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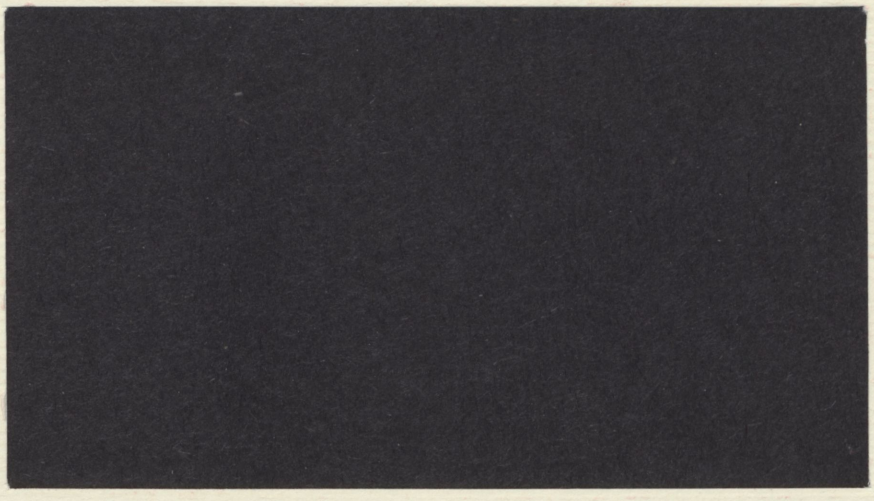
CARD Staff Report



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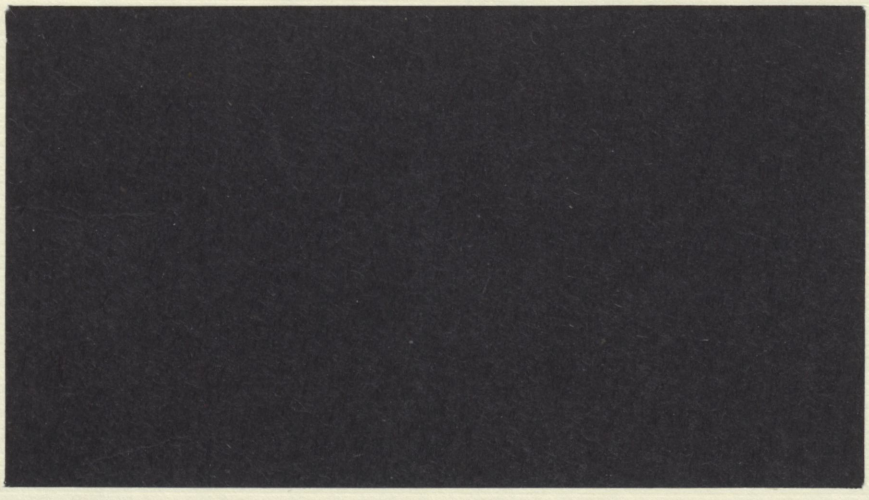

The Center for Agricultural and Rural Development at Iowa State University has been a leader in agricultural economic policy research since its founding in 1958.

Research projects at CARD are conducted in four major areas:

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4. Rural and economic development—Evaluation of changes in agricultural policy that affect rural and economic development.

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AN ANALYSIS OF THE U.S. HOUSE OF REPRESENTATIVES 1985 FARM BILL

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Revised

AN ANALYSIS OF THE U.S. HOUSE OF REPRESENTATIVES 1985 FARM BILL

FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE

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AN ANALYSIS OF THE U.S. HOUSE OF REPRESENTATIVES 1985 FARM BILL

December 1985

1. Introduction

On October 8, 1985 the U.S. House of Representatives adopted the 1985 ommibus Farm Bill (H.R. 2100, The Food Security Act of 1985). The consequences of this program, designed for the U.S. crop and livestock industry, is examined here. Included are several tables that define specific program parameters, commodity balance sheets for major crops and livestock industries, and corresponding aggregate estimates for net farm income, total government cost, and overall food expenditures.

This farm program design is a significant departure from the 1981 Farm Bill. Target prices are maintained over the five-year period (1986-1990) at the current 1985 level. Loan rates, however, may be reduced by up to 25 percent for all major commodities, with corresponding implications for market prices. Lowering the loan rate is a direct attempt by the U.S. House of Representatives to refocus the U.S. share of world trade. Crop producers in the United States will be provided a transition shelter, through deficiency payments, for entering farm programs and setting aside land as the market moves toward a lower price environment.

An additional feature of the House Farm Program design is a long-term land conservation reserve of approximately 25 million acres of land to be

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contracted on a bid basis at the county level. Approximately one-half of this land will be from the wheat ASCS base of 93 million acres, and one-fourth from the feed grain base.

Previous research by FAPRI has indicated several major problems in agriculture. These include the health of the general economy, the tremendous excess supply capacity of U.S. agriculture, diminishing exports, severe financial problems -- with corresponding implications for the farm credit system and other agriculture lenders -- and, finally, budget constraints imposed on agriculture as its prescribed share in reducing the federal deficit.

Many of these problems are outside the realm of agriculture. The focus of the farm program on lowering loan rates and building a conservation reserve of about 25 million acres are aimed at two of the problems: excess supply and declining exports. Budget constraints, health of the world economies, and farm credit will have a significant impact on the direction of agriculture in the next three to five years. Budget constraints that necessarily preclude the use of strong land acreage control programs tend to increase reserves, lower market prices, and increase total government cost. Sluggish growth with high interest rates and a strong dollar dominates the potential growth for U.S. products. Financially stressed farmers and the farm credit system set in motion additional complications that are not addressed by the Farm Bill but will have a dominant impact in the next four years.

2. Evaluation Procedure

The evaluation of the 1985 House Farm Bill is conducted via the use of an annual econometric model of the U.S. livestock-crop sector for the period 1985 through 1989. Analysis is based on a sequential process that incorporates information from a forecast of the general economies, and from supply and demand in foreign economies, with an interface to the domestic U.S. crop and livestock industries. This sequence takes place on an annual basis and is preconditioned by the specific set of policy variables as described in the 1985 House of Representatives Farm Bill.

The research is conducted in two phases. First, the FAPRI model is solved for the assumed external conditions, including policy parameters within a particular crop year. Second, the FAPRI model is rolled forward from year to year to develop estimates of the prescribed policy conditions and other factors external to agriculture over the evaluation period. The evaluation of the farm bill is designed to assess major agricultural commodities conditioned on the parameters associated with that legislation and the Farm Bill - provide perspectives for a potential adjustment in domestic and international markets. The analysis process includes:

-Predetermined conditions external to U.S. agriculture.

-General macro economic conditions for domestic and foreign markets.

-Normal weather, domestic and foreign markets.

-Farm program and corresponding policies for domestic and foreign agriculture.

-Estimation of farm program participation relative to market price expectations and government program variables.

-Simultaneous solution of crop and livestock sectors, preconditioned for CCC and Farmer-Held Reserve incentives, plus negotiated exports that includes PL480 trade.

-Government program outlays for the crop sector.

-Net farm income.

-Established program variables for succeeding years based on current market consequences preconditioned for the House Farm Bill program design.

-Roll the entire system forward one year and repeat the sequence.

The estimates are the initial solutions of the modeling system, which reflect simultaneous prices across all commodities relative to the corresponding market information that conditions supply and demand. If the initial solution is below the loan rate, a second solution is initiated that ensures prices at or near the loan rate, with corresponding increases in government stock categories. This may involve increases in either CCC or Farmer-Held Reserves. Likewise, a solution displaying market prices above release prices for Farmer-Held Reserves commodities, requires a second solution that will hold the price at or near the release price until the reserves are exhausted.

3. The 1985 House Farm Bill

The focus of the 1985 House Farm Bill is to ensure that the U.S. agricultural industry becomes more competitive in the world trade market. This focus is established through a prescribed step-down in loan rates that could reduce supports by as much as 25 percent beginning in 1986. To ensure farm income support, target prices for all commodities are frozen for the 1986 and 1987 crop years with the potential of a 5 percent reduction after 1987/88 if the Secretary can show similar reductions in the cost of production. This analysis is based on a continued increase in the cost of production series as projected by Wharton Econometrics. It implies that target prices will be frozen for all years of the Bill. Intermediate credit at three to ten years and blended credit programs are also provided in the export portion of the Bill.

A new feature in the Bill involves a direct allocation for export bonus. Export bonus programs allow the use of CCC stocks as an incentive to make U.S. commodities competitive in world markets and to counter subsidized exports in unfair trade practices. Also the Bill broadens the section 416 Food Donation Program to include grains, oilseeds, and other eatable agricultural commodities.

An additional feature of the Bill involves a long term conservation reserve of 25 million acres of land, phased in over a four-year period, with approximately seven million acres of land bid into the reserve program in the 1986/87 crop year. The bid process takes place on a county by county basis.

It is aimed at the more erosion-prone land with a maximum of a 25 percent of the ASCS base acreage placed in the reserve in any one county.

Another important feature of this Farm Bill is a transition period for U.S. agriculture to become more competitive in the world market. However, given the projected growth of the domestic and foreign economies, with corresponding pressure from competitive supplies, market prices are projected to follow the drop in loan rates. Lower prices provide an incentive for a change in the direction of U.S. trade and in the U.S. and foreign livestock breeding herds. However, export demand is not estimated to be strong enough to overcome the initial drop in commodity prices. Therefore, U.S. farmers are projected to participate at record levels in the corresponding reduced acreage programs. In the near term, this shelter for U.S. farmers is projected to substantially increase government costs of farm programs but will maintain net farm income at or near levels generated in the 1981 through 1985 period. Analysis indicates that program costs will be above levels normally associated with program operation with some moderation in costs near the end of the decade.

The two most significant features in the 1985 Farm Bill relative to the 1981 Bill are the potential for a substantially lower loan rate and the implementation of a sizable long-term land conservation reserve. This implies loan rates dropping from around $2.55 per bushel for corn down to the $2 level, with wheat loan rates declining from $3.30 to a low of $2.50 by 1987/88. Soybean loan rates are projected to decline also -- from the $5.02 level to a low of approximately $4.50 by 1988/89. Cotton loan rates are projected to decline from $0.57 per pound in 1985/86 to a low of about $0.40

per pound in 1987/88. Rice loan is estimated to decline from $8 per hundredweight to a low of $6.20 by 1988/89. This information is summarized in Table 1.

4. Economic Assumptions for 1986-1990

Production and net exports of major competitors are conditioned on internal economic growth, likewise implied excess demand by major importers are also driven by key general economic variables. These variables are provided by Wharton Econometrics and set the pattern of world growth as a preconditioning factor for the trade component of the model. These general economic variables are provided in Table 2, indicating a moderate rate of growth for U.S. commodities over the projection period. Highlights of these assumptions are:

-Real growth rates in the U.S. GNP of 2.5 to 3.3 percent for the period 1986 through 1990.

-An inflation rate of 3.8 to 5.4 percent, moving to the higher level in later years.

-Civilian unemployment dropping from a rate of 7.4 percent in 1986, declining to 7.1 percent by 1989.

-Short-term interest rates reflected by Moody's AAA Corporate Bond rate falls to 10.3 percent in 1986, but recovers in 1987 and steadily increases to a high of about 10.9 percent by 1990.

TABLE 1

VALUES FOR SELECTED POLICY PARAMETERS 1985 HOUSE FARM BILL

Crop & Year	Loan Rate	Target Rate	Reserve Entry	Reserve Release	Set Aside	Paid Diversion	Pmt. Rate	LTCR Acres
			Dollars per Bushel					
Corn								
85/86	2.55	3.03	2.55	3.25	10	--	--	-
86/87	2.06	3.03	2.06	3.25	20	--	--	1.09
87/88	1.97	3.03	1.97	3.25	20	--	--	2.19
88/89	1.98	3.03	1.98	3.25	20	--	--	3.29
89/90	1.90	3.03	1.90	3.25	20	--	--	3.29
90/91	1.90	3.03	1.90	3.25	20	--	--	3.29
			Dollars per Bushel					
Wheat								
85/86	3.03	4.38	3.03	4.45	20	10	2.70	0
86/87	2.66	4.38	2.66	4.45	30	--	--	4.35
87/88	2.50	4.38	2.50	4.45	30	--	--	8.70
88/89	2.50	4.38	2.50	4.45	30	--	--	13.06
89/90	2.50	4.38	2.50	4.45	30	--	--	13.06
90/91	2.46	4.38	2.46	4.45	30	--	--	13.06
			Cents per Pound					
Cotton								
85/86	57	81	--	--	20	10	30	0
86/87	44	81	--	--	25	--	--	.51
87/88	42	81	--	--	25	--	--	1.02
88/89	40	81	--	--	25	--	--	1.53
89/90	40	81	--	--	25	--	--	2.0
90/91	57	81	--	--	25	--	--	2.0
			Dollars per CWT					
Rice								
85/86	8.00	11.90	--	--	20	15	3.50	0
86/87	6.46	11.90	--	--	25	10	3.50	0
87/88	6.20	11.90	--	--	25	10	3.50	0
88/89	6.20	11.90	--	--	25	10	3.50	0
89/90	6.20	11.90	--	--	25	10	3.50	0
90/91	6.20	11.90	--	--	25	0	0	0
			Dollars per Bushel					
Soybeans								
85/86	5.02	--	--	--	--	--	--	0
86/87	4.77	--	--	--	--	--	--	1.23
87/88	4.53	--	--	--	--	--	--	2.46
88/89	4.30	--	--	--	--	--	--	3.69
89/90	4.30	--	--	--	--	--	--	3.69
90/91	4.30	--	--	--	--	--	--	3.69

LTCR: Long Term Conservation Reserve

TABLE 2

DOMESTIC AND FOREIGN ECONOMIC ASSUMPTIONS AND PROJECTIONS

Conditioning Assumptions	Years					
	1985	1986	1987	1988	1989	1990
United States						
Real GNP % change	2.5	2.8	3.3	2.8	3.0	0
GNP Deflator % change	3.8	4.0	4.4	4.9	5.1	5.4
Civilian Unemployment Rate	7.3	7.4	7.2	7.2	7.1	8.0
3-Month T. Bill Rate	7.5	6.8	7.5	8.4	8.7	9.5
Moody's AA Corporate Bond Rate	11.4	10.3	10.5	10.5	10.7	10.9
Foreign/Domestic						
Foreign Currency/Dollar % change	-9.4	-4.1	-3.1	-3.8	-1.4	-.5
Real GNP % change						
Latin America	2.4	3.5	4.2	3.4	3.8	4.2
Pacific Basin	5.9	6.4	6.5	6.0	6.0	6.1
Europe	2.3	2.1	2.3	2.5	2.5	2.1
Centrally Planned	3.0	3.1	3.2	3.1	3.2	2.3

SOURCES: Wharton Econometric Forecasting Associates.

-The U.S. dollar depreciates in the forecast period rather sharply at 9.4 percent in 1985 and more moderately through the remainder of the forecast period.

-Annual growth rates and real gross domestic product of 2.4 to 4.2 percent in Latin America, 5.9 to 6.5 percent in the Pacific Basin, 2.1 to 2.5 percent in Europe, 2.3 to 3.2 percent in the centrally planned economies.

Critical to these economic projections is a presumed continuation of the large U.S. budget deficit. The budget deficit is responsible, in part, for the high real interest rate and the relatively slow, but steady, rate of growth for the U.S. economy until 1990. For the world economy, a medium growth rate path is presumed. However, Pacific Basin nations will continue to grow at a relatively rapid rate compared with countries in other regions of the world. In addition, Africa and Latin America, although not shown, is projected to rebound from the stressed current economic conditions and achieve annual growth rates comparable to those of the centrally planned economies, around 3 percent, by the end of the decade.

5. Evaluation for Crop and Livestock

The evaluation of the 1985 House Farm Bill was conducted using the policy parameters detailed in section 3 and the domestic and foreign assumption projections reviewed in section 4. The evaluation for the crops sectors was on a crop-year basis (1985/86 through 1990/91). The comparable livestock figures are for calendar years 1985 through 1990. The outcomes of the five major crops under the Farm Bill are reviewed, then the outcomes for the

selected components of the livestock sector are provided. The analysis excludes dairy. The livestock commodities evaluated are beef, pork, and poultry. Also reduced acreage programs were implemented exclusively with the longer term conservation reserve. Excessive stock accumulation in the rice sector required the use of paid diversion programs that utilized the PIK option instead of direct payment for idled land.

Wheat (Table 3)

-A 30 percent reduced acreage program is implemented for the evaluation period with no paid diversion. Program participation is estimated to average 80 percent per year with corresponding planted acreage ranging from 68.6 to 75.7 million acres. Long term conservation reserves increases from 4.35 million acres in 1986/87 to 13.1 million by 1990/91.

-Domestic demand is projected to remain nearly constant and exports to increase by approximately 47 percent. Part of the projected increase in export growth is associated with normal weather projections for the forecast period, plus export gains associated with the lower market price conditioned by moderate world economic growth. Also, the projection is conditioned on a low base estimate of 1.05 billion bushels in 1985/86.

-Ending stocks are projected to remain about two billion bushels throughout the forecast period, indicating that stronger acreage control programs may be necessary to reduce overall stock levels and corresponding government program costs.

TABLE 3

WHEAT - HOUSE FARM BILL

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91
Acreage			Million Acres			
Base Acreage	93.3	93.3	93.3	93.3	93.3	93.3
L.T. Cons. Res.	0	4.35	8.7	13.06	13.06	13.06
RAP %	20%	30%	30%	30%	30%	30%
Paid Diversion%	10%	0%	0%	0%	0%	0%
% Participation	74%	80%	80%	80%	80%	80%
Planted	75.8	75.7	73.1	68.5	68.9	68.6
Harvested	64.6	67.3	65.1	61.0	61.3	61.0
Yield (bu/acre)	37.4	37.8	38.2	38.6	39.0	39.4
Base Yield (bu/acre)	36.3	37.1	37.8	38.3	38.2	38.2
Production (mil. bu.)	2,419	2,547	2,487	2,355	2,393	2,406
			Million Bushels			
Domestic Use	1,050	1,065	1,124	1,068	1,053	1,054
Exports	1,050	1,158	1,246	1,322	1,416	1,540
Ending Stocks	1,748	2,074	2,193	2,160	2,086	1,901
CCC Owned	656	893	1,004	1,140	1,113	1,124
"Free" Stocks	0	120	160	180	413	354
Estimated Price						
Farm Price	$3.09	$2.75	$2.58	$2.68	$2.85	$2.95
*Return/Acre ($/acre)						
Non Particpt	$44.61	$29.11	$20.71	$21.91	$24.75	$23.56
Participants	$67.97	$58.79	$58.24	$57.06	$54.38	$50.87

	1986	1987	1988	1989	1990
	Million Dollars (Fiscal Years)				
Direct Payments	$2076.7	$3510.1	$3982.8	$3993.5	$3391.3
Govt. Outlays Exc. PIK	$3870.1	$4360.9	$4241.6	$4203.3	$3484.6
Govt. Outlays Inc. PIK	$3870.1	$4503.9	$4570.4	$4640.4	$3954.7

*Returns per acre reflect net revenues over variable production cost and does not include land cost.

-Farm prices fall sharply in 1986/87 and remain low for the entire forecast period. Lowest prices are forecasted in 1987/88 at $2.58 per bushel increasing to $2.95 by 1990/91.

-Given lower loan rates and corresponding market prices, returns to program participants remain substantially above nonparticipants throughout the forecast period.

-Annual government cost excluding PIK moves from $4.4 billion in 1986 to around $3.5 billion by 1990, almost $2.5 to $3.0 billion of this program cost is associated with deficiency payments. PIK costs associated with export subsidies provided in the Farm Bill add an additional $300-450 million per year.

-Magnitude of stock buildup after 1986/87 implies that stronger acreage control programs will be necessary under normal weather assumption, possibly in the 30 percent reduced acreage - 10 percent paid diversion magnitude.

Corn (Table 4)

-A 20 percent reduced acreage program with no paid diversion is utilized throughout the forecast period. Program participation is estimated to range between 65 to 72 percent with planted area declining from 82 million acres in 1986/87 to 76.7 by 1990/91. Long term conservation reserve increases from 1.23 million acres in 1986/87 to 3.69 million by 1990/91.

TABLE 4

CORN - HOUSE FARM BILL

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91
Acreage			Million Acres			
Base Acreage	83.3	83.3	83.3	83.3	83.3	83.3
L.T. Cons. Rese	0	1.23	2.46	3.69	3.69	3.69
RAP %	10%	20%	20%	20%	20%	20%
Paid Diversion	0%	0%	0%	0%	0%	0%
% Participation	71%	65%	70%	72%	70%	68%
Planted	83.2	82.0	80.2	78.3	77.5	76.7
Harvested	74.8	72.1	70.6	68.9	68.2	67.5
Yield (bu/acre)	116.6	111.3	113.9	116.4	118.4	120.4
Base Yield (bu/acre)	100.2	105.3	105.8	105.9	113.0	115.3
Production (mil. bu.)	8,716	8,027	8,039	8,014	8,071	8,132
			Million Bushels			
Domestic Use	5,500	5,683	5,875	5,809	5,808	5,811
Exports	1,756	1,862	1,952	1,980	2,037	2,104
Ending Stocks	2,838	3,322	3,534	3,760	3,987	4,205
CCC Owned	616	903	1,036	1,220	1,408	1,476
"Free" Stocks	230	1,190	1,267	1,469	1,661	1,845
Estimated Price						
Farm Price	$2.54	$2.24	$2.07	$2.18	$2.23	$2.28
*Return/acre ($/acre)						
Non Particpts	$138.68	$83.95	$64.68	$74.81	$74.91	$72.27
Participants	$167.15	$136.45	$135.77	$134.64	$135.48	$130.38

	1986	1987	1988	1989	1990
	Million Dollars (Fiscal Years)				
Direct Payments	$3262.9	$4534.3	$5063.1	$5298.8	$5348.5
Govt. Outlays Exc. PIK	$6493.4	$4546.8	$5540.0	$5487.7	$5675.1
Govt. Outlays Inc. PIK	$6493.4	$4638.6	$5697.1	$5691.6	$5886.3

*Returns per acre reflect net revenues over variable production cost and does not include land cost.

-Domestic use is estimated to increase moderately over the forecast period from 5.7 to 5.8 billion bushels. Moderation in growth of the livestock herd in the latter part of the decade is offset by projected increases in the gasohol industry throughout the forecast period.

-Exports are projected to increase by about 20 percent over the total period. Initial growth is associated with lower prices. Longer term growth reflects increased market share resulting from a moderation in the growth of competitive production.

-Ending stocks are projected to grow from 2.8 billion to 4.2 billion by 1990/91, implying substantial increases in CCC-owned reserves. Ending stock paths suggests that stronger area control programs may be necessary to prevent this level of stock accumulation.

-Loan rates are estimated to decline from $2.55 in 1985/86 to a low of $1.90 by 1989/90. Market prices are estimated to fall from the $2.54 price level in 1985/86 to around a low of $2.07 by 1987/88, but increase to around $2.30 per bushel by 1990/91.

-Returns over variable costs are estimated to be about twice the level for program participants relative to nonparticipants.

-Annual government costs excluding PIK are estimated to range between $4.5 billion in 1986 to a high of $5.7 billion by 1990. PIK payments are associated with export subsidies - total deficiency payments average above $4.5 billion for the period 1987 through 1991.

-Magnitude of stock buildup after 1985/86, suggests stronger land control programs will be necessary, under normal weather assumptions, possibly in the 20 percent reduced acreage - 10 percent paid diversion range.

Soybeans (Table 5)

-Soybean acreage is predicted to decline from 63 million acres in 1986 to a low of 60 million acres by 1988/89. Projected acreage decline reflects the economic advantage of target price supports in the feedgrain industry.

-Domestic utilization is expected to increase approximately 7 percent over the forecast period, reflecting moderate growth in the domestic livestock industry, while exports are projected to increase approximately 15 percent for the period, reflecting lower prices, continued devaluation of the U.S. dollar, and moderate demand expansion in foreign markets.

-The loan rate drops from $5.02 in 1985/86 to a low of $4.50 by 1989/90. Market prices follow a similar path, dropping from $5.26 in 1985/86 to a low of $4.75 in 1987/88, with a moderate increase at the end of the projection period to about $5.70 per bushel.

-Returns over variable costs are projected to decline from $105 per acre in 1985/86 to a low of $72 per acre by 1987/88.

-CCC owned stocks are projected to decline from 225 million bushels to 80 million by 1990/91, with government costs ranging from a high of about

TABLE 5

SOYBEANS - HOUSE FARM BILL

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91
Acreage			Million Acres			
Planted	63.2	62.8	59.9	60.0	60.2	60.8
Harvested	62.2	61.8	58.9	59.0	59.2	59.8
Yield (bu/acre)	34.2	31.5	32.1	32.4	32.7	32.7
Production (mil. bu.)	2,129	1,946	1,891	1,912	1,937	1,956
			Million Bushels			
Domestic Use	1,174	1,216	1,227	1,249	1,258	1,261
Exports	664	689	710	728	749	763
Ending Stocks	601	642	596	531	460	392
CCC Owned	225	210	170	130	102	80
"Free" Stocks	376	432	426	401	358	312
Estimated Price						
Farm Price	$5.26	$4.81	$4.75	$5.00	$5.34	$5.67
*Return/Acre	$105.01	$73.09	$72.02	$77.90	$86.11	$90.91

	1986	1987	1988	1989	1990
	Million Dollars (Fiscal Years)				
Direct Payments	$0.0	$170.9	$253.2	$332.1	$247.0
Govt. Outlays Exc. PIK	$934.5	$65.6	($65.7)	($45.1)	($70.7)
Govt. Outlays Inc. PIK	$934.5	$122.0	$54.2	$83.1	$34.7

*Returns per acre reflect net revenues over variable production cost and does not include land cost.

925 million in 1986 to a positive cash flow of about $113 million by 1990/91. Positive returns are associated with the release or sale of government owned CCC stocks.

-With no target price support, the soybean industry will adjust downward proportionally more than commodities with these supports. Reduced market prices and less area will imply around $1.5 to $2.0 billion reduction in total revenues relative to the 1981 farm program design.

Rice (Table 6)

-Strong program participation will result in planted area of about 2.45 million acres until 1990/91, moving up slightly to 2.75 million acres. Twenty-five percent reduced acreage and 10 percent paid diversion programs are implemented to reduce excessive reserves accumulated in the earlier part of the forecast period.

-Total domestic demand is projected to increase from about 60 million hundredweight to approximately 72.5 million by the end of the decade, increasing 21 percent over the projection period.

-The loan rate is projected to decline from $8 per hundredweight in 1985/86 to a low of $6.20 in 1987/88, holding at this level throughout the remainder of the forecast period.

TABLE 6

RICE - HOUSE FARM BILL

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91
Acreage			Million Acres			
Base Acreage	4.2	4.2	4.2	4.2	4.2	4.2
L.T. Cons. Res	0.0	0.0	0.0	0.0	0.0	0.0
RAP %	20%	25%	25%	25%	25%	25%
P.D. (3.50 in PIK)	15%	10%	10%	10%	10%	0%
% Participation	82%	97%	97%	97%	97%	97%
Planted	2.47	2.45	2.45	2.45	2.45	2.75
Harvested	2.45	2.43	2.43	2.43	2.43	2.73
Yield (lbs/acre)	5,426	5,110	5,150	5,195	5,210	5,010
Base Yield (lbs/acre)	4,745	4,983	5,154	5,229	5,152	5,185
Production (mil. cwt.)	132.8	124.2	125.1	126.2	126.6	136.8
			Million CWT			
Domestic Use	60.0	65.8	68.3	69.8	71.1	72.5
Exports	59.0	62.2	66.3	68.0	70.3	72.7
Ending Stocks	80.6	77.8	69.3	58.7	45.0	37.6
CCC Owned	62.0	50.0	37.8	25.6	10.5	4.5
"Free" Stocks	18.6	27.8	31.5	33.1	34.5	33.1
PIK COMMODITIES	-----	10.4	11.1	11.2	11.1	0.0
Estimated Prices ($/cwt)						
Farm Price	$7.98	$6.88	$6.62	$6.62	$6.64	$6.81
*Return/Acre ($/acre)						
Non Participant	$180.83	$93.06	$71.96	$62.55	$51.86	$32.54
Participants	$256.45	$236.11	$237.38	$234.14	$223.57	$220.45

	1986	1987	1988	1989	1990
	Million Dollars (Fiscal Years)				
Direct Payments	$393.5	$684.5	$733.6	$745.8	$814.3
Govt. Outlays Exc. PIK	$557.6	$604.1	$642.1	$640.6	$734.9
Govt. Outlays Inc. PIK	$557.6	$673.6	$721.2	$730.9	$836.3

*Returns per acre reflect net revenues over variable production cost and does not include land cost.

-Market prices decline from $7.98 in 1985/86 to a low of $6.62 per hundred-weight in 1988/89, increasing moderately by the end of the decade.

-Exports are projected to increase 23 percent, with largest increases associated with the initial price decline in 1986/87.

-Ending stocks are projected to decline from 80.6 million hundredweight to about 38 million hundredweight by 1990/91, reflecting the strong acreage control program, heavy producer participation, and PIK payments.

-Government costs are projected to range between $560 million in 1986/87 to a high of $836 million by 1990. The majority of this cost is from deficiency payments and PIK commodity payments associated with the 10 percent paid diversion program.

-Returns per acre average $240 for participants and decline continuously for nonparticipants, from $180 in 1985 to a low of about $32 per acre in 1990/91.

Cotton (Table 7)

-Planted area is projected to decline from 10.8 million acres to a low of 9.2 by 1990/91. Planted area reflects a 25 percent reduced acreage program with about 95 to 98 percent farmer participation in the government program. Long term land retirement increases from .51 million acres in 1986/87 to 2.0 million in 1990/91.

TABLE 7

COTTON - HOUSE FARM BILL

Variable/Year	85/86	86/87	87/88	88/89	89/90	90/91
Acreage			Million Acres			
Base Acreage	15.80	15.80	15.80	15.80	15.80	15.80
L.T. Cons. Res	0.00	0.51	1.02	1.53	2.00	2.00
RAP %	20%	25%	25%	25%	25%	25%
Paid Diversion	10%	0%	0%	0%	0%	0%
% Participation	83%	95%	98%	95%	95%	95%
Planted	10.74	10.80	9.60	9.40	9.20	9.20
Harvested	10.34	10.10	9.20	9.00	8.80	8.80
Yield (lbs/acre)	633	641	654	669	675	682
Base Yields (lbs/acre)	529	575	594	607	639	654
Production (mil. bales)	13.64	13.48	12.54	12.54	12.38	12.50
			Million Bales			
Domestic Use	5.75	5.81	5.68	6.01	6.16	6.27
Exports	3.50	6.10	5.98	6.24	6.36	6.62
Ending Stocks	8.56	10.23	11.22	11.62	11.58	11.29
CCC Held Stocks	6.00	7.25	8.00	8.40	8.40	8.40
"Free" Stocks	2.56	2.98	3.22	3.22	3.18	2.89
Estimated Prices ($/lb)						
Farm Price	$0.53	$0.42	$0.41	$0.40	$0.44	$0.46
*Return/Acre ($/acre)						
Non Participants	$78.86	$1.67	($11.46)	($50.56)	($28.26)	($29.20)
Participants	$171.67	$165.43	$165.05	$143.73	$189.01	$184.02

	1986	1987	1988	1989	1990
	Million Dollars (Fiscal Years)				
Direct Payments	$1414.2	$1939.7	$2018.0	$2145.6	$2213.4
Govt. Outlays Exc. PIK	$3056.2	$2174.6	$2141.7	$2145.5	$2124.6
Govt. Outlays Inc. PIK	$3056.2	$2199.6	$2191.5	$2219.8	$2207.8

*Returns per acre reflect net revenues over variable production cost and does not include land cost.

-Domestic mill use is projected to increase about 9 percent over the forecast period, reflecting the farm price decline. Exports are also projected to increase moderately over the forecast period, reflecting the lower farm prices. The lower prices should continue to put pressure on foreign competitors.

-Ending stocks are projected to remain stable at about 11.5 million bales over the forecast period, with a significant portion in CCC reserves, averaging about 8 million bales per year.

-Loan rates decline from $0.57 per pound in 1985/86 to a low of $0.40 per pound in 1988/89. Market price is projected to average in the low 40s, or very near the loan rate, over the forecast period.

-Government costs excluding PIK are projected to range from a high of $3 billion in 1986 to a low of $2.1 billion by 1990, with deficiency payments averaging about $1.8 billion. PIK costs are associated with export subsidies provided by the Farm Bill.

-The combination of fixed targets, lower market prices, and heavy producer participation provide the liklihood for heavy government outlays.

Livestock (Table 8)

-Per capita consumption of beef, pork, and poultry is projected to decline from 194.2 pounds per capita in 1985 to 186.8 pounds per capita in 1990. The initial decline in per capita consumption is associated with the long

TABLE 8

FAPRI POLICY PROJECTIONS FOR LIVESTOCK UNDER THE HOUSE FARM BILL

Commodity and Variable	1984	1985	1986	1987	1988	1989	1990
Beef							
Omaha Price ($/cwt)	65.34	58.40	62.00	63.00	61.00	58.00	56.00
Commercial Production (million lbs)	23,698	23,500	22,000	21,250	21,350	21,750	21,850
Per Capita Consumption (lbs retail weight)	78.6	78.0	72.5	70.0	70.0	71.0	71.0
Retail Price ($/lb)	2.40	2.32	2.55	2.61	2.61	2.56	1.53
Expenditures ($/per capita)	188.59	180.96	184.88	182.70	182.70	181.76	179.63
Chicken							
Wholesale Price, 12 City ($/lb)	0.55	0.52	0.49	0.47	0.45	0.43	0.42
Production All Chicken (million lbs)	13,706	13,559	13,788	14,147	14,317	14,400	14,893
Per Capita Consumption (lbs retail weight)	55.7	54.7	54.2	55.2	55.3	55.2	55.1
Retail Price ($/lb)	0.81	0.84	0.79	0.76	0.74	0.71	0.71
Expenditures ($/per capita)	45.12	45.95	42.82	41.95	40.92	39.19	39.12
Pork							
7 Market Price ($/cwt)	48.69	44.75	42.50	38.00	36.00	40.00	43.00
Commercial Production (million lbs)	14,812	14,700	14,900	15,700	16,300	15,500	14,900
Per Capita Consumption (lbs retail weight)	61.7	61.5	61.0	65.0	66.5	63.1	60.7
Retail Price ($/lb)	1.63	1.62	1.62	1.58	1.57	1.66	1.74
Expenditures ($/per capita)	100.57	99.63	100.44	102.70	104.40	104.75	105.62
Total Expenditures ($/per capita)	334.28	326.54	328.14	327.35	328.02	325.75	324.37

term down trend in red meat consumption and near term increases in the breeding herd. This initial expansion relative to the down trend reflects incentives associated with lower input prices of feedgrains and soybean meal. However, per capita consumption during the period is substantially moderated by the projected path of retail demand. Two to 3 percent real income growth, plus a negative trend for red meat consumption, will continue to keep pressure on livestock prices.

-Commercial beef production is projected to decline from 23.5 billion pounds in 1985 to 21.85 billion pounds in 1990. Per capita consumption will drop from 78 pounds per capita in 1985 to 71 pounds in 1990. Omaha beef prices 900-1100 weight will increase from $58.40 per hundredweight in 1985 to high of $63.00 in 1987, declining to around $56.00 in 1990.

-Chicken production is projected to increase from about 13.6 billion pounds in 1985 to a high of 14.9 billion pounds by 1990. Chicken consumption reflects a continued upward trend in retail demand, partially offsetting the projected down trend in red meat consumption of both beef and pork. Per capita consumption is projected to increase from 54.7 pounds in 1985 to 55.1 in 1990. Prices are estimated to range from a high of $0.52 per pound in 1985 to a low of $0.42 per pound in 1990.

-Pork production is projected to increase from 14.7 billion pounds in 1985 to a high of 16.3 in 1988. Prices reflect the inverse of the production cycle with a high of $44.75 per hundred in 1985, declining to a low of $36.00 per hundred in 1988, and then increasing to around $43.00 per hundredweight by 1990. Per capita consumption is projected to increase

to 66.5 pounds by 1988 and then decline to around 60.7 pounds per capita by 1990.

-Total expenditures per capita for beef, pork, and poultry are estimated to range between a high of $328.24 in 1986 to a low of $324.37 in 1990.

Farm Income (Table 9)

-Direct government payments increase from about $8 billion in 1985 to around $12.6 billion at the end of the projection period. These costs reflect higher farmer participation rates for all the commodities.

-Total farm cash receipts decline from $150.6 billion in 1985 to a low of $140.5 billion in 1988, moving up to around $147.4 billion by 1990.

-Net farm income declines steadily from $25.6 billion in 1986 to $22.5 in 1990.

-Even with around $12.0 billion in government expenditures for crops, net farm income in 1972 dollars declines approximately $1.8 billion over the forecast period.

6. Government Costs/Feedgrains, Soybeans, Wheat, Cotton, and Rice (Table 10)

Since the dairy sector was not analyzed, costs in this section represents the five basic crop commodities. For these commodities, government payments and subsidies, excluding PIK, decline from a high of about $14 billion in 1986

TABLE 9

FAPRI POLICY PROJECTIONS OF FARM INCOME AND GOVERNMENT PAYMENTS
UNDER THE HOUSE FARM BILL

	1984	1985	1986	1987	1988	1989	1990
				— Billion of Dollars —			
Cash Recepits from Marketings							
Crops	69.5	70.6	67.2	60.0	59.0	61.4	64.1
Livestock	72.7	69.0	67.8	66.3	65.7	66.8	67.6
Direct Government Payments and Subsidies	8.0	8.0	8.6	11.8	12.9	13.2	12.6
Total Farm Cash Receipts	153.2	150.6	146.6	141.2	140.5	144.4	147.4
Net Farm Income	34.5	26.6	25.6	24.7	21.8	22.5	22.5
Net Farm Income (1972 $)	11.1	8.5	8.0	7.4	6.3	6.3	6.0

TABLE 10

GOVERNMENT PAYMENTS AND OTHER COSTS FOR CROPS UNDER THE HOUSE FARM BILL*

	Fiscal Years				
	1986	1987	1988	1989	1990
Loans	$12,956	$3,947	$3,873	$3,538	$3,243
Storage & Handling	607	983	944	1,034	1,100
Transportation	49	14	13	17	11
Processing	7	7	7	7	7
Prod. Storage Pmnts	393	506	529	432	413
Loan Coll. Pmnts	50	50	50	50	50
Deficiency Pmnts	7,038	10,091	10,897	11,001	10,907
Easement	0	715	984	1,274	852
Diversion Payments	208	0	0	0	0
Total	$21,307	$16,312	$17,296	$17,351	$16,583
Receipts:					
Loans Repaid	$5,433	$3,297	$2,927	$2,775	$2,539
Sales Proceeds	122	534	990	1,197	1,128
Miscellaneous	6	6	8	11	6
Total	$5,561	$3,836	$3,925	$3,983	$3,673
Net Outlays - Support & Related:					
Excluding PIK	$15,746	$12,476	$13,371	$13,369	$12,910
Including PIK	$15,989	$12,862	$14,106	$14,302	$13,882
Direct Payments to Producers	$7,641	$11,525	$12,816	$13,316	$12,822

*Crops included: Feedgrains, wheat, rice, cotton, and soybeans.

to around $11.9 billion by 1990. PIK payments associated with long term land conservation reserves, diversion payments for rice, and commodity exports increase the range from a high of $14.3 billion in 1986 to around $12.9 billion by 1990. Total government costs for these commodities remains relatively constant. The substantial excess capacity in the crop sector with heavy producer participation and market prices near loan rates will set the stage for substantial government payments throughout the forecast period. Also, costs associated with other feed grains, sorghum, oats, and barley should reflect similar paths of government exposure, strong cross substitution with corn in these markets will result in farm prices at or near loan rates with corresponding strong government outlays.

7. Conclusions

The House Farm Bill for 1985 maintains several features of the 1981 Bill. These include loan rates, target prices, Farmer-Held Reserves, CCC-Held Reserves, and $50,000 payment limitations. However, an area of significant departure concerns loan levels and long-term land conservation reserves designed to take about 25 million acres of land out of production. These two features strike a different course for U.S. agriculture in the future, lowering loan rates in an environment of moderate domestic and foreign demand, with excess supply capacity implying lower near-term market prices. Lower near-term market prices moderates the down trend in the U.S. livestock industry, and sets the stage for near term moderate gains in the export market, with the potential for longer term gains as world markets begin to respond to lower U.S. loan rates and corresponding market prices.

Program costs for this transition are likely to exceed levels associated with the 1981 farm program design. Farmers are provided income protection through fixed target prices in major commodities, excluding soybeans. The environment of constant target prices and potential lower market prices offers tremendous economic incentives for program participation. Higher levels of participation, plus expansion in the loan-rate/target-price gap, implies deficiency payments that will increase total government costs in excess of levels normally associated with farm program management and operation. Thus, in order for U.S. agriculture to chart a course towards more competitiveness in the world market, it is likely that the U.S. government will bear a substantial part of the initial costs for moving in this direction. Farmers who participate in government programs will maintain approximately the same levels of income support associated with the 1981 farm program. Farmers who do not participate will bear some of the cost. Also, a lack of target price supports in an environment of across-the-board reductions in loan rates subjects the soybean industry to a disappropriated share of the transition cost. Reduced acreage and lower prices will result in total revenues at $1.5 to $2.0 billion below supports in the 1981 Bill.

An additional dominant feature associated with the direction of U.S. agriculture under this farm program design is the projected consumer demand of red meat. Per capita consumption of red meat has continued on a steadily declining path. Since 1970 per capita consumption of red meat has declined approximately 20 pounds, equally divided between pork and beef. This decline is partially offset by a predominant trend toward increase consumption of poultry and other meats.

In general, the first-round analysis of the 1985 House Farm Bill indicates:

-Recovery in export markets will be slow with insufficient near-term growth to offset initial price declines.

-Program participation will be high, reflecting income protection provided by freezing target prices.

-Producers outside the program or in areas of the county with low traditional farm program participation will be subjected to substantial reductions in net returns - about one-half the level of participating regions.

-Program will be positive for the U.S. livestock industry; however, sluggish demand and predominant shifts away from red meats will be the dominant factor for future growth.

-In general the House Farm Bill gives about the same level of net farm income as the 1981 Farm Bill, but subjects the government to larger budget exposure.

-The House Farm Bill gets the farm economy one-third (1/3) of the way towards recovery. The other two-thirds (2/3) is associated with farm financial problems and health of world economies.

(1/3): Gets U.S. agriculture on the way towards recovery, House Farm Bill at least maintains status quo for program participants. Could be disruptive for farms or acres without ASCS program base. Also, the soybean industry, without equivalent target support, will receive less net revenues than under the current Farm Bill.

(1/3): Farm financial problems that may require additional support for the next four years.

(1/3): Putting the general economies back on a growth track, with lower interest rates, exchange rates, and a substantially reduced deficit, is the most significant challenge facing U.S. agriculture. It will undoubtedly have the greatest impact on an overall turnaround for U.S. agriculture.

In conclusion, we have identified several major problems in agriculture that will have to be remedied before significant growth can be expected. The House Farm Bill directly addresses two of these problems: excess supply is to be eased by 25 million acres of long-term conservation reserves; and the trend in world trade is to be reversed by implementation of a lower loan rate. These measures will be helpful in maintaining a base for U.S. agriculture; however, the Bill does not directly address farm financial stress, the health of the world economies, or specific budget constraints from the Office of Management and Budget (OMB).

Management and operation of the federal deficit will also have an impact. U.S. agriculture will require substantially more support in this transition

period to hold net farm income in the low $20 billion range. Budget constraints that preclude this support will complicate the current financial crisis and will likely add to overall long term budget exposure. This latter point is evident from the projected heavy accumulation of reserves through 1990. Stronger area control programs than used in this analysis will be required to prevent stock accumulation; however, paid diversion options to reduce acres increases near term budget outlays. Careful consideration of downstream cost relative to near term budget constraints will require stronger consideration.

Finally, this analysis is based on projections of moderate economic growth through 1990. Generally, the U.S. and world economies experience cyclical performance with the very strong likelihood of a recession during this period. Should this occur, government exposure will be much higher than projected since target price incentives will keep program participation at or near maximum levels, with market prices lower than projections in this analysis. Lower market prices imply heavier deficiency payments and the possibility of building stocks. This scenario would put additional pressure on maintaining much stronger acreage control programs with additional pressure on a federal deficit that has contributed to the current crises in agriculture.