

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

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

Supply and Demand Implications for U.S. Agriculture

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

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

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

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

FARM SECTOR IMPACTS

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

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

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

Crop Sector Impacts

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

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

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

Crop Production Impacts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Crop	1986-90 average			
	Permanent legislation	No supports		
	<u>Million acres</u>			
Wheat:				<i>option 1</i>
Planted	<u>1/</u> 78	79	58	56.9
Harvested	71	70		
Corn:				
Planted	95	81	68.5	73.5
Harvested	84	73	61	70
Soybeans:				
Planted	70	73		
Harvested	68	72		
Cotton:				
Planted	<u>2/</u> 14.5	10.5	9.9	10.0
Harvested	13.5	10.0	12.8	13.8
Sorghum:				
Planted	19	14	9.9	13.3
Harvested	18	13		
Barley:				
Planted	13	10	11.5	12.1
Harvested	12.5	10		
Rice:				
Planted	4.40	3.50	2.3	1.9
Harvested	4.35	3.45		
Sugar:				
Harvested	1.8	1.1		
Tobacco:				
Harvested	.7	1.0		
Peanuts:				
Planted	1.6	1.6		
Harvested	1.6	1.6		
10-crop total				
Planted	298.0	274.7		
Harvested	275.5	255.2		

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

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

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

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

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

Crop Use Impacts

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

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

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

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

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

-- = Negligible.

1/ Total use includes domestic disappearance plus exports.

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

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

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

Livestock Sector Impacts

Cattle, Hogs, and Poultry

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

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

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

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

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

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

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

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

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

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

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

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

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

^{1/} Excludes feeder cattle.

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

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

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

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

Dairy

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

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

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

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

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

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

Other Crop Impacts

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

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

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

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

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

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

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

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

FARM FINANCE IMPACTS

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

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

The Farm Sector's Income Position

Cash Receipts and Gross Farm Income

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

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

Item	1983	1984	1985	1986	1987	1988	1989	1990	1986-90 avg.
	<u>Billion dollars</u>								
Permanent legislation:									
Crop receipts	69.5	71.5	76.5	83.6	91.5	95.3	101.3	107.6	95.7
Livestock receipts	69.2	72.4	73.7	82.6	85.2	89.4	94.1	98.0	90.0
Program commodity receipts	63.3	62.4	67.5	80.1	88.9	94.2	101.1	108.1	94.5
Nonprogram commodity receipts	75.4	81.5	82.7	86.1	87.4	90.6	94.3	97.5	91.2
Total receipts ^{1/}	138.7	143.9	150.2	166.2	176.3	184.8	195.4	205.6	185.7
Gross farm income	162.6	167.2	172.6	183.1	194.8	205.4	218.5	231.2	206.2
No supports:									
Crop receipts	69.5	71.5	76.4	73.4	74.2	77.7	82.3	86.5	78.8
Livestock receipts	69.2	72.4	73.7	72.8	76.8	80.2	78.4	79.8	77.6
Program commodity receipts	63.3	62.4	67.5	60.6	63.8	67.6	68.3	70.8	66.2
Nonprogram commodity receipts	75.4	81.5	82.6	85.6	87.2	90.3	92.4	95.5	90.2
Total receipts ^{1/}	138.7	143.9	150.1	146.2	151.0	157.9	160.7	166.3	156.4
Gross farm income	162.6	167.2	172.2	160.3	165.5	172.9	176.1	182.4	171.4

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

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

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

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

Production Expenses and Net Income

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Farm Sector's Asset and Equity Position

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

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