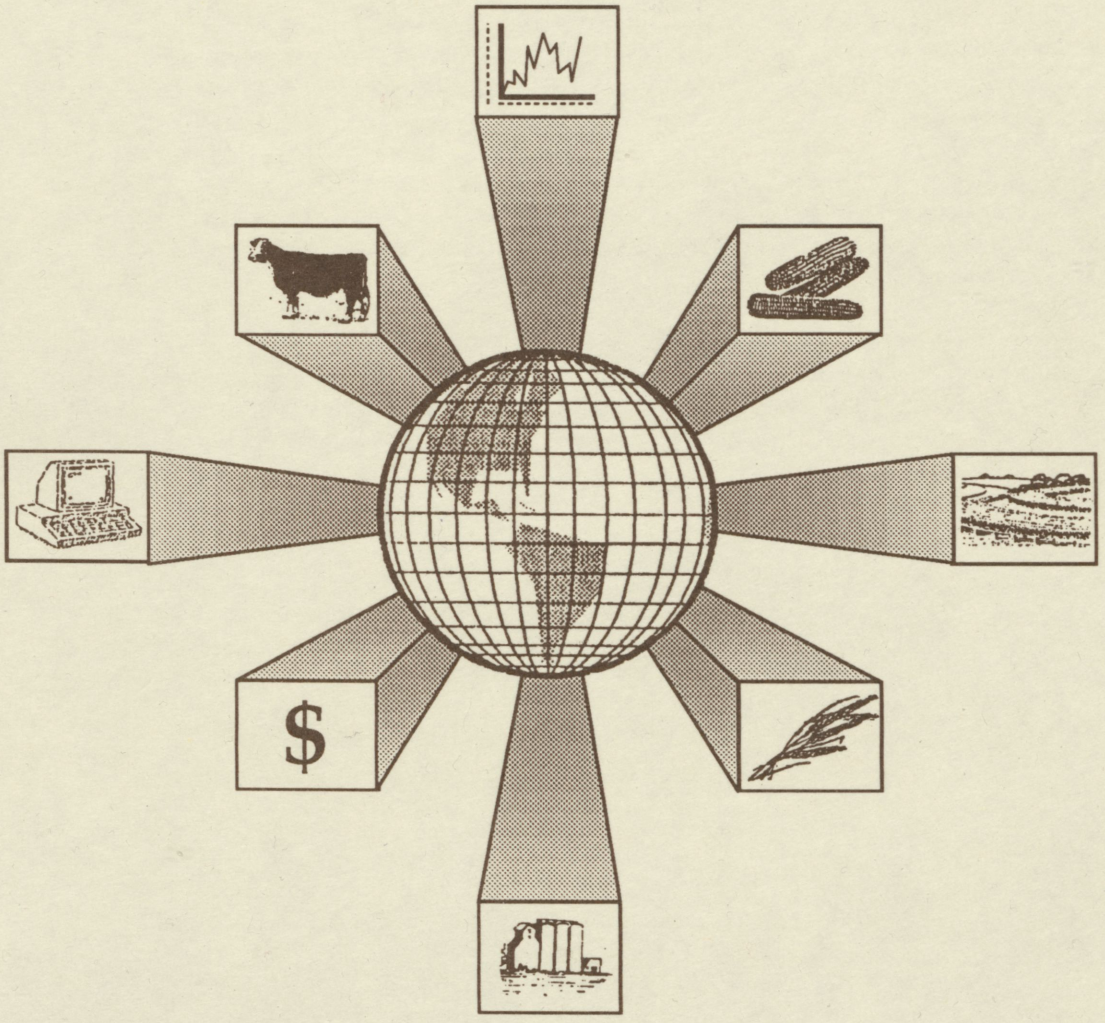
FAPRI staff report
U.S. and World Agricultural Outlook

Summary and Tables

February 1989



Food and Agricultural Policy Research Institute

Iowa State University
University of Missouri-Columbia

FAPRI U.S. and World Agricultural Outlook

Baseline projections for the U.S. agricultural sector and international agricultural commodity markets are produced periodically by the Food and Agricultural Policy Research Institute (FAPRI). These projections incorporate macroeconomic and financial forecasts from the WEFA Group (Bala Cynwyd, Pennsylvania) and domestic and trade policy assumptions for major participants in world markets for feed grains, soybeans, wheat, and rice.

The purpose of the FAPRI projections is to evaluate implications of current and projected agricultural policies of the United States and other countries in the context of a likely world macroeconomic and financial environment. Results are intended for use by producers, government agencies and officials, agribusinesses, and others who do intermediate and long-term planning. Consequences of macroeconomic, financial, and agricultural policy for the performance of U.S. agriculture and the international commodity markets are emphasized in the interpretations of the results.

Past FAPRI outlooks have included projections for each of the next ten years. This outlook presents specific projections only for the next five years (crop years 1988/89-1992/93 for crops; calendar years 1989-1993 for livestock). For the following five years, only period averages are presented. This emphasizes the greater reliability of the shorter-run projections and enables inclusion of more historical information on the printed tables.

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Staff Report #1-89
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FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE

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FAPRI #1-89 was produced at the Center for Agricultural and Rural Development, Iowa State University, on a Xerox Documenter System. The authors gratefully acknowledge the following:

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SUMMARY OF THE FAPRI OUTLOOK

The Macroeconomic Environment

The macroeconomic environment over the ten-year projection period is generally favorable for the U.S. export market. World real GDP continues the moderate growth path that has characterized the past few years but is not expected to match the 3.5 percent average growth rate achieved in 1988. Most developed market economies and the Pacific Basin are expected to experience a slowdown in 1989 and 1990 before resuming moderately good GDP growth rates.

World economic performance since 1985 and into the projection period is substantially improved over the recession years of the early 1980s, but it is not as robust as that experienced during the 1970s. Economic growth patterns in the developing market economies are diverse. Some in Latin America and Africa struggle under heavy external debt while others, such as the Asian newly industrialized countries and China, sustain growth above the world average rates.

The purchasing power of the U.S. dollar relative to most developed country currencies is projected to continue declining throughout the projection period, but at a lower rate than in the past four years. Prices of U.S. exports enhance the competitive position of the United States in international markets. The depreciation of the dollar is more pronounced relative to currencies in Western Europe and Japan than to those of other high-income countries. The dollar is even expected to appreciate relative to the currencies of Brazil, Australia, and Argentina during the 1990s.

The Policy Environment

The Food Security Act of 1985 (FSA85) has survived the first half of its 1985-1990 term with only minor revisions. The durability of the FSA85 can be attributed to an absence of politically viable alternatives and the variety of interests served by the legislation. The FSA85 has helped make U.S. agricultural commodities more competitive in world markets while protecting producer returns and promoting soil and water conservation. The primary drawback of the FSA85 has been the high cost to the federal treasury. Indeed, budgetary concerns have motivated most of the revisions to the legislation and would be the likely source of any further changes.

The FAPRI projections are conditioned on the assumption that the FSA85, as amended, will remain in effect until it expires in 1990. Within the framework of the FSA85, however, the drought of 1988 has resulted in significant changes in commodity program parameters. The drought reduced crop inventories and increased commodity prices. Acreage reduction rates for feed grains and wheat were reduced and are likely to be maintained at lower levels during the projection period. Higher commodity prices will make it necessary to increase conservation reserve (CR) rental rates if the CR is to reach the projected 40 million acres by 1990, the minimum specified by law.

For these projections, it is assumed that the new farm bill will hold target prices constant at the 1990 level, and that loan rates and dairy support prices will continue to be adjusted based on formulas in the current legislation. The Export Enhancement Program is phased out and acreage reduction programs are adjusted to maintain price paths for major agricultural products that increase slowly in the 1990s, when normal weather is assumed to return.

Other countries are also assumed to continue current agricultural policies. This means, for example, that the European Community is presumed to hold domestic support prices for grains at constant nominal levels throughout the projection period. The policy assumptions behind these projections do not incorporate changes that may result from the current GATT negotiations or from domestic pressures that have led to past changes in agricultural policies. If changes occur, they are likely to reduce agricultural subsidies and to increase trade.

Commodity Markets

Crop prices fell sharply when the FSA85 was implemented, and prices for wheat, feed grains, and soybeans remained low until the summer of 1988. The drought resulted in sharp increases in market prices and dramatic reductions in crop inventories. With less carryover and continued weather concerns, commodity prices are likely to be volatile until the size of the 1989 crop is known.

Assuming normal weather and no unexpected demand shocks, prices of major crop commodities are likely to fall in 1989/90 and 1990/91, as production increases and stocks rebuild. After 1990/91, prices are projected to increase, primarily through increased export demand. The FSA85 commodity programs are operated to generate this price path, with significant, but declining, government costs.

As market prices increase, the gap between participant and nonparticipant returns is reduced and commodity program participation rates decline. An additional factor discouraging participation during the latter years is the requirement that program participants meet conservation compliance provisions. Cotton and rice participation rates remain high, since market prices are low relative to target prices. Surplus capacity continues to be a more serious problem for these commodities.

Generic certificates have played an important role in reducing commodity prices, particularly for corn and wheat, by making inventories available to the market that otherwise would be locked up in government stocks. This method of stock adjustment has been particularly evident since the onset of the drought. With government stocks reduced to levels more consistent with long-term stock/use ratios, certificates are expected to play a less important role in commodity markets in future years.

Feed costs increased dramatically because of the drought, reducing profitability of the livestock sector in 1988. Cattle and hog slaughter was higher in 1988 than it would have been without the drought, due to some liquidation of breeding stock. The result is an even sharper decline in 1989 and 1990 beef production than otherwise would have occurred after an inventory buildup, and a slowing of the increase in pork production. Broiler prices increased sharply in 1988, as producers were able to pass along higher feed costs without significantly cutting profit margins.

After 1990, the relative retail prices of meat stabilize, and the movement of consumers away from beef and toward chicken and turkey is projected to slow. Steer prices are projected to average about $75 per hundredweight, with cyclical movements in production resulting in opposite movements in prices. Hog prices bottom near $40 per hundredweight when production peaks in 1992, but they improve to average $50 in the mid-1990s. Broiler prices remain flat through 1993 and then increase modestly alongside increases in feed costs.

Trade

The combination of lower prices, a more favorable U.S. exchange rate, increased world import growth, and an aggressive export subsidy program has caused a dramatic turnaround in the volume and value of U.S. agricultural exports since the low point in 1985/86.

The volume of exports for the major program crops increased by nearly 48 percent between 1985/86 and 1987/88. The value of this export volume increased by more than 50 percent. The drought of 1988 reduced U.S. export volumes, with the soybean industry taking the most severe cuts. Due to increased prices, however, the value of exports in 1988/89 is expected to increase.

The near-term outlook for grains is for the U.S. to maintain most of the gain in market share achieved in the past few years, but to experience little growth in export volume and value. Soybean and soybean product exports are expected to remain below the levels of recent years, as the domestic industry continues to be constrained by the current commodity programs. Foreign producers are responding to relative market prices and domestic producers are responding to higher program prices for feed grains and market prices for soybeans.

The longer-term export picture is more favorable. World import growth is stronger in the second half of

the decade and EC exports of competitive products are restrained by the constant level of domestic support prices. Much of the export growth is in the markets of developing countries, emphasizing the importance of continued economic growth in these countries and the sensitivity of agricultural exports to macroeconomic and financial policy.

U.S. Acreage

The acreage planted to major U.S. crops has been declining during the FSA85 in response to the large amount of acreage idled by government programs. As the acreage reduction program is cut back in response to the drought, planted acreage is expected to increase by more than 20 million acres in 1989/90 and to remain fairly stable at that level for the next few years. Growth in planted area resumes in the latter half of the decade, as export-led price increases bring more land into production.

Idled land, which reached a peak of nearly 80 million acres in 1989/90, is reduced by 24 million acres in 1989/90. It remains at about 60 million acres for the next few years. The big change in idled acreage is a shift from the annual acreage reduction programs, which accounted for two-thirds of the idled acreage in 1988/89, to the long-term conservation reserve, which accounts for two-thirds of the idled acreage from 1990 onward.

In the latter part of the decade, land idled in annual acreage reduction programs falls to less than 15 million acres. At this level the capacity to respond to drought is substantially reduced. The recent drought resulted in a 20-million-acre increase in planting in 1989, this from a very high level of feed grain stocks coming into the drought year.

Stocks

Even in past years when large areas of cropland have been idled, the United States has had larger reserve supplies in crop inventories than in the production capacity of idled acreage. Crop inventories had become very burdensome during the early 1980s, and the FSA85 was designed in part to reduce stock levels. The commodity programs were reducing inventories, but the drought of 1988 led to a dramatic reduction in stock levels. The projected levels of ending stocks for feed grains and wheat, from the current crop year onward, are smaller than they have been in the recent past, except for a period in the mid-1970s. This lower level of stocks, along with the lower amount of land idled in annual acreage reduction programs, creates the potential for volatility in prices.

Government Costs

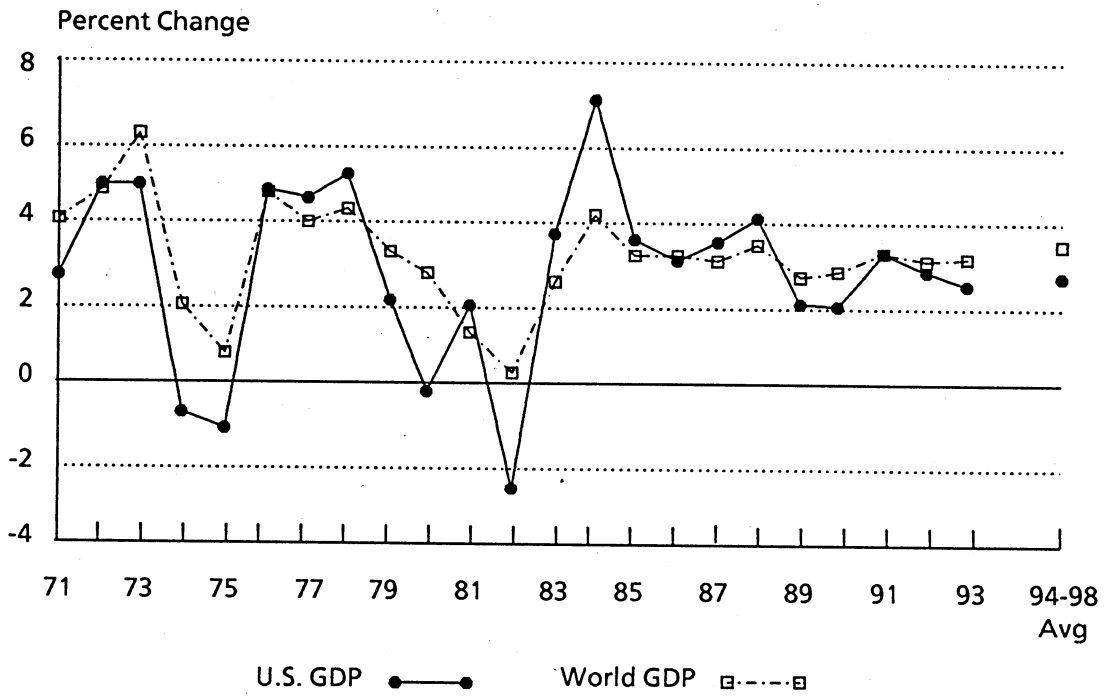
Government costs reached a peak level of 25.8 billion dollars in the last year of the 1981 bill, and they remained high during the first year of the FSA85. Costs were dramatically reduced during FY88, primarily because of the reduced outlays for commodity loan and stock programs. In FY89 deficiency payments decline sharply as a result of higher prices during the drought year. However, the drought assistance payments approximately offset the decline in deficiency payments and are expected to result in costs approximately equal to those of FY88.

Over the next few years government costs are expected to decline gradually but to remain in the range of 10-12 billion dollars. More than two billion dollars of this is for rental payments in the long-term conservation reserve. In the latter half of the decade, costs are expected to average about three billion dollars lower -- in the range of seven to nine billion dollars -- on an annual basis.

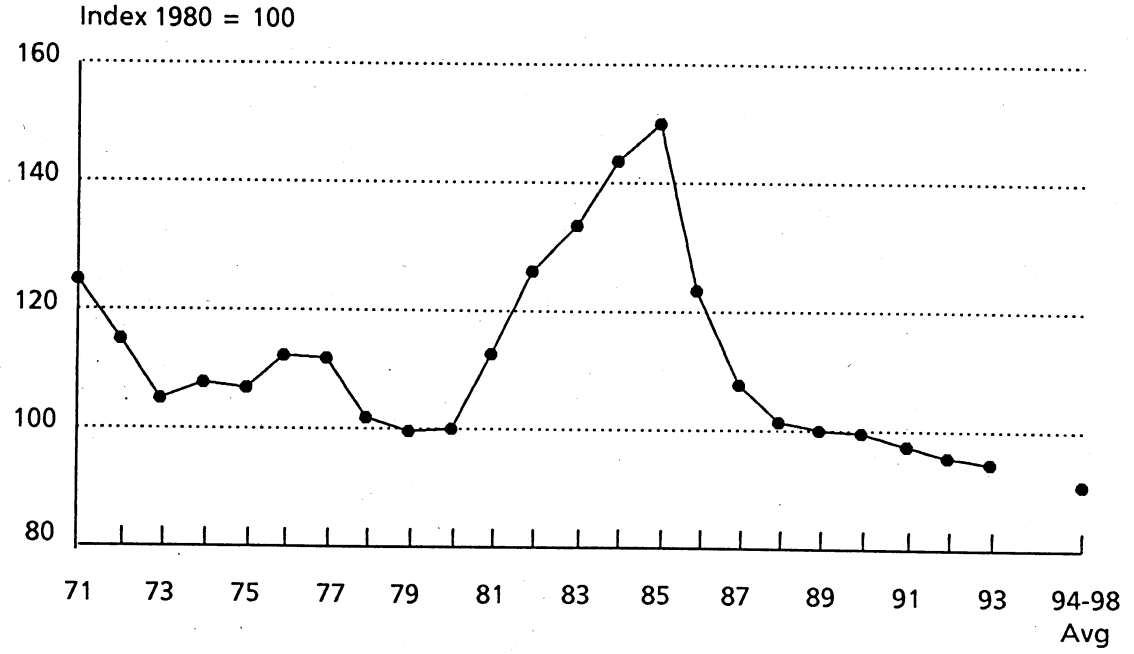
Net Farm Income

The net farm income before inventory change is a relatively stable indicator of income, in that it avoids the sometimes wide fluctuations in the value of inventory. By this measure, net farm income reached record levels of 46-47 billion dollars in 1987 and 1988. The projections are for gradually declining net farm income levels, as increases in production expenses are expected to exceed the growth in cash receipts from marketings. The decline in government payments, from the peak of nearly 17 billion dollars in 1987 to less than 9 billion dollars in 1993, also contributes to this decline in income. This decline in payments is associated with falling target prices until 1990, and with lower rates of participation in commodity programs as market prices increase in the out period.

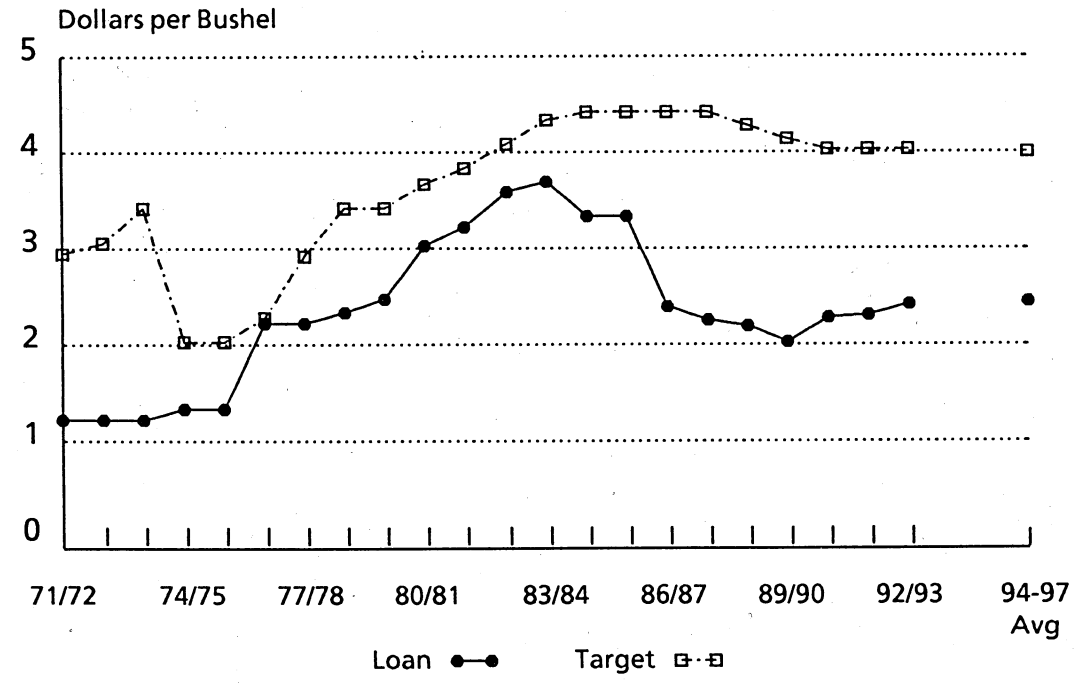
REAL GDP GROWTH RATES



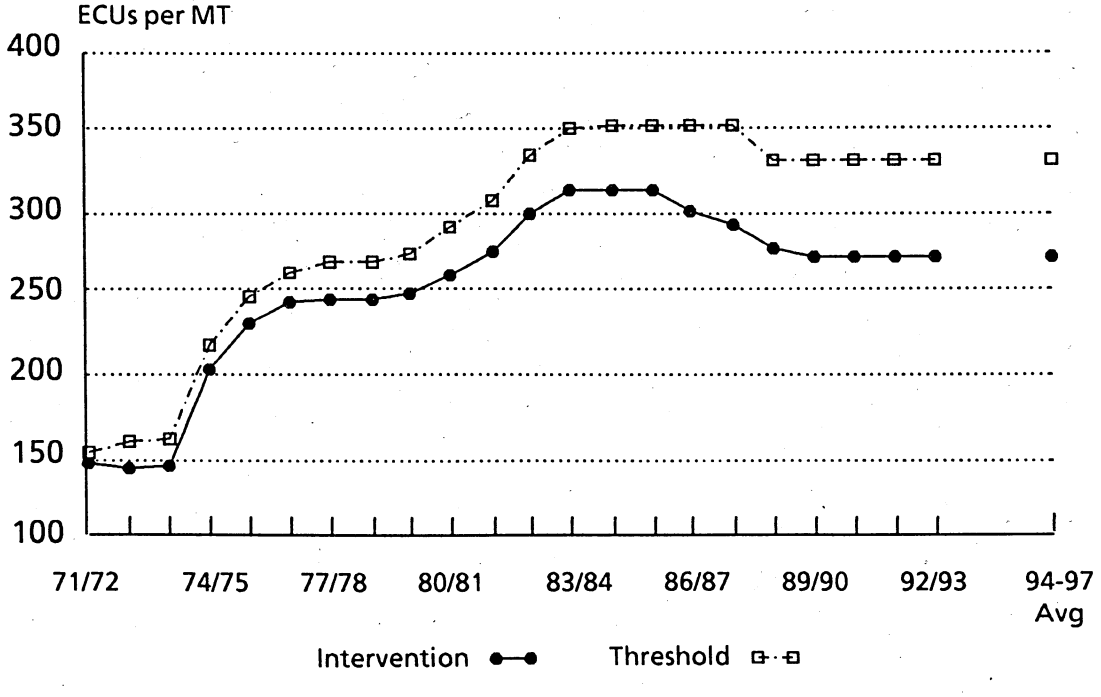
MERM EXCHANGE RATE



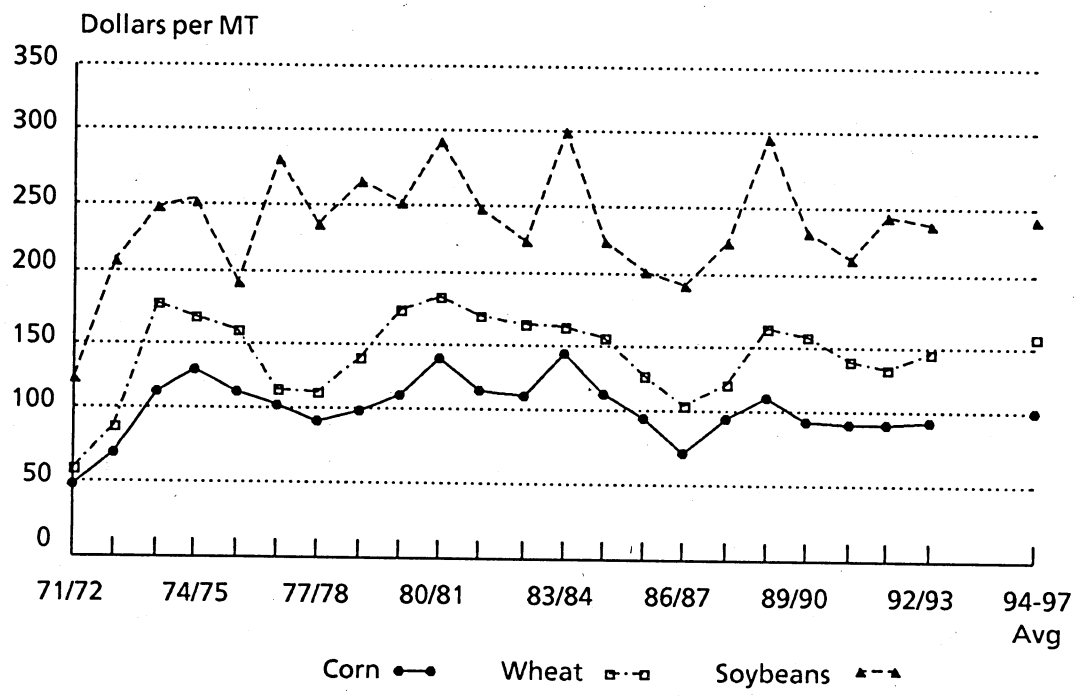
U.S. WHEAT POLICY PRICES



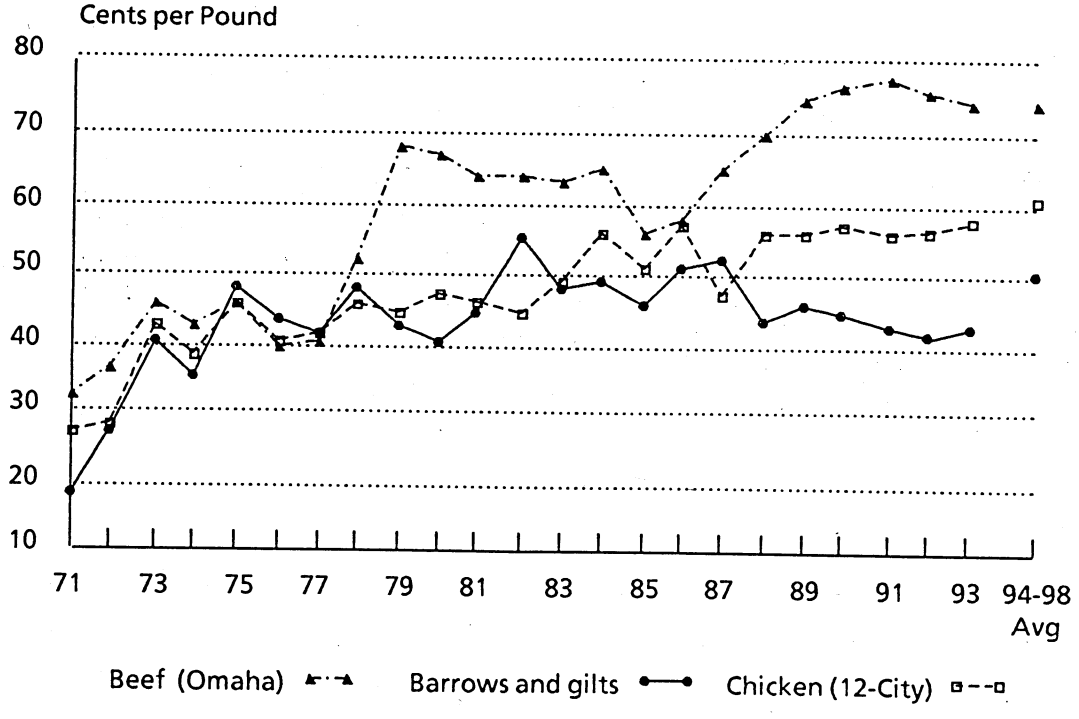
EC WHEAT POLICY PRICES



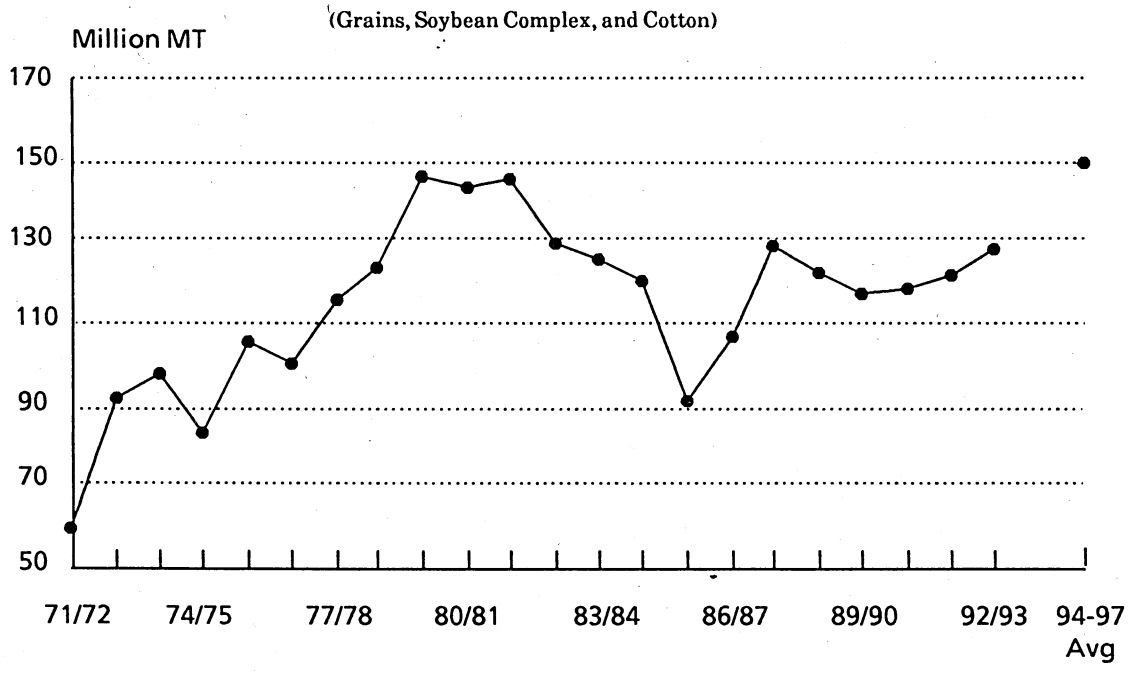
GULF PORT PRICES



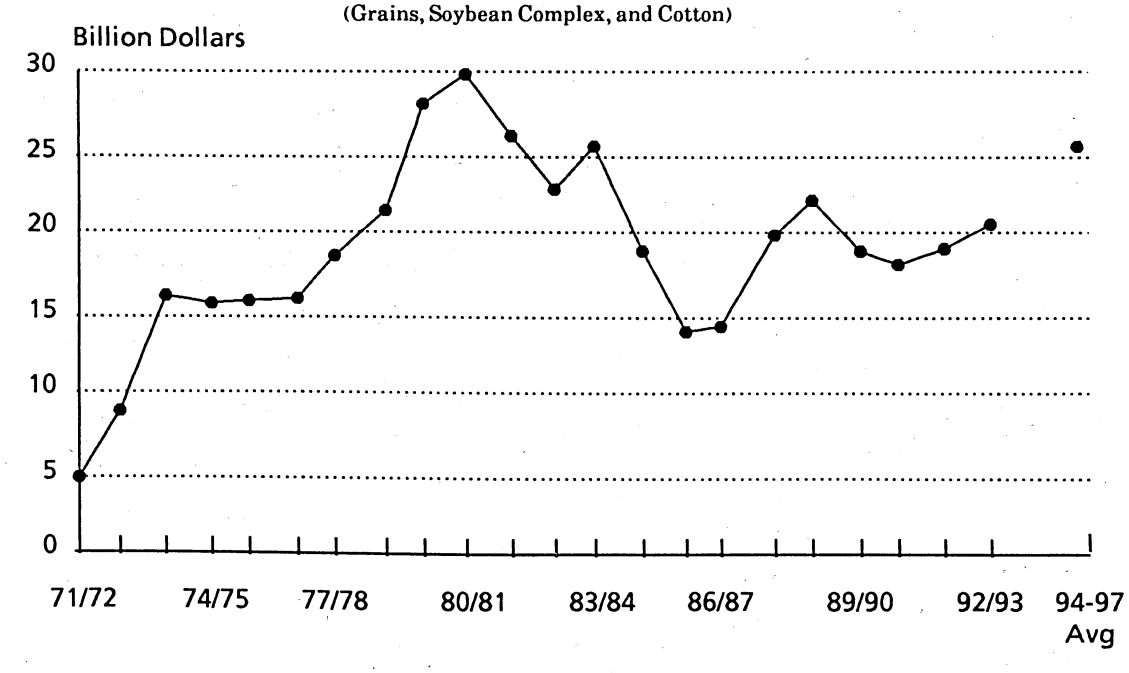
U.S. LIVESTOCK PRICES



VOLUME OF U.S. EXPORTS
(Grains, Soybean Complex, and Cotton)

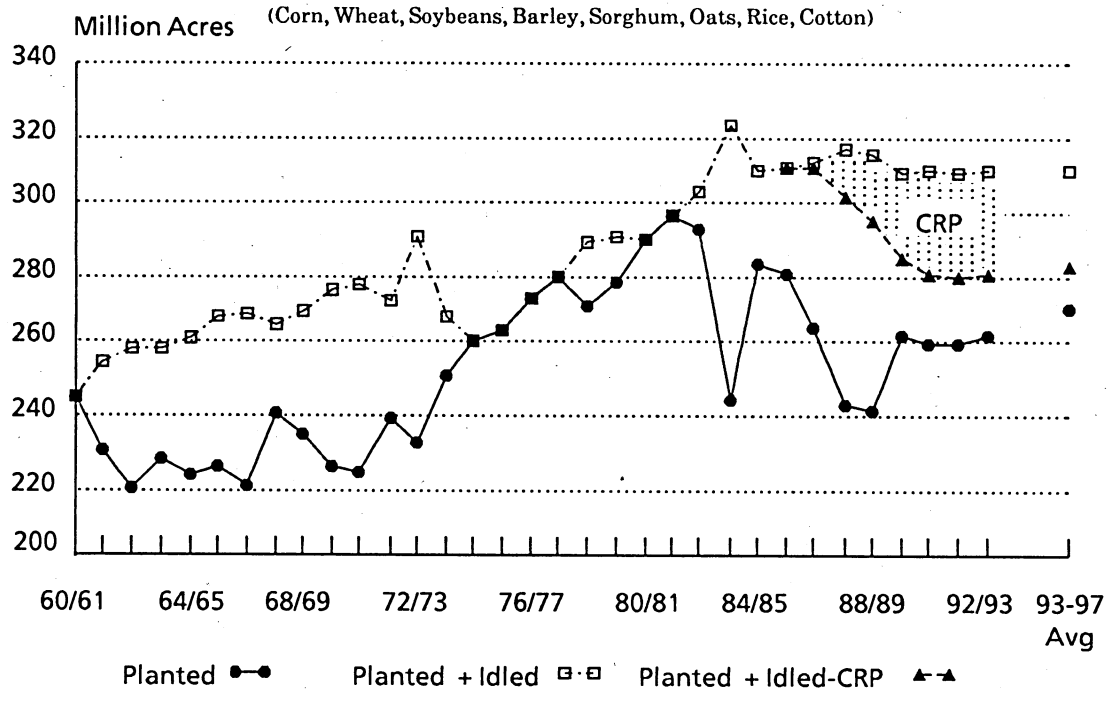


VALUE OF U.S. EXPORTS
(Grains, Soybean Complex, and Cotton)



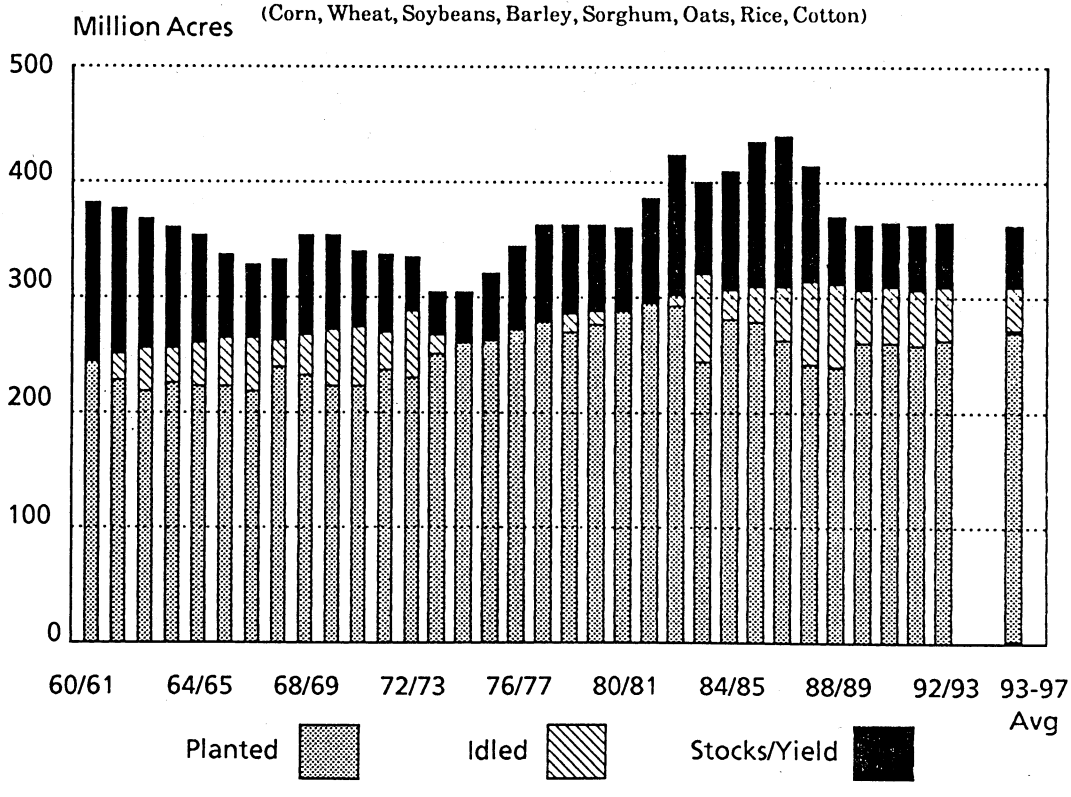
U.S. CROP ACREAGE

(Corn, Wheat, Soybeans, Barley, Sorghum, Oats, Rice, Cotton)

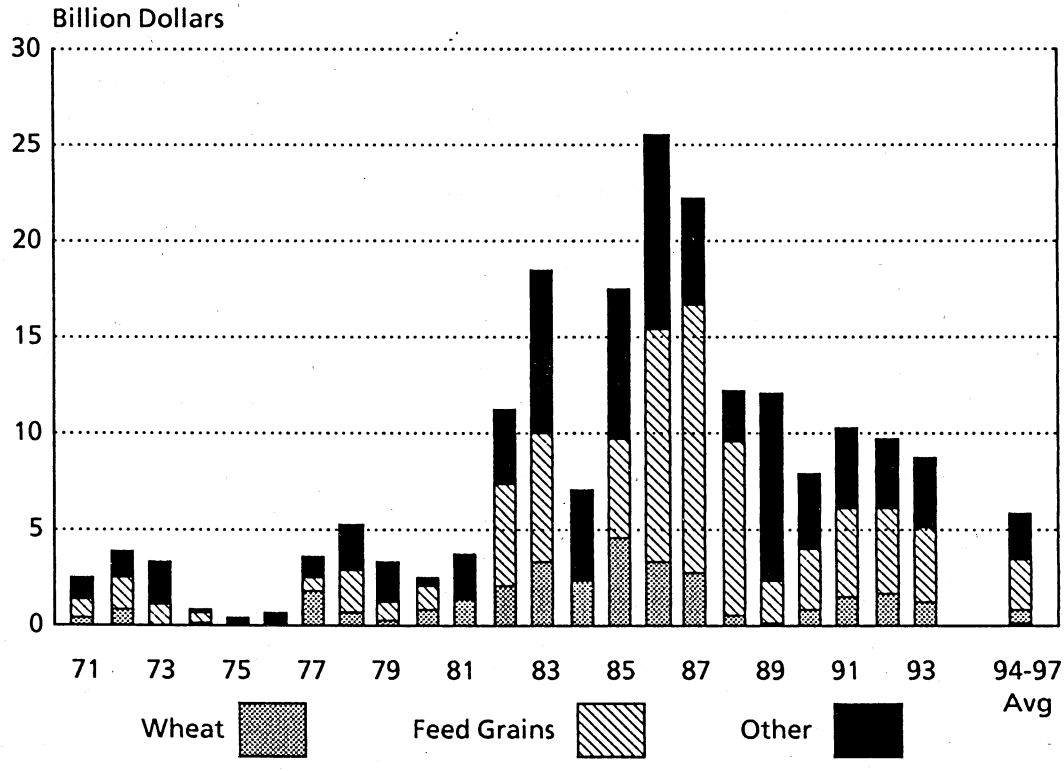


U.S. CROP ACREAGE AND INVENTORIES

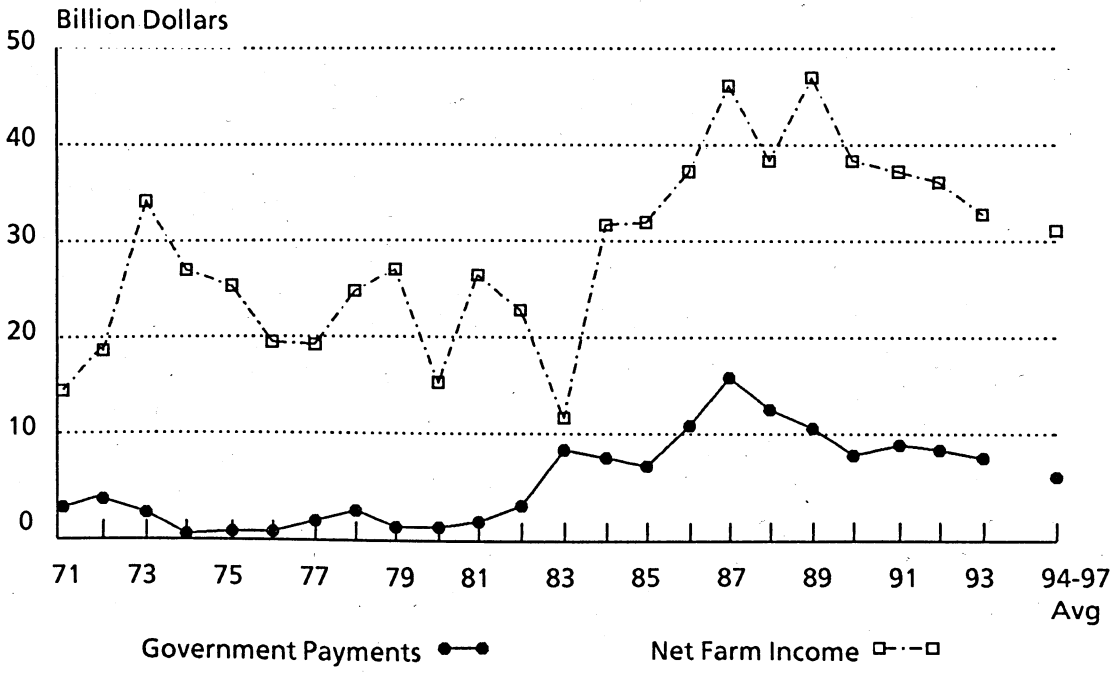
(Corn, Wheat, Soybeans, Barley, Sorghum, Oats, Rice, Cotton)



NET CCC OUTLAYS



NET FARM INCOME AND GOVERNMENT PAYMENTS



MACROECONOMIC ASSUMPTIONS

- The WEFA Group is projecting U.S. and world **economic growth** to slow in 1989 and 1990. After 1990, U.S. economic growth ranges from 2.5 to 3.3 percent per year, and world economic growth averages about 3 percent per year. No recession is included in the WEFA projections.
- As in recent years, the most rapid growth occurs in the **Pacific Basin**. The developing countries of **Latin America** and **Africa** grow more rapidly than in recent years.
- U.S. **inflation** is projected to increase slightly in 1989 and 1990, but is projected to remain between 4 and 5 percent throughout the next ten years.
- **Interest rates** are projected to increase in 1989, returning to 1988 levels by 1991.
- The federal **budget deficit** is projected to widen in 1989, then to narrow over time. An assumed tax increase in 1991 helps cut the deficit by more than $50 billion that year.
- No significant reduction in the **trade deficit** is foreseen. The WEFA Group projects continued current account deficits in the $150 billion range.
- Further **devaluations** of the dollar are projected over the next ten years. The dollar falls most against the currencies of Japan, Korea, and Taiwan, with smaller declines against European currencies.
- The dollar is not projected to decline in value against the currencies of competing exporters such as Canada and Australia. High rates of inflation are expected to continue in Argentina and Brazil, so those countries will continue to devalue their currencies against the dollar.
- The **oil price** is projected to remain flat through the end of 1990. After that, prices are projected to increase rapidly throughout the forecast period, as stagnant worldwide exploration and increasing consumption lead to a tighter supply-demand situation in the early 1990s.

Domestic and Foreign Economic Projections

Variable/Year	1985	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
United States					(Percent)						
Real GDP (Change)	3.6	3.1	3.5	4.1	2.0	2.0	3.3	2.8	2.5	*	2.6
GDP Deflator (Change)	2.4	3.1	3.0	3.7	4.2	4.7	4.5	4.3	4.1	*	4.3
Unemployment Rate	7.2	7.0	6.2	5.4	5.6	6.2	5.8	5.6	5.6	*	5.1
3-Month T. Bill Rate	7.5	6.0	5.8	6.6	8.0	7.0	6.2	6.1	6.2	*	6.3
Moody's AAA Bond Rate	11.4	9.0	9.4	9.9	10.7	9.8	9.0	8.9	9.0	*	9.2
MERM Exchange Rate (Change)	4.2	-18.0	-11.7	-5.8	-1.3	-0.6	-2.0	-1.9	-0.8	*	-1.6
					(Billion Dollars)						
Federal Budget Surplus	-196.9	-205.6	-157.8	-141.3	-158.8	-139.6	-87.8	-84.8	-83.2	*	-35.4
Current Account	-116.4	-141.4	-160.7	-140.5	-141.2	-138.6	-156.2	-156.9	-160.9	*	-158.2
Foreign					(Dollars Per Barrel)						
Saudi Light Oil	27.8	14.0	16.7	14.7	14.7	14.9	15.9	17.4	19.4	*	24.7
Real GDP					(Percent Change)						
World	3.2	3.2	3.1	3.5	2.7	2.8	3.3	3.1	3.1	*	3.2
Africa	3.4	-0.9	0.8	2.0	2.1	2.3	2.8	2.8	3.1	*	2.9
Latin America	3.8	4.2	1.8	0.0	1.4	4.0	4.7	4.6	4.3	*	4.5
Pacific Basin	2.0	7.3	8.8	7.3	6.0	4.5	5.3	5.6	6.1	*	5.7
Western Europe	2.6	2.7	2.6	3.2	2.3	2.6	2.8	2.8	2.8	*	2.8
Centrally Planned	3.3	4.9	3.0	3.1	3.2	3.7	3.1	3.4	3.6	*	3.4
Foreign Currency/$					(Percent Change)						
Argentina (real)	18.2	-4.1	0.8	-7.5	24.7	6.8	5.4	3.4	2.7	*	4.0
Brazil (real)	3.9	-5.1	-13.9	11.1	2.8	25.2	9.3	-4.6	1.4	*	2.8
Canada	5.4	1.8	-4.0	-7.4	1.3	1.2	-0.6	-0.6	2.1	*	-0.1
Australia	25.5	4.5	-4.3	-9.3	-0.9	5.2	4.4	3.7	1.9	*	0.6
Thailand	14.9	-3.2	-2.2	-1.4	-2.1	-4.4	-0.6	0.1	0.1	*	-0.1
Japan	-0.2	-29.3	-13.9	-11.1	-3.7	-2.9	-4.2	-4.8	-3.2	*	-4.0
EEC	3.6	-22.3	-15.0	-0.5	-2.4	-0.1	-1.8	-1.7	-1.7	*	-1.5
S. Korea	7.9	1.3	-6.7	-11.7	-9.8	-5.4	-3.1	1.1	1.3	*	-1.0
Taiwan	0.6	-5.0	-15.8	-10.4	-7.4	-6.7	-4.3	-3.9	-3.4	*	-3.9

SOURCE: The WEFA Group, October 1988, for projections through 1993. Projections for 1994-98 assume a continuation of conditions prevailing during the 1991-93 period.

U.S. AND WORLD POLICY ASSUMPTIONS

- **Target prices** are set in accordance with the Food Security Act, as amended, through the 1990/91 crop year. We assume new legislation will freeze target prices at 1990/91 levels.
- **Loan rates** are assumed to follow formulas set by current legislation throughout the projection period. Some loan rates increase after 1989/90, as the moving average of market prices increases.
- Wheat and feed grain **Acreage Reduction Program (ARP) rates** are reduced to 10 percent in 1989/90 as a result of the drought. The wheat ARP rate is reduced to 5 percent in 1990/91 and remains at that level for the remainder of the projection period. The feed grain ARP rate increases to 12.5 percent in 1990/91, then falls back to 10 percent for 1995/96 and beyond. Cotton and rice ARP rates are set at 25 percent from 1989/90-1991/92, and reduced to 20 percent in 1992/93.
- The **conservation reserve** is assumed to reach 40 million acres by 1990/91, as rental rates on future enrollment are increased 25 percent. As CRP land becomes eligible to leave the reserve in 1996/97, it is assumed that only one-half of the eligible land will actually return to crop production.
- Because of the drought and the reduction of government stocks, fewer generic **certificates** are being issued during the 1988/89 crop year. It is assumed that 50 percent of advanced deficiency payments will be made in certificates beginning next year, but that all other payments will be made in cash.
- The **Export Enhancement Program** is assumed to continue at fiscal 1989 levels ($775 million per year) through fiscal 1991. Funding is assumed to drop by $125 million per year after fiscal 1991.
- The **European Community** (EC-12) and **Japan** are assumed to hold commodity price supports at current levels during the projection period.
- The difference between EC-12 policy prices and world commodity prices has narrowed in 1988/89 by virtue of effects of the drought on world prices. However, EC-12 policy prices remain well above world prices throughout the projection period. Japanese support prices continue to exceed world prices by several orders of magnitude.

Key Program Provisions

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
Target Prices				(Dollars per Bushel)						
Corn	3.03	3.03	3.03	2.93	2.84	2.75	2.75	2.75	*	2.75
Sorghum	2.88	2.88	2.88	2.78	2.69	2.60	2.60	2.60	*	2.60
Barley	2.60	2.60	2.60	2.51	2.43	2.35	2.35	2.35	*	2.35
Oats	1.60	1.60	1.60	1.55	1.49	1.44	1.44	1.44	*	1.44
Wheat	4.38	4.38	4.38	4.23	4.10	4.00	4.00	4.00	*	4.00
Rice ($/cwt)	11.90	11.90	11.66	11.15	10.80	10.71	10.71	10.71	*	10.71
Cotton (¢/lb.)	81.00	81.00	79.40	75.90	73.40	72.90	72.90	72.90	*	72.90
Loan Rates				(Dollars per Bushel)						
Corn	2.55	1.92	1.82	1.77	1.65	1.58	1.55	1.58	*	1.60
Sorghum	2.42	1.82	1.74	1.68	1.56	1.48	1.43	1.51	*	1.54
Barley	2.08	1.56	1.49	1.44	1.35	1.51	1.53	1.57	*	1.54
Oats	1.31	0.99	0.94	0.90	0.85	1.11	1.24	1.31	*	1.38
Soybeans	5.02	4.77	4.77	4.77	4.53	4.50	4.50	4.50	*	4.50
Wheat	3.30	2.40	2.28	2.21	2.06	2.29	2.31	2.42	*	2.46
Rice ($/cwt)	8.00	7.20	6.84	6.63	6.50	6.50	6.50	6.50	*	6.50
Cotton (¢/lb.)	57.30	55.00	52.25	51.80	50.00	50.00	50.00	50.00	*	50.00
ARP Rates				(Percent)						
Corn	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
Sorghum	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
Barley	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
Oats	10.0	17.5	20.0	5.0	5.0	5.0	5.0	5.0	*	5.0
Wheat	20.0	22.5	27.5	27.5	10.0	5.0	5.0	5.0	*	5.0
Rice	20.0	35.0	35.0	25.0	25.0	25.0	25.0	20.0	*	20.0
Cotton	20.0	25.0	25.0	12.5	25.0	25.0	25.0	20.0	*	20.0
PLD Program				(Percent)						
Corn	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Sorghum	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Barley	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Oats	0.0	2.5	15.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Wheat	10.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Rice	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Cotton	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0

Key Program Provisions (continued)

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PLD Payment Rate				(Dollars per Bushel)						
Corn	---	0.73	2.00	1.75	---	---	---	---	*	---
Sorghum	---	0.65	1.90	1.65	---	---	---	---	*	---
Barley	---	0.57	1.60	1.40	---	---	---	---	*	---
Oats	---	0.36	0.80	---	---	---	---	---	*	---
Wheat	2.70	2.00	---	---	---	---	---	---	*	---
Rice ($/cwt)	3.50	---	---	---	---	---	---	---	*	---
Cotton (¢/lb)	30.00	---	---	---	---	---	---	---	*	---
Other Idled Area				(Million Acres)						
Cons. Reserve	0.0	2.0	17.7	25.5	33.0	40.0	40.0	40.0	*	38.0
0/92 & 50/92	0.0	3.5	6.9	9.1	5.5	4.0	3.1	2.0	*	0.6
CRP Rental Rate				(Dollars per Acre)						
New Enrollment		45.53	51.18	47.70	62.69	62.69	---	---	*	---
Average		45.53	48.70	48.39	51.63	53.57	53.57	53.57	*	53.57
Payments in Certs				(Percent)						
Adv. Deficiency										
Feed Grains		50	50	50	20	50	50	50	*	50
Wheat		50	50	50	20	50	50	50	*	50
Rice		40	50	50	25	50	50	50	*	50
Cotton		40	50	50	25	50	50	50	*	50
Reg. Deficiency										
Feed Grains		50	100	0	0	0	0	0	*	0
Wheat		50	100	0	0	0	0	0	*	0
Rice		25	100	0	0	0	0	0	*	0
Cotton		25	100	0	0	0	0	0	*	0
Final Deficiency										
Feed Grains		50	50	0	0	0	0	0	*	0
Wheat		50	60	0	0	0	0	0	*	0
Diversion										
Feed Grains		100	75	100	0	0	0	0	*	0
Wheat		100	0	0	0	0	0	0	*	0
CRP Rental		100	50	0	0	0	0	0	*	0
Export Enhancement				(Million Dollars)						
Program Expend.		643	1,200	775	775	775	650	525	*	225

Foreign Policy Assumptions

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
EC-12				(ECU/mt)						
Intervention										
Wheat	179	179	179	179	176	176	176	176	*	176
Barley	179	179	170	170	167	167	167	167	*	167
Rapeseed	421	421	408	408	405	405	405	405	*	405
Japan				(Yen/mt)						
Gov't Purchase										
Rice	311,133	311,133	292,617	292,617	292,617	292,617	292,617	292,617	*	292,617
Wheat	184,867	182,717	180,417	180,417	180,417	180,417	180,417	180,417	*	180,417
Barley	167,320	164,580	162,500	162,500	162,500	162,500	162,500	162,500	*	162,500

Foreign Policy and World Prices

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Dollars/mt)						
Wheat										
EC-12	153	191	208	211	209	211	215	219	*	229
Japan	942	1,179	1,329	1,434	1,482	1,537	1,609	1,675	*	1,890
U.S. Gulf	132	114	114	165	158	142	136	147	*	160
Barley										
EC-12	153	191	197	200	198	201	204	208	*	217
Japan	853	1,062	1,197	1,292	1,335	1,384	1,450	1,509	*	1,703
U.S. N. Pacific	102	91	101	153	122	114	110	111	*	119
Rice										
Japan	1,586	2,007	2,155	2,326	2,404	2,492	2,610	2,717	*	3,066
FOB Bangkok	225	221	294	288	279	283	284	295	*	326
Rapeseed										
EC-12	360	448	472	479	482	487	496	504	*	528
Western Canada	218	199	262	323	253	225	263	259	*	262

WORLD FEED GRAINS

- Because of the large increase in Soviet imports and the effects of the drought on Canadian production, the **United States** is expected to export nearly 56 million metric tons (mmt) of corn, sorghum, and barley. As Soviet imports return to more normal levels and Canadian exports recover, U.S. exports fall in 1989/90, then grow to surpass the 1988/89 level by 1992/93.
- **U.S.** export market share is projected to be about 67-68 percent in 1988/89 and 1989/90, before falling to about 64 percent during the early 1990s. During the 1993-97 projection period, increasing world demand pulls the U.S. export share back to an average of nearly 68 percent.
- Drought has reduced 1988/89 **Canadian** barley production by nearly 4 mmt. It is expected to reduce exports by nearly 1 mmt from 1987/88 levels, to 3.5 mmt. Exports increase to about 5.6 mmt by 1992/93 and remain in this range through the 1993-97 period.
- **EC-12** intervention prices for feed grains are not projected to increase, so production will increase mostly with yield increases. Net exports are expected to be more than 9 mmt in 1988/89 after a large crop and to drop to less than 6 mmt in 1989/90. In contrast to the last decade, EC net exports stabilize over the next decade as a result of policy changes.
- **Thai** corn production and exports are returning to normal levels in 1988/89 following good monsoon rains. Increases in domestic use of corn by the poultry industry in Thailand keep Thai exports stable at about 2.6 mmt through 1992/93. Slightly higher production during the 1993-97 period allows corn exports to increase slightly.
- Increasing incomes will continue to expand **Japanese** demand for feed grains. Imports are projected to increase by more than 2 mmt by 1992/93 and to average nearly another 2 mmt above this level over the last five years of the outlook.
- A nearly 13 mmt decrease in **Soviet** barley production will more than offset a modest increase in corn production. Soviet net imports of feed grains are expected to increase by nearly 11 mmt in 1988/89.
- As **Soviet** feed grain use continues to outpace production, imports increase slowly from 15 mmt in 1989/90 to 16.5 mmt by 1992/93. They average nearly 17 mmt during the 1993-97 period.
- **Developing countries'** incomes are projected to have moderate to strong economic growth, so feed grain imports are projected to increase fairly rapidly, particularly in the Pacific Basin and the oil-exporting countries.

Feed Grains Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 mt)						
Net Exporters										
Argentina	9,401	5,100	5,285	5,331	5,606	6,173	6,809	7,077	*	7,612
Canada	3,837	6,095	4,561	2,669	3,595	5,264	5,929	5,998	*	5,845
Australia	5,221	3,149	2,475	3,087	3,558	3,619	3,622	3,659	*	3,667
EC-12	1,641	4,005	3,421	9,361	5,746	6,605	6,802	7,053	*	6,929
Thailand	3,676	2,916	800	2,595	2,519	2,578	2,605	2,650	*	2,732
China	6,077	2,004	3,007	3,091	2,282	2,508	2,746	2,962	*	3,581
South Africa	2,940	1,888	893	1,317	1,715	1,958	2,063	2,138	*	2,220
Total Non-U.S.	32,792	25,156	20,442	27,451	25,021	28,705	30,576	31,535	*	32,584
United States	35,618	45,492	51,431	55,890	53,048	51,383	52,924	56,292	*	68,612
(Trade Share)	52.1%	64.4%	71.6%	67.1%	67.9%	64.2%	63.4%	64.1%	*	67.7%
Total	68,410	70,648	71,873	83,340	78,069	80,088	83,499	87,828	*	101,196
Net Importers										
Japan	21,254	21,050	22,471	21,963	22,529	23,159	23,803	24,518	*	27,005
USSR	12,373	10,039	9,311	20,105	15,224	16,035	16,338	16,552	*	16,927
Eastern Europe	3,423	619	3,113	4,616	3,534	2,182	2,448	2,890	*	4,443
Brazil	2,132	1,591	171	266	875	897	1,032	1,082	*	1,320
Mexico	2,315	4,218	4,061	4,190	3,386	3,533	3,683	4,042	*	4,444
Oth. Lat. America	2,428	2,842	4,072	3,501	3,201	3,523	3,516	3,529	*	4,100
Egypt	1,870	1,604	1,305	1,238	1,519	1,578	1,640	1,780	*	2,066
Saudi Arabia	7,320	9,779	5,084	5,300	6,168	6,316	6,604	7,007	*	8,526
Oth. Africa & ME	4,401	4,557	4,152	4,345	4,630	4,852	5,165	5,661	*	6,921
Hi Inc. E. Asia	7,890	9,162	10,150	11,011	12,045	12,823	13,557	14,619	*	17,627
Other Asia	1,198	2,482	3,034	3,178	2,842	3,021	3,478	3,774	*	4,936
Other Importers	-1,469	-309	1,114	2,728	2,116	2,168	2,238	2,372	*	2,880
Developed	21,254	21,050	22,471	21,963	22,529	23,159	23,803	24,518	*	27,005
Developing	28,085	35,926	33.144	35.756	36.783	38,712	40,911	43,867	*	52,821
CPE	15,796	10,658	12.423	24,721	18,758	18,217	18,786	19,443	*	21,370
Total	68,410	70,694	71,873	83,340	78,069	80,088	83,499	87,828	*	101,196

WORLD SOYBEANS AND PRODUCTS

- **U.S.** soybean exports are projected to expand from the dismal 1988/89 level of 15.4 mmt to about 18.7 mmt by 1992/93. U.S. trade share increases from 64 percent to about 69 percent, still well below the 79 percent of 1987/88, as South American countries remain strong competitors. Trade share continues rising during the 1993-97 projection period to an average of almost 73 percent.
- **U.S.** soymeal exports are falling sharply in 1988/89 because of reduced U.S. supply and high prices, as well as strong competition from Argentina and Brazil. Meal exports recover slowly to 6 mmt by 1992/93, and the U.S. trade share increases to about the 25 percent range by the early 1990s. Trade share continues increasing to an average of about 29 percent over the last five years of the outlook..
- Recovery of **Indian** oilseed crops and continued competition from **Brazil** and **Argentina** are drastically reducing U.S. soyoil exports from 1987/88 levels. U.S. soyoil exports are projected to recover slowly between 1988/89 and 1992/93, increasing the U.S. trade share from 17 percent to 23 percent during the early 1990s, and continuing to increase to an average of 25 percent during 1993-97.
- High soybean prices and low feed grain prices have induced the 1988/89 soybean area in **Argentina** and **Brazil** to increase about 1.75 million hectares (4.2 million acres) over 1987/88, a year already characterized by large increases in competitor soybean area.
- **Argentine** and **Brazilian** soybean area is projected to increase from 16.5 million hectares in 1988/89 to nearly 17.5 million hectares by 1992/93, and to average about 18 million hectares during the last five years of the outlook. Both countries show little or no expansion of soybean exports through 1992/93, but they increase sales of soymeal and soyoil on the world market.
- Increased production of rapeseed and sunflower seed in the **EC-12** has decreased the use of soybeans over the past few years. Demand for soybeans remains down throughout the projection period.
- Increases in soybean production in the **EC-12** have further contributed to reduced imports by this region. In 1988/89, the EC-12 is expected to import approximately 11.5 mmt of soybeans, down from more than 14 mmt only two years earlier. Imports in this region reach 12.4 mmt by 1992/93 and remain stable during the 1993-97 period.
- Increasing livestock production in the **USSR** is projected to keep soymeal use slowly expanding, forcing soybean imports up from 1.5 mmt in 1988/89 to about 2.3 mmt by 1992/93, and averaging slightly above this level during the last five years of the outlook.
- High-income **Pacific Basin** countries are projected to increase soymeal use and to expand crush to meet most of this use, resulting in increases in soybean imports.

Soybean Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 mt)						
Net Exporters										
Argentina	2,566	1,292	2,099	3,503	3,339	3,519	3,516	3,559	*	3,656
Brazil	855	2,849	2,498	3,827	3,627	3,630	3,674	3,719	*	3,393
China	1,250	1,751	1,301	1,301	1,354	1,297	1,237	1,136	*	854
Total Non-U.S.	4,671	5,892	5,898	8,631	8,319	8,446	8,426	8,414	*	7,903
United States	20,158	20,600	21,827	15,421	17,237	17,901	18,383	18,686	*	21,191
(Trade Share)	81.2%	77.8%	78.7%	64.1%	67.4%	67.9%	68.6%	69.0%	*	72.8%
Total	24,829	26,492	27,725	24,052	25,557	26,347	26,810	27,101	*	29,094
Net Importers										
EC-12	13,220	14,184	12,884	11,581	12,295	12,480	12,545	12,443	*	13,095
Japan	4,800	4,870	4,850	4,751	4,922	5,050	5,123	5,189	*	5,369
Eastern Europe	770	993	940	845	713	718	705	700	*	732
USSR	2,239	1,481	1,499	1,501	1,907	2,124	2,225	2,276	*	2,336
Taiwan	1,590	2,011	1,899	1,801	1,880	1,910	1,960	2,035	*	2,405
South Korea	1,010	1,011	1,095	1,154	1,243	1,376	1,524	1,671	*	2,189
Mexico	999	1,090	1,000	1,098	1,031	1,026	1,074	1,141	*	1,324
Other Importers	398	860	3,549	1,320	1,566	1,663	1,653	1,647	*	1,646
Developed	18,020	19,054	17,733	16,332	17,217	17,530	17,668	17,633	*	18,463
Developing	3,997	4,972	7,542	5,374	5,721	5,974	6,211	6,492	*	7,563
CPE	3,009	2,474	2,440	2,346	2,619	2,842	2,931	2,976	*	3,068
Total	25,026	26,499	27,715	24,052	25,557	26,347	26,810	27,101	*	29,094

Soymeal Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 mt)						
Exporters										
Argentina	3,248	3,600	5,250	5,259	5,674	5,887	6,002	6,098	*	6,423
Brazil	6,961	8,030	7,999	8,815	9,371	9,404	9,439	9,639	*	10,324
China	1,110	1,477	1,849	1,484	1,522	1,559	1,589	1,620	*	1,700
Total Non-U.S.	11,319	13,107	15,098	15,557	16,567	16,851	17,030	17,357	*	18,447
United States	5,480	6,661	6,233	4,089	4,362	5,039	5443	6019	*	7,484
(Trade Share)	32.6%	33.7%	29.2%	20.8%	20.8%	23.0%	24.2%	25.7%	*	28.8%
Total	16,799	19,767	21,331	19,646	20,929	21,890	22,473	23,376	*	25,930
Importers										
EC-12	8,710	8,515	7,678	7,891	8,487	8,831	9,027	9,367	*	10,294
Japan	168	216	549	499	485	480	483	509	*	621
Eastern Europe	3,690	3,959	3,921	3,498	3,892	4,122	4,251	4,379	*	4,849
USSR	600	2,572	3,003	3,251	2,874	2,796	2,812	2,873	*	3,139
Taiwan	-16	-18	-39	-27	-32	49	111	166	*	271
South Korea	46	185	299	348	335	392	423	464	*	558
Mexico	95	85	167	258	190	225	254	302	*	502
Other Importers	3,657	4,261	5,753	3,927	4,698	4,996	5,113	5,315	*	5,697
Developed	8,878	8,731	8,227	8,390	8,972	9,310	9,510	9,876	*	10,915
Developing	3,783	4,512	6,180	4,506	5,192	5,662	5,901	6,248	*	7,028
CPE	4,290	6,530	6,923	6,750	6,766	6,918	7,063	7,252	*	7,988
Total	16,951	19,774	21,331	19,646	20,929	21,890	22,473	23,376	*	25,930

Soyoil Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 mt)						
Exporters										
Argentina	649	800	1,120	1,150	1,222	1,259	1,278	1,294	*	1,347
Brazil	255	916	630	758	858	814	781	818	*	897
EC-12	880	915	829	614	693	666	645	600	*	559
Total Non-U.S.	1,784	2,631	2,579	2,522	2,774	2,738	2,704	2,712	*	2,803
United States	570	538	761	509	533	748	784	835	*	924
(Trade Share)	24.2%	17.0%	22.8%	16.8%	16.1%	21.5%	22.5%	23.5%	*	24.8%
Total	2,354	3,169	3,339	3,031	3,307	3,486	3,488	3,546	*	3,727
Importers										
Japan	1	16	20	28	12	8	9	13	*	30
Eastern Europe	170	114	118	148	132	142	153	162	*	192
USSR	109	201	119	155	108	131	129	141	*	191
China	130	412	171	255	277	308	308	308	*	317
Taiwan	-6	-1	-2	-3	0	18	28	37	*	50
South Korea	0	2	3	17	6	6	1	-5	*	-30
Mexico	50	40	16	32	31	39	41	52	*	103
Other Importers	1,957	2,381	2,895	2,398	2,741	2,835	2,820	2,839	*	2,873
Developed	1	16	20	28	12	8	9	13	*	30
Developing	2,131	2,835	3,083	2,700	3,055	3,205	3,198	3,230	*	3,314
CPE	279	315	236	304	240	273	282	303	*	383
Total	2,411	3,165	3,339	3,031	3,307	3,486	3,488	3,546	*	3,727

WORLD WHEAT

- Recovery of Canadian wheat exports in 1989/90 from the drought-reduced levels of this year is seen pushing **U.S.** exports down to 36 mmt. However, steady world demand increases U.S. exports to approximately 40 mmt by 1992/93 and an average of nearly 45 mmt over the 1993-97 projection period.
- With the recovery of Canadian exports, the **United States** is projected to drop five points from its 1988/89 trade share, to 42 percent in 1989/90, and to remain between 42 and 43 percent through 1992/93. The 1993-97 period projection is for a slight increase to more than 44 percent.
- **Canadian** wheat production was reduced by more than 10 mmt following the drought in 1988. Recovery is projected for 1989/90 with a crop of 27 mmt, increasing to 29 mmt by 1992/93. Exports return to the 20 mmt level after 1988/89 and increase slowly over time.
- **EC-12** wheat production increases only marginally over the projection period, as intervention prices are assumed to remain constant in nominal terms and actually to fall in real terms. Stable production with growing consumption leads to slight declines in EC net exports.
- The recovery and further expansion of **Australian** wheat exports, particularly in the early 1990s, is partially offset by reductions in EC-12 net exports.
- Although projected to increase by nearly 3 mmt in 1989/90 over 1988/89, **Soviet** wheat imports are projected to remain at about 15 mmt throughout the remainder of the outlook period, as Soviet wheat production is increased.
- Annual world real GDP growth of more than 3 percent per year induces steady growth in world demand for wheat, with the largest increases coming in **developing countries**.
- Rapid projected income growth in parts of the **Pacific Basin**, and in oil-exporting **Africa** and the **Middle East,** push wheat imports up rapidly in these areas.

Wheat Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Million mt)						
Net Exporters										
Canada	17.63	20.98	23.51	11.80	20.16	21.06	22.09	22.61	*	23.51
Australia	16.01	15.60	9.90	11.50	11.57	12.09	12.72	13.31	*	14.73
EC	12.40	14.48	14.29	19.00	14.45	13.36	12.99	12.71	*	12.31
Argentina	4.30	4.40	3.70	3.20	4.38	4.85	4.85	4.86	*	5.51
Total Non-U.S.	50.34	55.46	51.40	45.49	50.56	51.36	52.64	53.50	*	56.07
United States	24.46	26.77	42.87	40.23	36.14	37.54	38.22	40.37	*	44.81
(Trade Share)	32.7%	32.6%	45.5%	46.9%	41.7%	42.2%	42.1%	43.0%	*	44.4%
Total Net Exports	74.80	82.22	94.28	85.72	86.70	88.91	90.86	93.88	*	100.88
Net Importers										
Japan	5.50	5.80	5.70	5.40	5.70	5.77	5.85	5.94	*	6.24
India	-0.30	-0.32	-0.45	2.44	2.14	1.30	0.70	1.22	*	0.85
USSR	15.20	15.50	21.00	12.00	14.89	15.27	15.36	15.18	*	14.85
China	6.60	8.51	15.00	15.01	11.13	11.68	12.12	12.74	*	14.14
E. Europe	0.90	1.99	1.41	-1.50	1.20	1.08	0.94	0.79	*	0.39
Other W. Europe	-0.40	-0.57	-0.28	0.17	-0.30	-0.24	-0.08	-0.02	*	-0.20
Brazil	2.51	2.70	2.05	2.44	2.19	2.52	2.79	2.86	*	3.35
Mexico	0.09	0.46	0.75	1.20	0.78	0.75	0.74	0.70	*	0.77
Oth Lat. America	4.95	5.53	5.43	5.65	5.66	5.78	5.81	5.90	*	6.31
Hi Inc. E. Asia	4.04	4.56	4.38	4.85	5.19	5.49	5.68	5.97	*	6.78
Other Asia	8.16	8.23	9.17	9.65	9.22	9.78	10.49	10.97	*	12.47
Egypt	6.30	6.02	6.43	6.40	6.42	6.43	6.51	6.69	*	6.94
Algeria	2.80	3.41	3.80	3.70	3.65	3.76	3.89	3.97	*	4.27
Tunisia	0.83	1.13	0.85	1.10	1.12	1.16	1.20	1.22	*	1.30
Morocco	2.02	1.50	1.90	1.51	1.87	2.02	2.20	2.34	*	2.74
Oth Africa & ME	10.41	14.44	13.45	12.96	13.14	13.54	13.76	14.52	*	16.80
Other Importers	5.20	3.33	3.70	2.75	2.70	2.80	2.88	2.88	*	2.88
Developed	5.10	5.23	5.42	5.57	5.40	5.53	5.77	5.92	*	6.04
Developing	53.61	59.51	66.46	69.65	65.21	67.02	68.79	71.99	*	79.60
CPE	16.09	17.49	22.40	10.50	16.10	16.35	16.30	15.96	*	15.24
Total Net Imports	74.80	82.22	94.28	85.72	86.70	88.91	90.86	93.88	*	100.88

WORLD RICE

- After remaining flat in 1988/89, **U.S.** rice exports are projected to increase by 15 percent in 1989/90. An increase in imports by Indonesia and other countries more than offsets India's return to a net exporter position. U.S. exports remain steady between 1989/90 and 1991/92, and then increase in the mid-1990s.
- The **U.S.** trade share ranges from 26 to 28 percent throughout the projection period. This represents little change from the levels of 1986-88 but a sharp increase from the U.S. trade share in 1985/86, before the marketing loan program was instituted.
- Pressures from increases in domestic demand are likely to make **Indonesia** a significant net importer of rice during the next ten years, even though the country was a net exporter in the mid-1980s.
- **Thailand** maintains its position as the leading rice exporter and holds its export market share at nearly 50 percent throughout the next decade.
- Although **Indian** production recovered in 1988/89 from the drought of 1987/88, India remains a net importer of rice as domestic consumption returns to higher levels and stocks are replenished. In 1989/90, India returns to a net export position.
- **World rice trade** is projected to increase by 4 percent in 1988/89, to 8.4 mmt. Increasing populations in rice-deficient areas drive imports up to 10.3 mmt in 1992/93 and to an average of 11.1 mmt in the 1993-97 projection period.

Rice Trade

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 mt)						
Net Exporters										
Thailand	4,338	4,345	4,788	4,524	4,670	4,767	4,878	5,051	*	5,652
Pakistan	1,297	1,300	1,100	1,136	941	1,147	1,172	1,154	*	1,132
India	245	345	-500	-299	248	369	461	528	*	615
Burma	636	467	100	302	368	388	403	421	*	463
China	700	600	400	508	453	429	480	479	*	367
Total Non-U.S.	7,216	7,057	5,888	6,170	6,681	7,100	7,396	7,634	*	8,229
United States	1,820	2,629	2,227	2,265	2,602	2,604	2,627	2,694	*	2,867
(trade share)	20.1	27.1	27.4	26.8	28.0	26.8	26.2	26.1	*	25.8
Total Net Exports	9,036	9,686	8,115	8,435	9,283	9,704	10,023	10,328	*	11,096
Net Importers										
Japan	20	17	17	195	82	111	131	125	*	51
Indonesia	-358	-192	55	56	711	908	977	997	*	962
Saudi Arabia	500	500	500	499	497	508	511	520	*	545
EC-12	228	241	43	192	157	161	166	172	*	192
Other Importers	8,646	9,120	7,500	7,493	7,836	8,017	8,238	8,514	*	9,345
Total Net Imports	9,036	9,686	8,116	8,435	9,283	9,704	10,023	10,328	*	11,096

U.S. CORN

- Because of the drought, 1988/89 U.S. corn **production** fell 30 percent from the 1987/88 level. The production decline was much sharper than that for wheat, but the increase in market prices--projected to be 30 percent--is more modest, largely because of the high level of carryover stocks from previous corn crops.
- **Planted area** is projected to increase by 7 million acres in 1989/90 to 75 million acres. The increase is based on higher market prices, the reduction of the ARP rate from 20 to 10 percent, and the elimination of the Paid Land Diversion (PLD) program. Permitting soybeans to be planted on corn base acres limits the likely increase in corn acreage. Planted area is projected to average about 75 million acres throughout the next decade.
- In spite of sharply higher prices, corn **exports** are projected to increase in 1988/89, largely because of increased Soviet imports. After falling in 1989/90 and 1990/91, corn exports reach record levels by the mid-1990s, largely because of assumed high rates of economic growth in major importing countries.
- Corn **feed use** is projected to fall slightly in 1988/89 because of higher corn prices. It will then range from 4.6 billion to 4.8 billion bushels per year, depending on animal numbers and crop and livestock prices. **Gasohol** subsidies are assumed to remain in place, so that use increases sharply. **Other uses** are projected to expand at a much slower pace than has been common in recent years, in part because corn sweeteners have almost saturated available markets.
- Corn **stocks** are projected to be cut by two-thirds during the 1988/89 marketing year. Only because of the high level of carryover was the market price increase restrained. Some stock rebuilding is projected for 1989-92. Stocks are projected to remain below 1.8 billion bushels throughout the ten-year period.
- The corn **farm price** falls to $2.15 per bushel in 1989/90 as total carryover stocks build somewhat and substantial amounts of government-held stocks move into the marketplace. After that the corn price holds at about $2.10 per bushel through 1992/93, and then rises steadily to average $2.31 per bushel over the 1993-97 projection period, driven mainly by rising export demand.

U.S. Corn Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
PLD/PIK Rate	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	69.0	86.0	90.0	88.0	73.2	75.6	73.1	69.7	*	65.4
AREA				(Million Acres)						
Base Area	84.2	81.7	81.5	83.4	82.3	81.2	81.2	81.2	*	81.5
ARP/PLD/PIK/0-92	5.4	14.6	23.2	20.1	7.3	8.4	7.9	7.4	*	5.8
CRP Idled	0.0	0.2	2.3	2.9	4.0	5.0	5.0	5.0	*	4.8
Program Planted	49.0	53.8	49.5	50.7	50.4	50.5	48.9	46.7	*	44.9
Nonprog. Plant.	34.4	22.9	16.2	16.9	24.6	23.7	25.5	27.3	*	30.4
Planted Area	83.4	76.7	65.7	67.6	75.0	74.1	74.4	74.0	*	75.3
Harvested Area	75.2	69.2	59.2	58.2	67.3	66.7	66.9	66.6	*	67.9
YIELD				(Bushels per Acre)						
Actual Yield	118.0	119.3	119.4	84.6	117.2	118.4	119.9	121.4	*	125.7
Program Yield	106.0	105.0	104.0	105.0	105.0	105.0	105.0	105.0	*	105.0
				(Million Bushels)						
SUPPLY	10,536	12,292	11,958	9,185	9,465	9,541	9,709	9,805	*	10,222
Beg. Stocks	1,648	4,040	4,882	4,259	1,575	1,642	1,677	1,718	*	1,687
Production	8,877	8,250	7,072	4,921	7,885	7,893	8,027	8,082	*	8,531
Imports	11	2	4	5	5	5	5	5	*	5
DOMESTIC USE	5,255	5,906	5,967	5,674	5,990	6,108	6,186	6,178	*	6,185
Feed, Residual	4,095	4,714	4,738	4,435	4,697	4,776	4,816	4,769	*	4,677
Gasohol	270	285	300	314	346	373	397	421	*	484
Seed	19	16	16	18	18.	18	18	19	*	20
Food & Other	871	891	913	907	929	941	954	969	*	1,005
EXPORTS	1,241	1,504	1,732	1,936	1,833	1,756	1,805	1,922	*	2,363
TOTAL USE	6,496	7,410	7,699	7,610	7,823	7,864	7,991	8,099	*	8,549
ENDING STOCKS	4,040	4,882	4,259	1,575	1,642	1,677	1,718	1,705	*	1,674
FOR, Spec. Prg.	711	1,498	1,127	635	250	275	305	300	*	260
CCC Inventory	546	1,443	835	300	200	200	200	195	*	161
9-Month Loan	2,589	2,102	929	238	271	287	283	266	*	228
"Free" Stocks	194	-161	1,368	402	921	915	930	944	*	1,025
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	2.23	1.50	1.94	2.52	2.15	2.09	2.09	2.12	*	2.31
Loan Rate/bu.	2.55	1.92	1.82	1.77	1.65	1.58	1.55	1.58	*	1.60
Target Price/bu.	3.03	3.03	3.03	2.93	2.84	2.75	2.75	2.75	*	2.75
FOB Gulf Price/mt	99.00	70.00	98.50	113.71	97.86	95.29	95.29	96.58	*	104.71
Variable Cost/ac.	152.97	138.70	138.34	147.72	157.81	163.00	170.01	178.32	*	206.36
Variable Cost/bu.	1.30	1.16	1.16	1.75	1.35	1.38	1.42	1.47	*	1.64
Part. Returns/ac.	177.03	163.39	158.58	88.36	148.03	132.07	128.71	124.59	*	113.86
Nonpart. Returns	110.27	40.20	93.37	65.49	94.25	84.49	80.66	79.09	*	84.28

U.S. SORGHUM

- The drought reduced 1988/89 U.S. sorghum **production** by 22 percent from the previous level, but that was less than the effect of the drought on U.S. production of other feed grains. Taking into account the high level of sorghum stocks at the beginning of the marketing year,1988/89 sorghum prices are not projected to increase as much as prices for other feed grains.
- With the reduction of the ARP rate to 10 percent and the elimination of the PLD program, 1989/90 sorghum **area** increases by two million acres. After declining in 1990, sorghum planted area grows slowly over the ten-year period to 13 million acres.
- **Export** demand is projected to increase in 1988/89 by virtue of increased purchases by the USSR, and then to return to more normal levels in 1989/90. Exports increase in the 1990s, primarily because of economic growth.
- **Feed demand** is projected to decline to 520 million bushels in 1988/89 in response to higher prices. Sorghum feed demand ranges from 515 million to 540 million bushels after 1989/90, depending on livestock numbers and the relative prices of sorghum, corn, and wheat.
- Carryover **stocks** were extremely high in 1987/88. They are projected to decline rapidly between now and 1991/92 to a more normal 300 million bushels.
- Sorghum **prices** generally move with corn prices. Sorghum prices are highest relative to corn prices in the early 1990s, when sorghum supplies are tight as a result of expansion of the conservation reserve and the depletion of government stocks.

U.S. Sorghum Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
PLD/PIK Rate	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	55.0	74.0	84.0	81.0	70.2	71.7	70.4	68.8	*	62.8
AREA				(Million Acres)						
Base Area	19.3	19.0	17.4	17.0	16.4	15.9	15.9	15.9	*	16.1
ARP/PLD/PIK/0-92	0.9	2.6	4.4	3.9	1.6	1.8	1.7	1.5	*	1.0
CRP Idled	0.0	0.2	1.3	1.9	2.5	3.0	3.0	3.0	*	2.8
Program Planted	8.4	9.0	8.9	8.3	8.3	8.0	7.9	7.9	*	7.5
Nonprog. Plant.	9.9	6.3	2.9	2.1	4.2	3.7	4.3	4.8	*	5.5
Planted Area	18.3	15.3	11.8	10.5	12.5	11.7	12.2	12.7	*	12.9
Harvested Area	16.8	13.9	10.6	9.1	11.2	10.5	11.0	11.5	*	11.8
YIELD				(Bushels per Acre)						
Actual Yield	66.7	67.7	69.7	63.8	65.6	66.0	66.6	67.2	*	69.0
Program Yield	61.0	60.0	59.0	60.0	60.0	60.0	60.0	60.0	*	60.0
				(Million Bushels)						
SUPPLY	1,420	1,489	1,482	1,241	1,152	1,073	1,048	1,064	*	1,090
Beg. Stocks	300	551	743	663	420	378	318	294	*	277
Production	1,120	938	739	578	732	695	730	770	*	814
Imports	0	0	0	0	0	0	0	0	*	0
DOMESTIC USE	692	547	589	540	551	534	530	545	*	550
Feed, Residual	664	535	564	521	533	516	513	527	*	532
Food, Seed, Ind.	28	12	25	19	19	18	18	18	*	18
EXPORTS	178	198	231	280	222	221	224	230	*	263
TOTAL USE	870	745	820	820	773	755	755	775	*	813
ENDING STOCKS	551	743	663	420	378	318	294	289	*	278
FOR, Spec. Prg.	52	93	70	23	18	16	14	11	*	8
CCC Inventory	207	409	464	330	255	175	120	85	*	18
9-Month Loan	270	279	50	25	28	27	25	26	*	18
"Free" Stocks	22	-38	79	42	77	100	135	167	*	234
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	1.93	1.37	1.70	2.29	2.02	2.01	2.02	2.04	*	2.21
Loan Rate/bu.	2.42	1.82	1.74	1.68	1.56	1.48	1.43	1.51	*	1.54
Target Price/bu.	2.88	2.88	2.88	2.78	2.69	2.60	2.60	2.60	*	2.60
FOB Gulf Price/mt	94.00	76.00	88.25	108.35	96.27	95.82	96.27	97.16	*	104.86
Variable Cost/ac.	80.70	74.50	74.90	79.23	83.93	86.95	90.61	95.17	*	111.20
Variable Cost/bu.	1.21	1.10	1.07	1.24	1.28	1.32	1.36	1.42	*	1.61
Part. Returns/ac.	95.82	86.80	83.70	71.30	77.84	68.39	66.30	63.52	*	55.48
Nonpart. Returns	47.97	18.22	43.61	66.88	48.51	45.61	43.83	41.85	*	41.59

U.S. BARLEY

- The drought devastated barley growing regions, cutting 1988/89 U.S. **production** by 45 percent from previous levels. As a result, projected 1988/89 barley prices are 56 percent higher than 1987/88 levels, and are actually $0.30 per bushel higher than projected 1988/89 corn prices.
- Due to the reduction in the ARP rate from 20 percent in 1988 to 10 percent in 1989 and the elimination of the PLD program, 1989/90 barley **planted area** is projected to increase 1 million acres, to 10.7 million acres. For 1990/91 and beyond, planted area is projected to change little, hovering between 10.6 million and 11.0 million acres.
- Barley **exports** expanded in the mid-1980s, primarily in response to the Export Enhancement Program. Tight supplies reduce the use of the EEP for barley in 1988/89 and 1989/90. In the 1990s, barley exports again expand as barley becomes cheaper relative to wheat and corn.
- Domestic **feed use** of barley is projected to increase at a modest pace between 1988/89 and 1997/98, as barley prices fall relative to corn prices. **Brewing and other domestic uses** are projected to increase at slightly more than the rate of population growth.
- Barley **stocks** are projected to be cut in half during the 1988/89 marketing year. As a result, some stock rebuilding will be necessary in1989/90 and 1990/91.
- Because of the tight supply situation, barley **prices** are currently high relative to corn prices. After 1989/90, the barley price moves below that of corn, and thereafter a more normal barley-corn ratio is projected.

U.S. Barley Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	10.0	17.5	20.0	20.0	10.0	12.5	12.5	12.5	*	11.0
PLD/PIK Rate	0.0	2.5	15.0	10.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	57.0	72.0	84.0	78.0	50.6	55.8	62.6	64.4	*	57.0
AREA				(Million Acres)						
Base Area	13.3	12.4	12.5	12.6	12.1	11.7	11.7	11.7	*	11.9
ARP/PLD/PIK/0-92	0.7	2.0	3.1	2.9	1.0	1.2	1.2	1.0	*	0.8
CRP Idled	0.0	0.1	1.3	2.0	2.4	2.9	2.9	2.9	*	2.7
Program Planted	6.4	7.3	8.1	7.0	5.1	5.3	6.1	6.5	*	6.0
Nonprog. Plant.	6.8	5.8	2.9	2.7	5.6	5.3	4.5	4.3	*	4.8
Planted Area	13.2	13.1	11.0	9.7	10.7	10.7	10.6	10.7	*	10.8
Harvested Area	11.6	12.0	10.1	7.5	9.8	9.8	9.7	9.9	*	9.9
YIELD				(Bushels per Acre)						
Actual Yield	50.9	50.8	52.7	38.6	54.0	54.6	55.3	56.0	*	58.1
Program Yield	49.0	49.0	48.0	48.0	48.0	48.0	48.0	48.0	*	48.0
				(Million Bushels)						
SUPPLY	847	945	880	627	707	760	792	815	*	836
Beg. Stocks	247	325	336	321	167	215	243	253	*	250
Production	591	611	530	291	530	535	539	552	*	576
Imports	9	9	14	15	10	10	10	10	*	10
DOMESTIC USE	502	472	432	410	412	420	431	440	*	458
Feed, Residual	333	298	258	234	233	239	247	253	*	264
Food, Seed, Ind.	169	174	174	176	179	181	184	186	*	194
EXPORTS	22	137	126	50	80	96	107	119	*	130
TOTAL USE	524	609	558	460	492	517	538	559	*	588
ENDING STOCKS	325	336	321	167	215	243	253	256	*	248
FOR, Spec. Prg.	91	122	109	45	26	24	24	23	*	17
CCC Inventory	57	76	50	30	20	18	18	18	*	13
9-Month Loan	137	90	89	20	18	20	22	21	*	16
"Free" Stocks	40	48	73	72	151	181	189	194	*	202
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	1.98	1.61	1.81	2.82	2.23	2.06	1.99	2.01	*	2.16
Loan Rate/bu.	2.08	1.56	1.49	1.44	1.35	1.51	1.53	1.57	*	1.54
Target Price/bu.	2.60	2.60	2.60	2.51	2.43	2.35	2.35	2.35	*	2.35
FOB Pacif. NW/mt	101.50	91.40	100.97	152.53	122.41	113.73	110.16	111.18	*	118.74
Variable Cost/ac.	65.40	56.40	56.87	60.29	64.03	66.28	69.14	72.66	*	84.94
Variable Cost/bu.	1.28	1.11	1.08	1.56	1.18	1.21	1.25	1.30	*	1.46
Part. Returns/ac.	57.45	55.84	54.15	34.80	57.48	50.17	48.47	46.74	*	42.11
Nonpart. Returns	35.48	25.41	38.43	48.69	56.49	46.27	40.97	39.95	*	40.61

U.S. OATS

- Oats **production** has been falling for decades, and the United States became a net importer of oats in 1983/84. The drought reduced 1988/89 U.S. production even further, to just 219 million bushels, down 41 percent from a year ago. As a result, U.S. imports are projected to reach a record 60 million bushels this year.
- Higher prices and new rules permitting oats production on corn base acres are projected to result in a 2.8-million-acre increase in oats **harvested area** in 1989/90. When prices return to more normal levels, area harvested stabilizes at about 7 million acres.
- **Imports** are projected to return to a more normal level of 35 million bushels after 1988/89.
- High prices are rationing oats **feed demand** this year, so that oats will be used primarily where other grains are poor substitutes (such as horse feeding). After 1988/89, oats feed use averages about 365 million bushels. Nonfeed uses remain flat throughout the projection period.
- Oats **stocks** are being reduced to pipeline levels in 1988/89, but they should return to more normal levels in 1989/90.
- Oats **prices** per bushel have been higher than corn prices per bushel for much of the 1988/89 marketing year. This is completely out of line with the relative feeding value of oats and corn, and as such the situation cannot persist. Oats prices are projected returning to more normal levels in 1989/90 and generally to move with corn prices thereafter.

U.S. Oats Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	10.0	17.5	20.0	5.0	5.0	5.0	5.0	5.0	*	5.0
PLD/PIK Rate	0.0	2.5	15.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	14.0	38.0	45.0	30.0	25.6	30.4	30.1	30.2	*	30.8
AREA				(Million Acres)						
Base Area	9.4	9.2	8.7	8.3	8.1	7.9	7.9	7.9	*	7.9
ARP/PLD/PIK/0-92	0.1	0.5	0.9	0.2	0.1	0.1	0.1	0.1	*	0.1
CRP Idled	0.0	0.1	0.6	0.9	1.1	1.4	1.4	1.4	*	1.3
Program Planted	0.6	1.5	1.7	2.3	1.6	1.9	1.9	1.9	*	2.0
Nonprog. Plant.	12.7	13.2	16.3	11.6	12.9	11.6	11.8	11.7	*	11.4
Planted Area	13.3	14.7	18.0	13.9	14.5	13.5	13.7	13.6	*	13.3
Harvested Area	8.2	6.9	6.9	5.6	8.2	6.6	6.9	7.0	*	6.9
YIELD				(Bushels per Acre)						
Actual Yield	63.5	56.3	54.0	39.1	58.8	59.4	59.9	60.4	*	61.9
Program Yield	47.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	*	50.0
				(Million Bushels)						
SUPPLY	729	603	553	391	604	563	564	571	*	591
Beg. Stocks	180	184	133	112	87	138	114	116	*	129
Production	521	386	374	219	484	390	414	420	*	427
Imports	28	33	46	60	33	35	36	36	*	35
DOMESTIC USE	542	468	440	303	464	448	446	450	*	458
Feed, Residual	460	395	361	218	372	356	356	360	*	370
Food, Seed, Ind.	82	73	79	86	92	92	91	91	*	89
EXPORTS	2	3	1	1	1	1	1	1	*	1
TOTAL USE	544	471	441	304	465	449	447	451	*	459
ENDING STOCKS	184	133	112	87	138	114	116	120	*	132
FOR, Spec. Prg.	1	4	2	0	0	0	0	0	*	0
CCC Inventory	2	4	4	1	0	0	0	0	*	0
9-Month Loan	5	4	2	0	0	0	0	0	*	0
"Free" Stocks	176	121	104	86	138	114	116	120	*	132
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	1.23	1.21	1.56	2.63	1.64	1.77	1.82	1.84	*	1.96
Loan Rate/bu.	1.31	0.99	0.94	0.90	0.85	1.11	1.24	1.31	*	1.38
Target Price/bu.	1.60	1.60	1.60	1.55	1.49	1.44	1.44	1.44	*	1.44
Variable Cost/ac.	54.27	43.51	44.07	46.94	50.10	51.78	54.15	57.03	*	66.85
Variable Cost/bu.	0.85	0.77	0.82	1.20	0.85	0.87	0.90	0.94	*	1.08
Part. Returns/ac.	36.33	31.78	26.42	52.12	43.09	49.61	51.04	50.32	*	50.97
Nonpart. Returns	23.88	24.66	40.18	55.91	46.41	53.27	54.78	54.02	*	54.70

U.S. SOYBEANS

- The drought reduced 1988/89 soybean **production** by 20 percent from the level of the previous year. Higher market prices are rationing demand. Domestic use, exports, and ending stocks are all projected to fall substantially below 1987/88 levels.
- Higher market prices, a reduction in corn program participation, and new rules permitting soybeans to be planted without endangering future corn program payments all contribute to a projected 3-million-acre increase in soybean **area** in 1989/90. Lower prices and continued expansion of the conservation reserve wipe out that increase the following year. Soybean area fluctuates at about 60 million acres in the early 1990s, and then increases in response to increased demand in the mid-1990s.
- Soybean and soybean product **exports** are projected to fall sharply in 1988/89, in part because of the demand-inhibiting and supply-inducing effects of higher prices. However, factors such as changes in EC policies are also at work, so lost markets are not restored quickly.
- In spite of record crushing margins, domestic soybean **crush** fell in 1987/88, and higher soybean prices are projected to result in a much sharper decline in 1988/89. Steady increases in crush occur beginning in 1989/90, in order to meet increasing domestic and foreign demand for meal and oil.
- Soybean **stocks** will be cut dramatically during the 1988/89 crop year to pipeline levels. Increased 1989/90 production should allow stocks to rebound to a more normal 290 million bushels. Soybean oil stocks are also likely to rebuild in 1989/90 after sharp reductions this year.
- Soybean **prices** are projected to average about $7.50 per bushel during the 1988/89 crop year, but low stock levels mean prices are very sensitive to any supply or demand shocks. Increased production and stagnant demand are projected to reduce prices in 1989/90 and 1990/91. Prices oscillate in the 1990s, ranging from $5.50-$6.50 per bushel. After 1988/89, meal prices range from $170 to $205 per ton, and oil ranges from 20 to 23 cents per pound.

U.S. Soybeans Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
AREA				(Million Acres)						
CRP Idled	0.0	0.3	2.1	2.9	3.9	4.7	4.7	4.7	*	4.5
Planted Area	63.1	60.4	58.0	58.9	61.6	58.9	58.1	60.5	*	63.2
Harvested Area	61.6	58.3	57.0	57.4	60.2	57.5	56.7	59.0	*	61.6
YIELD (bu./ac.)	34.1	33.3	33.7	26.8	33.7	34.2	34.6	34.9	*	35.9
				(Million Bushels)						
SUPPLY	2,415	2,476	2,359	1,841	2,163	2,253	2,263	2,330	*	2,539
Beg. Stocks	316	536	436	302	137	288	300	271	*	326
Production	2,099	1,940	1,923	1,539	2,027	1,965	1,963	2,059	*	2,213
Imports	0	0	0	0	0	0	0	0	*	0
DOMESTIC USE	1,139	1,283	1,255	1,137	1,242	1,295	1,316	1,345	*	1,420
Crush	1,053	1,179	1,174	1,041	1,146	1,198	1,217	1,243	*	1,313
Seed, Residual	86	104	81	96	96	97	100	101	*	1,07
EXPORTS	740	757	802	567	633	658	675	687	*	779
TOTAL USE	1,879	2,040	2,057	1,704	1,876	1,952	1,992	2,031	*	2,199
ENDING STOCKS	536	436	302	137	288	300	271	299	*	340
CCC Inventory	131	249	0	0	0	0	0	0	*	0
"Free" Stocks	405	187	302	137	288	300	271	299	*	340
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	5.05	4.78	6.15	7.56	5.85	5.32	6.14	6.01	*	6.10
Loan Rate/bu.	5.02	4.77	4.77	4.77	4.53	4.50	4.50	4.50	*	4.50
FOB Gulf Price/mt	204.00	192.00	223.00	297.13	232.42	212.36	243.39	238.47	*	241.80
Bean/Corn Ratio	2.26	3.19	3.17	3.00	2.72	2.55	2.94	2.83	*	2.65
Variable Cost/ac.	71.03	65.18	65.81	70.08	74.73	77.11	80.29	84.13	*	97.11
Variable Cost/bu.	2.08	1.96	1.95	2.61	2.22	2.26	2.32	2.41	*	2.70
Net Returns/ac.	101.05	93.88	141.73	132.63	122.19	104.79	132.27	125.50	*	121.89
Meal Price/ton	154.90	162.70	222.00	248.39	183.09	170.20	188.41	182.20	*	192.79
Oil Price/cwt	18.00	15.40	22.65	22.14	22.83	18.57	21.17	21.98	*	21.59
Crush. Margin/bu.	0.61	0.72	1.66	0.79	1.02	0.77	0.67	0.75	*	0.87

U.S. Soybean Meal Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(1,000 Tons)						
SUPPLY	25,338	27,970	28,300	24,875	27,509	28,688	29,122	29,745	*	31,413
Beg. Stocks	387	212	240	153	292	246	229	221	*	218
Production	24,951	27,758	28,060	24,722	27,216	28,442	28,893	29,524	*	31,195
Imports	0	0	0	0	0	0	0	0	*	0
DOMESTIC USE	19,090	20,387	21,276	20,075	22,453	22,904	22,901	22,892	*	22,946
EXPORTS	6,036	7,343	6,871	4,507	4,808	5,555	6,000	6,634	*	8,249
TOTAL USE	25,126	27,730	28,147	24,582	27,262	28,459	28,901	29,526	*	31,195
ENDING STOCKS	212	240	153	292	246	229	221	219	*	218
PRICES				(Dollars)						
Decatur/ton	154.90	162.70	222.00	248.39	183.09	170.20	188.41	182.20	*	192.79
Decatur/mt	170.75	179.34	244.71	273.80	201.82	187.61	207.68	200.84	*	212.52

U.S. Soybean Oil Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Million Pounds)						
SUPPLY	12,257	13,745	14,895	13,794	14,169	14,996	15,217	15,511	*	16,378
Beg. Stocks	632	947	1,725	2,092	1,456	1,748	1,759	1,759	*	1,849
Production	11,617	12,783	12,974	11,502	12,663	13,233	13,443	13,737	*	14,514
Imports	8	15	196	200	50	15	15	15	*	15
DOMESTIC USE	10,053	10,833	10,930	11,015	11,196	11,573	11,713	11,875	*	12,446
EXPORTS	1,257	1,187	1,873	1,323	1,225	1,664	1,744	1,855	*	2,051
TOTAL USE	11,310	12,020	12,803	12,338	12,421	13,237	13,458	13,730	*	14,497
ENDING STOCKS	947	1,725	2,092	1,456	1,748	1,759	1,759	1,781	*	1,881
PRICES				(Dollars)						
Decatur/cwt	18.00	15.40	22.65	22.14	22.83	18.57	21.17	21.98	*	21.59
Decatur/mt	396.83	339.51	499.34	488.10	503.31	409.39	466.71	484.57	*	476.06

U.S. WHEAT

- The drought reduced 1988/89 **production** by 14 percent from previous levels. A 43-percent increase in farm prices, a modest reduction in exports, and a sharp reduction in carryover stocks are some of the consequences of the drought.
- Higher prices and the reduction in the ARP rate from 27.5 percent to 10 percent is projected to result in a 10-million-acre increase in wheat **plantings** in 1989/90, to 75 million acres. For 1990/91 and beyond, the ARP rate is assumed to be 5 percent, and wheat planted area fluctuates at about 78-80 million acres.
- **Exports** are projected to fall in 1988/89 for a variety of reasons, including higher prices and reduced use of the Export Enhancement Program. A further decline in U.S. wheat exports is projected for 1989/90, followed by steady growth in the 1990s, driven primarily by economic growth in developing countries.
- **Domestic use** of wheat will increase marginally over the ten-year projection period as increases in food use are fueled by population and income growth. After 1991/92, declines in wheat feed use will partially offset these gains.
- Carryover **stocks** are projected to fall from 1.26 billion bushels on June 1, 1988, to just 540 million bushels on June 1, 1989. Some stock rebuilding is necessary, and stocks reach a more normal 775 million bushels by 1992/93.
- Market **prices** are projected to remain high through the 1989/90 crop year, as higher 1989 wheat production is offset by the lower level of carry in. Prices fall until 1991/92 but then increase steadily because of stronger export demand and tight supplies. Over the final five years of the projection, the wheat farm price averages $3.60 per bushel, the same as for the 1980-85 period.

U.S. Wheat Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	20.0	22.5	27.5	27.5	10.0	5.0	5.0	5.0	*	5.0
PLD/PIK Rate	10.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	73.0	85.3	87.2	85.2	67.3	69.0	79.1	82.6	*	70.1
AREA				(Million Acres)						
Base Area	94.0	91.6	87.6	85.3	83.3	81.4	81.4	81.4	*	82.0
ARP/PLD/PIK/0-92	18.8	21.8	23.8	24.5	8.4	4.7	4.6	4.3	*	3.1
CRP Idled	0.0	0.6	5.0	7.6	9.6	11.4	11.4	11.4	*	10.9
Program Planted	40.9	50.3	49.9	46.1	46.0	49.9	58.1	61.3	*	52.7
Nonprog. Plant.	35.2	21.8	15.9	19.5	29.5	28.7	20.2	17.1	*	27.3
Planted Area	76.1	72.1	65.8	65.5	75.4	78.5	78.3	78.4	*	80.1
Harvested Area	64.7	60.7	56.0	53.2	64.2	66.7	66.2	66.1	*	67.5
YIELD				(Bushels per Acre)						
Actual Yield	37.5	34.4	37.7	34.1	37.7	39.1	39.5	40.0	*	41.3
Program Yield	35.0	35.0	34.0	34.0	34.0	34.0	34.0	34.0	*	34.0
				(Million Bushels)						
SUPPLY	3,865	4,018	3,945	3,094	2,973	3,185	3,317	3,416	*	3,563
Beg. Stocks	1,425	1,905	1,821	1,261	538	565	686	758	*	756
Production	2,425	2,092	2,107	1,811	2,420	2,605	2,615	2,643	*	2,792
Imports	15	21	17	22	15	15	15	15	*	15
DOMESTIC USE	1,046	1,193	1,092	1,056	1,064	1,104	1,140	1,140	*	1,159
Feed, Residual	270	413	288	235	229	258	284	275	*	266
Seed	93	84	85	98	103	103	103	105	*	109
Food & Other	683	696	719	724	733	743	753	760	*	784
EXPORTS	915	1,004	1,592	1,500	1,343	1,394	1,419	1,499	*	1,662
TOTAL USE	1,961	2,197	2,684	2,557	2,408	2,498	2,559	2,638	*	2,821
ENDING STOCKS	1,905	1,821	1,261	538	565	686	758	777	*	742
FOR, Spec. Prg.	596	632	467	275	75	80	100	85	*	61
CCC Inventory	602	830	283	150	145	150	155	145	*	126
9-Month Loan	678	236	178	24	23	30	32	26	*	17
"Free" Stocks	29	123	333	89	322	426	471	521	*	538
PRICES & RETURNS				(Dollars)						
Farm Price/bu.	3.08	2.42	2.57	3.68	3.52	3.16	3.01	3.26	*	3.57
Loan Rate/bu.	3.30	2.40	2.28	2.21	2.06	2.29	2.31	2.42	*	2.46
Target Price/bu.	4.38	4.38	4.38	4.23	4.10	4.00	4.00	4.00	*	4.00
FOB Gulf Price/mt	130.00	109.00	124.00	164.73	157.82	142.27	135.79	146.59	*	160.07
Variable Cost/ac.	62.84	56.22	56.75	60.32	64.22	66.45	69.42	73.05	*	85.55
Variable Cost/bu.	1.68	1.63	1.51	1.77	1.70	1.70	1.76	1.83	*	2.07
Part. Returns/ac.	72.50	66.21	68.14	55.21	77.38	80.30	78.07	77.34	*	71.96
Nonpart. Returns	52.60	27.06	40.04	65.03	68.48	57.02	49.58	57.31	*	62.25

U.S. RICE

- Unlike the other grains affected by the drought, U.S. rice **production** actually increased in 1988/89. With only modest increases projected for domestic and foreign demand, market prices have fallen back below the rice loan rate, so that the marketing loan is again in use.
- Assuming a 25 percent ARP is maintained in 1989/90, little change is expected in rice **planted area** next year. Assuming there are no unexpected shocks to supply or demand, planted area is projected to average about 3 million acres throughout the next decade, with a modest upward trend in the 1990s.
- After modest increases this year and in 1989/90, **exports** are projected to remain flat through 1992/93. Modest growth in export demand in the 1990s can be attributed to foreign economic growth and declining relative prices of rice when compared to wheat and other food grains.
- **Domestic demand** is projected to increase by 20 percent between 1988/89 and 1997/98, based on population growth and increased use by the brewing industry.
- Ending **stocks** are projected to build in 1988/89 in the face of increased production and relatively stagnant demand. After 1988/89, stocks range from 30 million to 35 million hundredweight for the remainder of the projection period.
- The market **price** exceeded the loan rate in 1987/88 in response to crop failures in southeast Asia and limited supplies elsewhere. Prices are projected to fall below the loan rate for every year between 1988/89 and 1991/92. Prices increase somewhat in the 1990s, but they remain far below the target price, even in the mid-1990s.

U.S. Rice Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	20.0	35.0	35.0	25.0	25.0	25.0	25.0	20.0	*	20.0
PLD/PIK Rate	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	90.0	92.0	97.0	85.0	81.7	83.8	83.5	85.9	*	82.3
AREA				(Million Acres)						
Base Area	4.23	4.20	4.20	4.20	4.20	4.20	4.20	4.20	*	4.20
ARP/PLD/PIK/0-92	1.25	1.27	1.25	0.86	0.82	0.84	0.84	0.69	*	0.66
CRP Idled	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	*	0.01
Program Planted	2.21	2.30	2.30	2.53	2.43	2.49	2.48	2.72	*	2.61
Nonprog. Plant.	0.30	0.08	0.06	0.40	0.50	0.43	0.43	0.30	*	0.50
Planted Area	2.51	2.38	2.36	2.93	2.93	2.92	2.91	3.02	*	3.11
Harvested Area	2.49	2.36	2.33	2.90	2.90	2.89	2.88	3.00	*	3.08
YIELD				(Pounds per Acre)						
Actual Yield	5,414	5,651	5,555	5,511	5,592	5,648	5,704	5,761	*	5,937
Program Yield	5,036	5,051	4,905	4,905	4,905	4,905	4,905	4,905	*	4,905
				(Million Cwt.)						
SUPPLY	201.8	213.3	184.0	194.6	203.8	203.0	202.4	207.1	*	220.0
Beg. Stocks	64.7	77.3	51.4	31.4	38.4	36.6	34.8	31.5	*	33.9
Production	134.9	133.4	129.6	159.5	162.4	163.3	164.6	172.6	*	183.1
Imports	2.2	2.6	3.0	3.7	3.0	3.0	3.0	3.0	*	3.0
DOMESTIC USE	65.8	77.7	80.4	82.2	83.4	84.3	86.2	88.2	*	94.0
Food	45.6	51.7	54.8	55.5	56.2	56.7	57.7	58.8	*	62.0
Seed	2.6	2.6	3.0	3.0	3.0	3.0	3.2	3.3	*	3.3
Industry	14.1	15.0	15.6	16.3	16.8	17.2	17.7	18.3	*	20.3
Residual	3.5	8.4	7.1	7.3	7.4	7.5	7.6	7.8	*	8.3
EXPORTS	58.7	84.2	72.1	74.0	83.8	83.9	84.6	86.6	*	92.0
TOTAL USE	124.5	161.9	152.6	156.2	167.2	168.2	170.8	174.9	*	186.0
ENDING STOCKS	77.3	51.4	31.4	38.4	36.6	34.8	31.5	32.3	*	34.0
CCC Inventory	43.6	8.7	0.0	6.4	4.0	2.0	0.0	0.0	*	0.0
"Free" Stocks	33.7	42.7	31.4	32.0	32.6	32.8	31.5	32.3	*	34.0
PRICES & RETURNS				(Dollars)						
Farm Price/cwt.	6.53	3.75	7.27	6.47	6.25	6.35	6.37	6.63	*	7.38
Loan Rate/cwt.	8.00	7.20	6.84	6.63	6.50	6.50	6.50	6.50	*	6.50
Target Price/cwt.	11.90	11.90	11.66	11.15	10.80	10.71	10.71	10.71	*	10.71
Thai Exp. Price/mt	225.09	220.90	294.00	288.18	278.63	282.87	283.82	294.55	*	326.17
Variable Cost/ac.	301.41	282.87	287.83	300.22	315.04	325.28	339.42	358.14	*	424.60
Variable Cost/cwt.	5.57	5.01	5.18	5.45	5.63	5.76	5.95	6.22	*	7.15
Part. Returns/ac.	232.71	227.91	208.39	210.14	189.52	181.25	173.40	175.14	*	137.88
Nonpart. Returns	52.12	-70.96	116.03	56.53	34.27	33.21	23.95	23.57	*	13.89

U.S. COTTON

- Unlike the major grains and oilseeds, cotton was not significantly affected by the drought, and 1988/89 **production** exceeded 1987/88 levels by 5 percent. However, both domestic and foreign demand have fallen in 1988/89, resulting in lower prices and a projected three-million-bale increase in carryover stocks.
- With a 25-percent ARP restored in 1989/90, an expansion of the conservation reserve, and higher soybean, sorghum, and wheat prices, cotton **area** is projected to fall by 2.3 million acres. Unless demand increases more rapidly than projected, ARP rates are likely to be set to ensure an average of a little more than 10 million acres planted after 1990/91.
- **Export** demand is projected to fall more than 1 million bales in 1988/89, in spite of substantially lower market prices. Even if exports rebound as projected in 1989/90, there is little evidence that the marketing loan program has solved all of the export problems facing the U.S. cotton industry.
- **Domestic mill use** of cotton is also projected to fall in 1988/89 to more normal levels, after the rapid expansion of 1986-88. Future growth in domestic use is expected to be limited.
- Cotton **stocks** are projected to increase to 9 million bales at the end of the current marketing year. Even with reduced acreage and a rebound in demand, cotton stocks still exceed 5 million bales as late as 1992/93.
- With the decline in demand, cotton **prices** have dropped sharply. For both 1988/89 and 1989/90, the average farm price is projected to be near the loan rate. As stocks fall, prices improve somewhat, but projected prices remain below the target price.

U.S. Cotton Supply and Utilization

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
PROGRAM				(Percent)						
ARP Rate	20.0	25.0	25.0	12.5	25.0	25.0	25.0	20.0	*	20.0
PLD/PIK Rate	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Partic. Rate	82.0	93.0	92.0	88.0	88.4	85.4	85.6	86.4	*	67.5
AREA				(Million Acres)						
Base Area	15.80	15.50	14.50	14.60	14.30	14.02	14.02	14.02	*	14.10
ARP/PLD/PIK/0-92	3.60	3.30	3.10	1.61	3.16	2.99	3.00	2.42	*	1.90
CRP Idled	0.00	0.10	0.74	1.04	1.34	1.62	1.62	1.62	*	1.54
Program Planted	8.16	9.73	9.00	10.12	8.53	8.08	8.10	8.72	*	6.85
Nonprog. Plant.	2.52	0.31	1.41	2.38	1.31	2.08	2.05	1.45	*	3.68
Planted Area	10.68	10.04	10.41	12.50	9.84	10.16	10.15	10.17	*	10.52
Harvested Area	10.23	8.47	10.04	11.89	9.37	9.68	9.67	9.70	*	10.04
YIELD				(Pounds per Acre)						
Actual Yield	630	552	706	624	629	640	651	661	*	694
Program Yield	613	608	593	590	590	590	590	590	*	590
				(Million Bales)						
SUPPLY	17.57	19.08	19.79	21.22	21.28	20.99	20.31	19.51	*	19.18
Beg. Stocks	4.10	9.35	5.03	5.77	9.00	8.08	7.21	6.15	*	4.67
Production	13.43	9.73	14.76	15.45	12.28	12.91	13.11	13.36	*	14.51
Imports	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*	0.00
DOMESTIC USE										
Domestic Mill	6.40	7.45	7.62	7.10	7.30	7.48	7.62	7.74	*	7.86
EXPORTS	1.97	6.68	6.58	5.23	6.00	6.41	6.64	6.81	*	6.92
TOTAL USE	8.40	14.13	14.20	12.32	13.30	13.88	14.26	14.55	*	14.78
UNACCOUNTED	0.14	0.08	0.18	0.10	0.10	0.10	0.10	0.10	*	0.10
ENDING STOCKS	9.40	5.03	5.77	9.00	8.08	7.21	6.15	5.06	*	4.50
CCC Inventory	0.77	0.07	0.00	0.30	0.30	0.30	0.15	0.00	*	0.00
"Free Stocks"	8.63	4.96	5.77	8.70	7.78	6.91	6.00	5.06	*	4.50
PRICES & RETURNS				(Dollars)						
Farm Price/lb.	0.565	0.524	0.635	0.519	0.500	0.500	0.513	0.532	*	0.623
Loan Rate/lb.	0.573	0.550	0.523	0.518	0.500	0.500	0.500	0.500	*	0.500
Target Price/lb.	0.810	0.810	0.794	0.759	0.734	0.729	0.729	0.729	*	0.729
Export Value	1,406	1,086	1,449	1,183	1,141	1,139	1,171	1,214	*	1,422
Var. Cost/ac.	266.09	224.17	225.56	235.05	246.03	254.12	263.81	276.73	*	323.20
Var. Cost/lb.	0.422	0.406	0.320	0.377	0.391	0.397	0.405	0.418	*	0.465
Part. Return/ac.	180.52	172.93	232.61	198.97	149.94	145.71	143.09	149.15	*	133.58
Nonpart. Returns	89.86	64.82	222.53	88.48	68.62	65.52	70.21	75.43	*	109.61

U.S. BEEF

- The drought increased 1988 beef slaughter above what it would have been otherwise, such that 1988 beef **production** was about even with 1987 levels. Higher prices should encourage expansion of cow herds, but production is projected to decline until 1991. Production is projected to build through 1995, to a level just even with that of 1988.
- As production declines, Omaha steer **prices** are projected to average more than $75 per hundredweight through 1992. Increased production results in slightly lower prices thereafter, but prices never fall below $69 per hundredweight.
- Sharply higher feed costs in 1989 will keep **returns** below production costs for the **feedlot** operator, even with higher Omaha prices. Positive profits should return between 1990 and 1992 as production costs decline and steer prices increase. Some of the expected profit will be bid into higher feeder animal prices, however.
- The **cow-calf** operator is also likely to suffer in 1989, particularly if pasture and hay conditions do not improve. Thereafter, returns will exceed costs for four years, which should induce some building of the breeding herd. By the mid -1990s net returns again turn down as production costs rise relative to returns.
- With little change in net trade or stocks, domestic beef **consumption** generally moves with production. In per-capita terms, beef consumption falls from 73 pounds in 1988 to 65 pounds in 1991, and it does not exceed 68 pounds thereafter.
- **Retail beef prices** generally move in the same direction as slaughter steer prices, but percent movements are usually smaller. Retail beef prices increase 12 percent between 1988 and 1998, far less than the general rate of price inflation, suggesting a continuing weakness in demand.
- U.S. beef **exports** are assumed to increase by 8 percent in 1989 and 11 percent in 1990, following the relaxation of Japanese beef import quotas. Even if the actual increase were much larger, however, the effect on U.S. markets would be small. The United States will remain a substantial net importer of beef over the next decade. **Net imports** will remain above 5 percent of beef production over the period.

U.S. Beef Supply and Utilization

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
SUPPLY				(Million Pounds)						
BEG. STOCKS	420	412	386	375	313	277	275	282	*	308
IMPORTS	2,129	2,269	2,355	2,200	2,200	2,200	2,200	2,200	*	2,200
% Year Ago		6.6%	3.8%	-6.6%	0.0%	0.0%	0.0%	0.0%	*	
PRODUCTION	24,369	23,566	23,597	22,457	21,704	21,777	22,204	22,668	*	22,933
% Year Ago		-3.3%	0.1%	-4.8%	-3.4%	0.3%	2.0%	2.1%	*	
TOTAL	26,918	26,247	26,338	25,032	24,216	24,254	24,680	25,150	*	25,442
% Year Ago		-2.5%	0.4%	-5.0%	-3.3%	0.2%	1.8%	1.9%	*	
CONSUMPTION										
DOMESTIC	25,824	25,205	25,233	23,939	23,079	23,099	23,501	23,940	*	24,170
% Year Ago		-2.4%	0.1%	-5.1%	-3.6%	0.1%	1.7%	1.9%	*	
EXPORTS	521	604	668	720	800	820	836	853	*	906
% Year Ago		16.1%	10.5%	7.8%	11.1%	2.5%	2.0%	2.0%	*	
TOTAL	26,345	25,809	25,901	24,659	23,879	23,919	24,337	24,793	*	25,076
% Year Ago		-2.0%	0.4%	-4.8%	-3.2%	0.2%	1.8%	1.9%	*	
END. STOCKS	412	386	375	313	277	275	282	297	*	291
% Year Ago		-6.3%	-2.9%	-16.6%	-11.2%	-0.8%	2.6%	5.2%	*	
				(Pounds)						
PER CAPITA CONS.	78.4	73.4	72.8	68.4	65.4	64.9	65.5	66.2	*	65.5
% Year Ago		-6.4%	-0.8%	-6.0%	-4.5%	-0.8%	0.9%	1.1%	*	
PRICES				(Dollars /Cwt)						
OMAHA STEERS	57.75	64.61	69.53	75.35	77.49	78.20	76.30	72.84	*	74.99
% Year Ago		11.9%	7.6%	8.4%	2.9%	0.9%	-2.4%	-4.5%	*	
K.C. FEEDERS	62.79	75.36	83.53	84.15	85.52	86.36	84.51	82.08	*	82.04
% Year Ago		20.0%	10.8%	0.7%	1.6%	1.0%	-2.1%	-2.9%	*	
UTILITY COWS	36.96	44.84	45.80	50.79	51.22	51.61	50.60	49.31	*	49.49
% Year Ago		21.3%	2.1%	10.9%	0.9%	0.8%	-2.0%	-2.5%	*	
				(Dollars/Pound)						
RETAIL BEEF	2.31	2.43	2.55	2.67	2.74	2.74	2.72	2.69	*	2.73
% Year Ago		5.2%	5.0%	4.9%	2.6%	-0.0%	-0.7%	-1.3%	*	
NET RETURNS				(Dollars /Head)						
Cow-Calf	-46.57	30.46	24.63	-11.53	17.31	24.08	13.95	0.95	*	-8.58
Feeder-Finish	-12.50	31.25	-34.00	-23.56	23.53	31.16	19.28	-4.66	*	-3.14

U.S. PORK

- The drought has slowed expansion in the pork industry. Higher feed prices in 1989 will likely lead to a **production** level only modestly higher than in 1988. Higher hog prices and lower feed prices in 1990-92 result in an increase in the breeding herd that continues the present expansion through 1992. Production then falls for three years.
- After the sharp decline in prices in 1988, barrow and gilt **prices** are projected to increase slightly in 1989, to $45.50 per hundredweight. After 1989, prices generally move in the opposite direction from production, in a range from $40 to $52 per hundredweight.
- The swine farrow-to-finish operator will find **profits** squeezed in 1989 in spite of higher prices. Feed costs are expected to increase about $10 per head. Profit margins will likely remain tight over the next several years as higher production drives down prices. Any domestic change in feed supplies induced by unfavorable weather will impact the swine operation directly.
- No significant changes are projected in U.S. pork **trade**. Net imports (excluding live hog imports) are assumed to hold steady at 1.1 billion pounds per year in the 1990s, about 7-8 percent of domestic production.
- **Consumption** moves with production, since stocks and net trade are relatively stable. Per-capita pork consumption increases slightly between 1988 and 1991, from 63 to 65.6 pounds. Per-capita consumption falls to a low of 59 pounds before rising in the last few years of the projection period.
- **Retail pork prices** generally move with barrow and gilt prices, but the changes are usually smaller in percent terms. By the end of the projection period, retail pork prices are about 14 percent higher than in 1988.

U.S. Pork Supply and Utilization

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
SUPPLY				(Million Pounds)						
BEG. STOCKS	289	248	347	440	383	383	394	395	*	368
IMPORTS	1,122	1,195	1,150	1,200	1,200	1,200	1,200	1,200	*	1,200
% Year Ago		6.6%	-3.8%	4.4%	0.0%	0.0%	0.0%	0.0%	*	
PRODUCTION	14062	14,374	15,673	15,722	16,128	16,716	16,719	16,214	*	15,542
% Year Ago		2.2%	9.0%	0.3%	2.6%	3.7%	0.0%	-3.0%	*	
TOTAL	15,473	15,817	17,170	17,362	17,710	18,299	18,312	17,810	*	16,928
% Year Ago		2.2%	8.6%	1.1%	2.0%	3.3%	0.1%	-2.7%	*	
CONSUMPTION										
DOMESTIC	14,063	15,237	16,409	16,710	17,057	17,635	17,647	17,160	*	16,477
% Year Ago		8.4%	7.7%	1.8%	2.1%	3.4	0.1	-2.8%	*	
EXPORTS	85	109	186	130	130	130	130	130	*	130
% Year Ago		28.4%	70.6%	-30.1%	0.0%	0.0%	0.0%	0.0%	*	
TOTAL	14,148	15,346	16,595	16,840	17,187	17,765	17,777	17,290	*	16,607
% Year Ago		8.5%	8.1%	1.5%	2.1%	3.4%	0.1%	-2.7%	*	
END. STOCKS	248	347	440	383	383	394	395	380	*	363
% Year Ago		39.9%	26.8%	-13.1%	0.1%	2.8%	0.4%	-3.9%	*	
				(Pounds)						
PER CAPITA CONS.	58.6	59.1	63.0	63.2	64.0	65.6	65.1	62.8	*	59.1
% Year Ago		0.9%	6.6%	0.4%	1.2%	2.5%	-0.7%	-3.5%	*	
PRICES				(Dollars/Cwt)						
BARROWS / GILTS	51.18	51.69	43.38	45.46	44.12	41.55	40.56	43.74	*	50.80
% Year Ago		1.0%	-16.1%	4.8%	-3.0%	-5.8%	-2.4%	7.8%	*	
SOWS	45.54	44.06	33.41	40.12	38.88	36.50	35.58	38.52	*	45.06
% Year Ago		-3.2%	-24.2%	20.1%	-3.1%	-6.1%	-2.5%	8.3%	*	
				(Dollars/Pound)						
RETAIL PORK	1.78	1.88	1.83	1.88	1.86	1.82	1.80	1.88	*	2.03
% Year Ago		5.6%	-2.7%	2.3%	-0.9%	-2.0%	-1.1%	4.0%	*	
NET RETURNS				(Dollars/Head)						
Farrow Finish	25.02	21.93	6.72	-1.50	4.88	-0.23	-5.53	-0.70	*	4.13

U.S. BROILERS AND TURKEYS

- Drought-induced rises in feed price may have slowed the increase in broiler and turkey **production** in 1988, but there is no evidence that any major downturn is imminent. Both broiler and turkey production increase over the next decade, albeit at rates lower than experienced in recent years.
- Since net trade and stocks are assumed to remain constant, **domestic use** moves with production. Per-capita chicken consumption increases from 62 pounds in 1988 to almost 68 pounds per capita by the end of the projection period. Turkey consumption per capita rises to about 17.5 pounds.
- **Broiler prices** increased sharply in 1988, as producers passed along higher feed costs to consumers without significantly cutting profit margins. Broiler prices increase slowly over the next decade, from $0.56 per pound in 1988 to about $0.63 per pound by 1998, an increase of 12 percent.
- **Turkey prices** increased modestly in 1988. Farm prices increase from $0.36 per pound in 1988 to almost $0.46 by the end of the projection period.
- Broiler producers are projected to generate **returns** about five cents per pound above costs of production over the forecast. Thus, even with only modest price increases, broiler producers receive no strong signals to reduce production.
- Turkey producers experienced some losses in 1988, and 1989 may be no better. Thereafter, margins remain tight, causing production to expand much more slowly than has been observed in the past several years.

U.S. MEAT CONSUMPTION AND EXPENDITURES

- U.S. per-capita meat **consumption** moves with total domestic production. Per-capita consumption remains relatively stable throughout the projection period, as higher broiler and turkey consumption offset reduced beef and pork consumption.
- After reaching record highs in 1988, per-capita meat **expenditures** are projected to fall slightly in 1989. Expenditures change little between 1989 and 1993, but modest increases occur in the mid-1990s.

U.S. Broiler Supply and Utilization

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
SUPPLY				(Million Pounds)						
BEG. STOCK	27	24	25	30	20	20	20	20	*	20
PRODUCTION	14,316	15,595	16,236	16,831	17,216	17,459	17,703	17,935	*	18,677
% Year Ago		8.9%	4.1%	3.7%	2.3%	1.4%	1.4%	1.3%	*	
TOTAL	14,342	15,619	16,261	16,861	17,236	17,479	17,723	17,955	*	18,697
% Year Ago		8.9%	4.1%	3.7%	2.2%	1.4%	1.4%	1.3%	*	
CONSUMPTION										
DOMESTIC	13,603	14,691	15,359	16,073	16,424	16,642	16,861	17,066	*	17,723
% Year Ago		8.0%	4.6%	4.7%	2.2%	1.3%	1.3%	1.2%	*	
EXPORTS	714	902	886	805	828	852	878	904	*	989
% Year Ago		26.2%	-1.7%	-9.1%	2.8%	3.0%	3.0%	3.0%	*	
TOTAL	14,317	15,593	16,245	16,878	17,252	17,494	17,739	17,971	*	18,712
% Year Ago		8.9%	4.2%	3.9%	2.2%	1.4%	1.4%	1.3%	*	
END. STOCK	24	25	30	20	20	20	20	20	*	20
% Year Ago		4.6%	20.0%	-33.3%	0.0%	0.0%	0.0%	0.0%	*	
				(Pounds)						
PER CAPITA CONS.	56.3	60.2	62.3	64.6	65.3	65.6	65.8	66.0	*	67.0
% Year Ago		6.9%	3.5%	3.7%	1.2%	0.3%	0.4%	0.3%	*	
PRICES				(Cents/Pound)						
12-CITY PRICE	56.90	47.36	56.26	56.39	56.59	55.99	56.70	57.75	*	60.9
% Year Ago		-16.8%	18.8%	0.2%	0.4%	-1.1%	1.3%	1.9%	*	
				(Cents/Pound)						
NET RETURNS	10.60	3.30	7.10	3.10	7.30	6.90	6.10	6.70	*	6.50

U.S. Turkey Supply and Utilization

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
SUPPLY				(Million Pounds)						
BEG. STOCK	150	178	282	200	227	226	220	189	*	176
PRODUCTION	3,271	3,828	4,044	4,198	4,284	4,354	4,352	4,425	*	4,617
% Year Ago		17.0%	5.6%	3.8%	2.1%	1.6%	-0.1%	1.7%	*	
TOTAL	3,421	4,006	4,326	4,398	4,511	4,580	4,573	4,614	*	4,793
% Year Ago		17.1%	8.0%	1.7%	2.6%	1.5%	-0.2%	0.9%	*	
CONSUMPTION										
CIVILIAN	3,202	3,688	4,128	4,155	4,250	4,324	4,348	4,391	*	4,586
% Year Ago		15.2%	11.9%	0.7%	2.3%	1.7%	0.6%	1.0%	*	
EXPORTS	31	36	52	36	36	36	36	36	*	36
% Year Ago		17.2%	43.7%	-30.4%	0.0%	0.0%	0.0%	0.0%	*	
TOTAL	3,233	3,724	4,180	4,191	4,286	4,360	4,384	4,428	*	4,622
% Year Ago		15.2%	12.2%	0.3%	2.3%	1.8%	0.6%	1.0%	*	
END. STOCK	178	282	200	227	226	220	189	186	*	171
% Year Ago		58.3%	-29.1%	13.5%	-0.6%	-2.4%	-14.4%	-1.3%	*	
				(Pounds)						
PER CAPITA CONS.	13.3	15.1	16.6	16.7	16.9	17.0	17.0	17.0	*	17.3
% Year Ago		14.1%	9.8%	0.6%	1.3%	0.8%	-0.4%	0.1%	*	
PRICES				(Cents/Pound)						
FARM PRICE	44.38	33.98	35.95	37.68	38.05	38.65	40.15	41.30	*	43.93
% Year Ago		-23.4%	5.8%	4.8%	1.0%	1.6%	3.9%	2.8%	*	
				(Cents/Pound)						
NET RETURNS	8.20	0.50	-2.80	-5.20	-0.30	0.80	0.90	1.80	*	1.70

U.S. Per Capita Meat Consumption

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
				(Pounds)						
BEEF	78.40	73.37	72.80	68.44	65.40	64.91	65.51	66.21	*	65.45
% Year Ago		-6.4%	-0.8%	-6.0%	-4.5%	-0.8%	0.9%	1.1%	*	
PORK	58.60	59.10	63.00	63.25	63.99	65.61	65.13	62.83	*	59.07
% Year Ago		0.9%	6.6%	0.4%	1.2%	2.5%	-0.7%	-3.5%	*	
BROILERS	56.30	60.20	62.33	64.59	65.35	65.57	65.81	66.00	*	67.01
% Year Ago		6.9%	3.5%	3.6%	1.2%	0.3%	0.4%	0.3%	*	
TURKEY	13.30	15.12	16.60	16.73	16.96	17.11	17.07	17.10	*	17.43
% Year Ago		13.7%	9.8%	0.8%	1.4%	0.9%	-0.2%	0.2%	*	
TOTAL	206.60	207.79	214.73	213.01	211.69	213.20	213.52	212.15	*	208.96
% Year Ago		0.6%	3.3%	-0.8%	-0.6%	0.7%	0.2%	-0.6%	*	

U.S. Per Capita Meat Expenditures

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
				(Dollars)						
BEEF	181.10	178.29	185.64	182.76	179.25	177.84	178.22	177.83	*	178.78
% Year Ago		-1.6%	4.1%	-1.6%	-1.9%	-0.8%	0.2%	-0.2%	*	
PORK	104.31	111.11	115.29	118.68	119.03	119.64	117.47	117.85	*	120.08
% Year Ago		6.5%	3.8%	2.9%	0.3%	0.5%	-1.8%	0.3%	*	
BROILERS	46.73	47.26	53.17	48.40	51.40	50.79	51.37	52.99	*	57.78
% Year Ago		1.1%	12.5%	-9.0%	6.2%	-1.2%	1.1%	3.2%	*	
TURKEY	14.13	15.30	15.89	16.16	16.36	16.70	17.00	17.42	*	18.50
% Year Ago		8.3%	3.8%	1.7%	1.2%	2.1%	1.8%	2.5%	*	
TOTAL	346.27	351.96	369.99	366.01	366.03	364.98	364.06	366.09	*	375.14
% Year Ago		1.6%	5.1%	-1.1%	0.0%	-0.3%	-0.3%	0.6%	*	

U.S. DAIRY

- Total milk **production** is projected to rise 10 percent between 1988 and 1998. Although the number of cows on farms is expected to fall 9.5 percent during this period, a 21 percent increase in production per cow more than offsets the decline in cow numbers.
- Fluid **consumption** is likely to continue a modest growth path. Although per-capita consumption of fluid milk will increase only slightly, total fluid consumption will increase at a little more than 1 percent per year.
- **Government removals** will exceed 5 billion pounds through 1993. As a result, the support price will fall $0.50 per hundredweight per year to $8.60 per hundredweight in 1993. Removal levels of less than 2.5 billion pounds in 1996-98 will bring support price increases of $0.50 per hundredweight in each of those years. As a result, the dairy sector will develop a more cyclical production pattern.

U.S. Dairy Supply and Utilization

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-98 Avg
SUPPLY				(Million)						
Milk Cows	10.81	10.33	10.26	10.18	10.09	10.00	9.92	9.81	*	9.48
% Year Ago	-%	-4.4%	-0.7%	-0.8%	-0.9%	-0.9%	-0.8%	-1.1%	*	
				(1,000 Pounds)						
Production/Cow	13.26	13.79	14.17	14.39	14.75	15.03	15.28	15.55	*	16.53
% Year Ago	2.0%	4.0%	2.8%	1.6%	2.%5	1.9%	1.7%	1.8%	*	
			(Billion Pounds		Milk-Equivalent)					
Total Production	143.38	142.46	145.35	146.49	148.78	150.23	151.51	152.61	*	156.60
% Year Ago	0.2%	-0.6%	2.0%	0.8%	1.6%	1.0%	0.9%	0.7%	*	
CONSUMPTION										
Fluid Consumption	52.64	53.43	54.05	54.63	55.34	56.01	56.72	57.47	*	59.55
% Year Ago	1.2%	1.5%	1.2%	1.1%	1.3%	1.2%	1.3%	1.3%	*	
Mfg Milk Use	72.6	75.24	75.16	76.88	77.47	78.28	79.96	81.21	*	86.38
% Year Ago	3.2%	3.6%	-0.1%	2.3%	0.8%	1.0%	2.1%	1.6%	*	
Net Gov't Removals	10.63	6.70	8.95	8.43	8.58	7.92	7.09	6.04	*	2.59
% Year Ago	-19.3%	-37.0%	33.6%	-5.8%	1.8%	-7.7%	-10.5%	-14.8%	*	
PRICES				(Dollars/cwt)						
Farm Price	12.51	12.54	12.14	12.24	11.54	10.98	10.42	9.86	*	10.31
% Year Ago	-1.9%	0.2%	-3.2%	0.8%	-5.7%	-4.9%	-5.1%	-5.4%	*	
Support Price	11.60	11.29	10.60	10.73	10.10	9.60	9.10	8.60	*	9.20
% Year Ago	-3.2%	-2.7%	-6.1%	1.2%	-5.9%	-5.0%	-5.2%	-5.5%	*	
NET RETURNS	2.72	3.94	3.63	3.51	3.04	2.45	1.73	1.02	*	1.02

U.S. LAND USE

- Total **planted area** for 15 principal crops fell to 250 million acres in 1988/89, slightly below both 1987/88 and the PIK year of 1983/84.
- Although less land was idled by annual government programs in 1988/89, the expansion of the conservation reserve resulted in a slight increase in total **idled acres**.
- In 1989/90, reduced ARP rates, the elimination of PLD programs, and reduced participation rates are projected to reduce total idled acreage by 24 million acres. Planted acreage is projected to increase 21 million acres as a result.
- Beginning in 1989/90, the **CRP** accounts for most of the land idled by government farm programs. Annual programs idle just 22 million acres in 1989/90 and an average of 13 million acres between 1993 and 1997.
- Through the first seven enrollment periods, CRP sign-up has been concentrated in the wheat, sorghum, and barley growing regions of the Great Plains and the Mountain States. The Corn Belt share of total enrollment is expected to increase, since there is much more land eligible for CRP enrollment in the Corn Belt than in the regions where past sign-up was greatest.
- If a drought or some other event results in a need to quickly expand production, it will be more difficult in the future than it was after the drought of 1988, since there will be fewer acres idled by annual programs.
- Summing across planted and idled area, the **total acreage** devoted to 15 major crops is projected to remain flat over the next decade, at about 330 million acres.
- Total area is also flat for most major crops. However, some corn land is expected to shift to soybean production in 1989/90, due in part to the change in law permitting soybean production without the loss of corn base acreage.

Planted and Idled Area

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Million Acres)						
15-Crop Total Area	321.3	322.0	329.5	329.8	326.7	329.6	328.7	329.4	*	329.7
Planted	290.6	273.9	252.1	250.2	271.3	269.5	269.3	272.1	*	278.3
Program	115.7	133.9	129.4	127.0	122.3	126.1	133.6	135.7	*	122.5
Nonprogram	174.9	139.9	122.7	123.2	149.0	143.4	136.0	136.3	*	155.8
Idled	30.8	48.1	77.4	79.6	55.4	60.1	59.4	57.4	*	51.4
ARP/PLD/0-92	30.8	46.1	59.8	54.1	22.4	20.1	19.4	17.4	*	13.3
CRP	0.0	2.0	17.7	25.5	33.0	40.0	40.0	40.0	*	38.0
Wheat Total Area	94.9	94.5	94.6	97.6	93.4	94.7	94.4	94.1	*	94.0
Planted	76.1	72.1	65.8	65.5	75.4	78.5	78.3	78.4	*	80.1
Program	40.9	50.3	49.9	46.1	46.0	49.9	58.1	61.3	*	52.7
Nonprogram	35.2	21.8	15.9	19.5	29.5	28.7	20.2	17.1	*	27.3
ARP/PLD/0-92	18.8	21.8	23.8	24.5	8.4	4.7	4.6	4.3	*	3.1
CRP	0.0	0.6	5.0	7.6	9.6	11.4	11.4	11.4	*	10.9
Corn Total Area	88.8	91.5	91.2	90.6	86.2	87.5	87.4	86.4	*	85.9
Planted	83.4	76.7	65.7	67.6	75.0	74.1	74.4	74.0	*	75.3
Program	49.0	53.8	49.5	50.7	50.4	50.5	49.0	46.7	*	44.9
Nonprogram	34.4	22.9	16.2	16.9	24.6	23.7	25.5	27.3	*	30.4
ARP/PLD/0-92	5.4	14.6	23.2	20.1	7.3	8.4	7.9	7.4	*	5.8
CRP	0.0	0.2	2.3	2.9	4.0	5.0	5.0	5.0	*	4.8
Sorg. Total Area	19.2	18.1	17.5	16.3	16.6	16.6	16.9	17.2	*	16.8
Planted	18.3	15.3	11.8	10.5	12.5	11.7	12.2	12.7	*	12.9
Program	8.4	9.0	8.9	8.3	8.3	8.0	7.9	7.9	*	7.5
Nonprogram	9.9	6.3	2.9	2.1	4.2	3.7	4.3	4.8	*	5.5
ARP/PLD/0-92	0.9	2.6	4.4	3.9	1.6	1.8	1.7	1.5	*	1.1
CRP	0.0	0.2	1.3	1.9	2.5	3.0	3.0	3.0	*	2.8
Barley Total Area	13.9	15.2	15.4	14.5	14.1	14.7	14.7	14.7	*	14.3
Planted	13.2	13.1	11.0	9.7	10.7	10.7	10.6	10.7	*	10.8
Program	6.4	7.3	8.1	7.0	5.1	5.3	6.1	6.5	*	6.0
Nonprogram	6.8	5.8	2.9	2.7	5.6	5.3	4.5	4.3	*	4.8
ARP/PLD/0-92	0.7	2.0	3.1	2.9	1.0	1.2	1.2	1.0	*	0.8
CRP	0.0	0.1	1.3	2.0	2.4	2.9	2.9	2.9	*	2.7

Planted and Idled Area (continued)

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Million Acres)						
Oats Total Area	13.4	15.3	19.4	15.0	15.7	15.0	15.2	15.1	*	14.7
Planted	13.3	14.7	18.0	13.9	14.5	13.5	13.7	13.6	*	13.3
Program	0.6	1.5	1.7	2.3	1.6	1.9	1.9	1.9	*	2.0
Nonprogram	12.7	13.2	16.3	11.6	12.9	11.6	11.8	11.7	*	11.4
ARP/PLD/0-92	0.1	0.5	0.9	0.2	0.1	0.1	0.1	0.1	*	0.1
CRP	0.0	0.1	0.6	0.9	1.1	1.4	1.4	1.4	*	1.3
Soybean Totl Area	63.1	60.7	60.1	61.8	65.4	63.6	62.9	65.2	*	67.7
Planted	63.1	60.4	58.0	58.9	61.6	58.9	58.1	60.5	*	63.2
CRP	0.0	0.3	2.1	2.9	3.9	4.7	4.7	4.7	*	4.5
Cotton Total Area	14.3	13.4	14.3	15.1	14.3	14.8	14.8	14.2	*	14.0
Planted	10.7	10.1	10.4	12.5	9.8	10.2	10.1	10.2	*	10.5
Program	8.2	9.7	9.0	10.1	8.5	8.1	8.1	8.7	*	6.8
Nonprogram	2.5	0.3	1.4	2.4	1.3	2.1	2.1	1.5	*	3.7
ARP/PLD/0-92	3.6	3.3	3.1	1.6	3.2	3.0	3.0	2.4	*	1.9
CRP	0.0	0.1	0.7	1.0	1.3	1.6	1.6	1.6	*	1.5
Rice Total Area	3.8	3.7	3.7	3.8	3.8	3.8	3.8	3.7	*	3.8
Planted	2.5	2.4	2.4	2.9	2.9	3.0	2.9	3.0	*	3.1
Program	2.2	2.3	2.3	2.5	2.4	2.5	2.5	2.7	*	2.6
Nonprogram	0.3	0.1	0.1	0.4	0.5	0.4	0.4	0.3	*	0.5
ARP/PLD/0-92	1.2	1.3	1.3	0.9	0.8	0.8	0.8	0.7	*	0.7
CRP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
7 Other Crops*										
Planted**	10.0	9.2	9.0	8.7	8.9	8.9	8.9	8.9	*	9.0
Other CRP Area	0.0	0.4	4.4	6.3	8.2	9.9	9.9	9.9	*	9.5

* Sugar, sunflower, peanuts, edible beans, tobacco, rye, and flaxseed.

** Harvested area for sugar cane, tobacco, and rye.

Base Reductions Due to the Conservation Reserve Program

	86/87	87/88	88/89	89/90	90/91
			(Million Acres)		
Wheat	0.6	5.0	7.6	9.6	11.4
Corn	0.2	2.3	2.9	4.0	5.0
Sorghum	0.2	1.3	1.9	2.5	3.0
Barley	0.1	1.3	2.0	2.4	2.9
Oats	0.1	0.6	0.9	1.1	1.4
Cotton	0.1	0.7	1.0	1.3	1.6
Rice	0.0	0.0	0.0	0.0	0.0
Total Base Reduction	1.3	11.2	16.3	21.0	25.3
Reduced Soybean Area	0.3	2.1	2.9	3.9	4.7
Other	0.4	4.4	6.3	8.2	9.9
Total CRP Area	2.0	17.7	25.5	33.0	40.0

CRP Enrollment by Region

	Through Spring 1988		Future Enrollment		Final Enrollment	
	(Million Acres)	(% of Total)	(Million Acres)	(% of Total)	(Million Acres)	(% of Total)
Corn Belt	3.56	13.9	3.12	21.6	6.68	16.7
N. Plains	6.04	23.7	2.96	20.5	9.01	22.5
S. Plains	4.10	16.0	2.28	15.7	6.38	15.9
Mountain	5.24	20.5	2.06	14.2	7.30	18.3
Lake	2.07	8.1	1.07	7.4	3.14	7.9
Appalachia	0.86	3.4	0.84	5.8	1.70	4.2
Pacific	1.49	5.8	0.75	5.2	2.24	5.6
Southeast	1.25	4.9	0.63	4.3	1.87	4.7
Delta	0.78	3.0	0.56	3.9	1.34	3.3
Northeast	0.13	0.5	0.21	1.4	0.34	0.9
Total	25.53		14.47		40.00	

U.S. AGRICULTURAL EXPORTS

- The drought of 1988 has increased prices and reduced the volume exported, particularly for wheat and soybeans. Because of the higher prices, the **value** of exports of ten major agricultural commodities is higher in 1988/89 than in 1987/88, in spite of reduced export volume.
- Because of decreased Soviet feed grain production, exports of corn and sorghum are expected to increase, despite higher export prices.
- Recovery of wheat and feed grain crops in the USSR and Canada, along with continued strength in Argentine and Brazilian soybean complex exports, are projected to reduce the **volume** of U.S. agricultural exports in 1989/90.
- Increases in world demand, particularly in the Pacific Basin and the oil-exporting countries, will result in increasing exports beginning in 1990/91. By 1992/93, exports recover to the levels of 1987/88. During the 1993-97 projection period, the average volume of exports surpasses that of the early 1980s.
- Because of lower prices and increased foreign competition, the **value** of exports of ten commodities is projected to fall in 1989/90 and 1990/91. The value of exports increases in the 1990s, so that it surpasses the 1987/88 level in 1992/93 and nears the record highs of the early 1980s during the mid-1990s.

U.S. Exports of 10 Commodities

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93		93-97 Avg
				(Million mt)						
Exports	87.64	101.39	129.56	122.81	117.77	119.18	122.42	129.01	*	150.07
Wheat	24.90	27.32	43.33	40.83	36.55	37.95	38.63	40.78	*	45.22
Feed Grains	36.55	46.26	52.62	57.38	53.96	52.34	53.89	57.26	*	69.57
Corn	31.52	38.20	44.00	49.17	46.55	44.61	45.85	48.81	*	60.03
Sorghum	4.52	5.03	5.87	7.10	5.65	5.61	5.69	5.84	*	6.68
Barley	0.48	2.98	2.74	1.09	1.74	2.10	2.34	2.60	*	2.84
Oats	0.03	0.04	0.01	0.01	0.01	0.01	0.01	0.01	*	0.01
Soybean Sector	26.19	27.80	28.91	20.11	22.16	23.69	24.62	25.55	*	29.61
Soybeans	20.14	20.60	21.83	15.42	17.24	17.90	18.38	18.69	*	21.19
Soybean Meal	5.48	6.66	6.23	4.09	4.36	5.04	5.44	6.02	*	7.48
Soybean Oil	0.57	0.54	0.85	0.60	0.56	0.75	0.79	0.84	*	0.93
Cotton	0.43	1.45	1.43	1.14	1.31	1.39	1.45	1.48	*	1.51
Rice	2.66	3.82	3.27	3.36	3.80	3.80	3.84	3.93	*	4.17
FOB Prices				(Dollars/mt)						
Wheat	130.00	109.00	124.00	164.73	157.82	142.27	135.79	146.59	*	160.07
Corn	99.00	70.00	98.50	113.71	97.86	95.29	95.29	96.58	*	104.71
Sorghum	94.00	76.00	88.25	108.35	96.27	95.82	96.27	97.16	*	104.86
Barley	101.50	91.40	100.97	152.53	122.41	113.73	110.16	111.18	*	118.74
Soybeans	204.00	192.00	223.00	297.13	232.42	212.36	243.39	238.47	*	241.80
Soybean Meal	170.75	179.34	244.71	273.80	201.82	187.61	207.68	200.84	*	212.52
Soybean Oil	396.83	339.51	499.34	488.10	503.31	409.39	466.71	484.57	*	476.06
				(Billion Dollars)						
Value of Exports	13.02	13.64	19.85	21.03	18.21	17.55	18.57	19.94	*	24.56
Wheat	3.24	2.98	5.37	6.73	5.77	5.40	5.25	5.98	*	7.26
Feed Grains	3.60	3.33	5.13	6.53	5.31	5.03	5.18	5.57	*	7.37
Corn	3.12	2.67	4.33	5.59	4.56	4.25	4.37	4.71	*	6.32
Sorghum	0.43	0.38	0.52	0.77	0.54	0.54	0.55	0.57	*	0.70
Barley	0.05	0.27	0.28	0.17	0.21	0.24	0.26	0.29	*	0.34
Oats	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*	0.00
Soybean Sector	5.27	5.33	6.82	5.99	5.17	5.06	5.97	6.07	*	7.18
Soybeans	4.11	3.96	4.87	4.58	4.01	3.80	4.47	4.46	*	5.13
Soybean Meal	0.93	1.19	1.53	1.12	0.88	0.95	1.13	1.21	*	1.60
Soybean Oil	0.23	0.18	0.42	0.29	0.28	0.31	0.37	0.41	*	0.44
Cotton	0.53	1.68	2.01	1.30	1.44	1.54	1.64	1.74	*	2.07
Rice	0.38	0.32	0.52	0.48	0.52	0.53	0.54	0.57	*	0.68

U.S. GOVERNMENT COSTS

- **Net outlays** by the Commodity Credit Corporation (CCC) on farm programs fell from $25.8 billion in fiscal year 1986 to $12.5 billion in fiscal 1988. Stock program outlays account for most of the difference. Farmers placed fewer commodities under loan and redeemed more loans as the government liquidated CCC inventories.
- **Fiscal 1989** costs are projected to total about $12 billion. For feed grains and wheat, deficiency payments and stock outlays fall as a result of the drought. Offsetting these declines are increased cotton and rice program costs and $4.5 billion in disaster payments made to producers affected by the drought.
- **Fiscal 1990** costs are projected to fall, primarily because no disaster payments are assumed. Costs increase slightly in 1991, as lower crop prices in 1989/90 and 1990/91 result in higher deficiency payments.
- In the **1990s**, costs are projected to fall as rising crop prices reduce deficiency payment rates and discourage program participation.
- Assuming the conservation reserve reaches the targeted 40 million acres and that the average rental rate on future enrollment increases 25 percent, **CRP** rental payments will total $2.1 billion per year in the early 1990s.

Total Government Costs
(CCC Accounting)

Program/ Fiscal Yr.	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93		94-97 Avg
				(Million Dollars)						
Feed Grains	12,212	13,967	9,053	2,232	3,236	4,704	4,458	3,973	*	2,730
Corn		12,399	7,878	1,959	2,781	4,146	3,938	3,502	*	2,455
Sorghum		1,102	915	498	389	428	374	338	*	203
Barley		433	254	-209	66	129	146	131	*	72
Oats		33	6	-16	0	1	1	1	*	0
Wheat	3,440	2,836	678	149	944	1,531	1,671	1,337	*	773
Soybeans	1,597	-476	-1,676	-110	158	128	159	30	*	-4
Cotton	2,142	1,786	666	2,479	915	941	931	857	*	336
Rice	947	906	128	888	511	468	412	409	*	345
Dairy	2,337	1,166	1,295	1,136	1,108	919	728	590	*	331
Cons. Reserve	23	26	0	0	0	0	0	0	*	0
Net Interest	1,411	1,219	395	55	216	287	233	31	*	159
Disaster Payments	0	0	31	4,500	0	0	0	0	*	0
Other Net Costs	1,733	736	1,892	777	1,049	1,494	1,579	1,513	*	1,219
Net CCC Outlays	**25,841**	**22,408**	**12,461**	**12,106**	**8,136**	**10,472**	**9,853**	**8,940**	*	**5,888**
Cons. Reserve	0	0	946	1,526	1,979	2,276	2,143	2,143	*	2,129
TOTAL GOV'T COSTS	**25,841**	**22,408**	**13,407**	**13,632**	**10,115**	**12,747**	**11,996**	**11,083**	*	**8,018**

Total Government Costs
(By Function, Adjusted for Certificate Usage)

Item/ Fiscal Yr.	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93		94-97 Avg
				(Million Dollars)						
Defic. Payments		9,136	11,878	7,574	5,924	7,265	7,166	6,410	*	4,213
Diver. Payments		1,530	732	0	0	0	0	0	*	0
Producer Storage		832	493	334	159	104	111	112	*	97
Cons. Reserve		705	1,376	1,526	1,979	2,276	2,143	2,143	*	2,129
Disaster Payments		0	31	4,500	0	0	0	0	*	0
Direct Payments		**12,202**	**14,509**	**13,934**	**8,062**	**9,645**	**9,420**	**8,665**	*	**6,439**
Loans Made		15,476	12,262	6,363	7,853	7,908	7,164	7,349	*	6,296
Loans Repaid		10,847	15,093	8,043	8,619	8,003	7,617	7,626	*	6,612
Storage, Handling		1,427	1,153	634	422	351	308	266	*	185
Net Dairy Purch.		618	838	824	789	708	606	495	*	274
Net Stock Outlays		**6,675**	**-840**	**-222**	**445**	**964**	**462**	**484**	*	**142**
Other Net Costs		3,531	-262	-81	1,608	2,139	2,115	1,933	*	1,436
TOTAL GOV'T COSTS	**25,841**	**22,408**	**13,407**	**13,632**	**10,115**	**12,747**	**11,996**	**11,083**	*	**8,018**

U.S. NET FARM INCOME

- After large increases in 1987 and 1988, total **cash receipts** are projected to remain flat in 1989 and 1990. In the 1990s, total cash receipts increase at an average rate of 2.2 percent per year.
- **Crop marketings** account for an increasing proportion of total cash receipts over time. By 1990 crop marketings surpass the 1985 peak of $74.2 billion. By 1993 crops account for a larger proportion of total receipts than do livestock. **Livestock marketings** are at record highs, but projected increases are limited.
- **Government payments** and subsidies generally are projected to decline over time, in response to rising market prices. Government payments accounted for more than 10 percent of total cash receipts in 1987, but the proportion is projected to fall to just 3 percent in the 1994-97 projection period.
- **Production costs** increased sharply in 1988 in response to higher feed costs, and another large increase is likely in 1989 based on the projected increase in planted area. In the 1990s production costs increase at an average annual rate of 3.5 percent.
- **Net farm income before adjusting for inventory changes** exceeded $46 billion in both 1987 and 1988. Lower crop prices, reduced government payments, and higher production costs result in the 1989 value falling to less than $40 billion. Further modest declines occur in the 1990s, as production costs increase more rapidly than receipts.
- Large drought-induced **inventory changes** in 1988 and 1989 skew the **net farm income** numbers. In 1988, the large reduction in stocks resulted in a large negative change in inventories, so net farm income fell by nearly $8 billion from the 1987 level. In 1989, stock rebuilding may cause net farm income to exceed the 1987 value. In the 1990s, projected inventory changes are small, so net farm income is not significantly affected by inventory changes.

U.S. Net Farm Income

Variable/Year	1986	1987	1988	1989	1990	1991	1992	1993		94-97 Avg
				(Billion Dollars)						
Cash Receipts from Marketings	**135.10**	**138.09**	**149.26**	**151.43**	**154.39**	**155.92**	**159.13**	**160.97**	*	**174.29**
CROPS	63.55	61.88	69.28	70.68	73.11	74.44	78.46	81.20	*	91.85
Feed Grains	16.98	13.06	15.16	14.91	16.37	16.21	16.55	16.90	*	18.98
Food Grains	5.63	5.41	7.21	8.39	8.62	8.28	8.85	9.25	*	10.78
Oilseeds	10.59	10.80	12.65	12.39	11.93	11.69	12.90	12.85	*	14.38
Cotton & Cotton Seed	3.55	4.03	4.59	3.65	3.35	3.49	3.66	4.04	*	4.75
Other	26.80	28.58	29.67	31.33	32.84	34.77	36.50	38.16	*	42.96
LIVESTOCK	71.55	76.22	79.98	80.75	81.28	81.47	80.68	79.76	*	82.43
Cattle	28.92	33.83	36.55	36.35	37.29	38.17	37.86	36.77	*	36.41
Hogs	9.72	10.33	9.36	9.79	9.79	9.61	9.37	9.76	*	10.65
Dairy	17.75	17.83	17.61	17.87	17.11	16.44	15.73	14.99	*	15.71
Poultry	12.24	11.05	12.97	13.33	13.69	13.84	14.23	14.71	*	15.83
Other	2.92	3.18	3.49	3.41	3.40	3.41	3.48	3.53	*	3.83
GOVERNMENT PAYMENTS	11.81	16.75	13.26	11.55	8.81	9.94	9.18	8.56	*	6.11
OTHER CASH RECEIPTS	5.05	5.56	5.70	5.80	6.00	6.20	6.40	6.60	*	7.10
Total Cash Receipts	**151.97**	**160.40**	**168.22**	**168.77**	**169.20**	**172.06**	**174.72**	**176.13**	*	**187.49**
NON-CASH & OTHER	10.63	9.99	9.61	8.77	9.19	9.42	9.66	9.91	*	10.68
Total Receipts before Inventory Change	**162.59**	**170.39**	**177.82**	**177.55**	**178.39**	**181.47**	**184.37**	**186.04**	*	**198.17**
Production Expenses	**122.34**	**123.50**	**131.49**	**138.38**	**140.46**	**144.55**	**148.76**	**152.65**	*	**167.80**
Feed	16.18	16.09	22.14	22.29	20.32	20.19	20.61	20.48	*	21.80
Purchased Livestock	9.74	12.01	12.73	12.99	13.22	13.41	13.22	12.92	*	12.90
Seed	2.98	3.01	3.16	3.55	3.62	3.73	3.90	4.09	*	4.74
Fertilizer	5.79	5.39	6.02	7.45	7.72	8.23	8.69	9.17	*	10.70
Repair, Op. of Cap. Items	13.16	13.38	14.15	15.18	15.63	16.22	16.90	17.78	*	20.36
Hired Labor	9.88	10.75	11.00	11.32	11.56	11.83	12.18	12.34	*	12.85
Real Estate Interest	9.13	8.20	7.89	8.37	8.74	8.82	8.64	8.60	*	9.04
Business Taxes	4.12	4.34	4.21	4.59	4.69	4.77	4.99	5.22	*	5.99
Depreciation	18.92	17.35	18.20	17.81	18.58	19.58	20.28	21.21	*	24.19
Miscellaneous	25.73	25.98	25.00	27.25	28.79	30.21	31.65	33.10	*	36.90
Rent to Nonoperators	6.70	6.99	7.00	7.59	7.59	7.58	7.70	7.72	*	8.33
Net Income before Inventory Change	**40.26**	**46.89**	**46.33**	**39.17**	**37.93**	**36.92**	**35.61**	**33.39**	*	**30.37**
VALUE OF INVENTORY CHG	-2.82	-0.62	-7.86	7.85	0.51	0.54	0.81	-0.23	*	0.68
Net Farm Income (Nominal $'s)	**37.44**	**$46.26**	**38.47**	**47.02**	**38.44**	**37.46**	**36.42**	**33.16**	*	**31.05**
Net Farm Income (1967 $'s)	**12.49**	**15.03**	**12.01**	**14.07**	**11.11**	**10.44**	**9.79**	**8.59**	*	**7.32**

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