growth. With growth in exports also likely to be weak by
historical standards, growth in total demand for U.S. farm products could
recover from the stagnation of the early 1980's but average less than 2 to 3
percent per year, or less than two-thirds the pace of the 1970's.

This 2- to 3-percent annual growth in demand would be somewhat faster than
trend growth in productivity, but not fast enough to support full use of the
sector's resource base on a regular basis. In this setting, agriculture would
face a persistent problem—varying in severity from year to year depending on
factors such as weather—of excess resources working to dampen returns through
the end of the decade and into the 1990's.

The assumptions outlined above also have a number of implications for growth
in farm production expenses. Inflation has generally increased the prices
farmers pay for inputs at about a 1-to-1 ratio. With inflation assumed to
average 5 percent per year for the rest of the decade, the per-acre costs of
producing farm products—assuming no radical change in production techniques
and input use—would increase approximately 5 percent annually. Trend growth
in productivity would slow growth in unit production costs to 3 to 4 percent
per year. This would be appreciably slower than growth in expenses during the
1970's but faster than experienced so far in the 1980's.

FARM SECTOR IMPACTS

Reverting to permanent legislation or operating without supports would
initially affect only the program commodities accounting for roughly
two-fifths of the sector's output. Producer prices for the 14 commodities in
question would move up sharply in 1986 and increase 4 to 6 percent per year
thereafter regardless of market conditions. Risk would be virtually
eliminated with Government support programs guaranteeing producers both an
attractive minimum price and an outlet for their products. Conversely,
eliminating supports in the market setting assumed here would result in a
sharp drop in prices and increased producer risk as the Government withdrew
from the market.

21

Under either scenario, program commodity impacts would spread quickly through input and price linkages to the rest of the crop and livestock sectors. Ultimately, the entire agribusiness sector as well as the general economy would be affected.

This section describes crop and livestock sector impacts and provides the basis for the farm finance section that follows.

Crop Sector Impacts

Given the heavy concentration of support activities in grains, oilseeds, and cotton, differences in prices, returns, production, and use between scenarios are particularly marked for field crops. Under permanent legislation, parity-linked supports would push field crop prices up sharply above recent market-clearing levels.

Price relationships between program and nonprogram commodities and among program commodities would also change dramatically. Program commodities would be afforded a 10- to 30-percent premium relative to nonprogram commodities.

The use of the 1910-14 ratio between the prices farmers paid for production inputs and received for their products, unadjusted for subsequent growth in productivity, would also work to change relative prices among program commodities. Current corn and cotton prices, for example, reflect stronger growth in productivity in corn than cotton over the last several decades that has increased corn supplies and lowered corn prices relative to cotton. Reverting to permanent legislation would involve reverting to the relative corn and cotton prices prevailing in 1910-14--in short, to more expensive corn prices vis-a-vis cotton prices. These changes in prices would affect field crop production and use as outlined below.

Crop Production Impacts

Commodity prices, production, and producer returns would differ substantially between the permanent legislation and no-support alternatives. Under the no-support scenario, farm operators would have no alternative to producing for the open market at market-clearing prices. Given the domestic and export demand assumed here for the rest of the 1980's, this would mean producing well below proven capacity for prices that fell in many cases below many producers' total costs. In some cases involving less efficient operators, prices could fall below variable costs of production as well. Significant changes in production practices and asset values would take place under these circumstances as the sector adjusted to a fundamentally different market environment.

Conversely, under the permanent legislation scenario, farmers would produce first and foremost for the Government as the residual buyer willing to clear the market by paying above what would otherwise be market-clearing prices.

Producer Prices and Returns. The producer prices shown in tables 5 and 6 for the two scenarios make this point graphically. It was assumed under the permanent legislation scenario that the Secretary would opt to support prices at the lower end of the 50- to 90-percent parity range. As the data in parentheses suggest, support levels would be substantially higher should the Secretary set loan rates or direct purchase prices at the upper end of the range. But even with Secretarial restraint in setting support levels, prices under permanent legislation would be well above historical levels.

22

Table 5--Producer prices for selected program commodities under permanent legislation

Crop	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average 1/
					Dollars per bushel				
Wheat:									
Loan rate	3.65	3.30	3.30	3.89	4.08	4.26	4.45	4.65	4.27 (7.69)
Season-avg. farm price	3.50	3.30	3.30	4.00	3.90	3.80	3.85	3.80	2/3.87
Corn:									
Loan rate	2.65	2.55	2.55	2.91	3.00	3.17	3.37	3.56	3.20 (5.76)
Season-avg. farm price	3.25	2.85	2.65	2.91	3.00	3.17	3.37	3.56	3.20
Sorghum:									
Loan rate	2.52	2.42	2.42	2.76	2.85	3.01	3.20	3.38	3.04 (5.47)
Season-avg. farm price	2.85	2.55	2.45	2.76	2.85	3.01	3.20	3.38	3.04
Soybeans:									
Loan rate	5.02	5.02	5.02	7.40	7.63	7.83	8.04	8.37	7.83 (14.09)
Season-avg. farm price	7.90	7.00	6.50	7.40	7.63	7.83	8.04	8.37	7.83
					Dollars per pound				
Upland cotton:									
Loan rate	.55	.55	.57	.90	.94	1.01	1.10	1.20	1.02 (1.42)
Season-avg. farm price	.67	.64	.60	.90	.94	1.01	1.09	1.17	1.02
Tobacco:									
Loan rate	1.70	1.70	1.70	1.78	1.80	1.89	1.97	2.05	1.90 (3.42)
Season-avg. farm price	1.76	1.77	1.78	1.78	1.80	1.89	1.97	2.05	1.90
					Cents per pound				
Peanuts:									
Loan rate (quota)	27.5	27.5	28.3	39.3	40.8	42.2	44.1	46.6	42.4 (76.4)
Season-avg. farm price	24.1	25.7	24.7	39.3	40.8	42.2	44.1	45.8	42.4
Sugar: New York (c.i.f. duty paid)	22.0	22.5	23.0	25.6	26.4	27.2	28.4	29.5	27.4 (49.4)
					Dollars per hundredweight				
Rice:									
Loan rate	8.14	8.00	8.00	11.05	11.60	12.11	12.65	13.22	12.13 (21.83)
Season-avg. farm price	8.60	8.75	8.50	11.81	12.37	12.99	13.65	14.40	13.04

1/ Prices shown in parentheses are the maximum support levels the Secretary could set.

2/ Wheat prices average below the loan rate because producers are eligible for support only if they comply with the acreage allotments announced by the Secretary. The Secretary can reduce the allotment if CCC stocks are excessive. The projections used here showed that stocks would be excessive from 1986 through 1990, and the allotment was consequently reduced over time. As a result, compliance with the allotment fell and the proportion of wheat eligible for the loan program declined over time.

The producer prices shown for the no-support scenario were estimated using the study's macroeconomic, resource and productivity, and trade assumptions and assuming that the commodity markets cleared without Government intervention. The price margin between the scenarios averages approximately 40 percent, with the largest differences in peanut, rice, and cotton prices--90, 77, and 57 percent, respectively.

Differences in producer returns between scenarios would be considerably narrower than these producer price margins suggest. The price and income

Table 6--Producer prices for program commodities with no price
    and income supports

Crop	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average
				Dollars per bushel					
Wheat: Season-avg. farm price	3.50	3.30	3.30	2.80	2.95	3.10	3.25	3.30	3.08
Corn: Season-avg. farm price	3.25	2.85	2.65	2.40	2.60	2.65	2.75	2.85	2.65
Sorghum: Season-avg. farm price	2.85	2.55	2.45	2.15	2.40	2.55	2.70	2.75	2.51
Soybeans: Season-avg. farm price	7.90	7.00	6.50	6.25	6.50	6.80	7.15	7.40	6.82
				Dollars per pound					
Upland cotton: Season-avg. farm price	.67	.64	.60	.58	.61	.63	.69	.75	.65
Tobacco: Season-avg. farm price	1.76	1.77	1.78	1.50	1.40	1.45	1.50	1.45	1.46
				Cents per pound					
Peanuts: Season-avg. farm price	24.1	25.7	24.7	21.2	21.8	22.4	23.0	23.6	22.5
Sugar: c.i.f. New York	22.0	22.5	23.0	14.4	16.5	18.6	21.2	23.8	18.9
				Dollars per hundredweight					
Rice: Season-avg. farm price	8.60	8.75	8.50	7.00	6.75	7.00	8.00	7.90	7.33

support benefits involved in a reversion to permanent legislation would quite likely lead to a disproportionate increase in production expenses that would narrow differences in net returns.

Permanent legislation's impact on crop production expenses would be twofold, affecting both production techniques and input costs. Field crop prices guaranteed well in advance of planting at parity-linked levels would encourage producers to expand output--first by using existing capacity more fully but eventually by developing new capacity as well. This drive to expand output would involve increased use of inputs on land already in cultivation. It would also ultimately involve expanding cultivation to more marginal cropland with potentially lower yields unless input use were increased further. Consequently, much of the scenario's added production would tend to be higher cost output. Over time, program benefits would also tend to be capitalized into asset values, particularly land values, and raise permanent legislation's cost structure even further.

On the other hand, the lower prices and increased risk likely under the no-support scenario would work initially to lower, and subsequently to slow, growth in production expenses. These adjustments in production expenses could combine to narrow the margin between net returns under the two scenarios to one-half or less of the producer price differences implied in tables 5 and 6.

Production. Permanent legislation's incentive to expand output would be only partially offset by the Secretary's use of acreage allotments and marketing quotas. Allotment authority is limited to wheat, cotton, tobacco, and peanuts. Moreover, in at least the wheat and cotton cases, the permanent statutes include acreage minimums and allotment formulas that further restrict the Secretary's ability to influence supply. In the case of cotton, a minimum allotment of 16 million acres, well above recent plantings of 10 to 12 million acres, is specified. Wheat allotments are tied closely to reducing excess CCC stocks rather than to strengthening the general market situation.

Equally important, the Secretary cannot restrict use of land taken out of wheat, cotton, tobacco, or peanut production. As a result, permanent legislation provides very little control over supply, and acreage in the major program commodities could average nearly 300 million acres from 1986 to 1990 (table 7). This compares with the record 288 million acres planted and idled in 1981 and implies continued growth in arable area as well as further expansion in irrigation and doublecropping.

Permanent legislation's increased input use would also result in an initial increase in yields in 1986 and 1987 and faster growth over the remainder of the period. By 1990, for example, grain yields could be as much as 2 bushels per acre higher than the postwar trend would suggest despite an increase in acreage that would ordinarily lower yields 0.25 to 0.5 bushel per acre. Hence, even with the most restrictive production control programs allowable by law, all crop output under the permanent legislation scenario would be substantially higher--possibly 15 percent higher--than under the no-support scenario, while output of the program crops would be 20 to 30 percent higher.

Lower producer prices and net returns under the no-support scenario would slow the longterm trend toward expansion in acreage and increased input use. Program commodity producers would crop fewer acres--23 million fewer on average than under permanent legislation and 13 million fewer than in 1981. Given the fixed-cost nature of most producers' land expenses, this acreage adjustment is more pronounced than it appears. With no Government programs to

Table 7—Crop acreage under the permanent legislation
and no-support scenarios

Crop	1986-90 average	
	Permanent legislation	No supports
	Million acres	
Wheat:		
Planted	1/ 78	79
Harvested	71	70
Corn:		
Planted	95	81
Harvested	84	73
Soybeans:		
Planted	70	73
Harvested	68	72
Cotton:		
Planted	2/ 14.5	10.5
Harvested	13.5	10.0
Sorghum:		
Planted	19	14
Harvested	18	13
Barley:		
Planted	13	10
Harvested	12.5	10
Rice:		
Planted	4.40	3.50
Harvested	4.35	3.45
Sugar:		
Harvested	1.8	1.1
Tobacco:		
Harvested	.7	1.0
Peanuts:		
Planted	1.6	1.6
Harvested	1.6	1.6
10-crop total		
Planted	298.0	274.7
Harvested	275.5	255.2

Handwritten annotations (right margin): option 1; 58 56.9; 68.5 73.5; 61 70; 9 10.; 13.5 13.8; 9 13.3; 11.5 12.1; 2.3 1.7

1/ Less than under the no-support scenario because wheat support prices are restricted to production from allotment acreage, which would be considerably below the acreage planted in wheat in recent years.

2/ Less than the minimum allotment of 16 million acres. Under permanent legislation, the allotment would be apportioned according to 1977 planting patterns. This means, for example, that the Southeast's allotment would more than triple while the West's acreage would be cut in half. Several years are assumed to pass before the Southeast would plant its full allotment.

pay for idling land, the scenario's reduced plantings imply that returns on this abandoned acreage would have fallen below variable costs and no longer contribute to meeting fixed costs. Moreover, this reduction in land cropped would take place after a sharp decline in land values and shifts in land ownership from the relatively inefficient to more efficient producers.

Under the no-support scenario, input use would also fall initially and grow slowly over the rest of the period as farm operators cut back on acreage, lowered fertilizer application rates, and reduced machinery purchases. By 1990, the difference in input usage between scenarios could amount to 15 to 20 percent. The impact on yields would be significant; grain yields could drop as much as 2 to 3 bushels per acre below the postwar trend despite lower acreage that would ordinarily boost yields.

No-support's adjustments in acreage and input use combined would lower the sector's productive capacity 15 to 20 percent. The crop sector could face a net loss in its land base of up to 10 percent, even after internal recapitalization and changes in ownership are considered. Input changes and slowed adoption of new technology could reduce capacity an added 10 percent. Production under the no-support scenario would average roughly 85 percent of the record 1979-81 level and only 70 percent of the permanent legislation level.

Crop Use Impacts

Higher prices under the permanent legislation scenario would dampen growth in demand for U.S. farm products at home and abroad. Domestic and export use would fall initially in 1986 and 1987 and gradually recover, but would not reach the record set in 1981 until well into the 1990's. Domestically, feed demand for grains and oilseeds would stagnate while demand for commodities such as wheat and rice would grow slowly.

U.S. exports would be particularly sensitive not only to the higher support prices likely under permanent legislation but to the trade environment they shaped as well. Growth in world import demand would weaken as higher U.S. support prices translated into higher world market prices. Production adjustments in other exporting countries would be equally important. Given the direct link between the U.S. and world markets, U.S. support programs would translate into an open-ended commitment to support trade prices and keep world export supply and import demand in approximate balance by adjusting U.S. stocks. Competing exporters would react to higher trade prices by expanding production for export. They would likely use aggressive marketing to sell their added output on the world market and thereby weaken the U.S. export position further.

Given the increased farm output but lower marketings for domestic use and exports under the permanent legislation scenario, loan placements and forfeitures would increase steadily and rapidly. By the end of the period, the CCC would become the residual buyer for a quarter of the crop sector's total output and for half or more of the output of program commodities with the highest support levels (table 8). The situation would be particularly troublesome for cotton. High loan rates would not only increase output and strengthen the competitors' position in the world market, but would also encourage further shifts in demand toward synthetic fibers. By 1990, Government stocks could grow to 1-1/2 years' use for wheat and corn, and more than 4 years' use for cotton and rice.

Table 8--Government stocks of major commodities under the permanent legislation and no-support scenarios

Crop	1983	1984	1985	1986	1987	1988	1989	1990
Wheat:								
Permanent legislation:								
Million bushels	790	1,050	1,050	2,046	2,645	3,085	3,175	3,593
Percent of total use 1/	31	44	44	95	122	134	135	150
No support:								
Million bushels	790	1,050	1,050	1,000	1,000	1,000	1,000	900
Percent of total use 1/	31	44	44	38	37	37	36	32
Corn:								
Permanent legislation:								
Million bushels	225	300	750	2,977	5,007	7,352	10,057	12,727
Percent of total use 1/	3	4	10	39	65	94	127	155
No support:								
Million bushels	225	300	750	700	700	700	675	365
Percent of total use 1/	3	4	10	9	8	8	8	4
Sorghum:								
Permanent legislation:								
Million bushels	225	275	300	643	973	1,303	1,633	1,968
Percent of total use 1/	35	43	43	93	136	181	224	270
No support:								
Million bushels	225	275	300	50	50	30	--	--
Percent of total use 1/	35	43	43	7	6	4	--	--
Cotton:								
Permanent legislation:								
Million bales	.4	1.4	2.5	4.1	7.2	11.7	18.4	27.0
Percent of total use 1/	3	13	24	41	76	131	252	466
No support:								
Million bales	.4	1.4	2.5	2.5	1.5	.5	--	--
Percent of total use 1/	3	13	24	22	13	4	--	--
Soybeans:								
Permanent legislation:								
Million bushels	--	--	--	270	360	425	535	610
Percent of total use 1/	--	--	--	13	17	19	24	26
No support:								
Million bushels	--	--	--	--	--	--	--	--
Percent of total use 1/	--	--	--	--	--	--	--	--
Rice:								
Permanent legislation:								
Million hundredweight	25	29	40	111	191	283	388	505
Percent of total use 1/	21	23	31	97	171	257	359	476
No support:								
Million hundredweight	25	29	40	40	40	40	40	--
Percent of total use 1/	21	23	31	26	25	23	22	--

-- = Negligible.
1/ Total use includes domestic disappearance plus exports.

The outlook for growth in use is reversed under the no-support alternative. Lower prices would enhance growth in demand, particularly export demand. As in the permanent legislation scenario, the trade policy signals sent to the other exporters would be as important as changes in prices. U.S. products would be priced to compete, leading to lower world market prices, faster growth in world import demand, and a larger U.S. share of a growing world market.

Domestic use would also respond to lower prices, although not to the same extent as exports. Total export and domestic use over the study period would average 10 to 15 percent higher than under permanent legislation and 15 to 20 percent higher than the record set in 1979-81. This difference in usage would be most pronounced for cotton, where usage under a no-support scenario would be over 100 percent higher than under a permanent legislation scenario, and least pronounced for soybeans, with a difference of only 5 to 10 percent between scenarios.

With no provision for Government accumulation and management of stocks, stocks would tend to fall toward the levels necessary to stabilize the market. The transition stock assumed to be in place into the early 1990's would work to smooth this adjustment toward expanded private sector stockholding. In most cases, however, the stocks held by commercial vendors would be well below the combined Government and commercial stock levels of the last several decades but well above current commercial stock levels.

Livestock Sector Impacts

Cattle, Hogs, and Poultry

The livestock outlook through 1990 is likely to be shaped by both the crop price and income support programs put in place in 1985 and by market fundamentals operating essentially independent of the forces at play in the field crop sector. A decision to revert to permanent legislation or to operate without supports for the major field crops and dairy would work indirectly through feed supply and price linkages to raise or lower livestock numbers, meat supplies and prices, and operator returns. However, market factors such as the changing demand for meat and cyclical movements in livestock numbers are likely to be equally important. These market fundamentals could mute, and in some cases amplify, support provision impacts early in the adjustment period and possibly into the 1990's.

The general impact each of the support programs analyzed here would have on the livestock sector is clear. Higher feed prices under permanent legislation would increase livestock production expenses and encourage feeders to scale back their operations. This in turn would work to lower feeder livestock prices and encourage operators to reduce breeding herds. These adjustments would result initially in larger meat supplies and lower prices as breeding stock was slaughtered but, in the longer run, tighter meat supplies and higher prices.

Conversely, the lower feed prices likely with supports eliminated would encourage feeders to expand and increase demand and prices for feeder livestock. Livestock producers would respond by expanding breeding herds. These changes would initially hold down meat supplies, lower feed costs, and result in larger returns, particularly for feeder livestock producers. Meat supplies would expand and prices would drop off, however, after the industry made the initial adjustment.

29

The state of the livestock sector, however, in at least the short term of 1 to 3 years, is likely to depend as much on meat supply and demand fundamentals as on crop-support provisions. Sluggish growth in domestic and export demand for livestock products, uncertain beef and pork production cycles, and a weak outlook for producer returns appear likely through 1990 under both of the scenarios analyzed. The livestock industry has been characterized over the last 10 years by relatively stable per capita consumption averaging 203 pounds (+ 4 to 5 pounds) per year. With annual population growth of 1 percent or less and stable per capita consumption levels, growth in meat demand has been sluggish. Growth in meat exports, particularly poultry, sparked some hope for expansion in the sector in the 1970's, but competition from other exporters has kept export volume small. The unfavorable economic situation here and abroad since 1980 has further weakened growth in demand for meat.

Slow growth in demand for meat has kept livestock and poultry prices low and producer returns weak since the late 1970's. Many producers responded to the weak demand, cyclical peaks in meat supplies, and widening year-to-year swings in feed supplies and prices by liquidating breeding herds in 1982 and 1983. These liquidations further increased supplies and depressed prices in the short term. Per capita meat supplies reached an alltime high of 209 pounds in 1983 and 1984. Many producers reduced herds again in 1983 and early 1984 in response to higher feed costs, tighter feed supplies, and lower meat prices.

Consequently, meat supplies during at least the first 2 to 3 years of the period analyzed would remain large under either alternative, and cattle and hog breeding stocks would continue near, or increase slowly, from current cyclical lows. Equally important, the industry would probably have sizable underutilized capacity. These market factors in combination would be likely to mute, and in some cases reverse, the initial impacts of a 1985 decision in favor of permanent legislation or to eliminate supports. As a result, it could take several years before the full livestock impacts of the support decision made in 1985 became apparent.

Permanent Legislation. A decision to revert to permanent legislation would boost grain prices, slow expansion in meat production, and increase retail meat prices. The abundant but relatively high-priced feedstuffs available under permanent legislation would tighten returns for livestock and poultry producers and, in the process, moderate livestock cycles by slowing breeding herd expansion and growth in meat supplies in 1988 and 1989.

Livestock prices would rise in response to slowed increases in supplies, but price increases would be offset by higher producer expenses. The current provisions of the meat import law would delay any import relief until the end of the decade. Returns would likely move above cash costs after contraction began late in the decade (tables 9, 10, and 11). A reversion to permanent legislation would result in higher food costs, lower returns to feeder livestock producers, and underutilization of facilities and reduced demand for feedstuffs.

No Supports. With supports eliminated, lower feed prices could work with the higher livestock prices likely in 1987 and 1988 to accelerate expansion in livestock numbers early in the period. This accelerated expansion would tend, however, to sharpen the contraction that followed toward the end of the decade. Lower corn prices and excess crop acreage readily available for use as pasture, combined with higher feeder livestock prices, would encourage retention of additional stock for cattle and hog herd expansion.

Table 9--Livestock and meat prices under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990
Permanent legislation:			Dollars per hundredweight					
Choice steers, Omaha	62.37	64.97	67.00	70.00	71.75	72.50	75.50	79.50
Feeder steers, Kansas City	63.71	64.89	68.75	69.60	68.75	67.85	69.80	73.30
Barrows and gilts, 7 markets	47.71	48.45	51.00	49.00	50.00	52.00	56.00	61.00
			Cents per pound					
Broilers, 12 cities	49.8	55.3	51.0	52.0	53.0	54.0	57.0	62.0
No supports:			Dollars per hundredweight					
Choice steers, Omaha	62.37	64.97	67.00	70.00	70.75	71.00	71.50	74.00
Feeder steers, Kansas City	63.71	64.89	68.75	69.60	72.10	69.25	68.15	70.15
Barrows and gilts, 7 markets	47.71	48.45	51.00	48.50	45.50	47.50	50.50	56.50
			Cents per pound					
Broilers, 12 cities	49.8	55.3	51.0	52.0	52.0	50.0	54.0	57.0

Table 10--Livestock and poultry production costs under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990
			Dollars per hundredweight					
Beef: 1/								
Permanent legislation	65.50	75.20	71.45	70.60	76.05	79.25	83.80	88.50
No supports	65.50	75.20	71.45	70.60	68.75	73.50	76.35	79.60
Pork:								
Permanent legislation	53.45	53.05	50.35	50.20	53.60	55.80	58.85	61.75
No supports	53.45	53.05	50.35	50.20	49.35	51.90	53.95	56.35
			Cents per pound					
Broilers:								
Permanent legislation	51	53	52	54	57	60	64	67
No supports	51	53	52	53	55	58	61	64

1/ Excludes feeder cattle.

With herd numbers up substantially in 1987 and 1988, meat production in 1989 could reach 215 to 217 pounds per capita, compared with less than 212 pounds under permanent legislation. The contraction necessary to bring the expanded inventory back into balance would be severe and much sharper than under permanent legislation.

Feeder livestock operators would be likely to receive returns above cash costs early in the period. However, the expansion likely in feeder operations in 1987 and 1988 would lead to returns falling below cash costs by the end of the period, extending at least through the early 1990's as inventories were reduced.

The assumptions made here regarding USDA's management of the farmer-owned reserve (FOR) and CCC stocks on hand at the start of a no-support program would serve as a buffer for disruptions in feed supplies to the livestock sector. It was assumed that USDA would isolate FOR and CCC stocks from the market at the beginning of the 1986 marketing year and dispose of them only when open-market prices moved more than 10 percent above the 5-year moving average. This gradual decrease would moderate increases in feed costs that could result under the no-support scenario from low crop yields or unexpected increases in foreign demand. Highly variable grain supplies and prices can cause sharp livestock inventory adjustments which upset the longterm investment plans associated with the livestock sector.

A general conclusion about the effects of the two alternatives on the livestock and poultry sector is that, in the short run (1 to 2 years), producers' returns would rise with lower grain prices and fall with high prices. The length and severity of the adjustment would be affected by the stage in the livestock cycle when policy decisions are made (or implemented). After the initial adjustment, livestock and poultry producers' returns would be higher under the higher feed price alternative as meat supply levels would decline, boosting livestock and poultry prices. This situation would likely continue into at least the early 1990's. However, the lower feed price alternative would result in a large inventory correction in the late 1980's through the early 1990's, and in poorer returns.

Dairy

While differences in meat supply, demand, and prices between scenarios would be shaped as much by market conditions as support provisions, program provisions would overshadow market factors in shaping the dairy outlook (table 12).

Under permanent legislation, the Secretary is directed to operate a milk support program using direct CCC purchases of dairy products to keep milk prices at 75 percent of parity. Producer prices would move up significantly in late 1985 to $18 per hundredweight. If no-support prices were used as an indicator, this $18 price would be more than 60 percent above market-clearing levels. This higher support rate, combined with the elimination of virtually all of the producer's price risk, would encourage dairy producers to expand milk cow numbers and accelerate adoption of yield-enhancing technology, which could expand output more than one-third by 1990.

Large-scale CCC purchases would be necessary to support milk prices at 75 percent of parity. Higher milk prices would not only expand output faster but also would slow growth in demand significantly. The widening margin between dairy product demand and milk production could push CCC net removals of dry

Table 11--Meat consumption per capita under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990
Permanent legislation:					Pounds			
Total red meat and poultry	209.1	209.1	207.5	207.4	209.1	210.5	211.5	208.6
Beef	78.7	78.6	75.3	72.9	73.1	74.6	74.5	74.9
Pork	62.2	60.8	59.9	62.4	64.6	62.9	62.2	59.5
Broilers	50.8	52.7	55.1	54.9	54.2	55.6	57.2	57.0
No supports:								
Total red meat and poultry	209.1	209.1	207.5	207.8	211.4	214.4	216.7	214.0
Beef	78.7	78.6	75.3	72.9	73.2	74.8	75.8	76.7
Pork	62.2	60.8	59.9	62.3	65.9	64.4	64.2	61.2
Broilers	50.8	52.7	55.1	55.3	54.8	57.3	58.8	58.9

Table 12--Dairy production and prices under the permanent legislation and no-support scenarios

Item	Unit	1983	1984	1985	1986	1987	1988	1989	1990
Permanent legislation:									
Production	Bil.lbs.	140.0	134.3	137.0	140.5	147.0	150.0	152.0	154.0
Use	do.	122.8	126.3	128.5	123.0	124.0	125.0	126.0	127.0
Removals	do.	16.8	8.1	8.7	17.7	23.2	25.2	26.2	27.2
All-milk price	Dol./cwt	13.57	13.39	13.85	18.00	19.50	20.95	22.45	24.00
Dairy-product CPI	1967=100	250.0	252.9	265.0	307.0	325.0	343.0	361.0	379.5
No supports:									
Production	Bil.lbs.	140.0	134.3	135.8	134.4	131.5	133.0	137.0	138.5
Use	do.	122.8	126.3	129.4	132.8	131.7	133.2	137.2	138.7
Removals	do.	16.8	8.1	8.5	--	--	--	--	--
All-milk price	Dol./cwt	13.57	13.39	12.50	11.25	14.20	15.10	12.60	12.00
Dairy-product CPI	1967=100	250.0	252.9	252.3	241.9	277.7	281.6	272.4	270.5

-- = Negligible.

milk, butter, and cheese up to the equivalent of 18 percent of milk production. By 1990, the dairy support program could cost $6 to $7 billion dollars annually. This assumes that import restrictions under Section 22 of the Agricultural Adjustment Act would be tightened to keep removals and program costs from rising even higher.

Under the no-support scenario, the milk support program is assumed to end October 1, 1985. Prices would fall to the $11.25-per-hundredweight level necessary to clear the market and would continue low through 1986 and into 1987. However, with reductions in cow numbers and the lower milk yields likely as producers shifted to lower cost feed rations, milk prices could move up in 1987 before trending downward again in 1989 and 1990. These fluctuations notwithstanding, milk supplies would be more than adequate to meet the expanded demand likely with lower prices. Consumption of dairy products under the no-support scenario would move up slightly over this period while consumption under permanent legislation would likely be stagnant.

It should be noted that the same adjustments in production costs and returns take place in the dairy sector as in the program crops. Production costs would be sufficiently higher under permanent legislation and lower under no legislation to make the difference in producer returns considerably narrower than implied by the prices in table 12.

Other Crop Impacts

Permanent legislation includes provisions for support for several other commodities including tobacco, peanuts, and sugar. While the tobacco and peanut programs are mandatory and their provisions well defined in statutes dating back to the 1930's, the sugar program would be discretionary. It was assumed here that the Secretary would implement a sugar program but would keep support levels as low as possible.

With the lower producer prices likely with a 1985 decision to operate without supports, most tobacco and peanut operators would face a serious cost-price squeeze and many would be forced to liquidate. However, the elimination of quotas would work in at least some cases to lower the tobacco and peanut cost structure significantly as production shifted to the most competitive producers and quota-related costs were eliminated. Hence, net returns would be higher than the initial drop in producer prices would suggest.

No-support's lower prices would also work to change the U.S. competitive position in the world peanut and tobacco markets. High-quality U.S. tobacco would become more competitive and domestic peanut prices would fall far enough to reduce peanut imports sharply and expand peanut sales abroad. With assets revalued and transferred in many cases from relatively inefficient to relatively efficient producers, peanut and tobacco production could be high enough to meet both increased domestic demand and expanded foreign demand.

Permanent legislation would raise peanut and tobacco producer prices, but not to the same degree as for the field crops. Peanut and tobacco prices would be high enough, however, to encourage large imports of both products. Hence, import restrictions would be needed to keep the market in balance and avoid the large stock buildups and Federal expenditures likely for grains and cotton.

Assuming that the Secretary chose to offer a sugar support program with loans set at 50 percent of parity, production would expand significantly and tighter import restrictions would be needed to prevent the buildup of CCC stocks.

34

Assuming tariff and nontariff restrictions minimized import penetration, direct Government expenditures would be low. Consumers, however, would continue to face high sweetener prices, and the sugar industry would face further losses in market share to other sweeteners.

With no supports and trade liberalized, U.S. sugar producers would be hard pressed to compete with foreign producers. However, given the volatility of the world market, this increased import dependence could translate into less stable sugar prices.

Other crops not treated in the permanent legislation, such as fruits and vegetables, would also be affected by the changes in import demand and prices that would accompany a change in support programs. It was assumed here, however, that input demand in these operations would be price-insensitive enough to leave usage unchanged between scenarios. It was also assumed, given operators' past performance and recourse in many cases to marketing orders, that at least part of the resulting change in production expenses would be passed along to consumers. Hence, supplies of these other crops would remain essentially unchanged under either scenario, producer costs and returns would be somewhat higher or lower, and consumer prices would also be largely unchanged.

FARM FINANCE IMPACTS

Reverting to permanent legislation or operating without supports would have a significant impact on the farm sector's income, asset, and equity positions. Gross farm income would differ by as much as $35 billion, or more than 20 percent, between scenarios. Differences in net farm incomes would also be significant, but not as pronounced as differences in commodity prices and gross income would suggest. Permanent legislation's higher gross income would be partially offset by the scenario's sharp rise in production expenses, while the slower growth in gross income likely under the no-support scenario would be partially offset by slowed growth in production expenses.

Differences between scenarios in the sector's asset and equity positions ultimately would be even more pronounced than differences in income. The enhanced program benefits in place with permanent legislation would quite likely be capitalized into rising asset values, while asset values would fall sharply under the no-support scenario to reflect their reduced income-earning capacity.

The Farm Sector's Income Position

Cash Receipts and Gross Farm Income

Cash receipts and gross farm income differ significantly between scenarios, reflecting permanent legislation's combination of high prices and rapidly expanding output and no-support's combination of low prices and slowly growing output. The permanent legislation combination would increase cash receipts from marketings and CCC loan placements almost 50 percent to $205 billion by 1990 (table 13). Increases in receipts would be most pronounced for commodities such as milk and cotton, where parity-linked prices would generate the largest increases in producer returns, production controls would be ineffective or nonexistent, and a large and growing proportion of output would accumulate as Government stocks.

35

Table 13--Cash receipts from marketings and CCC loan placements and gross farm income under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 avg.
					Billion dollars				
Permanent legislation:									
Crop receipts	69.5	71.5	76.5	83.6	91.5	95.3	101.3	107.6	95.7
Livestock receipts	69.2	72.4	73.7	82.6	85.2	89.4	94.1	98.0	90.0
Program commodity receipts	63.3	62.4	67.5	80.1	88.9	94.2	101.1	108.1	94.5
Nonprogram commodity receipts	75.4	81.5	82.7	86.1	87.4	90.6	94.3	97.5	91.2
Total receipts1/	138.7	143.9	150.2	166.2	176.3	184.8	195.4	205.6	185.7
Gross farm income	162.6	167.2	172.6	183.1	194.8	205.4	218.5	231.2	206.2
No supports:									
Crop receipts	69.5	71.5	76.4	73.4	74.2	77.7	82.3	86.5	78.8
Livestock receipts	69.2	72.4	73.7	72.8	76.8	80.2	78.4	79.8	77.6
Program commodity receipts	63.3	62.4	67.5	60.6	63.8	67.6	68.3	70.8	66.2
Nonprogram commodity receipts	75.4	81.5	82.6	85.6	87.2	90.3	92.4	95.5	90.2
Total receipts1/	138.7	143.9	150.1	146.2	151.0	157.9	160.7	166.3	156.4
Gross farm income	162.6	167.2	172.2	160.3	165.5	172.9	176.1	182.4	171.4

1/ Total of crop receipts and livestock receipts or, program commodity receipts and nonprogram commodity receipts.

36

Given the concentration of permanent legislation support programs in the crop sector, the commodity composition of receipts would also differ significantly between alternatives. Program commodity receipts would grow to account for over one-half of the total by 1990, compared with 40 percent in 1979-81 and slightly more than 25 percent in 1969-71. Crop receipts would account for over half of total receipts, compared with 45 percent in the early 1980's and less than 40 percent in the early 1970's.

Increases in receipts from marketings and loan placements under permanent legislation would push gross farm income up to $230 billion by 1990. While gross farm income includes returns from sources other than marketings, such as Government payments, receipts would grow to account for 90 percent of gross income—up from 85 percent in 1983 and 80 percent during the 1970's. This growing importance of receipts as a source of income relates to permanent legislation's use of nonrecourse loans rather than the current combination of loans, deficiency payments, and diversion payments to support prices and incomes. This dependence on nonrecourse loans essentially rules out large-scale direct Government payments to producers, an increasingly important source of income so far in the 1980's.

The receipt and gross income situation would be substantially different under the no-support scenario. The volume of products marketed would be higher, but the cash receipts generated would be well below receipts from marketings and loan placements under permanent legislation. Cash receipts would be less than $170 billion by 1990, approximately the 1986 level under the permanent legislation scenario. Moreover, the commodity composition of receipts would differ significantly, with livestock receipts growing faster than crop receipts and program commodity receipts slipping to two-fifths of the total by 1990. Without large-scale Government payments to supplement cash receipts, gross farm income under the no-support scenario would reach $183 billion by 1990 compared with the $231 billion likely under permanent legislation.

Production Expenses and Net Income

The $50-billion difference in gross farm income between scenarios narrows significantly after taking production expenses into account (tables 14 and 15). Under permanent legislation, production expenses would increase sharply with the drive to expand output as much and as quickly as possible. Growth in total expenses could average as much as 5 to 7 percent, or $9 to $11 billion, per year while growth in unit costs could average as much as 2 to 3 percent per year. The high-price, low-risk environment under permanent legislation would encourage producers to increase use of purchased inputs such as fertilizer and fuel as they intensified cropping of the acreage already in use and brought new acres into cultivation. The cost of fixed inputs such as land would also increase significantly under permanent legislation; as noted later in this section, land values could reach $1,220 per acre under permanent legislation compared with $640 per acre by 1990 under the no-support scenario. The combination of expanded input use and higher prices for items such as fertilizer and machinery could generate a $200-billion production expense bill by 1990, up from $135 billion in 1983.

Conversely, production expenses under the no-support scenario would grow slowly, possibly reaching the $167-billion level likely under permanent legislation in 1987 by 1990. Expenses would actually decline 2 to 3 percent per year in real terms compared with the 1-percent growth likely under the permanent legislation scenario. This slower growth in expenses would reflect

Table 14--Production expenses under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average
					Billion dollars				
Permanent legislation:									
Total expenses	135.3	144.6	147.5	160.6	168.4	178.0	189.3	199.8	179.2
Cash expenses	109.5	121.7	124.2	135.9	141.9	149.9	158.2	165.7	150.3
Fertilizers	7.4	8.6	9.0	10.8	11.1	11.9	12.7	13.2	11.9
Pesticides	3.5	3.6	3.6	4.4	4.6	4.8	5.0	5.3	4.8
Fuels, energy, and electricity	9.9	10.7	10.7	11.8	12.5	13.2	13.9	14.8	13.2
Labor and related expenses	11.7	12.9	13.3	14.9	15.9	17.0	18.7	20.2	17.4
No supports:									
Total expenses	135.3	144.6	147.3	146.4	151.4	156.2	161.0	166.5	156.3
Cash expenses	109.5	121.7	124.0	123.8	128.3	132.6	136.1	142.0	132.6
Fertilizers	7.4	8.6	9.0	9.1	9.7	10.3	10.7	11.0	10.2
Pesticides	3.5	3.6	3.6	3.7	3.8	3.8	4.0	4.2	3.9
Fuels, energy, and electricity	9.9	10.7	10.7	9.8	10.4	11.0	11.7	12.3	11.0
Labor and related expenses	11.7	12.9	13.3	12.7	14.1	14.8	15.8	16.8	14.8

Table 15--Machinery and equipment expenditures under the permanent legislation and no-support scenarios

Scenario	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average
					Billion dollars				
Permanent legislation	9.8	10.5	11.2	13.0	15.2	16.7	18.1	18.7	16.3
No supports	9.8	10.5	10.8	8.2	8.5	9.2	9.4	9.5	9.0

producers' efforts to reduce variable costs as much as possible in order to ease a tightening cost-price squeeze. Farmers would reduce use of purchased inputs such as fertilizers, fuel, and labor in particular and cut back on machinery purchases. Table 16 summarizes the wheat, corn, soybean, and cotton production costs projected under the permanent legislation and no-support scenarios. The differences in input use and prices between scenarios translate into 10- to 20-percent differences in unit and per-acre production costs by 1990.

Table 17 summarizes the input demand elasticities used to estimate production expenses under the two scenarios. The elasticities suggest that, all other things being equal, a 10-percent change in farm product prices would result in a 5- to 6-percent change in input demand. Given historical physical input-output

Table 16--Average cash costs of production under the permanent legislation and no-support scenarios

Crop	Permanent legislation		No supports	
	Per acre	Per bushel/pound	Per acre	Per bushel/pound
		Dollars		
Wheat	118	3.20	104	2.84
Corn	287	2.40	253	2.18
Soybeans	143	4.37	125	3.94
Upland Cotton	362	.85	329	.70

Table 17--Selected input demand elasticities with respect to farm product prices under the permanent legislation and no-support scenarios

Item	Elasticity 1/
All production inputs	+.5 to +.6
Fertilizer and agrichemicals	+.60 to +.70
Machine hire, repair, and operation	+.5 to +.6
Machinery purchases 2/	3/ +.5 to +.7(+.65 to +.75)
Fuels, energy, and electricity	+.25 to +.4
Labor and related expenses	+.4 to +.5

1/ Elasticities at the upper end of the ranges shown were used under permanent legislation to reflect reduced economic risk.

2/ Machinery purchases were treated as a capital investment entering farm accounts through depreciation.

3/ Machinery purchase elasticities estimated using net income (shown in parentheses) rather than product prices as the explanatory variable were used for this study.

ratios, this suggests that the same 10-percent change in farm-product prices would result in a 3- to 4-percent change in yields.

The narrower differences in net incomes than in gross incomes between the two scenarios reflect these differences in production expenses (table 18). Net cash income (cash income less cash expenses) would average $40 billion and $27 billion, respectively, under the permanent legislation and no-support scenarios over 1986-90. Net farm income (the difference between cash and imputed income and cash and imputed expenses) would average $30 billion and $16 billion, respectively, under the two scenarios.

Ultimately, less than one-third of the increase in gross income generated under the permanent legislation scenario would accrue to farmers as net income. Under the no-support scenario, farmers would receive much lower gross income but would retain a larger portion of it due to lower production expenses. For both net cash income and net farm income, differences between scenarios would be greatest early in the transition period. Differences by the mid-1990's could narrow even further as production costs accelerated under permanent legislation but grew slowly with supports eliminated.

Net cash and net farm income would increase fractionally faster than the general rate of inflation under the permanent legislation scenario, allowing farmers to protect gains made early in the period with the transition to parity-linked prices. However, with the economy growing an average of 3 to 5 percent per year, farm incomes would slip relative to incomes in the rest of the economy, even with the permanent support prorgrams in place. With the number of farms declining at a slowed pace compared to the 1950's and 1960's, nominal net income per farm would increase 5 to 7 percent per year on average, providing a 1- to 2-percent annual real gain. However, the income of operators not involved in the production of program commodities would slip 2 to 3 percent per year in real terms compared with the 2- to 3-percent gain likely for program commodity producers.

Farm incomes under the no-support scenario would initially fall sharply in nominal as well as real terms and relative to incomes elsewhere in the economy. Some operators would be forced to leave the sector as prices fell below variable costs and income fell to zero. With the number of farms declining somewhat faster as a result, income per farm would decline less than the sector income total would suggest. Incomes would gradually recover, but only after sufficient resources had left the sector to bring agriculture's production capacity into closer balance with demand for its products. This adjustment process could extend into the 1990's and involve the loss of possibly 20 percent of current operators over and above the 1 to 3 percent that normally leave the sector each year.

The Farm Sector's Asset and Equity Position

The financial consequences of reverting to the permanent support programs or eliminating supports in 1985 would reach beyond raising or lowering farm incomes to affect the sector's asset and equity positions. Differences in incomes between scenarios over the longer term would be sharp enough to generate dramatically different expectations about the future and convince farmers either to bid more for the resources necessary to maintain, and possibly expand, their operations or to liquidate part or all of their holdings.

Permanent legislation would generate strong enough growth in income and improvements in cash flow to generate substantial asset appreciation, reinforced

Table 18—Alternative net income measures under the permanent legislation and no-support scenarios

Item	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average
					Billion dollars				
Permanent legislation:									
Net cash income 1/	40.1	33.6	36.1	33.9	38.3	39.8	42.1	44.7	39.8
Net farm income: 2/									
Current dollars	16.1	33.8	26.7	27.8	28.1	29.2	30.7	32.4	29.6
1972 dollars	7.5	15.1	11.2	11.0	10.7	10.6	10.6	10.6	10.7
					Dollars				
Average net income 3/									
per farm	6,793	14,400	11,350	11,900	12,050	12,550	13,250	14,000	12,750
					Billion dollars				
No supports:									
Net cash income 1/	40.1	33.6	36.0	25.7	26.2	29.0	27.5	28.5	27.4
Net farm income: 2/									
Current dollars	16.1	33.8	26.6	15.2	15.1	17.8	16.1	16.8	16.2
1972 dollars	7.5	15.1	11.1	6.1	5.7	6.3	5.8	5.5	5.9
					Dollars				
Average net income 3/									
per farm	6,793	14,400	11,400	6,850	7,100	8,750	7,850	8,400	7,800

1/ Cash income minus cash production expenses.
2/ Gross farm income including cash and noncash sources minus cash and noncash production expenses.
3/ The number of farms is assumed to decline from 2.37 million in 1983 to 2.30 million by 1990 under permanent legislation and 2.0 million under no supports.

by the market's tendency to capitalize enhanced program benefits into asset values. In contrast, eliminating supports would cause severe enough cash flow and net income problems to result in significant capital losses as asset values, particularly land values, declined to new market equilibrium levels.

Reverting to permanent legislation, with its high supports masking market signals to move resources out of agriculture, could take the sector back to the rapid asset appreciation and growth in equity experienced in the 1970's. On the other hand, eliminating supports would strengthen the downward pressure on asset values and equity erosion the sector has experienced since 1981 until agriculture's resource base moved into closer balance with demand for its products.

Differences in asset appreciation and depreciation are most readily apparent in the land values projected under the two scenarios. With permanent support programs in place, land values could increase as much as 55 percent over the 1986-90 period to $1,200 per acre compared with $745 currently. While this nominal rate of increase would fall somewhat short of appreciation over the 1970's, the real rate of increase would be comparable. Land values in this range would be well in excess of the prices even their enhanced income earning capacity would warrant. This "overvaluation" would reflect strong demand for additional acreage by producers interested in expanding their operations, even at the cost of bidding up the price of the 1 to 3 percent of farmland changing hands in any one year. It would also enhance land's investment appeal outside the sector as a resource that, with Government support programs in place, would appreciate over time.

Under the no-support scenario, land values would fall to reflect both their reduced income-generating capacity and the greater risk involved in farming without Government programs. A drop in land values of the magnitude shown in table 19 would more than likely be accompanied by large-scale changes in ownership. Many high-cost producers would be pressured to leave agriculture

Table 19—Projected land values under the permanent legislation and
            no-support scenarios 1/

Year	Permanent legislation		No supports	
	Nominal dollars	1972 dollars 2/	Nominal dollars	1972 dollars 2/
		Dollars per acre		
1983	745	360	745	360
1984	740	340	740	340
1985	780	345	730	325
1986	840	355	510	215
1987	900	355	540	210
1988	1,005	380	580	215
1989	1,120	400	605	215
1990	1,220	410	640	215
1986-90: average	1,015	380	575	215

1/ Data are mean values for all agricultural land and are not comparable to the data used to estimate farm real estate asset value.
2/ Deflated using the implicit GNP deflator.

as their incomes fell, their equity eroded, and their assets were acquired by producers better able to cover costs after recapitalization. The drop in values would also reflect an overall decrease in land use of 20 to 30 million acres, or the equivalent of 8 to 10 percent of the cropland base under the no-support scenario.

Movements in total assets would be less severe but would parallel this movement in land values. As table 20 shows, a decision to revert to permanent legislation would work first to rebuild, and eventually to expand on, the asset gains of the 1970's. Adopting the no-support alternative would result in further erosion in the asset gains made in the 1970's, but with a bottoming out and upturn in asset values after the resource adjustment process was completed early in the 1990's.

The changes in equity implied by these changing asset values would be even more pronounced. The difference in debt between the two scenarios is relatively small compared to likely changes in asset values. Debt would increase substantially under the permanent legislation scenario because of increased borrowing to finance rising operating expenses and capital expenditures for items such as land and machinery. Debt would fall under the no-support scenario as some farmers opted to, or were forced to, liquidate and pay off notes. Lenders would also quite likely tighten credit criteria and reduce lending to the sector as a whole and possibly even to financially-sound operators interested in acquiring bargin-priced assets.

The differences in debt levels over the period after these payoff and lending adjustments were taken into account could be $25 billion--small relative to asset values but equal to more than 10 percent of the sector's debt total. As a result, virtually the full swing in asset values would be reflected in equity gains and losses--up more than 50 percent in nominal terms under the permanent legislation scenario and down more than 10 percent under the no-support scenario. These changes in equity adjusted for inflation translate into a 10-percent gain under the permanent legislation scenario and a 55-percent loss under the no-support scenario over the 1985-90 period.

The financial pressures at work under each of the scenarios would be reflected in the sector's changing debt/asset and debt/equity ratios. While still low in comparison with other sectors of the economy, debt would grow under the no-support scenario whether measured as a proportion of assets or relative to income. Debt relative to net cash income would increase significantly, with the ratio averaging 8:1 over the last half of the 1980's compared with a postwar average of 5 to 6:1. These measures point to agriculture undergoing an initial financial shock of serious proportion, followed by a consolidation period that would leave the sector somewhat weaker but still financially sounder than many other sectors of the economy.

Under the permanent legislation scenario, the ratios shown in table 20 suggest that agriculture would continue to be in a strong wealth position compared with most other sectors of the economy. Debt burdens would lighten relative to asset values and equity. Debt relative to net cash income would not change significantly but would be fractionally above the sector's historical ratio.

Finance and Farm Structure

The combined income, asset, and equity impacts of adopting either support alternative could be significant enough and differ widely enough across farm enterprises to affect the structure of agriculture.

43

Table 20--Farm assets, debt, equity, and financial ratios under the permanent legislation
and no-support scenarios

					January 1					:1987-91
Item	1983	1984	1985	1986	1987	1988	1989	1990	1991	:average
					Billion dollars					
Permanent legislation:										
Real estate assets	770	765	765	810	880	960	1,090	1,235	1,365	1,105
Nonreal estate assets	275	260	270	300	320	335	355	375	395	355
Total assets	1,040	1,025	1,035	1,110	1,200	1,295	1,445	1,610	1,760	1,460
Debt	215	210	215	225	225	255	270	280	295	265
Proprietor equity	830	815	820	885	875	1,040	1,175	1,330	1,465	1,195
No supports:										
Real estate assets	770	765	765	755	515	545	580	620	660	585
Nonreal estate assets	275	260	270	280	275	280	290	305	315	295
Total assets	1,045	1,025	1,035	1,035	790	825	870	925	965	880
Debt	215	210	215	215	200	205	210	215	230	210
Proprietor equity	830	815	820	820	590	620	660	700	735	670
					Ratio					
Permanent legislation:										
Debt/asset	0.21	0.21	0.21	0.20	0.19	0.20	0.19	0.17	0.17	0.18
Debt/net cash income	5.4	6.3	6.0	6.6	5.9	6.4	6.4	6.3	6.4	6.3
Debt/equity	.26	.26	.26	.25	.23	.25	.23	.21	.20	.22
No supports:										
Debt/asset	.21	.21	.21	.21	.25	.25	.24	.23	.24	.24
Debt/net cash income	5.4	6.3	6.0	8.4	7.6	7.2	7.6	7.5	7.9	7.6
Debt/equity	.26	.26	.26	.26	.34	.33	.32	.31	.31	.32

44

From a sector-wide perspective, eliminating supports could result in serious enough cash flow problems and capital losses to force heavily indebted farmers to liquidate at least part of their operations. High-cost operators, operators who recently entered agriculture with a limited capital base, and operators who invested heavily in new or expanded capacity in the late 1970's and early 1980's would be most seriously affected. By 1990, the sector could lose 15 to 20 percent of its current operators. It is unclear, however, how the total number of operations would change. Lower land values could make it easier for new entrants to farm, working to increase farm numbers. Lower land values could also encourage efficient producers to expand, possibly accelerating the trend toward larger farms. In either case, the current structure would come under significant pressure.

In contrast, reverting to permanent legislation would strengthen cash flow for program commodity operators and boost capital gains and growth in equity for asset owners. Many of the relatively inefficient or highly leveraged producers who might otherwise have been forced out of business would be sheltered by parity-linked support prices. More efficient producers seeking to expand their operations would have to compete with these less efficient producers, whose ability to bid for inputs and acquire or hold onto a significant portion of the sector's resources would strengthen under permanent legislation.

Typical Farms Analysis

The effects of adopting either scenario would vary greatly among farms depending on their commodity mix, size, and tenure and equity arrangements. Financial models for seven typical farms operating under three different tenure and equity arrangements were used in this study to assess impacts by farm type.

The typical farms analyzed included:

- An <u>Illinois corn-soybean farm</u> with 360 acres (180 acres in corn and 180 acres in soybeans) and assets valued in 1982 at $1.1 million.

- An <u>Iowa corn-hog farm</u> with 240 crop acres (140 acres in corn, 60 acres in soybeans, and 40 acres in oats) and 100 litters of farrow-to-finish hogs. Assets were valued in 1982 at $704,000.

- A <u>Kansas wheat-livestock farm</u> with 480 crop acres (360 acres in wheat, 80 acres in alfalfa, and 40 acres in sorghum) and 45 beef cows. Total value of assets in 1982 was $598,000.

- A <u>Louisiana rice-soybean farm</u> with 480 acres (160 acres in rice and 320 acres in soybeans) and assets valued in 1982 at $810,000.

- A <u>Mississippi Delta cotton-soybean farm</u> with 1,040 crop acres (480 acres in cotton and 560 acres in soybeans). Assets were valued in 1982 at $1.7 million.

- A <u>Washington wheat-fallow farm</u> with 1,080 crop acres (540 acres in wheat and 540 acres in fallow). Assets were valued in 1982 at $983,000.

- A <u>Wisconsin dairy farm</u> with 45 milk cows and 160 crop acres (60 acres of corn, 30 acres in corn silage, 20 acres of oats, and 50 acres in pasture). Total value of assets in 1982 was $496,000.

The tenure and equity characteristics of these typical farms proved extremely important in determining the survival of farms under adverse conditions and the distribution of benefits under more favorable economic conditions. This analysis used the following tenure and equity combinations to assess the impacts of different support programs:

- <u>Full ownership and 100-percent equity</u> representing well established operations with longtime owners.

- <u>Full ownership and 60-percent equity</u> representing well established operations but with above-average levels of debt.
- <u>Part-ownership and 40-percent equity</u> representing recently established operations with above-average levels of debt.

The data shown in table 21 summarize the results of this typical farms analysis using composite indices of economic well-being to provide a single measure of impact. The indices were calculated using actual 1980-83 data and projected 1990 values for net cash income, net worth, and asset values.

The results suggest that all farms would enjoy higher net cash incomes, appreciation in asset values, and gains in net worth under the permanent legislation scenario. However, benefits would be unevenly distributed. Increases in land values would be the major source of improved well-being, particularly over time as higher production expenses eroded initial gains in net cash incomes. Full owners and, to a lesser extent, part-owners would receive the largest share of gains in land values. In some cases, part-owner operators with partial equity could actually be worse off if the cost of renting higher priced land offset appreciation on the limited acreage they owned.

On a commodity basis, dairy farmers, followed closely by cotton and feed grain producers, would experience the largest gains. Gains in net cash income, asset values, and net worth would raise the index for the Wisconsin dairy farm by one-half to two-thirds from the 1980-83 level and the index for the Mississippi cotton-soybean farm and Iowa corn-hog farm by roughly two-fifths.

Wheat producers would fare less well as wheat support levels slip somewhat relative to the other crops. The Kansas wheat-livestock and Washington wheat-fallow farms would show marginal increases in their respective indices. Specialized livestock operators outside the dairy sector would benefit the least because permanent legislation's major programs focus almost exclusively on crops. However, gains in feed grains and wheat would help to offset the impact of small gains or losses in livestock and keep the increase in welfare shown for mixed crop-livestock farms larger than it would otherwise be.

Equity/asset and debt/asset ratios for representative farms not included in the economic well-being index would reflect this same general pattern and wide differences between farms. The indebtedness of most farms would increase under the permanent legislation scenario due to increased farmer use of debt to finance expansion. Although the increases in the value of farm assets would generally not be sufficient to improve equity/asset ratios, asset values would increase fast enough to increase equity in all cases.

As table 21 suggests, the no-support scenario would reduce economic well-being for most of the farms analyzed in the short term. Net cash incomes would become negative for many of the hardest hit farmers and equity would decline substantially as cash flow deficits were refinanced and farmland values declined. Full owners with little debt and, as a result, lower fixed costs

would be the least affected. Their capital losses would be largely paper losses, since they would likely not be forced to liquidate any significant portion of their operations in a depressed farm asset market. Farms with initial debt/asset ratios above 50 percent would face considerable pressure to liquidate.

Among the major commodity groups, dairy farms and, to a lesser extent, cotton and feed grain producers would suffer the worst declines in economic well-being under the no-support scenario. Corn Belt feed grain operators with livestock activities and livestock operators other than dairymen would be least affected.

Equity/asset and debt/asset ratios reflect the same general no-support pressures. Among large farms ($250,000 or more per year in sales), roughly

Table 21--Composite indices of economic well-being by type of farm, 1990 1/

Type of farm	Permanent legislation	No supports
	1980-83 = 100	
Illinois corn-soybean:		
Full owner, full equity:	115	100
Full owner, part equity:	100	80
Part-owner, part equity:	80	50
Iowa corn-hog:		
Full owner, full equity:	145	110
Full owner, part equity:	140	105
Part-owner, part equity:	130	90
Kansas wheat-livestock:		
Full owner, full equity:	105	95
Full owner, part equity:	85	60
Part-owner, part equity:	75	20
Louisiana rice-soybean:		
Full owner, full equity:	110	85
Full owner, part equity:	95	40
Part-owner, part equity:	50	10
Mississippi Delta cotton-soybean:		
Full owner, full equity:	140	95
Full owner, part equity:	135	75
Part-owner, part equity:	115	50
Washington wheat-fallow:		
Full owner, full equity:	115	100
Full owner, part equity:	100	80
Part-owner, part equity:	85	40
Wisconsin dairy:		
Full owner, full equity:	155	65
Full owner, part equity:	160	45
Part-owner, part equity:	180	45

1/ Weighted sum of net cash income, net worth, and asset value indicators.

one-third of the operators and one-fifth of the debt would be concentrated in operations with debt/asset ratios above 40 percent. Debt/asset ratios above 40 percent have historically been associated with severe cash flow problems that usually require refinancing as fast as asset appreciation permits. These operations would face serious liquidation pressure as land values declined and net cash income fell off sharply.

Among small farms, the deterioration in cash flow and land values likely with the no-support scenario would be less disruptive since these farms typically have higher off-farm earnings on which to rely. The medium-sized farms ($50,000 to $250,000 in sales per year) are in an intermediate position. Their debt/asset ratios are traditionally lower than for the very large farms, but their off-farm income is more limited than that of small farms.

The extent to which these financial problems would change the number of medium- and large-sized farms would depend on the forbearance of the lenders and which types and sizes of farms would bid for liquidated assets. Small and very small farms could use their off-farm income sources and relatively strong equity positions to weather the period of adjustment. Resource use would remain largely unchanged, however, despite these financial adjustments. Most land and other farm assets would continue to be used, with the possible exception of assets in the process of changing ownership and marginal acreage in the process of reverting from cropping to less intensive uses. Even farms undergoing foreclosure would likely be rented out to neighboring operators or to new operators with a lower cost structure. Thus, while the assets might change ownership and be revalued lower, most would continue in production after the transition was completed.

NATURAL RESOURCE AND CONSERVATION IMPACTS

Reverting to the permanent support statutes or operating without supports would affect agriculture's natural resource base through resulting changes in land and water use, the economics of conservation, and the potential for public involvement in resource management. While difficult to measure with any precision, these effects in combination could prove significant enough--particularly over time--to make resource conservation an important consideration in evaluating alternative support policies.

Land and Water Use

The farm sector's demand for land and water differs significantly between support scenarios. Permanent legislation's high and rising commodity prices and nonrecourse loan programs would encourage producers both to increase the land and water committed to agricultural production and to use the natural resources already committed more intensively. Conversely, land and water use would tend to fall with the reductions in farm output likely with supports eliminated.

As much as 30 million more acres would be used in crop and livestock operations with the permanent support programs in place than under the no-support alternative. Much of this acreage increase would involve use of more marginal and/or erosive land. In many cases, operators would also change crop rotation patterns and shift land from extensive pasture and forage uses to more intensive cropping. Moreover, shifts in acreage between crops would also be a concern in some areas of the country where land used for more erosive crops would expand at the expense of land in less erosive crops. Increased cotton plantings in the Southern Plains, for example, would increase pressure on the land base even if the total acreage cropped did not change.

These factors in combination suggest that a return to the permanent support programs could ultimately lead to increased soil erosion and threaten longer run soil productivity in the most seriously affected areas of the country. The projections shown in table 22 suggest that soil loss could be 5 to 10 percent higher than under the no-support scenario. 4/

Increased demand for water under the permanent legislation scenario would also add to pressures on agriculture's natural resource base. Water use could be as much as 25 percent higher with the permanent support programs in place than under the no-support option. The demand for water would increase faster than demand for land as operators used it both to bring added acreage into cultivation and to irrigate existing acreage being used more intensively.

The geographic distribution of this added demand for water could work to increase resource pressure even more than the increase in water use would suggest. Much of the increased demand for water would be in areas dependent at least in part on mining groundwater. The increased crop production in the Southern and parts of the Northern Plains likely under the permanent legislation alternative, for example, would increase pressure on the Ogallala Aquifer significantly.

The Economics of Resource Conservation

The financial situation in the farm sector would also differ enough between scenarios to raise questions about the changing economics of resource conservation. Some analysts argue that the high and stable prices and guaranteed outlets provided for in the permanent support programs would improve the economics of conservation. Higher returns would theoretically

Table 22--Resource use under the permanent legislation and no-support scenarios in 1990

Item	Unit	Permanent legislation	No supports
Land in selected crops	Mil. acres	263	242
Total cropland	do.	495	465
Soil loss with 30-percent conservation tillage	do.	973	916
Soil loss with 58-percent conservation tillage	do.	594	561
Water use	Mil. acre/ft.	29	23

4/ The Iowa State University CARD agricultural modeling system was used to estimate soil loss and water usage under the two scenarios. A number of assumptions were made regarding the acreage of specific commodities, the location of production, the tillage methods used, and the use of abandoned cropland. Assumptions on the location and scale of production were taken from the commodity sections of this report while two conservation tillage adoption levels were assumed--the current 30 percent and an upper bound 58 percent. Finally, the land dropped from the crop production base was assumed to revert to grass and trees.

encourage farm operators to expand investment in soil conservation and water management. However, data for the 1970's raise serious questions about the linkage between returns and investment in conservation. Commodity prices and producer returns during the late 1970's were relatively high but net investment in soil conservation actually declined.

Conversely, with price supports eliminated and returns substantially lower, investment in conservation could well shrink or stop altogether as operators struggled to meet operating expenses. At the same time, however, pressure to reduce production expenses could result in accelerated adoption of minimum tillage and other resource-conserving farming practices. Evidence from the late 1970's and early 1980's indicates that conservation tillage is frequently adopted as much as a cost-saving measure as an erosion control strategy.

Public Resource Management

The potential for public involvement in improving private sector resource management would also differ significantly between scenarios. Public involvement in resource management to date has been limited to programs such as the land bank and requiring that land idled under the acreage reduction programs be put into a conserving use. Many conservation proponents propose tying eligibility for support program benefits to improved resource management. Requiring conserving use of land idled under the 1977 and 1981 Acts is often cited as an example of what is being done, while linking diversion and deficiency payments to improved land management is cited as an example of what could be done. While the permanent support statutes include no provision for conservation linkages in their current form, they do provide a framework for public involvement that would be lacking under the no-support alternative.

Conservation Conclusions

Hence, on balance, the conservation advantages of adopting the no-support scenario could be significant. Although higher commodity prices under permanent legislation could encourage expanded investment in soil and water conservation, pressure on agriculture's land and water base would be significantly greater. Moreover, given the cost-price squeeze likely under the no-support scenario, accelerated adoption of improved farming practices such as conservation tillage could more than offset any drop in longterm investment likely as a result of reduced producer returns. Finally, while eliminating support programs would rule out one avenue for increased public involvement in the management of privately owned resources, simpler and less costly programs are available to address the issue.

AGRIBUSINESS AND RURAL DEVELOPMENT IMPACTS

Economic activity and employment in the agribusiness sector as a whole would not differ substantially between scenarios. Agribusiness activity would be less than 2 percent greater and employment 2 to 3 percent higher by 1990 with supports eliminated than with the permanent support programs in place. However, activity within the major agribusiness subsectors would differ substantially between scenarios.

Reverting to the permanent support programs would boost economic activity and employment in farming and the farm input and service industries. As noted earlier in this report, reverting to the permanent support programs would expand farm activity as much as one-third. This expanded farm activity would

50

work in turn to increase input industry activity through increased demand and higher prices for items such as machinery, fertilizer, and pesticides. However, the higher commodity prices underlying increased activity in both of these subsectors would slow growth in economic activity in the industries that process, transport, and market farm products.

Conversely, activity in the input industries would stagnate or decline under the no-support scenario while farming activity would increase at less than half the pace likely under permanent legislation. However, growth in the processing, transportation, and export industries would accelerate. The scenario's lower commodity prices would generate increased activity in these volume-oriented subsectors that would more than offset slowed activity in farming and the input industries.

On balance, agribusiness activity under the no-support scenario would expand from $600 billion currently to $1,080 to $1,090 billion in 1990 compared with $1,050 to $1,060 billion under the permanent legislation scenario (table 23). Given differences in labor input/output ratios in the various subsectors of the agribusiness complex, 500,000 more jobs would be created under the no-support scenario than under the permanent legislation scenario.

The changes in the individual subsectors shaping this aggregate agribusiness perspective are highlighted in table 23.

Input Industry Impacts

The price and income support programs adopted in 1985 will affect the major input industries through their impact on farm demand for their products and the prices farmers were willing to pay for them. With permanent legislation's higher commodity prices and expanded acreage, input demand could increase 14 percent from 1985 through 1990 (table 24). Growth in input demand would be strongest in 1986 and 1987 as farm prices rose sharply to parity-linked levels and farmers expanded acreage 5 to 6 percent. Growth would continue through 1990, however, as farmers increased application rates for items such as fertilizer to accelerate growth in yields and output. The added business activity involved, particularly if increased demand generated stronger input prices, would allow many input industries to boost lagging returns and operate

Table 23--Employment and gross national product in agriculture-related sectors of the economy under the permanent legislation and no-support scenarios

Year	Employment		Nominal GNP	
	Permanent legislation	No supports	Permanent legislation	No supports
	Million workers		Billion dollars	
1981-83	22.5	22.5	610	610
1985	22.7	22.7	750	751
1986	23.4	23.6	813	818
1987	23.5	23.7	874	885
1988	23.5	23.9	933	951
1989	23.5	24.0	1,005	1,027
1990	23.6	24.1	1,058	1,083

closer to full capacity by 1990 than at any point to date in the late 1970's or 1980's. Conversely, the initial drop and subsequent slower growth in input demand likely with supports eliminated could leave 1990 input use 2 percent below 1985 levels. This decline in demand would be significant enough to keep plant capacity utilization in much of the industry at or below current lows until well into the 1990's and to force large-scale changes in the structure and operation of the most seriously affected operations.

The individual input industries would be affected differently by a decision to revert to the permanent support programs or operate without supports. The impact on the fertilizer and machinery industries would be particularly marked.

Fertilizer use from 1986 to 1990 under permanent legislation could increase 14 percent. Growth of this magnitude would allow domestic fertilizer producers to increase capacity utilization from an estimated 72 percent in 1983 to possibly 83 percent by 1990 (table 25). Growth in demand at this pace would quite likely reverse the fertilizer price declines experienced since 1981. Nominal prices would keep up with, and possibly exceed, the general rate of inflation. The farm value of fertilizer sales could reach $17 billion by 1990, compared with 1983 sales of under $10 billion and the 1981 record of $14 billion.

With no supports, fertilizer use would decline initially in 1986 and increase less than 2 percent for the 1985-90 period as a whole. Weak fertilizer demand would keep downward pressure on nominal fertilizer prices and lead to further real declines in industry revenues. The industry's capacity utilization rates could lag at 72 to 74 percent from 1986 through 1988 and increase slowly thereafter. Some of the hardest hit plants with higher than average costs could be forced to close during the 1986-88 period.

The impact of adopting either support scenario on the farm machinery industry would be as great or greater than the impact on the fertilizer industry. Farm machinery purchases are closely linked not only to production levels but also to net cash income, debt/asset ratios, and interest rates. These factors, combined with alternative levels of prices and returns, would widen differences in machinery demand between scenarios.

Table 24--Changes in use of selected inputs under the permanent legislation and no-support scenarios, 1986-90

Input	Permanent legislation	No supports
	Percent	
Seed	6	1
Fertilizer	14	2
Herbicides	3	-4
Insecticides	8	-5
Energy	9	2
Farm machinery	20	-13
Subtotal	13	-3
Total	14	-2

52

Machinery demand under permanent legislation could increase as much as 20 percent over the 5-year period, or fast enough to reverse the decline in prices and returns that the industry has experienced since 1979. Machinery industry receipts, taking into account increased sales and higher prices, could double in nominal terms by 1990 from $10 billion in 1983. Demand for new farm machinery under the no-support scenario could decline 13 percent from 1986 through 1990, with an initial 1986-87 drop of possibly twice this magnitude. This decline in machinery demand would put additional pressure on an industry that has experienced a steady decline in demand for its products since 1979. Plant capacity utilization levels could slip further below the 50-percent levels reported for many operations since 1981.

Under permanent legislation, demand for seed, pesticides, and energy would increase, albeit less sharply than demand for fertilizer and machinery. Demand for these inputs as a group would rise between 6 and 9 percent over the period analyzed. Given their current capacity, the seed and pesticide industries could meet demand increases of this magnitude without significant upward pressure on prices. Growth in demand for these items under the no-support scenario would vary between individual inputs. Demand for insecticides could drop as much as 5 percent, while demand for herbicides could slip 4 percent and demand for seed and energy could increase as little as 1 to 2 percent. Competition among pesticide manufacturers and seed producers would increase as sales declined and would add to downward pressure on prices. Changes in agriculture's use of energy between scenarios would be significant from a sector perspective but would be too small to affect economy-wide energy supplies, demand, or prices.

Table 25--Farm expenditures for fertilizer and fertilizer industry operating rates, actual 1977-84 and projected 1985-90

Year	Expenditures		Operating rate	
	Billion dollars		Percent of capacity	
1977	8.0		82	
1978	8.1		80	
1979	9.1		85	
1980	13.4		92	
1981	14.1		93	
1982	11.5		81	
1983	9.5		72	
1984	11.0		76	
1985	13.0		73	
	Permanent legislation	No supports	Permanent legislation	No supports
	Billion dollars		Percent of capacity	
1986	13.6	12.9	75	72
1987	14.3	13.5	77	73
1988	15.0	13.7	79	74
1989	15.7	14.0	81	75
1990	16.5	14.3	83	76

Transportation, Processing, and Marketing Impacts

The transportation, processing, and marketing industries accounting for over half of the agribusiness sector's economic activity would fare differently under the permanent legislation and no-support scenarios than the input industries. The higher prices and reduced marketings likely under permanent legislation would work to the disadvantage of businesses concerned more with the volume than the price of the products they handled. On the other hand, the lower prices and increased marketings likely with supports eliminated would increase business activity in these industries.

Differences in economic activity and employment between scenarios in these downstream operations would be most pronounced in the transportation subsector. With much of permanent legislation's expanded farm output stored either locally or on-farm, the volume of farm products moving through the transportation system to export or to domestic processors would be significantly lower than with supports eliminated. Using the index of utilization (domestic use plus exports) shown in table 26 as a general indicator, the difference in ton-miles between scenarios could be two-fifths or more. Conversely, with supports eliminated, the transportation sector could break the ton-mile record set in the late 1970's by 1987 and increase throughput 5 to 10 percent by 1990.

The reduced demand for transportation likely with the permanent support programs would add to longstanding pressures to contract the system or reduce service on less profitable routes. This pressure would most likely be concentrated in long-distance transportation of farm products between regions and to export. Demand for local transportation might actually increase under permanent legislation as producers moved their increased output to local storage facilities.

The rail, inland waterway, road, and port systems could be expanded in time to meet the significant ton-mile increase likely with increased marketings and exports under the no-support scenario. These systems were used at roughly two-thirds of capacity in 1982 and 1983, and railroad car and barge numbers appear to have increased in 1982 and 1983.

The processing and marketing subsectors would also experience more economic activity and employment with supports eliminated. Processors and marketers would experience lower input costs and increased demand for their products and services. While marketing margins tend to move with commodity prices, the full impact of a price rise or fall is seldom passed on to the consumer. As a result, processing and marketing margins would tend to be more favorable and returns 15 to 20 percent higher under the no-support scenario.

Given current capacity in these subsectors, the added demand for their services likely with supports eliminated would not be large enough to generate higher costs. Many of the industries in question would also be able to operate nearer full capacity than the 60- to 70-percent levels likely under permanent legislation or the 70- to 80-percent levels reported since 1981.

The downward pressure on the marketing and processing subsectors likely with permanent legislation would be less than the pressure likely on the transportation industry. This is due to the limited amount of processing and marketing involved in exports, a key source of the increased activity likely with supports eliminated and the drop in activity under permanent legislation. Permanent legislation pressure would still be great enough, however, to generate changes in the structure of the processing and marketing industries as they scaled back operations and growth expectations.

Table 26--Indices of production, utilization, export, and storage of farm products under the permanent legislation and no-support scenarios

Scenario	1977/78	1981/82	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
					1983 = 100					
Production:										
Permanent legislation	128.7	161.0	100.0	158.0	156.8	166.0	170.0	172.5	176.7	177.6
No supports	128.7	161.0	100.0	158.0	156.8	163.9	161.7	163.0	167.3	171.4
Storage:										
Permanent legislation	109.5	249.2	100.0	114.8	183.9	227.4	293.3	363.1	431.1	501.4
No supports	109.5	249.2	100.0	114.8	183.9	176.9	165.1	151.3	142.1	137.5
Exports:										
Permanent legislation	93.0	114.8	100.0	103.5	110.7	108.8	113.1	113.8	116.6	119.3
No supports	93.0	114.8	100.0	103.5	110.7	123.5	128.4	131.9	135.5	139.3
Utilization: 1/										
Permanent legislation	90.9	104.1	100.0	103.7	110.7	108.2	110.8	112.0	113.7	115.5
No supports	90.9	104.1	100.0	103.7	110.7	116.7	119.7	121.5	123.7	125.9

1/ Utilization includes exports and domestic use but excludes storage.

55

Storage would not be a problem under the no-support scenario but could become a critical concern with a reversion to permanent legislation. Reverting to permanent legislation could increase the grain carryover fivefold from 1983/84 levels to possibly 15 billion bushels by 1990/91. Although total storage capacity was estimated at over 18 billion bushels in 1982, added capacity would be required to handle both ongoing storage needs and the peak seasonal needs associated with harvest. Most of the increase in carryover stocks would come after 1986/87 and allow time for the construction of additional facilities. The added storage activity under permanent legislation would not be sufficient, however, to offset losses in transportation, processing, and marketing. Hence, activity in these industries as a group would be greater with no supports than with permanent legislation.

Rural Development Impacts

The increasingly diverse mix of activities underway in nonmetropolitan areas would limit the impact of a decision to revert to permanent legislation or operate without supports on rural development. Jobs and incomes in the 2,500 nonmetropolitan counties as a group would differ as little as 5 percent between scenarios, with the permanent support programs working to accelerate, and the no-support program working to slow, economic growth.

However, differences between scenarios would be significantly greater in the 700 counties most dependent on agriculture. These counties are heavily concentrated in the Plains and western Corn Belt (North Dakota, South Dakota, Iowa, Kansas, and Nebraska), and would experience faster growth in income and employment with permanent legislation in place but would face serious adjustment problems if supports were eliminated. The no-support adjustment would be even more serious for the 200 counties in this group heavily dependent on Federal farm program payments to supplement their agriculture earnings.

Diminishing Role of Agriculture

Agriculture's role in the rural economy has declined over the last 3 decades. About 10 percent of the $320 billion in income reported for nonmetropolitan areas at the start of the 1980's was generated in the farm sector. This compares with more than twice this share as recently as 1960. Of the 30 million persons employed in nonmetropolitan areas, less than 8 percent were employed in agriculture defined broadly to include forestry and fisheries (table 27). While comparable data are not available for the agribusiness sector, the information available suggests the same pattern of declining importance in the rural economy.

However, agriculture continues to be a major source of income and employment in roughly 700 nonmetropolitan counties. Farming in these counties contributed 20 percent or more of total labor and proprietor income from 1975 through 1979. 5/ Some of these farming-dependent counties depended on agriculture for as much as 70 percent of their income. The limited information available suggests that service and industry activities in these counties also tends to be dominated by agribusiness establishments.

5/ In 1950, over 2,000 counties received 20 percent or more of labor and proprietor income from farming, illustrating the decline in the importance of farming as an economic base in most rural areas.

These counties have typically experienced low rates of economic growth and high rates of population decline for decades and are heavily concentrated in the western edge of the Corn Belt and in the Plains States. Smaller concentrations can also be found in the Mississippi Delta, the southeastern Coastal Plains, and in the Mountain States. The factors shown in table 28 suggest that these counties could have a hard time adjusting to reduced supports. Income from agriculture ranges from 23 to 46 percent, while declining or slowly growing population and low population density limit opportunities outside agriculture. These factors are reflected in the relatively small number of farmers who work off farms more than 100 days per year despite combined farm and off-farm incomes well below the national

Table 27--Structure of employment in metropolitan and nonmetropolitan areas, 1982 1/

Item	United States		Metro		Nonmetro	
	1,000	Percent	1,000	Percent	1,000	Percent
Total employed	99,524	100.0	69,192	100.0	30,335	100.0
Total wage and salary workers	89,965	90.4	63,983	92.5	25,986	85.7
Agriculture	1,549	1.6	577	.8	973	3.2
Mining	989	1.0	468	.7	521	1.7
Construction	4,134	4.2	2,812	4.1	1,323	4.4
Manufacturing	19,756	19.9	13,645	19.7	6,111	20.1
Transportation, communication, and public utilities	5,408	5.4	3,960	5.7	1,449	4.8
Wholesale and retail trade	18,596	18.7	13,405	19.4	5,191	17.1
Finance, insurance, and real estate	5,631	5.7	4,541	6.6	1,090	3.6
Private household workers	1,207	1.2	778	1.1	429	1.4
Services	17,179	17.3	13,325	19.3	3,854	12.7
Government	15,516	15.6	10,472	15.1	5,045	16.6
Self-employed	8,898	8.9	4,937	7.1	3,961	13.1
Agriculture	1,636	1.6	383	.6	1,253	4.1
Nonagricultural	7,262	7.3	4,554	6.6	2,708	8.9
Unpaid family	662	.7	274	.4	388	1.3
Agriculture	261	.3	47	.1	213	.7
Nonagricultural	401	.4	226	.3	174	.6

1/ Totals may not add due to rounding.

average. While not the only counties likely to be affected by changes in support policies, farming-dependent counties would be the most seriously affected.

Federal Outlays to Farming-Dependent Counties

The sharpest adjustments to changes in support programs would occur in the 200 counties among these 700 farming-dependent counties that rely heavily not only on agriculture but on Federal farm program payments as well (table 29). Roughly 200 of the 700 counties most dependent on agriculture were also heavily dependent on Federal farm program payments. The 200 counties in question received an average of $422 per capita in Federal outlays for program commodities at the start of the decade. This $422 per capita represented as much as one-quarter of per capita income in the most dependent counties. These counties are even more heavily concentrated in the Plains States and western Corn Belt. The Dakotas, Iowa, Kansas, and Nebraska are among the States with the largest concentrations.

INTERNATIONAL TRADE IMPACTS

World agricultural trade and U.S. farm exports over the remainder of the decade are likely to be shaped to a large extent by the market forces summarized in the assumptions sections of this report. Growth in world demand for and trade in farm products was assumed to recover from the slowdown of the early 1980's as the decade progressed, but not to return to the unusually fast pace of the 1970's. Should the value of the dollar weaken somewhat but continue high by historical standards as assumed here, the U.S. competitive position in the market would continue weak. In this environment, recouping the export losses suffered since 1981 could take to the end of the decade.

Table 28--Farming-dependent counties arrayed into thirds by selected variable depicting adjustment potential

Selected variable	Specialized agriculture counties 1/				All nonmetropolitan counties
	Top third	Middle third	Bottom third	All	
Proportion of labor and proprietor income from			Percent		
agriculture, 1975-79	46	32	23	34	14.6
Population change, 1970-80	-.6	5.9	9.1	4.8	14.6
Population density per square mile, 1980 population	10	19	25	18	42.0
Proportion of farmers who worked off the farm 100 days or more, 1978	25	30	35	30	41.0

1/ Nonmetro counties in which labor and proprietor income from agriculture was 20 percent or more for 1975-79; 702 of the 2,443 nonmetro counties in the contiguous 48 States met this criterion.

The farm support programs adopted in 1985 are not likely to change this basic outlook significantly. They could work, however, through their impacts on export prices and the international trade policy environment to strengthen or weaken the pace of growth in world trade and the recovery in U.S. exports.

Export Price and Trade Policy Effects

The most immediate effect of adopting either of the support scenarios analyzed here on world trade and U.S. exports would be through changes in commodity prices. Differences in domestic U.S. producer prices would be passed through the marketing system and reflected in U.S. export prices and ultimately in world market prices. Table 30 suggests a 10- to 20-percent difference in export prices for feed grains and oilseeds and an even wider difference in cotton prices between the scenarios.

The shift in U.S. trade policy implied in a decision to eliminate supports or to revert to permanent support programs would eventually have as pronounced an impact on trade as differences in export prices. Given the direct link between U.S. and world market prices, reverting to the permanent support programs would commit the United States to maintaining not only high U.S. but high world market prices as well. USDA's open-ended nonrecourse loan programs would operate to raise or lower CCC stocks and U.S. exports as needed to balance world export supply and import demand at parity-linked price levels.

This U.S. adjustor role would serve the interests of the other exporters well. It would minimize market disruptions and any year-to-year adjustments

Table 29--Number of counties and average Federal outlay per capita: Nonmetro counties arrayed by average per capita outlay and specialization in agriculture, fiscal year 1980

Per capita Federal outlays for commodity agriculture 1/	Unit	Specialized agriculture counties 2/				All nonmetro counties
		Top third	Middle third	Bottom third	All	
Top third:						
Nonmetro counties	No.	207	164	119	490	815
Average outlay	Dol.	422	241	252	293	225
Middle third:						
Nonmetro counties	No.	23	61	99	183	814
Average outlay	Dol.	52	49	46	47	39
Bottom third:						
Nonmetro counties	No.	4	9	16	29	814
Average outlay	Dol.	16	10	9	10	7
All:						
Nonmetro counties:	No.	234	234	234	702	2,443
Average outlay	Dol.	362	172	140	193	56

1/ Federal outlays to nonmetro counties had a face value of $11 billion. After the loans and loan guarantees were adjusted to net grant equivalents, the value became $3.5 billion.
2/ Nonmetro counties in which labor and proprietor income from agriculture was 20 percent or more for 1975-79.

Table 30--U.S. export unit values under the permanent legislation and no-support scenarios

Item and unit	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1986-90 average
Permanent legislation:					Dollars				
Wheat (ton)	160	155	159	179	177	176	179	180	179
Corn (ton)	150	135	125	139	144	153	163	172	155
Soybeans (ton)	300	265	265	291	300	310	322	335	312
Cotton (ton)	1,625	1,560	1,485	2,140	2,230	2,405	2,585	2,770	2,426
Rice (ton)	400	390	385	465	480	495	510	530	496
Tobacco (lb.)	2.88	2.90	2.94	2.94	2.97	3.12	3.25	3.38	3.13
No supports:									
Wheat (ton)	160	155	159	135	142	150	157	161	149
Corn (ton)	150	135	125	118	128	132	138	144	132
Soybeans (ton)	300	265	265	257	267	279	293	303	280
Cotton (ton)	1,625	1,560	1,485	1,440	1,510	1,555	1,690	1,825	1,604
Rice (ton)	400	390	385	360	355	360	385	380	368
Tobacco (lb.)	2.88	2.90	2.94	2.48	2.31	2.40	2.48	2.40	2.41

60

in production, use, or prices they might otherwise have to make in response to fluctuations in the world market. However, it would become an increasingly costly role for the United States over time in terms of the budget outlays necessary to build up and maintain large-scale CCC stocks as well as lost export market share.

On the other hand, eliminating supports would signal U.S. unwillingness to continue supporting trade prices and underwriting operation of the world market. U.S. prices would automatically fall or rise to the levels necessary to clear the domestic U.S. market and, in turn, the world market.

These differences in trade prices and the trade policy environment between scenarios would have a twofold impact. A change in trade prices would initially affect demand in the major importing countries. If continued over any length of time, changes in trade prices would also affect production in both the importing and competing exporting countries. For example, higher prices under permanent legislation would initially reduce world import demand and, if continued, encourage producers in the importing and other exporting countries to expand output to displace high-priced U.S. products. Increased export availabilities in the competitor countries, combined with dampened demand in the importing countries, would reduce both U.S. exports and the U.S. share of the world market.

Conversely, the lower prices likely with supports eliminated, reinforced by the changes in U.S. trade policy they imply, would work in the short term to strengthen world import demand. If continued for any length of time, they would also discourage growth in production in the importing countries and encourage greater dependence on low-priced imported U.S. products. The lower prices and riskier market environment would also discourage production for export in the competing exporting countries. Both developments would boost U.S. exports and the U.S. share of a growing world market.

U.S. Exports Under the Permanent Legislation and No-Support Scenarios

Differences in U.S. exports between scenarios were estimated using the price elasticities of export demand summarized in table 31 and detailed in Appendix II.

The results shown in tables 31 and 32 suggest that permanent legislation's parity-linked loan rates would raise world market prices enough to slow growth in world import demand by one-third or more by 1990. Farmers in the other exporting countries would increase production for sale abroad in competition with the United States as much as 50 percent faster than the pace likely without permanent legislation's support umbrella. Displaced U.S. exports would account for as much as one-third of the surpluses accumulated by the CCC in its efforts to support farm prices.

With supports eliminated, growth in import demand could accelerate 25 percent or more while growth in supply in the other exporting countries could lag at possibly two-thirds the pace likely with high price supports. U.S. export volume under permanent legislation would grow less than 1 percent per year and lag below record 1979-81 levels until early in the 1990's (table 32). The U.S. volume share of the world market would drop from a peak of 40 percent at the start of the 1980's and 37 percent currently to 30-32 percent by 1990. Moreover, U.S. export levels could also become more variable from year to year as the United States became even more of a residual world supplier, particularly for commodities such as wheat, rice, and cotton.

61

While not provided for in the permanent statutes, the P.L. 480 and export credit programs were assumed to continue in operation at recent funding levels of approximately $6 billion. These programs would become increasingly critical as the decade progressed in keeping U.S. export performance from weakening further. Without these export enhancement programs in place, the U.S. share of the world market would drop even further to possibly 25 to 27 percent. There would undoubtedly be considerable pressure to increase funding of export credit programs and to use export subsidies to dump commodities on foreign markets to ease permanent legislation's surplus problems.

Under the no-support scenario, lower trade prices would work to expand world import demand at half-again the pace likely with supports in place. Equally important from a U.S. perspective, the incentive for competing exporters to expand production for sale abroad would be lessened considerably. With no supports, U.S. export volume could grow 4 to 6 percent per year and break the volume record set in 1979-81 by 1987. This combination of faster growth in world import demand and a more competitive U.S. position in the market could increase the U.S. share of world agricultural trade to possibly 42 to 44 percent by 1990.

The U.S. trade outlook under the two alternative scenarios differs somewhat if measured in terms of export value rather than export volume. Higher export prices under permanent legislation offset much of the scenario's slower growth in export volume. As a result, the value of exports under permanent legislation would be only $2 to $3 billion below that with supports eliminated, which would reflect lower export prices but higher export quantities.

From the standpoint of economic activity and employment, however, the volume of products moving into export is more important than export prices and export value. As noted earlier, economic activity and employment is particularly

Table 31--Price elasticities of
        foreign demand for U.S.
        farm exports 1/

Crop	U.S. export demand
Wheat:	
Permanent legislation	0.9 to 1.1
No supports	.7 to .8
Coarse grains:	
Permanent legislation	.8 to 1.0
No supports	.7 to .9
Soybeans and meal:	
Permanent legislation	.8 to 1.0
No supports	.7 to .9
Cotton:	
Permanent legislation	.6 to .7
No supports	.4 to .5

1/ See Appendix II for sources and supplementary information.

Table 32—Alternative U.S. agricultural export volume and value under the permanent legislation and no-support scenarios

Item and unit	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 average
Export volume									
Permanent legislation:									
Wheat (bil.bu.)	1,429	1,525	1,400	1,175	1,260	1,350	1,400	1,470	1,330
Corn (bil.bu.)	1,866	2,025	2,035	2,020	2,115	2,100	2,165	2,250	2,130
Soybeans (bil.bu.)	740	800	860	840	865	900	915	925	889
Cotton (mil.bales)	6.8	6.5	6.0	4.6	4.5	4.1	3.6	3.1	3.7
Rice (mil.cwt)	70.3	68	70	45	43	41	39	37	41
Tobacco (mil.lbs.)	620	600	605	605	610	615	615	605	610
No supports:									
Wheat (bil.bu.)	1,429	1,525	1,400	1,600	1,650	1,675	1,700	1,780	1,680
Corn (bil.bu.)	1,866	2,025	2,035	2,300	2,400	2,500	2,625	2,850	2,535
Soybeans (bil.bu.)	740	800	860	925	965	1,000	1,025	1,060	995
Cotton (mil.bales)	6.8	6.5	6.0	5.9	6.1	6.3	6.3	6.5	6.3
Rice (mil.cwt)	70.3	68	70	76	82	90	96	101	89
Tobacco (mil.lbs.)	620	600	605	730	760	770	730	760	750
Export value									
Permanent legislation (bil. dol.)	38.0	37.5	39.0	41.5	44.0	46.5	49.0	51.5	46.5
No supports (bil. dol.)	38.0	37.5	39.0	41.0	44.5	48.0	51.5	55.5	48.1

63

sensitive to volume of products moving through the transportation, processing, and marketing industries to export. For example, the employment and economic activity lost when farm exports fell from 164 million tons in 19881 to 141 million tons in 1984 would not be recovered until the 1990's with the permanent support programs in place, but would be recouped by 1987 under the no-support scenario.

Differences in export volume and value between the permanent legislation and no-support scenarios would be most pronounced for wheat, rice, and cotton. However, they would also be significant for feed grains, soybeans, and soybean products.

In the case of wheat, the United States faces a particularly price elastic market. Permanent legislation's high support prices would encourage large-scale expansion in production for export in countries such as Canada, Australia, Argentina, and the EC. These countries have traditionally marketed aggressively to maximize their exports and expand their share of the world market. Permanent legislation's higher trade prices would also slow growth in wheat import demand in the price-sensitive developing countries that dominate the import market.

The current depressed state of the world wheat market would also tend to strengthen the reaction to a reversion to permanent legislation. Growth in wheat import demand has slowed over the last several years due to macroeconomic and financial problems in many of the developing countries. Wheat production in several of the largest importing and exporting countries has also continued to grow. Aggressive competitor marketing and the rising value of the dollar have worked to weaken the U.S.'s competitive edge and dropped the U.S. share of world trade from a peak of 48 percent in the late 1970's to 38 percent currently. The wheat market's pronounced price sensitivity could combine with the depressed state of the market to keep U.S. exports as much as 350 million bushels lower in 1990 under the permanent legislation scenario than under the no-support scenario.

While the elasticities involved are lower, the change in cotton prices between scenarios is large enough to generate an even greater difference in export volumes. Under permanent legislation, U.S. cotton exports could drop to 3 million bales by 1990, or less than 15 percent of the bales traded worldwide, from 6.8 million bales and 36 percent of the market in the early 1980's. Under the no-support scenario, exports by 1990 could total 6.5 million bales and continue to account for approximately 35 percent of the world market.

Demand for U.S. feed grains, oilseeds, and oilseed products is less sensitive to price changes than wheat but more so than cotton. U.S. corn exports in 1990 could reach 2.3 billion bushels under permanent legislation compared with nearly 3 billion bushels under the no-support scenario. The U.S. position as the dominant supplier, rather than one of many suppliers as in the case of wheat, would minimize the change in U.S. market share between scenarios. The U.S. market share would range a few percentage points above and below 60 percent under the two scenarios. Exports of soybeans and soybean products by 1990 would be the equivalent of 1.1 billion bushels (50 percent of the world market) under permanent legislation but as much as 1.3 billion bushels (55 percent of the world market) under the no-support scenario.

U.S. Import Restrictions and Permanent Legislation Trade Levels

U.S. imports of farm products would not differ substantially between scenarios, but for very different reasons. Under the no-support scenario, domestic U.S. prices would be low enough to discourage imports of all the major program commodities with the possible exception of sugar. Under the permanent legislation scenario, trade restrictions would have to be used to prevent large-scale imports from displacing U.S. products and increasing CCC stocks and program expenditures.

It was assumed for this study that the import restrictions authorized under Section 22 of the Agricultural Adjustment Act, the Meat Import Law, and the General Agreement on Tariffs and Trade (GATT) would be pursued as vigorously as possible. The import restrictions necessary to minimize imports under the permanent support scenario would essentially close off the U.S. market. With support prices high, foreign suppliers could otherwise underprice U.S. producers without resorting to illegal trading practices.

This assumption of tightened U.S. import controls could work to slow growth in world agricultural trade and trade in nonfarm products. The countries affected by tightened U.S. import restrictions would undoubtedly seek redress under the General Agreement on Trade and Tariffs (GATT). GATT-awarded compensation could take the form of retaliation against U.S. farm products or nonagricultural exports. Equally important from a broader trade policy perspective, U.S. use of import restrictions of the magnitude likely under the permanent legislation scenario would weaken the postwar trade liberalization movement, possibly beyond recovery. The United States would find itself in a weak position to oppose similar moves by other countries (such as the EC) to limit imports of farm products from the United States to ease their own domestic agricultural problems. Given the experience of the 1930's, the dramatic tightening in U.S. import restrictions needed to make the permanent support programs operational could well lead to a generalized trade war.

GOVERNMENT EXPENDITURES, FOOD COSTS, AND ECONOMIC ACTIVITY

The effects of the support program decisions made in 1985 would quickly spread beyond the agribusiness sector to affect the operation of the general economy. This section of the report traces out the impacts alternative support programs would have on key macroeconomic indicators including Government expenditures, food prices and food consumption expenditures, and economic activity and employment.

Government Expenditures

Permanent Legislation Program Costs

The most pronounced differences between the permanent legislation and no-support scenarios analyzed in this report are in the Government expenditures area.

Given the commodity supply, demand, and price projections discussed earlier, the Federal Government could be spending as much as $50 billion per year by 1990 under the permanent legislation scenario to support commodity prices and farm incomes at parity-linked levels. Roughly two-thirds of this total--$34 billion--would be spent to finance USDA nonrecourse loan and storage activities (table 33). The cost of financing the $150 to $160 billion in

added Federal debt that would accumulate by 1990, assuming permanent legislation's programs were financed through borrowing, could reach $17 billion. The increased costs involved in operating the food stamp program and other public assistance and entitlement programs with higher food prices could add $3 to $4 billion more to Government costs by 1990. As a result, the direct and indirect costs associated with reverting to permanent legislation could reach $55 to $60 billion per year by the start of the 1990's.

To put this cost estimate into perspective, expenditures in 1986 would be more than twice the cost of operating price and income supports over the 1970's, and costs by 1990 would be roughly twice the level projected for 1986. Expenditures

Table 33--Selected Government expenditures under the permanent legislation and no-support scenarios 1/

Item	1986	1987	1988	1989	1990	1986-90 avg.
Permanent legislation:			Million dollars			
CCC loan and purchase activity 2/	18,500	17,400	20,100	23,200	27,000	21,250
Grains	11,800	10,000	10,900	11,300	13,400	11,500
Cotton	1,000	1,400	2,200	3,500	4,800	5,100
Dairy	3,050	4,400	5,300	5,900	6,500	2,600
Oilseeds	2,000	950	800	1,200	900	1,200
CCC storage costs	1,200	2,550	3,800	5,400	7,000	4,000
Subtotal	19,700	19,950	23,900	28,600	34,000	25,250
Accumulated interest costs 3/	1,300	3,700	6,200	10,500	16,800	7,700
Total	21,000	23,650	30,100	39,100	50,800	33,000
No supports:						
Storage costs	770	740	705	640	485	665
Returns on stock sales	0	295	355	865	1,710	645
Accumulated interest costs 3/	50	125	170	190	85	125
Total	820	570	520	-35	-1,140	145

1/ Includes only costs related to price and income support; does not include other costs such as P.L. 480, export credit, or food stamps.
2/ Total includes items not represented in the four subcategories.
3/ Assumes support program costs are deficit-financed at interest rates of 12.9 percent, 12 percent, 11 percent, 11.8 percent, and 12.8 percent, respectively, for 1986 through 1990. Accumulated interest was calculated as the current year's interest rate times one-half of the current year's net outlays plus previous years' net outlays and interest charges.

Note: Negative signs denote net revenues.

of this magnitude would be equal to more than a quarter of the sector's gross farm income and over half of the gross income of program commodity producers. Equally important, only a small portion of the $55- to $60-billion expenditures in question would ultimately accrue to farmers as net income after rising production expenses are taken into account. Program commodity producers could ultimately retain less than $1 of every $4 in direct and indirect Government costs associated with permanent legislation.

The high cost of the permanent support programs relates both to the link between parity and support prices and the use of nonrecourse loan or direct purchase programs. The permanent programs work to support prices by removing enough of the commodity in question from the market to tighten supplies sufficiently to boost producer returns. With support prices high and rising and output increasing each year, the volume of products that has to be taken off the market in order to support parity-linked prices would expand regularly--both in absolute terms and relative to total output. By 1990, the CCC could become the residual outlet for more than one-fourth of program commodity output.

Permanent legislation's loan, storage, and interest costs are theoretically recoverable. CCC would be empowered to sell any excess stock it accumulated as a result of support activities if market prices moved a predetermined percentage (generally 115 percent) above the support rate. However, the likelihood of CCC disposing of enough stock to recover any significant portion of its costs by 1990 is minimal. With large and growing stocks overhanging the market and support rates moving up each year, the probability of market prices rising high enough to trigger CCC sales would be small.

Year-to-year fluctuations in weather could raise or lower yields and in turn raise or lower the stocks CCC acquired in any one year. But yield variability would quite likely balance out over the period analyzed. As a result, while CCC stocks and program costs might vary in any one year from the estimates shown in table 33, the 1986-90 average is unlikely to change significantly and most CCC costs would effectively be nonrecoverable.

No-Support Program Costs

Government expenditures under the no-support scenario would be limited to funding USDA's disposal of the CCC stocks and farmer-owned reserves on hand at the end of the 1985 marketing year. Holding these stocks as a transition reserve until they could be disposed of without depressing market prices would involve outlays, including administrative costs and interest expenses, of less than $1 billion annually early in the period. By the middle of the period, however, receipts from the sale of reserve grain and cotton could exceed the cost of operating the reserve and yield net revenues. The cost for the 5-year period analyzed here would be less than $150 million per year, and as much as $3 to $3.5 billion in revenue could be generated by the 1990's as remaining stocks were sold off.

Food Prices and Food Consumption Expenditures

Differences in food prices and food consumer expenditures between scenarios would also be significant, particularly for milk, meat, and sugar. Data on food prices under the permanent legislation and the no-support scenarios (tables 34 and 35) suggest as much as a 1- to 3-percentage-point difference

67

between programs. This would translate into a $15- to $20-billion difference in food consumption expenditures by 1990. 6/

Under the permanent legislation scenario, higher commodity prices and wider marketing margins would combine with higher prices for imported foodstuffs to generate a 4- to 6-percent average annual increase in retail food prices from 1986 through 1990. Growth in retail prices at this pace—fractionally faster than the general rate of inflation—would push food consumption expenditures up to $420 billion by 1990 compared with $300 billion in the early 1980's. This higher 1990 food bill would represent a double tax on most consumers who would also have financed the support programs that contributed to higher retail food prices.

Food prices would rise less quickly under the no-support scenario. The 1986-90 increase would average 2.5 to 4.5 percent per year and implies food consumption expenditures of $400 billion per year by the end of the decade. Over the 5-year period, consumers would pay $70 billion less with supports eliminated than with the permanent support programs in place. The percentage of income spent on food would also drop slightly by 1990 with supports eliminated while it would continue at 16 to 17 percent under permanent legislation. Moreover, food consumption levels would also be fractionally higher under the no-support scenario by 1990 because of the scenario's generally lower prices.

Table 34—Annual increases in retail food prices under the permanent
         legislation and no-support scenarios

Item	: 1984	: 1985	: 1986	: 1987	: 1988	: 1989	: 1990	:1986-90 average
	:			Percent				
Permanent	:							
legislation	: 4.5	4.2	5.9	4.5	4.7	4.7	4.8	4.9
No supports	: 4.5	4.0	2.7	4.4	4.2	2.4	3.9	3.6

Table 35—Food consumption expenditures under the permanent legislation
         and no-support scenarios

Item	: 1984	: 1985	: 1986	: 1987	: 1988	: 1989	: 1990	:1986-90 average
	:			Billion dollars				
Permanent	:							
legislation	: 320	335	355	370	385	405	420	385
No Supports	: 320	335	345	360	375	385	400	370

6/ The projections shown are based on commodity price data drawn from the crop and livestock sections of this report and on marketing margin estimates tied to the general macroeconomic indicators.

Economic Activity

The impacts of adopting either of the support programs analyzed here would ultimately be strong enough to affect the operation of the general economy. Many of these impacts--including changes in food prices and food consumption expenditures, increased competition for resources between the agricultural and nonagricultural sectors, and differences in employment and economic activity within the agribusiness sector--have already been highlighted. However, the larger or smaller Federal deficit and the different financial environments likely depending on the support program adopted would also have a significant impact on how the general economy performed.

As table 36 suggests, support programs would have a significant impact on the size of the Federal deficit. By 1990, the difference in farm program expenditures between the permanent legislation and no-support scenarios could exceed $50 billion annually while the cumulative difference in spending from 1986 through 1990 could exceed $160 billion. Depending on how this added deficit was financed, the rest of the economy could experience faster inflation rates or slower economic growth with a reversion to the permanent support programs and slower inflation or higher growth as a result of a no-support decision.

The interest rate and inflation measures in table 36 provide an indication of potential macroeconomic impacts. Should the Federal Reserve Board choose to monetize the added debt generated as a result of reverting to permanent

Table 36--Changes in Federal deficits and related indicators under the permanent legislation and no-support scenarios 1/

Item	1986	1987	1988	1989	1990	Cumulative 1986-90
Impacts on the Federal deficit: 2/			Billion dollars			
Permanent legislation	+12	+15	+20	+28	+39	+114
No supports	-8	-8	-10	-11	-12	-49
Interest rate: 3/			Percent			
Permanent legislation	13.2	12.4	11.6	12.4	13.8	--
No supports	12.7	11.8	10.8	11.5	12.5	--
Inflation rate: 4/						
Permanent legislation	6.7	5.7	4.7	6.9	6.1	5/ 30
No supports	5.9	5.1	4.7	5.7	4.5	29

-- = Not applicable.
1/ See table 3 for basic macroeconomic and Federal deficit assumptions.
2/ Measured from a base scenario assuming farm program costs would average $10 to $12 billion per year through 1990.
3/ Assumes added deficit is financed through borrowing.
4/ Assumes added deficit is monetized.
5/ Cumulative increase in inflation.

legislation, the results would be inflationary. The cumulative increase in inflation could be as much as 3 to 5 percentage points by 1990. The stronger food price inflation likely with parity-linked commodity prices and monetized Federal deficits could amount to a 5- to 6-percentage point difference in the consumer price index by 1990.

Should the Federal Reserve Board choose not to monetize the permanent legislation deficit and borrow on the open market, the added money demand could raise interest rates 0.5 to 1.5 percentage points by 1990. This would dampen economic activity in interest-sensitive sectors such as housing, consumer durables, and business-fixed investment. Moreover, assuming longrun bond price purchasing power in the foreign exchange market, the higher U.S. interest rate could raise the value of the dollar 5 to 15 percent. This would in turn dampen economic activity in export-oriented and import-competing sectors. Conversely, a no-support decision would ease pressure on the Federal deficit and ultimately reduce inflation rates or interest rates and help accelerate economic growth.

The macroeconomic effects of permanent legislation's misallocation of resources to agriculture that could be used more profitably elsewhere would also be significant by 1990. The less than optimal resource allocation involved could lower overall growth in the gross national product—although not to the same extent as permanent legislation's substantially larger Federal deficits. On balance, the loss by 1990 associated with permanent legislation's higher food prices and consumption expenditures, higher inflation rates and interest rates, and resource misallocation could be as high as $75 to $150 billion per year (roughly 1 percent of the GNP). It also could reduce employment by up to 1 percent.

CONCLUDING NOTE

This study's analysis of the impact of reverting to permanent legislation or operating without supports led to both the scenario-specific conclusions presented earlier in the report and to conclusions regarding farm support programs in general. The most important of the scenario-specific conclusions have been discussed in the text; the more general conclusions are highlighted below.

Designing Effective Support Programs for a Changing Agriculture

The agriculture of the 1980's bears little resemblance to the agriculture in place when price and income support programs were first enacted in the 1930's. The changing structure of agriculture, its linkages to the rest of the economy, and the importance of exports have all worked to change—generally to weaken—the role that price and income supports play in determining the economic well-being of the sector.

The structure of American agriculture has changed almost beyond recognition since the 1930's. The agriculture that has emerged is increasingly diverse with more complex, less clearly defined price and income problems and goals. For example, the sector is now made up of at least three very different groups of farms—a large group of small farmers, many of whom farm part time and look to off-farm sources for much or most of their income; an intermediate group of medium-sized farms most comparable to the traditional family farm referred to in much of the support legislation; and a small group of large, generally corporate farms.

Their roles in the sector differ dramatically as do their price and income concerns. For example, over half of agriculture's output comes from the less than 10 percent of producers who make up the third group. Conversely, the 60 percent of producers who fall into the first group account for less than a tenth of agriculture's output. While the small operators' net farm incomes are generally low or negative, their off-farm incomes are often high enough to make their total incomes greater than the median income for both farm and nonfarm families. The larger operators, particularly those owner-operators falling into the second group, generally have higher net farm incomes but little or no off-farm income. As a result, their total incomes in many cases are below small operator levels.

This heterogeneous environment is quite different from the more homogeneous setting of the 1930's. When the original support programs were passed, the large majority of operators worked relatively small farms and depended on agriculture for most or all of their income. With this homogeneity gone, it is increasingly difficult to design a single set of farm programs--particularly commodity support programs--to solve the different problems of each of these groups.

The farm sector's strengthening ties to the rest of the economy also make it difficult to design and implement effective price and income support programs. Two-thirds of agriculture's inputs are now purchased from outside the sector, compared with less than half in the 1960's, in direct competition with other sectors of the economy. Farmers have also grown increasingly dependent on capital borrowed on the open market in competition with the rest of the economy. These linkages make macroeconomic policies affecting interest rates and inflation as or more important in determining farm returns than commodity price and farm income support programs.

The growing importance of exports has also added to the difficulty of designing and operating supports. Exports now account for a third of agriculture's output and an even larger share of growth and year-to-year swings in demand for U.S. farm products. This export dependence ties U.S. agriculture into weather, macroeconomic and financial, and agricultural and trade policy developments around the world and further limits the effectiveness of domestic support programs.

While program provisions have been modified over time to take these structural, macroeconomic, and trade changes into account, adjustments have generally lagged and in the process weakened or confounded support efforts. In short, the effectiveness of price and income programs has tended to weaken over time in large part because of a rapidly changing environment. This changing environment has led many program analysts to advocate a sharp increase or decrease in Government involvement in the market and has left few analysts supporting the programs currently in place.

The Rising Cost of Public Support

The cost of public intervention to stabilize farm prices and incomes or hold them above market-clearing levels has also increased dramatically over the last 2 decades. This is due in part to the mode of intervention and in part to increased market volatility. Intervention to support incomes using nonrecourse loans or direct purchases to manipulate market prices tends to be less efficient than direct payments to producers. Direct payments save the public the cost of acquiring, storing, and ultimately disposing of troublesome

surpluses. They also save farmers the cost of producing surplus products and as a result have a far greater impact, dollar for dollar, on net farm incomes.

The rising cost of public intervention also relates to widening swings in the market that would work in the absence of supports to move commodity prices and farm incomes up or down dramatically from year to year. In the increasingly volatile setting of the 1970's and the 1980's to date, stabilizing prices and incomes has become far more costly that in the less volatile 1960's.

Market Responses to Price and Income Supports

Support programs that set commodity prices and producer returns above market-clearing levels risk touching off counterproductive supply, demand, and trade adjustments. The longrun elasticity of supply is large enough—possibly above .5—that supporting prices above market-clearing levels will generate a sharp increase in output the market will not absorb. The longrun price elasticity of demand is also large enough—possibly above .5—that high prices will reduce use, particularly exports. These two adjustments combined can result in a serious surplus problem that eventually overshadows the original price and income problem being dealt with.

Support provisions other than price are also critical in determining program impacts. For example, the virtual elimination of producer risk under the permanent support programs and the dramatic increase in risk likely with no supports are as important in influencing producer response as price levels. The residual supplier role for the United States implied in a nonrecourse loan program is as important in determining trade impacts as changes in export prices.

Longer Term Impacts

The longer term effects of adopting either of the two scenarios analyzed here could prove more significant than the short- and medium-term impacts cited in the main body of the text.

After 5 years of permanent legislation and the changes in farm structure likely to accompany it, the agricultural sector would find it difficult to operate without continued large-scale public support. Program commodity producers would depend on supports, directly or indirectly, for as much as one-third of their gross incomes and over one-half of their net incomes. Their asset and equity positions would depend even more heavily on continued Government support and the capitalization of program benefits into land and other farm assets.

Withdrawal of the support provided for in permanent legislation after 1990 would result in a sharp resource contraction in the sector and touch off even greater financial adjustments than the 1986-90 adjustments likely under the no-support scenario. Continuing permanent legislation support, however, would lead to even greater dependence on the Federal Government as the 1990's progressed. The sector's competitive position in the world market would deteriorate further and domestic demand for high-priced farm products would stagnate. As a result, farmers would look to the CCC as the outlet for an increasingly large share of their products—products produced in many cases at higher unit costs that weaken any improvement in income. Program costs would also rise at an increasing pace and possibly double from 1990 levels before mid-1990's.

After 5 years of no price and income supports, the farm sector would have contracted significantly. Many of its less efficient and highly leveraged operators would have been forced out of business and possibly 30 million acres of land would have been abandoned. However, return on new investment in lower priced assets would approach, and possibly exceed, returns under permanent legislation. The sector would also have shifted to a lower cost structure. This lower cost structure, combined with stronger growth in demand for lower priced farm products here and abroad, would narrow differences in net farm incomes between scenarios significantly by the mid-1990's. In short, the farm sector would be in a stronger position to compete with other sectors in the domestic market for resources and with other exporters internationally for a growing world market.

The Probability of Reverting to Permanent Legislation or Eliminating Price and Income Supports

The likelihood of reverting to permanent legislation or operating without price and income supports is quite small. Support programs have been in effect in the United States for the past 50 years and have served as an important safety net for farmers. Congress has also chosen consistently since the 1950's to pass new, temporary legislation every 4 years rather than revert to the permanent support programs.

A reversion to permanent legislation has obvious drawbacks. First, the cost of such action would be substantial and come at a time when the cost of Government programs in general has come under close scrutiny. Secondly, reverting to permanent legislation would essentially isolate the sector from market forces both here and abroad. Domestically, this would eventually result in a less productive and eventually less profitable agriculture. Internationally, reverting to the permanent support programs would underwrite the other exporters as they squeezed the United States out of the world market.

Similarly, operating without price and income support programs would have serious drawbacks. A decision to eliminate supports would be enormously disruptive in its early stages as producers adjusted and prices and supplies moved up and down dramatically from year to year in response to changing domestic and international market conditions. The market and the sector would eventually adjust to this new environment, but only after a painful and extended adjustment process.

Thus, while this study does not describe likely policy outcomes for 1985-90, its value lies in its identification of the general direction and approximate magnitude of the changes likely throughout the economy with more or less Government intervention in farm prices and incomes.

APPENDIX I. PERMANENT LEGISLATION AND NO-SUPPORT IMPACTS
ASSUMING VARIABLE YIELDS AND EXPORTS

The permanent legislation and no-support scenarios reported on in the main body
of this report assumed that the United States would experience normal weather
and regular growth in export demand over the remainder of the decade. These
simplifying assumptions were made in order to focus as clearly as possible on
the different support programs considered and to avoid the problem of
forecasting year-to-year fluctuations in yields and exports.

But as the experience of the last decade demonstrates, year-to-year
fluctuations in weather and exports have become increasingly important
determinants of the state of U.S. agriculture. As appendix table 1 indicates,
swings in U.S. output due to fluctuations in yields have more than doubled
since 1960 and have become a major source of widening price and income
movements. Widening swings in foreign production as well, combined with
changing trade policies and an increasingly unstable international economic
environment, have also worked to increase year-to-year swings in U.S. exports
dramatically. Hence, the results reported on so far overlook a critical
consideration--how the permanent support and no-support programs would perform
with variable yields and exports.

This appendix reports on changes in the farm and nonfarm indicators cited in'
the text using the same permanent legislation and no-support program provisions
and economic assumptions, but allowing yields and exports to fluctuate.
Alternative permanent legislation and no-legislation scenarios were analyzed
assuming good weather, bad weather, strong export demand, weak export demand,
good weather plus weak export demand, and bad weather plus strong export
demand.

The year-to-year fluctuations in yields assumed in the weather scenarios were
estimated using an all-crop yield trend for the 1960-83 period to identify the
5-year periods within these 24 years with the largest deviations above and
below trend. Deviations from trend for the individual crops for the two 5-year
periods identified in this manner were then superimposed on the normalized
yields described in the main body of the report. For the good weather

Appendix table 1--Interannual fluctuations in
                   agricultural production, selected
                   countries and regions 1/

Country or region	1961-71	1972-83
	Percent	
United States	1.5	3.5
EC-10	2.1	3.2
Australia	4.1	5.5
USSR	5.0	6.1
Mexico/Central America	1.1	3.0
North Africa/Middle East	2.9	3.9
East Asia	4.4	7.1

1/ Measured as the coefficient of variation from
best-fit linear or curvilinear time trends.

scenario, the year-to-year swings in wheat, feed grain, soybean, and cotton yields experienced during the 1960-64 period were superimposed on the normalized 1986-90 yields (appendix table 2). For the bad weather scenario, the unusually poor 1974-78 yield pattern was superimposed on the same normalized yields.

Since the good and bad weather cases were based on trend analysis of an all-crop yield series, not all the individual crops in a given year have higher or lower than normal yields. For example, in the first year of the good weather scenario, wheat and soybean yields were somewhat above trend while corn and cotton yields were below trend. This approach made it possible to estimate scenario probabilities (roughly 5 percent for the weather scenarios and 2 to 3 percent for the combined weather and export demand scenarios) and avoid the bias likely if individual crop yields were analyzed and no provision was made for tradeoffs between above- and below-trend yields in different commodities in the same season.

Year-to-year swings in export demand were estimated using the same procedure (appendix table 3). The strong export demand scenario superimposed 1978-82's unusually favorable export demand deviations from trend on the normalized exports used in the main body of the study. The weak export demand scenario superimposed the unfavorable 1968-72 pattern on the normalized exports.

Permanent Legislation with Variable Yields and Exports

With support programs setting a price floor well above open-market levels, differences in commodity prices, farm incomes, and food prices between the normalized permanent legislation scenario and the scenarios providing for

Appendix table 2--Yield deviations assumed under the good
weather and bad weather scenarios

Year 1/	:	Wheat	:	Corn	:	Soybeans	:	Cotton
Good weather scenario:	:	Percent deviation from normalized yields						
1986 (1960)	:	8.3		-5.1		0.4		-0.7
1987 (1961)	:	-2.8		4.1		5.9		-3.1
1988 (1962)	:	-.3		4.0		.7		.5
1989 (1963)	:	-1.4		5.2		.2		13.1
1990 (1964)	:	-1.0		-5.9		-7.6		12.4
Bad weather scenario:	:							
1986 (1974)	:	-11.9		-20.0		-14.9		-9.1
1987 (1975)	:	-2.8		-6.2		2.6		-7.3
1988 (1976)	:	-5.2		-6.8		-8.3		-5.4
1989 (1977)	:	-5.4		-6.1		6.3		5.2
1990 (1978)	:	-4.7		2.0		1.0		-15.5

1/ The years shown in parentheses correspond to the year of the yield deviation used in the analysis.

variable yields and exports were small. Differences in the cost of operating support programs, however, proved quite large.

Commodity prices differed little, if at all, between the normalized and variable yield and export scenarios. Under the good weather scenario, the increased output resulting from higher yields accumulated as added CCC stocks acquired at the same loan rates as in effect under the normalized yield scenario. Permanent legislation's support levels were also high enough to rule out any significant increase in prices under the low yield scenario, under either the weak or strong export demand scenarios, and under the scenario combining good weather and weak exports. Only with an unusually bullish combination of poor weather and strong exports would commodity prices change significantly, possibly rising 10 to 30 percent above loan rate levels. Moreover, prices proved sensitive only if the shock of the poor weather and strong export scenario occurred early in the 5-year period, before enough stocks had accumulated to overhang the market.

Gross receipts and net farm income varied more widely between the normalized and variable yield and export scenarios, but differences remained small. With high loan rates ruling out commodity price movements, changes in farmers' receipts and income were due solely to changes in the volume of products put under loan. Individual commodity receipts increased 4 to 8 percent while net returns increased 20 to 30 percent with high yields; poor yields resulted in a

Appendix table 3--Export volume deviations assumed under the
weak and strong export demand scenarios

Year 1/	:	Export volume 2/
	:	
	:	Percent deviation from
	:	normalized exports
	:	
Weak export scenario:	:	
	:	
1986 (1968)	:	-19
1987 (1969)	:	-32
1988 (1970)	:	-21
1989 (1971)	:	-31
1990 (1972)	:	-17
	:	
Strong export scenario:	:	
	:	
1986 (1968)	:	+8
1987 (1969)	:	+11
1988 (1970)	:	+17
1989 (1971)	:	+13
1990 (1972)	:	+2
	:	

1/ The years shown in parentheses correspond to the year of the export deviation used in the analysis.

2/ As in the yield case, an all-export index was used to identify the 5-year periods for which individual commodity deviations were calculated. For reference purposes, export volume over the 1980-83 period averaged 157 million tons.

comparable drop in returns. However, the mix of good and bad wheat, corn, soybean, and cotton yields in any one year kept gross receipts and net income for agriculture as a whole largely unchanged between scenarios. Receipts and income also did not change between the strong and weak export scenarios, again because any increase or decrease in demand here or abroad under permanent legislation would be reflected in adjustments in CCC stocks rather than in changes in production or prices.

Government costs, however, differed widely between the normalized scenario and the variable yield and export scenarios. Under the good weather scenario, loan placements and forfeitures rose significantly. Storage costs were $2 to $4 billion higher while "recoverable" CCC loan outlays were $6 to $8 billion higher for the 5-year period. Low yields, on the other hand, reduced combined loan and storage program costs $10 to $12 billion. The extremely bearish combination of weak exports and good yields generated an added $15 to $20 billion in CCC activity for the period as a whole. The equally improbable combination of poor yields and strong exports cut Government expenditures by one-half as market forces pushed prices and incomes above parity-linked levels and reduced the CCC's loan and storage activities sharply.

Food prices and food consumption expenditures did not differ significantly between the normalized and variable yield and export scenarios. Food prices increased significantly faster--1 to 2 percentage points per year--than in the normalized scenario only if the low yield and strong export combination happened early in the period before large CCC stocks accumulated to overhang the market. High loan rates acting as a commodity price floor prevented any significant slowing in food price increases even in the improbable case of good yields combined with low exports.

No-Support Impacts With Variable Yields and Exports

Changes in the price, income, and program cost indicators were significantly greater under the no-support scenario for a given swing in yields or exports than under permanent legislation. With no programs to support prices in periods of surplus or dampen prices during periods of tight supply, commodity prices were considerably more variable--variable enough to translate into significant swings in farm income and food prices.

Commodity prices under the poor weather scenario averaged 10 to 30 percent above prices under the normalized no-support scenario. The transition reserve dampened upward pressure on prices early in the 5-year period. However, no stock accumulation program was in place to replenish stocks drawn down during the first few years of the period. Results under the good weather scenario reflected this same set of factors. Without any reserve program to ease the price pressure generated by several years of good harvests, commodity prices fell significantly below the levels projected under the normalized no-support scenario.

Crop receipts and farm income under the no-support scenario tended to follow the general pattern associated with swings in yields and exports for commodities facing an inelastic market. When yields were low and prices rose, total receipts rose. Total receipts fell, however, with higher yields and lower prices. This pattern was reversed under permanent legislation; high support prices worked to reduce income in poor crop years and raise it in good crop years.

Net farm income also followed a more predictable pattern under the no-support scenario. With low yields, net farm income averaged 75 percent above the levels projected under the high-yield scenario. In the final year of the simulation under the high yield scenario, net farm income dropped to close to zero, indicating the severe stress that could result from a combination of several years of high yields and low prices in the absence of support programs.

With public involvement in the sector minimal, changes in Government payments between the normalized and variable yield and export scenarios with supports eliminated were negligible. Differences in consumer prices were significant, however, reflecting the wide swings in prices possible in the absence of support programs. This was particularly true for the low probability scenarios combining high yields with low exports and low yields with high exports. Under the high and low yield scenarios, food prices could average 1 to 2 percentage points per year higher or lower than under the normalized scenario. Under the combined low yield/high export scenario or under the high-yield/low-export scenario, however, food price increases could average 3 to 5 percentage points higher or lower. A 1-percentage-point increase or decrease in food prices could translate by 1990 into a $4 to $5 billion change in food consumption expenditures.

Conclusions

Broadening the analysis to include variable yields and exports did not change the study's major findings. It did, however, serve to emphasize that the main study projections are subject to considerable year-to-year movement--even if the basic trends at play over the next 5 years have been properly identified. This is particularly true for Federal program costs under permanent legislation and farm income and food prices with supports eliminated.

With variable yields and exports, Government program costs could be substantially greater, but not much lower, than under the normalized permanent legislation scenario. Permanent legislation's program costs of $50 billion in 1990 could reach $70 to $80 billion in 1990 with a combination of high yields and low exports. Given the experience of the last 20 years, this combination has a probability of 1 in 20. Program costs could be negligible and would not vary measurably under the no-support scenario despite yield and export shocks.

Farm incomes would not vary significantly under permanent legislation, despite export and yield variations. Income could become variable, however, with supports eliminated and could vary as much as $10 to $15 billion in any one year, from as high as $30 billion to approaching zero. Food prices would not change much with yield and export variations from the results reported under the normalized permanent legislation scenario. However, food prices could rise or fall significantly from year to year under the no-support scenario, swinging food consumption expenditures $10 billion or more.

APPENDIX II. EXPORT DEMAND ELASTICITIES

The impacts of adopting either of the support alternatives analyzed in the
main body of this report depend heavily on the sensitivity of U.S. exports to
changes in commodity prices. The export levels shown in table 32 assume that
the price elasticity of export demand is approximately 1--that is, a 10-percent
change in commodity prices would generate a 10-percent change in export volume.
The individual commodity elasticities used in the study were:

Wheat	-0.8 to 1.0
Coarse grains	- .9 to 1.1
Soybeans	- .8 to 1.0
Cotton	- .5 to .7

These elasticities were taken from various sources 1/ and provide for two
basic components:

- the responsiveness of import demand abroad to changes in U.S. export
  prices (including, in turn, the responsiveness of production and use in
  importing countries to changes in prices); and

- the responsiveness of export supply abroad to changes in U.S. export
  prices (including, in turn, the responsiveness of production and use in
  the competing exporting countries to changes in prices).

While the elasticities shown above do not differ greatly between commodities,
their individual import demand and export supply components differ greatly.
For example, world import demand is considerably more inelastic for wheat than
for coarse grains. However, export supply in the competitor countries is
considerably more elastic for wheat than for coarse grains. As a result,
their overall export demand elasticities are comparable.

The price elasticities assumed in this study differ from the elasticities used
in many other export demand studies. Some agricultural economists contend that
the price elasticity of export demand is considerably greater, possibly twice
the magnitude assumed here. Others, however, contend that exports are
essentially insensitive to changes in trade prices.

The use of higher or lower export demand elasticities in keeping with other
studies would have little or no effect on the main conclusions reached here.
Use of higher export demand elasticities under the permanent legislation
scenario would generate lower export volume, larger Government stocks, and
greater Government expenditures. More inelastic export demand assumptions
would mean more exports than shown in table 32 for the permanent legislation
scenario, but only marginally lower stocks, Government expenditures, and no
changes in commodity market prices.

1/ The elasticities were derived from a number of different sources including
Alternative Futures for World Food in 1985, Volumes I-III, by Anthony Rojko and
others, FAER-146, FAER-149, and FAER-151; Sources of Recent Changes in U.S.
Agricultural Exports, Staff Report AGES831219, by John Dunmore and James
Longmire; and A Strong Dollar Dampens Demand for U.S. Farm Exports, by James
Longmire and Arthur Morey, FAER-193. All reports were published by the
Economic Research Service, U.S. Department of Agriculture.

The opposite would occur under the no-support scenario. With lower elasticities, exports would expand more slowly, but leave the sector facing the same adjustment problems. With higher elasticities, exports would expand faster, but not fast enough to change major conclusions--unless the elasticities used were several times larger than the elasticities used in this study.

The elasticities shown in table 31 were modified somewhat before being used to calculate the export volume estimates shown in table 32. Individual commodity elasticities were raised or lowered fractionally--generally less than 10 to 20 percent--between years to take into account factors such as: biological lags in the expansion or contraction of animal numbers, the difference in shortrun supply responses with rising prices versus prices declining, political and "trading partner" affiliations, and lags in consumption changes with changing prices. Adjustments were also made to reflect differences between scenarios in factors other than price. For example, under the no-support scenario, U.S. trade policy would change dramatically and put the United States in a position to compete aggressively for market share rather than serve as the world's residual supplier.

Acreage Allotment. An individual farm's share, based on its previous production, of the national acreage needed to produce sufficient supplies of a particular crop; currently used only for tobacco.

Acreage Reduction Program (ARP). A voluntary land retirement system in which farmers reduce their planted acreage from a historical "base acreage" level. This is generally an unpaid reduction that is often required for participation in other agricultural programs.

Agricultural Stabilization and Conservation Service (ASCS). An agency of the U.S. Department of Agriculture responsible for administering farm price and income support programs as well as some conservation and forestry cost sharing programs; local offices are maintained in nearly all farming counties.

Basic Commodities. Six crops (corn, cotton, peanuts, rice, tobacco, and wheat) declared by legislation as requiring price support.

Bilateral Agreement. A two-country agreement for the exchange of a given volume of specified products during a specified time period.

Carryover. The inventory of a farm commodity not yet used at the end of a marketing year. Marketing years generally start at the beginning of the new harvest for a commodity.

Commodity Credit Corporation (CCC). A wholly owned Federal corporation within, and managed by officials of, the U.S. Department of Agriculture. It functions as the financial institution through which all money transactions involving farm price and income support take place.

Deficiency Payment. Government payment made to farmers who participate in feed grain, wheat, rice, or cotton programs; payment rate is per bushel (pound or hundredweight) based on the difference between a target price and the higher of either the market price or the loan rate, whichever difference is less. See Target Price.

Disaster Payment. Federal aid provided to farmers for feed grains, wheat, rice, and upland cotton either when planting is prevented or crop yields are abnormally low because of adverse weather and related conditions. No premium is charged for this insurance.

Export Allocation or Quota. Control applied to exports by an exporting country to limit the amount of goods leaving that country.

Export Subsidy. A Government grant, made to a private enterprise, for the purpose of facilitating exports.

Farm. Any enterprise that has or would have had $1,000 or more in gross sales of farm product.

Farmer-Owned Grain Reserve. Program designed to provide protection against wheat and feed grain production shortfalls and to provide a buffer against unusually sharp price movements. Farmers place their grain in storage and receive an extended nonrecourse loan for 3 to 5 years. Interest on the loan

may be waived and farmers may receive annual storage payments from the Government. Farmers cannot take grain out of storage without penalty unless the market price reaches a specified "release price." When the release price is reached, farmers may elect to remove their grain from the reserve but are not required to do so. However, at that point the storage and interest incentives may be reduced or eliminated.

Federal Crop Insurance. A voluntary risk management tool, available to farmers since the 1930's, that protects them from the economic effects of unavoidable adverse natural events. Administrative costs are appropriated by the Congress and 30 percent of the insurance costs are federally subsidized.

Federal Marketing Orders and Agreements. Intended to promote orderly marketing, a means authorized by legislation for agricultural producers to collectively influence the supply, demand, or price of particular commodities. Approved by a required number of a commodity's producers--usually two-thirds-- the marketing order is binding on handlers of the commodity. It may limit total marketings, prorate the movement of a commodity to market, or impose site and grade standards. Currently 41 marketing orders are in effect.

Food Stamp Program. A USDA program designed to help low-income households afford an adequate and more nutritious diet. The program began in 1961.

General Agreement on Tariffs and Trade (GATT). An agreement negotiated in 1947 among 23 countries, including the United States, to increase international trade by reducing tariffs and other trade barriers. This multilateral agreement provides a code of conduct for international commerce. GATT also provides a framework for periodic multilateral negotiations on trade liberalization and expansion. Seven sessions have been held, including most recently, the Tokyo Round Multilateral Trade Negotiations, begun in 1973 and ended early in 1979.

International Trade Barriers. Regulations used by governments to restrict imports from, and exports to, other countries. Examples are tariffs, embargoes, import quotas, and unnecessary sanitary restrictions.

Import Quota. The maximum quantity or value of a commodity allowed to enter a country during a specified period of time.

Loan Rate. The price per unit (bushel, bale, pound) at which the Government will provide loans to farmers to enable them to hold their crops for later sale. The Agriculture and Food Act of 1981 established minimum loan rates for wheat, feed grains, and rice, and set soybean and cotton rates by a formula reflecting an average of previous years' market prices. See Nonrecourse Loans.

Marketing Quota. Under certain agricultural programs, that quantity of a commodity that will provide adequate and normal market supplies. When marketing quotas are in effect (only after approval by two-thirds or more of the eligible producers voting in a referendum), growers who produce in excess of their farm acreage allotments are subject to marketing penalties on the "excess" production and are ineligible for Government price support loans. Quota provisions have been suspended for wheat, feed grains, and cotton since the 1960's. Rice quotas were abolished in 1981. Quotas are still used for domestically consumed peanuts, but not for exported peanuts. For certain tobaccos, a poundage limitation is applicable as well as acreage allotments.

Multilateral Agreement. Agreement or program involving three or more
countries--such as the General Agreement on Tariffs and Trade. See Bilateral
Agreement.

National Farm Program Acreage. The number of harvested acres of feed grains,
wheat, and cotton needed nationally to meet domestic and export use and to
accomplish any desired increase or decrease in carryover levels. Program
acreage for an individual farm is based on the producer's share of the
national farm program acreage.

Nonrecourse Loan. Price support loan to farmers to enable them to hold their
crops for later sale, usually within the marketing year. The loan is
nonrecourse in that farmers can forfeit without penalty the loan collateral
(the commodity) to the Government as settlement of the loan. See Loan Rate.

Normal Crop Acreage. The acreage on a farm normally devoted to a group of
designated crops. When a set-aside program is in effect, a farm's total
planted acreage of such designated crops plus set-aside acreage cannot exceed
the normal crop acreage, if the farmer wants to participate in the commodity
loan program or receive deficiency payments.

Normal Yield. A term designating the average historical yield established for
a particular farm or area. Normal production would be the normal acreage
planted in a commodity multiplied by the normal yield.

Paid Diversion. A voluntary land retirement system in which farmers are paid
for foregone production from their base acreage.

Parity Price. Price per bushel, pound, or bale that would be necessary for a
bushel today to buy the same quantity of goods (from a standard list) that a
bushel would have bought in the 1910-14 base period at the price then
prevailing.

Payment Limitation. A limitation set by law on the amount of money any one
individual may receive in farm program payments, such as deficiency and
disaster payments, each year under the feed grain, wheat, cotton, and rice
programs. The limitation, currently $55,000, does not include the value of
loans received.

Permanent Legislation. The statutory legislation upon which many agricultural
programs are based (for the major commodities, principally the Agricultural
Adjustment Act of 1938 and the Agricultural Act of 1949). Although these laws
are frequently amended for a given number of years, they would once again
become law if current amendments, such as the 1981 Act, were to lapse or new
legislation not be enacted.

Public Law 480. Enacted in 1954 to expand foreign markets for U.S.
agricultural products, combat hunger, and encourage economic development in
the developing countries. Makes U.S. agricultural commodities available
through low interest, longterm credit under Title I of the Act, and as
donations for famine or other emergency relief under Title II. Under Title I,
the recipient country agrees to undertake agricultural development projects to
improve its own food production or distribution. Title III authorizes "food
for development" projects.

Set-Aside. A program to limit production by restricting the use of land. Restriction is placed on the amount of a farmer's total cropland base used for production rather than on the acres used to produce a specific crop.

Target Price. Commodity price target level established by law for wheat, feed grains, rice, and cotton. If the market price falls below the target price by an amount equal to (but not more than) the difference between the target price and price support loan levels, a deficiency payment is made to farmers. See Deficiency Payment.

Tariff. A system of duties imposed by Government on both imported and exported goods. Sometimes used as a means of generating revenue.

**United States
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