Pesticides

1981

ECONOMIC MODELING INPUTS TO PESTICIDE REGULATORY DECISIONS

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AGRICULTURAL AND ECONOMIC IMPACTS ASSOCIATED WITH CANCELLATION OF THE USE OF PESTICIDE "X" ON SOYBEANS

Economic Environment

The yield reductions associated with cancellation of pesticide "X" would initiate a sequence of dramatic changes within the soybean sector of U.S. agriculture which would, in turn, affect other crop producing sectors as well as livestock and poultry production. These linkages and impacts were examined through the use of the DRI econometric model of U.S. Agriculture and were evaluated over the forecast period second quarter, 1981 (1981:2) to fourth quarter, 1983 (1983:4).

The agricultural model provides an environment for research which is reflective of contemporary production technology and facilitates analysis and forecasts of: regional agricultural land use and crop production; livestock production; commodity supply, utilization and price (exports, domestic use, inventories, and cash price); farm cash receipts (farm prices and volumes of marketing); farm production and expenses; farm sector income statement and balance sheet; wholesale and consumer food price indices; and cash and future commodity prices.

U.S. agriculture exists within a dynamic economic system and is subject to external, nonagricultural influences such as those imposed by high energy prices (primarily a supply related impact because of changes in the relative costs of purchased inputs, but also demand related in that consumers' real incomes are affected), changes in taxes, long and short term interest rates and industrial output. Within the DRI modelling framework, such external effects are included through interactions between the DRI agricultural model and the DRI macroeconomic model of the U.S. economy. This interaction, brought about by the transfer of sixty variables which are forecast at the macroeconomic level, but which are treated as exogenous to the agricultural economy, serves to place agricultural activity within an overall economic framework which is consistent with current experience, expected monetary and fiscal policy and forecasted macroeconomic behavior.

Briefly, the external environment within which the analysis of pesticide "X"s cancellation was examined suggests a strengthening of demand for agricultural products. The inflation outlook is more favorable than it appeared during late 1980 and early 1981. The world oil market is slack, and inventories have accumulated due to a mild winter and surprisingly large conservation measures in the major consuming nations. With OPEC oil priced above its equilibrium value and with domestic oil decontrol complete, energy costs will show relatively small increases during the last two quarters of this year, and in the longer term, oil prices are expected to increase at approximately 11% a year. Other elements which are key to inflation appear less favorable. The surprisingly strong economy will accelerate industrial prices later this year in some basic and durable goods industries and the wage prospect also places sharp limits on inflation improvement. These elements, along with other measures produce an overall inflation projection of 9.3% for the GNP deflator and 9.6% for the Consumer Price Index during 1981, both substantial improvements over the 9.8% and 12.5% respective increases during the previous four quarter period ending in 81:1. For 1982 and 1983, the Administration's fiscal policy will produce a decisive influence on the economy. Tax cuts will create a strong recovery for 1982, producing a real GNP advance of 3.3%. Business fixed investment is forecast to show a 6% advance, created both by tax incentives and a stronger economy. A small turnabout in housing starts during 1981 will be followed by stronger performance during 1982 with some modest declines during 1983. In aggregate, the forecast through 1983 shows the GNP deflator declining to an annual rate of 8.7% and the Consumer Price Index moderating to an annual rate of 8.2%.

The food price outlook has also brightened considerably since last winter. High interest rates and a strong dollar have taken the steam out of the futures markets. Good official crop surveys and an absence of disturbing news about world supplies have contributed to lower prices. Meat prices particularly have shown large declines in recent months, and, given their heavy weight in the price indexes, assure a moderate food price outlook.

Agricultural Environment

Contrary to the relatively optimistic external picture, the internal dynamics of U.S. agriculture suggest a potential for destabilizing impacts. The pesticide cancellation was evaluated within an agricultural setting where the prospects for crop production during 1981 are extremely critical with respect to market

performance. The supply cushion which existed as we entered the 1980 crop year will be largely exhausted by the end of the current crop year. U.S. agriculture has the capacity to produce the grain and oilseeds that will be needed in 1981-82, but a performance similar to last year's would put us critically short to meet domestic and foreign demands. In this respect, our most pressing requirements are for feed grains (corn, oats, grain sorghum) and factors such as high interest rates, unstable international markets and declining prices at planting time combined to discourage significant expansion in corn acreage. If yields return to normal levels in 1981, the crisis created by 1980's poor performance will be eased. Stock levels will increase for wheat and feed grains as declining livestock numbers reduce domestic demand and increased world production slows the growth in U.S. exports. Cotton and soybean production will be closely balanced with disappearance which will stabilize stocks in these sectors. Within the soybean sector, a 14% decline in exports and a 7% reduction of soybean crushings from the 1979-80 levels has created a relative balance. The small 1980 soybean crop resulted in some drawdown in stocks which can be maintained, but not rebuilt, through normal yields in 1981. With normal yields, prices of soybeans and soybean meal during 1981-82 are expected to strengthen as export demand pressure builds. World economic recovery will be the key to this resurgence of export demand. Similarly, demand for soybean oil will experience a boost from improving world economies during 1981-82. As a result, soybean oil stocks are expected to be drawn down from record 1980-81 levels and prices and will begin to recover in 1981-82.

Cancellation of Pesticide "X"

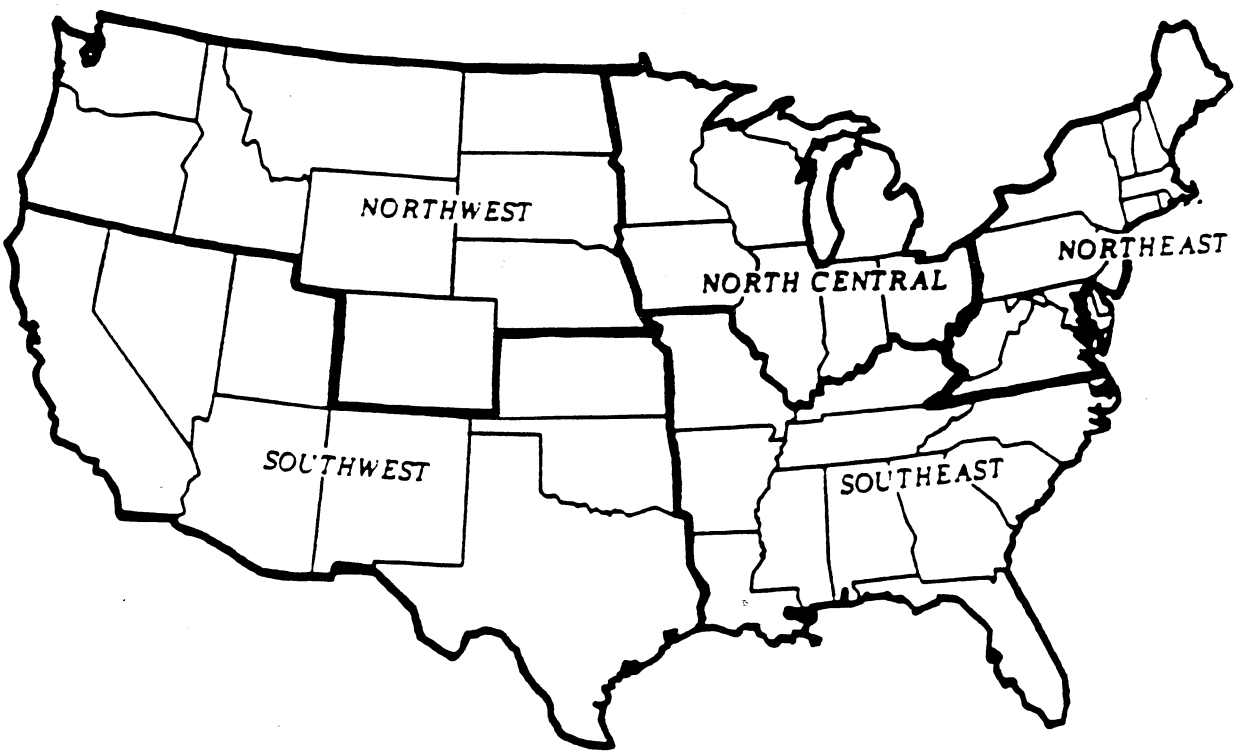
The assumed cancellation of pesticide "X", if effective beginning with the second quarter of 1981, would exert market influences within the relatively volatile environment described above, i.e. tight supplies following poor production in 1980 and strengthening demand. The yield declines which were assumed to be associated with cancellation, when weighted by acres treated within each state would result in a national yield deterioration of 2.6 bushels per acre, 9% below normal, or expected 1981-82 yields. The resulting average yield for the nation would be 26.3 bushels per harvested acre, slightly less than the 26.8 bushel yield realized last year during extremely adverse weather conditions and substantially below the 32 bushel yield of 1979-80.

Regionally (see Map 1 for regional definitions), this initial yield decline would be distributed as reported in Table 1, e.g. 1.91 bushel decline in the Northcentral region and 3.41 bushel decline in the Southeast. In all instances, the effects are reported as deviations from the DRI control forecast, and, since the cost and yield impacts were assumed to begin during the second quarter of 1981, these influences affected soybean planting during 1981. As a result of marginally higher soybean production costs which exert a negative influence on acres planted and the substantial yield declines which transfer a strong negative planting influence, total acres planted to soybeans in the U.S., as reported in Table 1, would decline by slightly more than 42,000 acres; the largest portion of which would occur in the Southeast (-19,560 acres). The combined effects of a slight acreage decline and substantial yield reductions would diminish soybean production in the U.S. during 1981 by slightly more than 9 percent, or almost 180 million bushels. As reported in Table 1, most of this reduction would occur in the Southeast and Northcentral regions (105 million and 63 million bushels respectively).

Decreases in production would initiate soybean price increases at both the farm and wholesale level. As depicted in Chart 1, real farm price changes (nominal price deflated by the parity index (JPARITYNS)based in 1980:1) begin during the third quarter of 1981 and continue throughout the forecast. Over the period of analysis, the cancellation induced increases in price peak during 82:3 and 83:3 as stocks are drawn down prior to harvest. At the peak during 1982, nominal farm prices are increased by slightly more than $1.50 per bushel and real prices increase by just under $1.50. An alternative measure of the real price effects (utilizing the Wholesale Price Index for all farm products, WPI01 based in 1980, as a deflator) is depicted in Chart 2 and shows real prices increasing by $1.07 per bushel during 82:3. At the wholesale level, estimated as the price of soybeans in Chicago, the nominal price increases by $1.66 during the third quarter of 1982, and real prices based in 1980 (deflated by the wholesale price index for farm products, WPI01) increase by slightly more than $1.10 per bushel (Chart 3). Chart 4 presents quarterly changes in the farm-to-wholesale price spread and indicates that, except in periods when pressure eases somewhat, i.e. the quarter after harvest in 1982 and 1983, farmers gain slightly more from the cancellation induced price increases than do wholesalers.

Price increases transfer through to the soybean processing and export sectors and result in a decrease in the quantity of soybeans demanded. During the third quarter of 1981 (81:3), the domestic disappearance of soybeans for crushing

MAP 1. REGIONAL DISAGGREGATION FOR ANALYSIS OF CANCELLATION IMPACTS



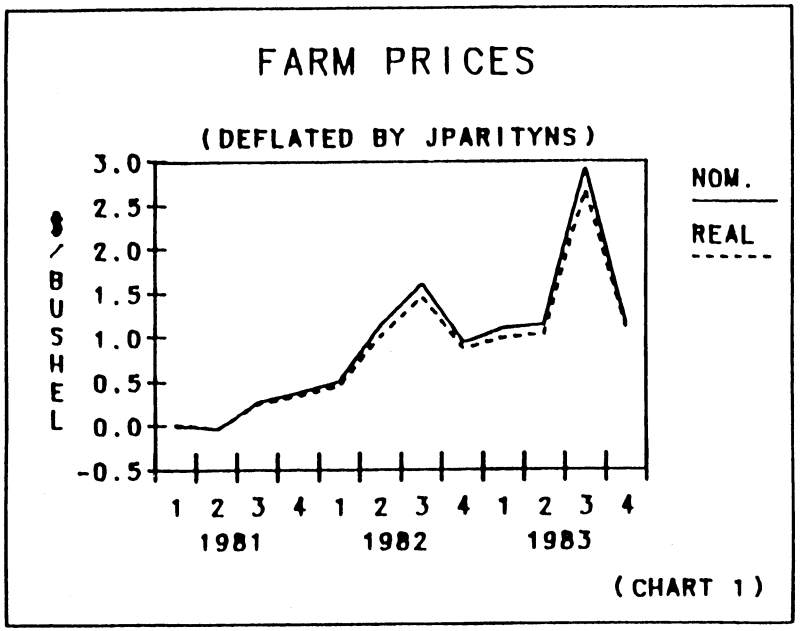
SOUTHWEST	NORTHWEST	NORTH CENTRAL	SOUTHEAST	NORTHEAST
Arizona	Colorado	Illinois	Alabama	Connecticut
California	Idaho	Indiana	Arkansas	Delaware
Kansas	Montana	Iowa	Florida	Maine
Nevada	Nebraska	Michigan	Georgia	Maryland
New Mexico	North Dakota	Minnesota	Kentucky	Massachusetts
Oklahoma	Oregon	Ohio	Louisiana	New Hampshire
Texas	South Dakota	Wisconsin	Mississippi	New Jersey
Utah	Washington		Missouri	New York
	Wyoming		North Carolina	Pennsylvania
			South Carolina	Rhode Island
			Tennessee	Vermont
				Virginia
				West Virginia

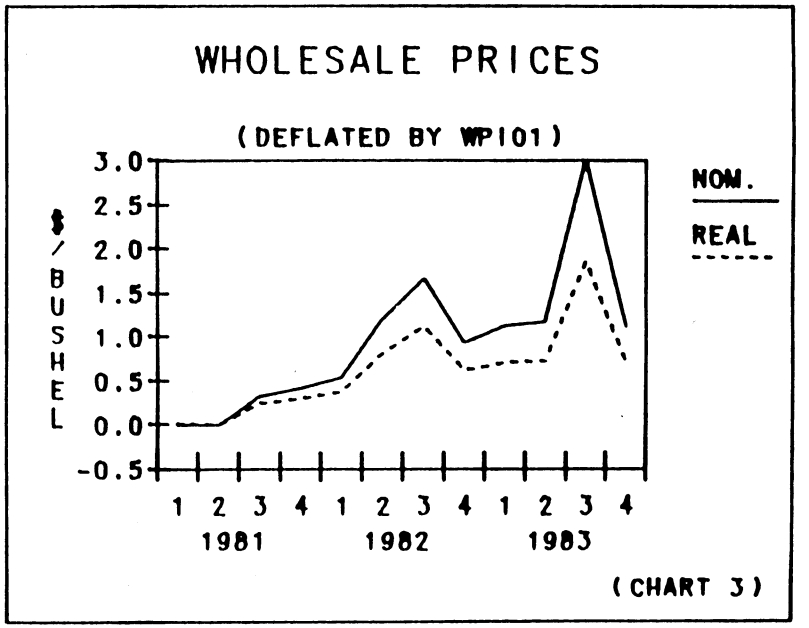
TABLE 1

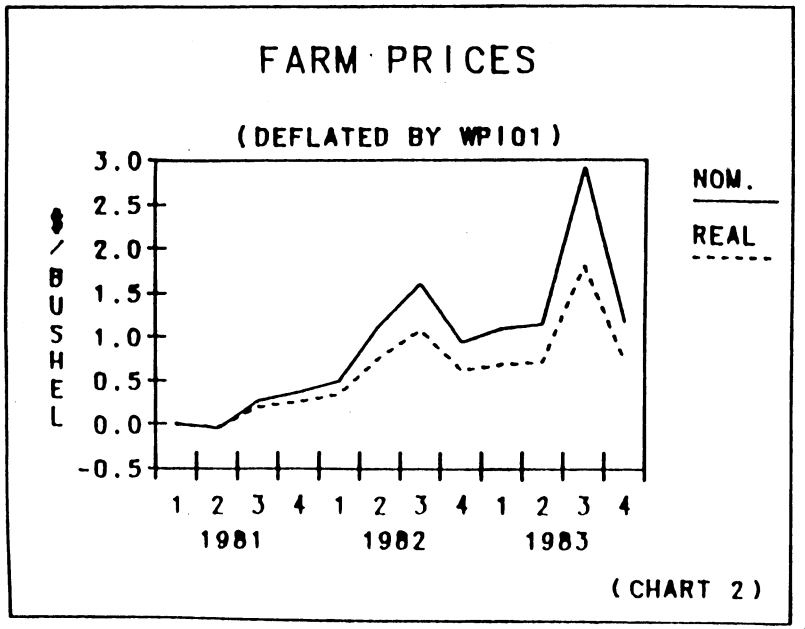
CHANGES IN REGIONAL SOYBEAN PRODUCTION RESULTING FROM CANCELLATION

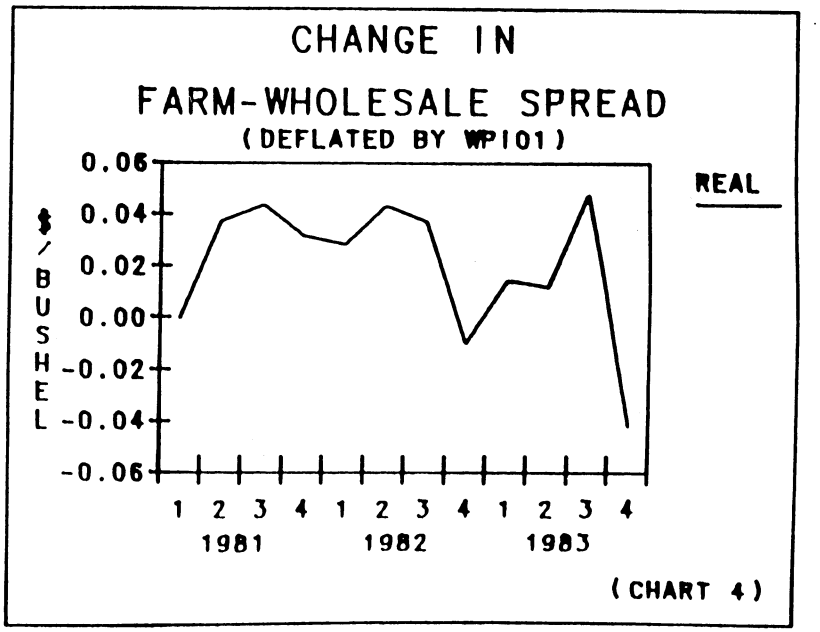
	1981		1982		1983	
	DIFF.	%CH	DIFF.	%CH	DIFF.	%CH
NORTHEAST						
ACRES PLANTED (1000)	-0.80	-0.05	27.43	1.64	31.03	1.79
ACRES HARVESTED (1000)	-0.63	-0.04	27.91	1.69	31.98	1.79
YIELD (BU./ACRE)	-2.18	-8.07	-2.18	-8.01	-2.18	-7.94
PRODUCTION (1000 BU.)	-3,454.18	-8.11	-2,894.84	-6.45	-3,077.43	-6.29
NORTHCENTRAL						
ACRES PLANTED (1000)	-17.97	-0.05	445.52	1.32	297.97	0.88
ACRES HARVESTED (1000)	-17.87	-0.05	443.10	1.32	296.40	0.88
YIELD (BU./ACRE)	-1.91	-5.56	-1.91	-5.52	-1.91	-5.47
PRODUCTION (1000 BU.)	-63,209.39	-5.61	-49,435.53	-4.27	-54,401.41	-4.64
NORTHWEST						
ACRES PLANTED (1000)	-2.53	-0.16	-21.43	-1.17	-95.80	-4.88
ACRES HARVESTED (1000)	-2.48	-0.16	-21.00	-1.17	-93.86	-4.88
YIELD (BU./ACRE)	-3.08	-12.07	-3.13	-10.24	-3.30	-10.66
PRODUCTION (1000 BU.)	-4,961.39	-12.21	-6,196.04	-11.29	-8,937.56	-15.02
SOUTHEAST						
ACRES PLANTED (1000)	-19.56	-0.06	544.12	1.70	491.45	1.54
ACRES HARVESTED (1000)	-19.21	-0.06	535.10	1.70	483.77	1.54
YIELD (BU./ACRE)	-3.41	-14.29	-3.41	-14.23	-3.41	-14.18
PRODUCTION (1000 BU.)	-105,121.22	-14.34	-96,608.59	-12.78	-96,930.91	-12.85
SOUTHWEST						
ACRES PLANTED (1000)	-1.19	-0.06	5.63	0.26	5.59	0.25
ACRES HARVESTED (1000)	-1.21	-0.06	5.10	0.25	4.68	0.23
YIELD (BU./ACRE)	-1.47	-7.36	-1.47	-7.23	-1.47	-7.11
PRODUCTION (1000 BU.)	-2,803.31	-7.42	-2,949.61	-7.01	-2,990.66	-6.91
TOTAL US						
ACRES PLANTED (1000)	-42.05	-0.06	1,001.26	1.40	730.24	1.02
ACRES HARVESTED (1000)	-41.40	-0.06	990.23	1.40	722.97	1.02
YIELD (BU./ACRE)	-2.60	-9.01	-2.61	-8.96	-2.62	-8.93
PRODUCTION (1000 BU.)	-179,549.49	-9.07	-158,084.60	-7.69	-166,337.96	-8.00

REAL AND NOMINAL SOYBEAN PRICE IMPACTS ASSOCIATED WITH PESTICIDE CANCELLATION









declines by 4 million bushels (-1.8% from the base case), and this decline is followed during 81:4, 82:1, 82:2 and 82:3 by declines of 6(-1.4%), 7(-2.5%), 16(-10.5%) and 29 (-12.4%) millions bushels respectively. Just as domestic demand moderates in response to higher prices, soybean exports also decline over this period. From 81:4 to 82:3, exports decrease by 8(-2.6%), 7(-3.2%), 5(-3.9%) and 10(-7.5%) million bushels. Chart 5 shows the quarterly changes in soybean utilization which result from the pesticide cancellation over the entire forecast period and also depicts the quarterly changes in the wholesale price of soybeans which initiate these decreases in quantity demanded.

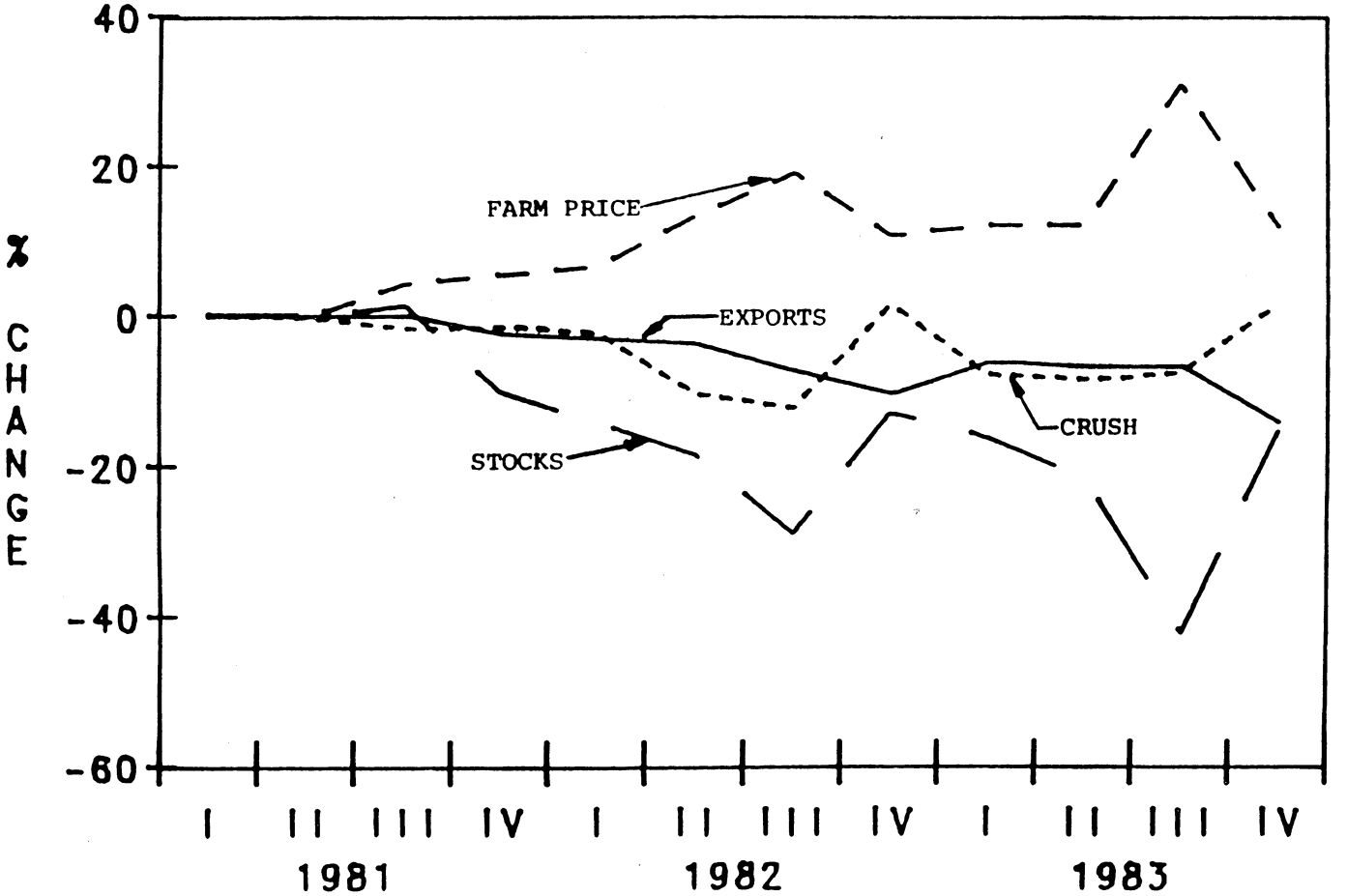
Farmers, as profit maximizers, respond to changes in expected returns from alternative crop enterprises by increasing the acrege planted to the relatively more profitable crops. As a result of the lower yields and consequent supply shortages during the 1981 crop year, the farm level price for soybeans during the second quarter of 1982 (the planting quarter) is elevated by $1.13 ($1.01 when deflated by the parity index) which, in turn, generates a 1.4% increase in soybean acreage (1,000,100 acres). As seen in Table 2, this increase is offset by decreases in corn (49,000 acres or 0.1%), cotton (164,000 acres or 1.0%), and wheat (333,000 acres or 0.4%).

Despite the substantial acreage response in 1982, the depressed yield effects which were assumed to be permanent continue to depress total 1982 soybean production below base case levels by 158 million bushels (-7.7%). As a result, upward price pressure continues to allocate the decreased production as exports and domestic disappearance remain below the levels which were forecast for the base case and stocks remain depressed. These phenomena carry through into 1983 where the analysis suggests that an additional 730,000 acres of soybeans would be planted, with production remaining 166 million bushels short.

The dynamics of adjustment within the soybean sector are reported more completely on a quarterly and crop year basis in Table 3 (Base Case) and Table 4 (After Cancellation).

Expansion of soybean acreage, although insufficient to produce prior levels of output, results in significant shifts of acreage planted to alternative crops. As shown in Table 2, there is a substitution of soybeans for competing crops at the national level, e.g., a reduction in corn and cotton acreage during 1982 and 1983 and a less obvious reduction in wheat acreage totaling 333,000 acres in 1982 and 1,129,000 acres in 1983. The dynamics of this latter adjustment require an

RELATIVE CHANGES IN SOYBEAN UTILIZATION



(CHART 5)

TABLE 2

CHANGES IN REGIONAL CROP PRODUCTION
PATTERNS RESULTING FROM CANCELLATION

	1981		1982		1983	
	1,000 acres					
	DIFF.	%CH	DIFF.	%CH	DIFF.	%CH
NORTHEAST						
SOYBEANS	-0.80	-0.05	27.43	1.64	31.03	1.72
CORN	-0.43	-0.01	54.34	1.12	50.72	1.09
GRAINSORSHUM	0.00	0.00	-0.05	-0.19	-0.11	-0.40
COTTON	0.00	0.23	-0.05	-5.75	-0.04	-5.71
RICE	0.00	NC	0.00	NC	0.00	NC
WHEAT	0.00	0.00	-0.03	0.00	-0.26	-0.03
SUNFLOWERS	0.00	NC	0.00	NC	0.00	NC
NORTHCENTRAL						
SOYBEANS	-17.97	-0.05	445.52	1.32	297.97	0.88
CORN	0.03	0.00	8.15	0.02	-312.93	-0.58
GRAINSORSHUM	0.00	0.00	0.00	0.00	0.00	0.00
COTTON	0.00	NC	0.00	NC	0.00	NC
RICE	0.00	NC	0.00	NC	0.00	NC
WHEAT	0.01	0.00	-8.12	-0.11	-43.15	-0.59
SUNFLOWERS	-0.50	-0.07	258.31	49.58	709.91	99.79
NORTHWEST						
SOYBEANS	-2.53	-0.16	-21.43	-1.17	-95.80	-4.88
CORN	1.76	0.01	-82.50	-0.59	-747.57	-5.12
GRAINSORSHUM	-0.01	0.00	-3.18	-0.10	-160.26	-4.77
COTTON	0.00	NC	0.00	NC	0.00	NC
RICE	0.00	NC	0.00	NC	0.00	NC
WHEAT	4.22	0.01	-325.13	-1.00	-1,086.22	-3.30
SUNFLOWERS	-1.50	-0.05	837.97	29.65	1,941.83	54.80
SOUTHEAST						
SOYBEANS	-19.56	-0.06	544.12	1.70	491.45	1.54
CORN	-0.06	0.00	-33.29	-0.31	-162.84	-1.50
GRAINSORSHUM	-0.03	0.00	2.77	0.15	-2.94	-0.11
COTTON	6.53	0.17	-167.45	-4.35	-199.90	-5.76
RICE	-0.02	0.00	5.67	0.24	-2.27	-0.10
WHEAT	0.00	0.00	0.00	0.00	0.00	0.00
SUNFLOWERS	0.00	NC	0.00	NC	0.00	NC
SOUTHWEST						
SOYBEANS	-1.19	-0.06	5.63	0.26	5.59	0.25
CORN	0.11	0.00	3.97	0.10	5.69	0.12
GRAINSORSHUM	-0.82	-0.01	-0.09	0.00	-10.28	-0.10
COTTON	0.06	0.00	3.04	0.03	1.90	0.02
RICE	-0.02	0.00	-0.29	-0.03	-0.33	-0.03
WHEAT	0.00	0.00	0.00	0.00	0.00	0.00
SUNFLOWERS	0.00	0.00	0.07	0.03	-0.04	-0.01
TOTAL US						
SOYBEANS	-42.05	-0.06	1,001.26	1.40	730.24	1.02
CORN	1.42	0.00	-49.33	-0.06	-1,166.94	-1.31
GRAINSORSHUM	-0.87	-0.01	-0.55	0.00	-173.59	-1.03
COTTON	6.59	0.05	-164.46	-1.11	-198.04	-1.37
RICE	-0.05	0.00	5.38	0.16	-2.60	-0.08
BARLEY	2.07	0.02	22.86	0.24	72.28	0.77
WHEAT	4.23	0.00	-333.28	-0.43	-1,129.64	-1.45
SUNFLOWERS	-2.00	-0.05	1,096.35	30.62	2,651.69	58.61

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TABLE 3. BASE CASE

COMMODITY REPORT: Soybeans
(Crop Year Beginning September 1)

	Crop Production				Supply (Million Bushels)			Disappearance (Million Bushels)				Prices ($ per Bushel)	
	Acreage Planted (1000's)	Acreage Harvested (1000's)	Yield per Acre Harvested (Bushels)	Production (Mil. Bu.)	Beginning Stocks	Production	Total	Domestic Disappearance	Exports	Total	Ending Stocks	Cash Price	Price at Farm
8014					359	1,817	2,176	374	251	625	1,529	8.16	7.89
8111					1,529	0	1,529	265	230	495	1,034	7.38	7.63
8112					1,034	0	1,034	233	123	356	678	7.40	7.08
8113					678	0	678	247	114	360	317	7.59	7.26
80-81	70,087	67,856	26.8	1,817	359	1,817	2,176	1,118	719	1,836	317	7.63	7.46
8114					317	1,980	2,297	426	306	732	1,565	7.61	7.37
8211					1,565	0	1,565	318	225	543	1,023	8.15	7.86
8212					1,023	0	1,023	212	142	354	669	8.90	8.54
8213					669	0	669	233	140	373	296	8.71	8.40
81-82	69,476	68,588	28.9	1,980	317	1,980	2,297	1,189	813	2,002	296	8.34	8.04
8214					296	2,057	2,352	369	316	685	1,668	8.63	8.39
8311					1,668	0	1,668	339	239	578	1,089	9.15	8.86
8312					1,089	0	1,089	230	152	382	707	9.65	9.30
8313					707	0	707	264	151	416	292	9.70	9.38
82-83	71,448	70,961	29.1	2,057	296	2,057	2,352	1,203	858	2,061	292	9.28	8.98

TABLE 4. AFTER CANCELLATION

COMMODITY REPORT: Soybeans
(Crop Year Beginning September 1)

	Crop Production				Supply (Million Bushels)			Disappearance (Million Bushels)				Prices ($ per Bushel)	
	Acreage Planted (1000's)	Acreage Harvested (1000's)	Yield per Acre Harvested (Bushels)	Production (Mil. Bu.)	Beginning Stocks	Production	Total	Domestic Disappearance	Exports	Total	Ending Stocks	Cash Price	Price at Farm
8014					359	1,817	2,176	374	251	625	1,529	8.16	7.89
8111					1,529	0	1,529	265	230	495	1,034	7.38	7.63
8112					1,034	0	1,034	232	123	356	678	7.39	7.03
8113					678	0	678	242	114	356	322	7.91	7.54
80-81	70,087	67,856	26.8	1,817	359	1,817	2,176	1,113	719	1,831	322	7.71	7.52
8114					322	1,800	2,122	420	298	718	1,404	8.02	7.75
8211					1,404	0	1,404	311	217	528	876	8.70	8.36
8212					876	0	876	196	137	332	544	10.10	9.68
8213					544	0	544	204	129	334	210	10.37	10.00
81-82	69,434	68,547	26.3	1,800	322	1,800	2,122	1,131	782	1,912	210	9.30	8.95
8214					210	1,899	2,108	374	283	657	1,451	9.55	9.33
8311					1,451	0	1,451	315	225	540	911	10.27	9.96
8312					911	0	911	216	141	357	554	10.82	10.45
8313					554	0	554	245	141	386	168	12.69	12.29
82-83	72,450	71,551	26.5	1,899	210	1,899	2,108	1,150	790	1,940	168	10.83	10.51

examination of the acreage devote to sunflowers, a minor, but expanding crop in several regions. Sunflowers provide high protein feed products which compete with soybean oil and meal. As the price of soybean-derived protein increases, the demand for sunflower protein, being relatively less expensive increases, thereby creating an incentive for expanded acreage. In the major sunflower producing regions, most notably the Northwest and Northcentral, sunflowers compete with wheat; therefore, the expansion in sunflower acreage draws down wheat acreage.

Although the acreage adjustments in the Northwest may seem dramatic given that they derive from secondary effects, an examination of recent changes in acreage within this region add credibility to this conclusion. During the period 1976 to 1980, sunflower acreage in the Northwest was quite volatile, ranging from 620,000 acreas in 1976 to 4080 acres in 1979, with interyear changes equalling 2 million acres, similar in magnitude to those forecast through this analysis.

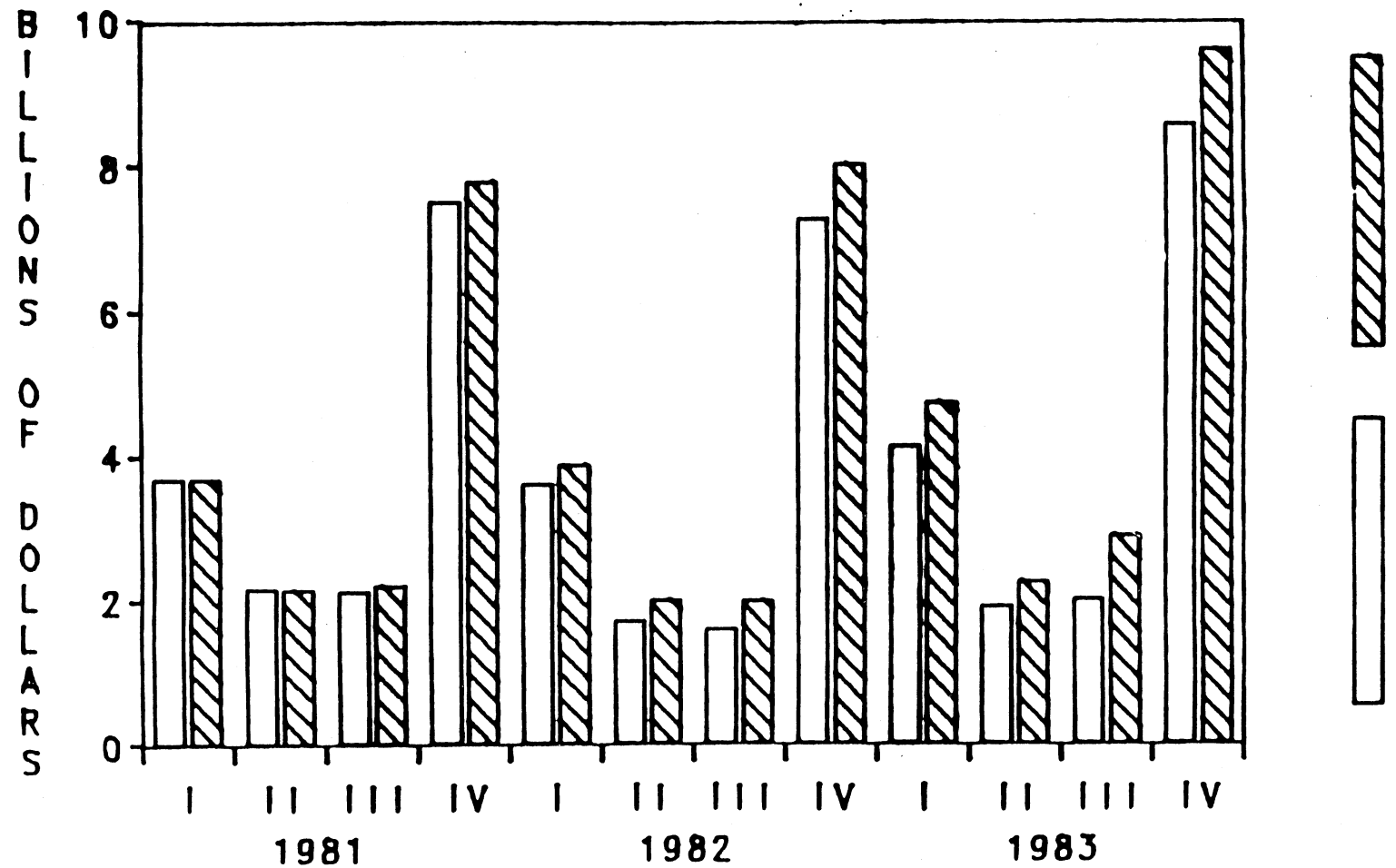
The question of "who pays the bill" for cancellation, e.g., soybean growers versus other crop producers, crop producers versus livestock producers or farmers versus consumers can be addressed through examination of cash receipts to various agricultural sectors, farm income measures and wholesale and consumer price indices.

The quarterly patterns of nominal cash receipts from farm marketings after cancellation show a continual positive adjustment from 81:3 to 83:4 ranging from $80 million (+0.2%) initially to a maximum of $960 million (+1.7%) during the last quarter. The increase derives primarily from changes in the value of soybean marketings. Cash receipts in this sector increase every quarter in magnitudes ranging from $70 million(+3.4%) during 81:3 to $1.05 billion (+12.2%) during 83:4 (Quarterly changes in cash receipt from soybeans are depicted in Chart 6).

Not all farmers share in these windfall gains created by higher soybean prices. Higher crop prices reduce the demand for feed used to fatten livestock and hogs and also reduce poultry production. The dynamics of adjustment to higher soybean prices within these sectors are dependent upon their reliance on high protein feed and the ease of herd or flock adjustment.

Income from poultry is affected first, with nominal cash receipts from poultry and eggs declining by $10 million during 81:3 (-0.4%) and remaining down by approximately that amount for each quarter through 82:2. Cash receipts from hogs

CHANGES IN FARM CASH RECEIPTS FROM SOYBEAN MARKETING



(CHART 6)

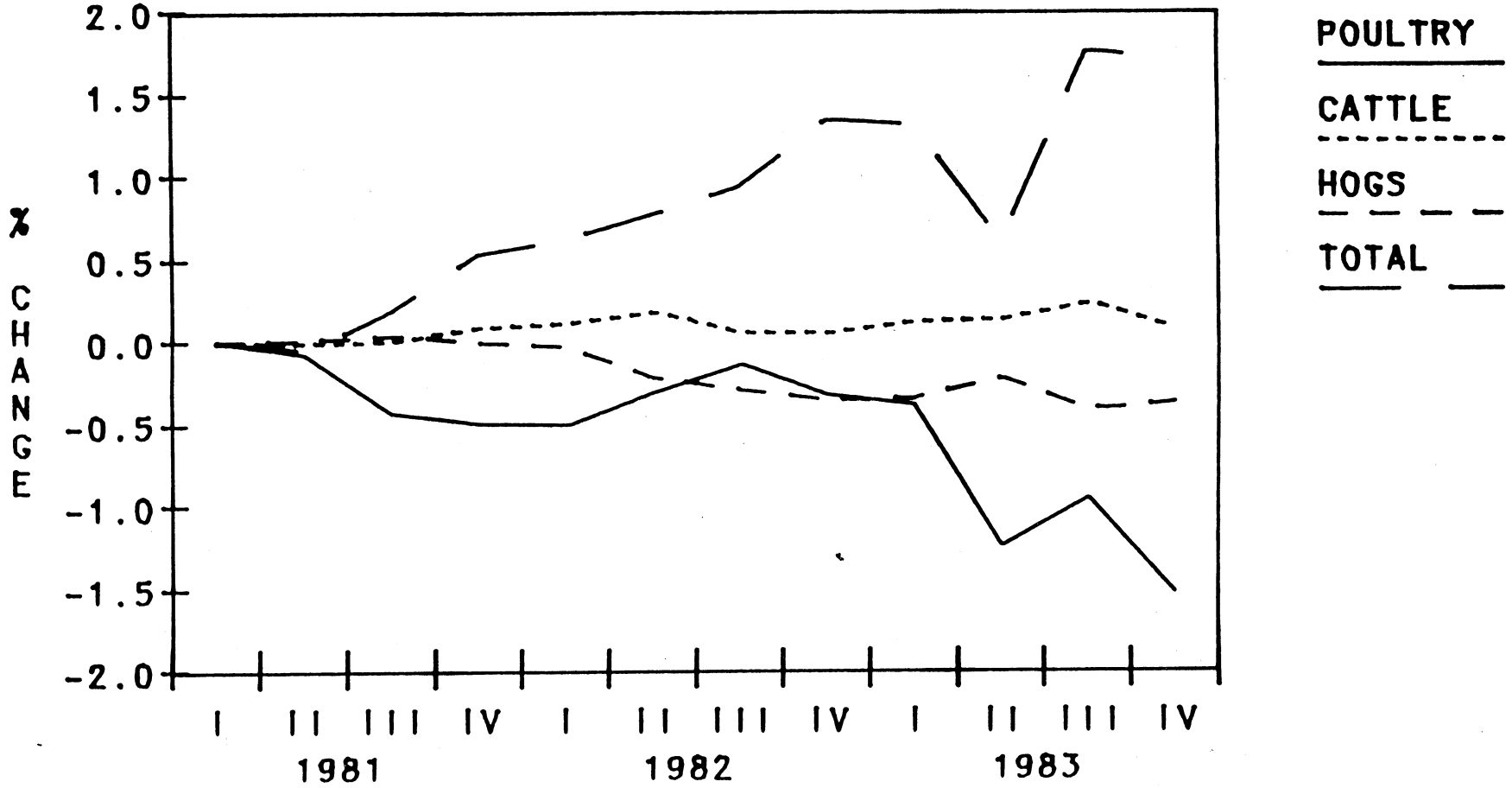
begin to decline during 82:2 (down $10 million or 0.2%) and remain approximately $10 million down each quarter through 1983:4. Herd and flock adjustments for hogs and poultry provide mixed signals to the cattle sectors. A slight increase in the marketing of hogs in response to higher feed prices (which cause an increase in liquidations) puts downward pressure on red meat prices. On the other hand, slightly smaller poultry flocks tend to limit meat supplies in aggregate, thereby exerting upward price pressure. Further, the adjustments in the hog sector lead to increased competition for the poorer cuts of beef arising primarily from non-fed beef, and after early stages of liquidation, tend to make meat from fed beef a relatively cheaper commodity. As a result, quarterly patterns of nominal cash receipts from cattle and calves show 0.1% to 0.2% increase over the base case, ranging from $10 to $20 million per quarter.

Chart 7 shows the cancellation induced percentage changes in the components of farm income discussed above and suggests that agriculture, as a whole, would benefit from cancellation-related reduced soybean production. Further, it suggests that the gains would be unevenly distributed, with hog and poultry producers being disadvantaged, at least over this relatively short run period, while soybean producers benefit from windfall gains. This conclusion is also supported on a real basis as seen in Chart 8 where the annual changes in cash receipts from various sectors are deflated by the Wholesale Price Index for farm products.

As seen in this chart, total real cash receipts from farming (based in 1980 dollars) grow each year over the three year forecast. In the last year, 1983, total real cash receipts are increased by approximately $1.75 billion as a result of cancellation, with this aggregate distributed as small decreases in poultry and hogs, a small increase to cattle, and a $2 billion dollar increase to soybeans.

Chart 9 offers comparative measures which are useful for assessing consequences of cancellation at the producer and consumer level. These measures include: the index of prices received by farmers for all farm products, the Wholesale Price Index for all farm products, the Consumer Price Index for food and beverages and the Parity Index which reflects the ratio of prices received by farmers to prices paid. As in the earlier graphics, Chart 9 shows the quarterly pattern of changes in these measures calculated as the change in the variable (after cancellation minus base forecast) divided by its value in the base case.

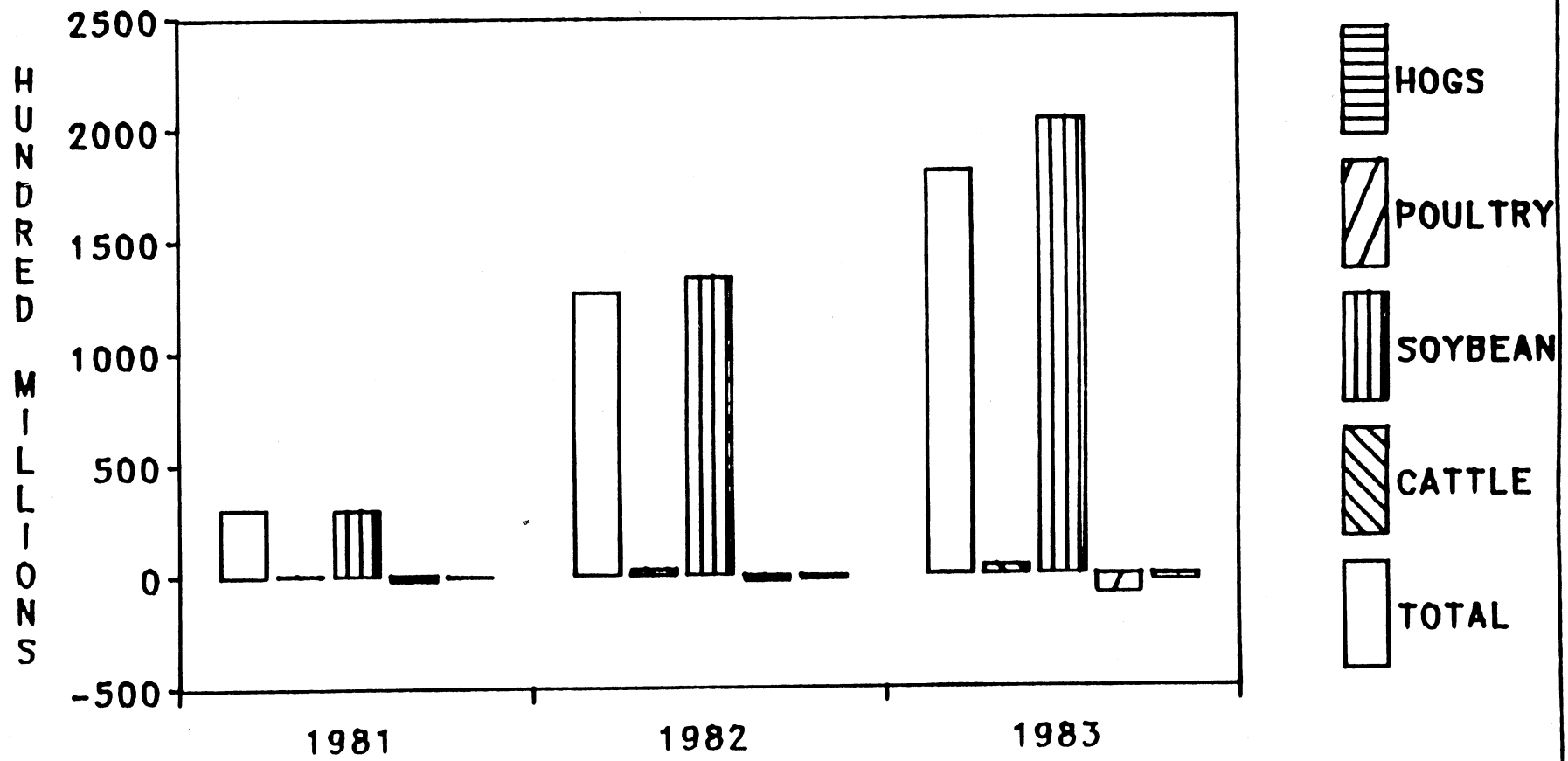
CHANGES IN CASH RECEIPTS FOR SELECTED SECTORS



(CHART 7)

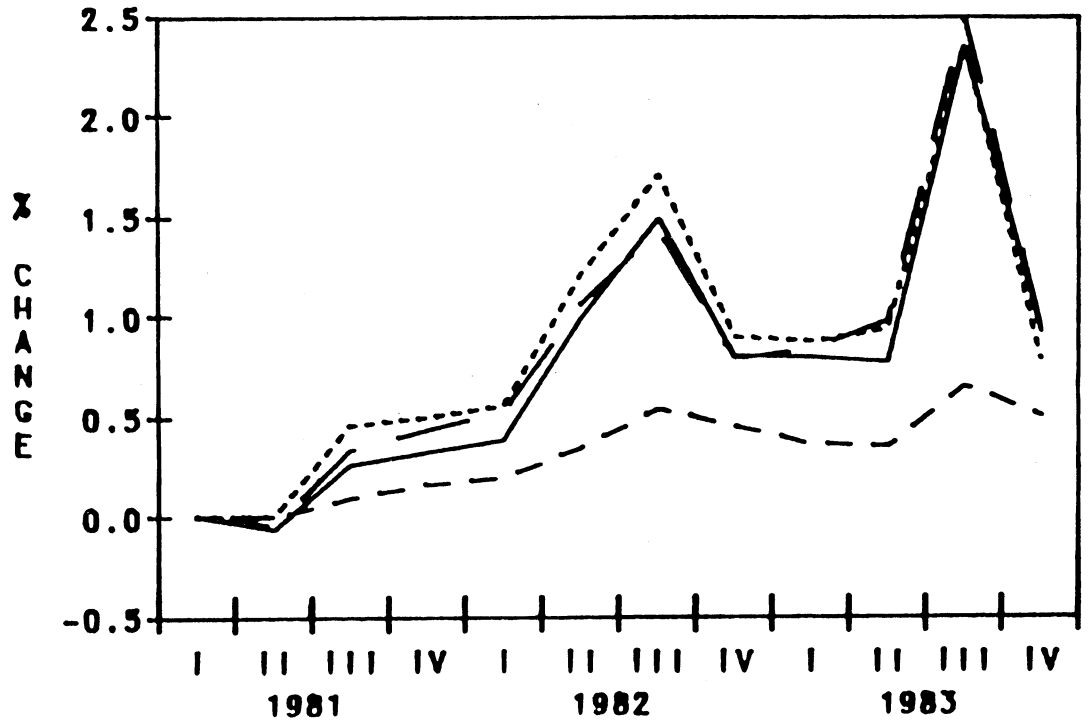
ANNUAL REAL CHANGES IN CASH RECEIPTS FROM FARMING BY SELECTED SECTOR

(DEFLATED BY WP101)



(CHART 8)

CHANGE IN RELEVANT FARM AND CONSUMER INDICES



JPAS -- Index of Prices Received

WPI -- Wholesale Price Index

CPI -- Consumer Price Index

JPAR-- Parity Index

(CHART 9)

Given this construction, the increase in the Parity Index indicates that farmers, as a whole, are relatively better off after cancellation, i.e. prices received have increased faster than prices paid. A second measure at the farm level, the index of prices received, although reflecting less of an equity concept also indicates that farmers would gain through cancellation.

Contrary to the interpretation attached to the farm level indices, the increases in both the Wholesale Price Index for all farm products and the Consumer Price Index for food and beverages suggest that consumers bear the burden of costs associated with cancellation (ignoring of course, the offsetting gains associated with health measures).

Summary tables which depict U.S. agricultural under the two alternatives utilized in this analysis are presented as a basis for characterizing the magnitude of cancellation-related impacts. Tables 5 and 6 summarize, respectively, a physical and financial synopsis of the base case which was DRI's May, 1981 Control Forecast of U.S. Agriculture. Tables 7 and 8 summarize, respectively, the physical and financial conditions of U.S. agriculture without pesticide "X". Tables 9 and 10 summarize the physical and financial impacts of cancellation.

TABLE 5. PHYSICAL SUMMARY OF THE BASE CASE

	1981				1982							
	I	II	III	IV	I	II	III	IV	1980	1981	1982	1983
Major Crop Planted Acreage (Million Acres)												
Corn	...	...	...	...	...	...	...	...	84.1	84.8	87.0	88.8
Cotton	...	...	...	...	...	...	...	...	14.6	14.6	14.8	14.5
Soybeans	...	...	...	...	...	...	...	...	70.1	69.5	71.4	71.6
Wheat	...	...	...	...	...	...	...	...	80.4	86.2	77.8	78.1
Major Crop Yields (Bu./Harvested Acre)												
Corn	...	...	...	...	...	...	...	...	91.0	99.9	101.1	103.1
Cotton (Lb.)	...	...	...	...	...	...	...	...	411.0	472.8	473.6	474.3
Soybeans	...	...	...	...	...	...	...	...	26.8	28.9	29.1	29.4
Wheat	...	...	...	...	...	...	...	...	33.4	34.5	33.6	33.8
Domestic Use of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	1,226	783	1,230	1,548	1,384	787	1,128	1,478	5,194	4,923	4,846	5,006
Cotton (1000 Ba.)	1,452	1,872	1,026	1,528	1,513	1,978	1,063	1,573	6,506	5,820	6,045	6,273
Soybeans	265	233	247	426	318	212	233	369	1,206	1,118	1,189	1,203
Wheat	190	139	324	220	206	136	327	219	783	810	886	900
Exports of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	683	379	771	828	510	347	744	660	2,433	2,560	2,428	2,604
Cotton (1000 Ba.)	2,094	1,874	571	1,351	1,983	2,437	623	1,403	9,228	6,073	6,342	6,666
Soybeans	230	123	114	306	225	142	140	316	877	719	813	858
Wheat	381	233	503	354	298	218	560	359	1,375	1,503	1,373	1,488
Carryout Stocks of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	3,995	2,833	832	5,825	3,932	2,798	927	6,445	1,617	832	927	974
..Reserve	863	400	315	266	214	238	163	257	610	315	163	262
Cotton (1000 Ba.)	5,992	2,247	1,103	10,497	7,805	3,392	2,182	11,782	3,000	2,247	3,392	4,332
Soybeans	1,034	678	317	1,565	1,023	669	296	1,668	359	317	296	292
Wheat	1,333	962	2,809	2,236	1,732	1,378	2,888	2,310	902	962	1,378	1,389
..Reserve	331	361	386	386	386	451	481	481	274	361	451	481
Ending Inventories of Cattle and Hogs (Millions)												
Cows	50.9	51.5	51.1	50.5	51.4	51.9	51.6	51.0	49.9	50.5	51.0	50.1
Cattle on Feed	9.8	8.6	8.4	9.8	8.6	8.2	8.2	9.6	11.1	9.8	9.6	10.4
All Cattle	120.3	124.8	121.3	118.0	122.9	127.9	124.5	121.1	115.0	118.0	121.1	121.9
Breeding Hogs	8.5	8.4	7.8	7.7	8.0	8.3	7.9	8.1	9.2	7.7	8.1	8.5
All Hogs	58.5	60.2	58.4	56.1	53.4	56.5	56.2	54.2	64.5	56.1	54.2	57.0
Fed. Insp. Livestock Slaughter (Million Head)												
Cattle	8.0	8.7	8.9	8.8	8.7	8.4	8.8	9.1	31.6	34.5	35.0	36.9
Hogs	22.6	22.2	21.0	22.0	19.5	19.7	19.3	20.7	91.9	87.8	79.2	78.7
Turkeys	26.2	36.5	48.6	41.2	28.4	34.0	53.2	45.1	157.0	152.5	160.7	173.6
Chicken (Bil. Lb.)	2.9	3.2	3.1	3.0	3.1	3.4	3.4	3.3	11.6	12.2	13.1	13.7

TABLE 6. FINANCIAL SUMMARY OF THE BASE CASE

	1981 I	1981 II	1981 III	1981 IV	1982 I	1982 II	1982 III	1982 IV	1980	1981	1982	1983
Spot Market Prices of Major Crop Commodities ($/Bu., Crop-Year Basis)												
Corn	3.51	3.52	3.62	3.49	3.62	3.77	3.89	3.70	2.81	3.53	3.69	3.85
Cotton ($/Cwt.)	83.31	81.72	80.67	79.27	81.13	86.08	89.19	89.13	70.05	83.94	81.79	87.34
Soybeans	7.38	7.40	7.59	7.61	8.15	8.90	8.71	8.63	6.53	7.63	8.34	9.28
Wheat	4.48	4.23	4.19	4.56	4.32	4.38	4.33	4.71	4.18	4.46	4.37	4.60
Livestock Spot Market Prices ($/Cwt.)												
Choice Steers	61.91	65.62	70.95	76.08	79.00	87.67	87.30	84.94	67.04	68.64	84.73	92.10
Feeder Steers	70.83	72.87	74.02	75.21	74.58	80.89	73.12	72.89	75.23	73.23	75.37	67.85
Hogs	40.67	41.35	46.45	54.28	63.38	61.65	59.99	65.46	40.04	45.69	62.62	73.78
Broilers	48.48	50.29	53.38	51.38	55.56	57.27	56.96	53.79	46.32	50.88	55.89	61.55
Turkeys	76.94	73.34	79.03	91.27	88.06	89.88	95.08	98.39	76.28	80.15	92.86	88.64
Farm Cash Receipts ($ Billion)												
Livestock	16.3	17.0	18.3	20.2	19.3	20.4	20.3	21.6	69.3	71.9	81.6	87.6
..Meat Animals	9.9	10.2	11.1	12.9	12.0	12.6	12.3	13.8	43.0	44.2	50.7	54.1
..Dairy	4.4	4.4	4.4	4.5	4.6	4.9	4.7	4.7	16.4	17.6	19.0	20.6
..Poultry & Eggs	2.0	2.2	2.5	2.6	2.6	2.7	2.9	2.8	9.3	9.3	11.0	11.9
Crops	16.7	13.4	21.7	31.1	19.4	14.1	19.2	31.5	69.1	82.9	84.3	92.8
..Food Crops	2.2	1.6	3.6	2.4	1.6	1.6	3.8	2.6	10.0	9.8	9.6	10.3
..Feed crops	4.5	4.3	7.2	8.6	6.5	4.5	5.0	8.1	17.1	24.5	24.2	28.2
..Cotton	1.3	0.2	0.2	2.8	1.2	0.2	0.3	3.1	5.4	4.6	4.7	4.8
..Oilseeds	3.7	2.2	2.5	8.0	3.8	2.0	2.2	8.0	14.7	16.5	15.9	17.5
Total (inc CCC)	33.0	30.4	40.0	51.3	38.8	34.5	39.5	53.1	138.5	154.8	165.9	180.4
Farm Income ($ Billion, SAAR)												
Cash Receipts	142.00	137.72	159.65	179.95	164.60	154.91	157.41	186.28	140.50	154.83	165.80	180.35
Prod. Expenses	140.00	143.80	147.22	149.74	154.28	159.64	162.36	164.69	132.00	145.19	160.24	172.38
Realized net	14.71	11.73	26.44	43.81	28.68	14.85	11.59	35.28	23.25	24.17	22.60	26.90
Net Farm Income	18.00	13.18	27.89	45.26	30.63	16.80	13.54	37.23	21.75	26.08	24.55	27.60
Real Net Income	9.61	6.88	14.24	22.61	14.98	8.05	6.35	17.10	12.28	13.33	11.62	12.10
Price Indexes (% Change at Compound Annual Rates)												
WPI Farm Products	-15.64	6.53	32.80	30.18	7.96	8.44	1.21	14.07	3.47	11.16	14.03	10.13
WPI Proc. Foods	-11.80	5.56	21.45	21.56	9.89	9.06	5.01	11.33	8.41	8.37	12.32	9.75
CPI Food & Bev	5.49	4.57	12.08	16.06	12.10	9.15	6.89	8.35	8.58	9.63	10.86	8.80
CPI All Urban	10.85	6.90	8.44	8.18	8.05	9.44	8.95	9.09	13.51	9.74	8.50	8.41
Farm Prices Paid	13.98	7.39	7.05	8.09	18.50	9.49	3.27	4.65	12.47	9.77	9.83	7.67
Farm Prices Recd	-0.51	-9.24	26.02	14.64	15.39	10.35	-1.55	3.40	2.15	9.09	10.77	5.92

TABLE 7. PHYSICAL SUMMARY OF CANCELLATION CASE

	1981				1982							
	I	II	III	IV	I	II	III	IV	1980	1981	1982	1983
Major Crop Planted Acreage (Million Acres)												
Corn	...	...	...	...	...	...	...	...	84.1	84.8	87.0	87.7
Cotton	...	...	...	...	...	...	...	...	14.6	14.6	14.6	14.3
Soybeans	...	...	...	...	...	...	...	...	70.1	69.4	72.4	72.4
Wheat	...	...	...	...	...	...	...	...	80.4	86.2	77.5	76.9
Major Crop Yields (Bu./Harvested Acre)												
Corn	...	...	...	...	...	...	...	...	91.0	99.9	101.1	103.1
Cotton (Lb.)	...	...	...	...	...	...	...	...	411.0	472.8	473.5	474.2
Soybeans	...	...	...	...	...	...	...	...	26.8	26.3	26.5	26.7
Wheat	...	...	...	...	...	...	...	...	33.4	34.5	33.6	33.8
Domestic Use of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	1,226	783	1,244	1,567	1,403	801	1,144	1,493	5,194	4,937	4,915	5,067
Cotton (1000 Ba.)	1,452	1,872	1,026	1,528	1,513	1,979	1,063	1,573	6,506	5,820	6,045	6,272
Soybeans	265	232	242	420	311	196	204	374	1,206	1,113	1,131	1,150
Wheat	190	139	324	219	205	135	327	218	783	810	882	894
Exports of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	683	379	770	822	504	342	737	657	2,433	2,559	2,405	2,571
Cotton (1000 Ba.)	2,094	1,874	571	1,351	1,984	2,437	624	1,403	9,228	6,073	6,343	6,666
Soybeans	230	123	114	298	217	137	129	283	877	719	782	790
Wheat	381	233	502	354	298	218	559	359	1,375	1,503	1,372	1,487
Carryout Stocks of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn	3,995	2,833	820	5,800	3,893	2,749	868	6,371	1,617	820	868	883
..Reserve	863	401	310	260	205	227	131	218	610	310	131	192
Cotton (1000 Ba.)	5,992	2,247	1,103	10,503	7,811	3,397	2,180	11,632	3,000	2,247	3,397	4,173
Soybeans	1,034	678	322	1,404	876	544	210	1,451	359	322	210	168
Wheat	1,333	962	2,810	2,238	1,735	1,383	2,884	2,308	902	962	1,383	1,391
..Reserve	331	361	386	386	386	451	481	481	274	361	451	481
Ending Inventories of Cattle and Hogs (Millions)												
Cows	50.9	51.5	51.1	50.5	51.4	51.9	51.5	50.9	49.9	50.5	50.9	50.1
Cattle on Feed	9.8	8.7	8.4	9.8	8.6	8.1	8.2	9.6	11.1	9.8	9.6	10.4
All Cattle	120.3	124.8	121.3	118.0	122.9	127.8	124.5	121.0	115.0	118.0	121.0	121.8
Breeding Hogs	8.5	8.4	7.8	7.7	8.0	8.3	7.9	8.1	9.2	7.7	8.1	8.5
All Hogs	58.5	60.2	58.4	56.1	53.4	56.6	56.3	54.3	64.5	56.1	54.3	57.2
Fed. Insp. Livestock Slaughter (Million Head)												
Cattle	8.0	8.7	8.9	8.9	8.7	8.4	8.8	9.1	31.6	34.5	35.0	36.9
Hogs	22.6	22.2	21.0	22.0	19.5	19.7	19.3	20.8	91.9	87.8	79.3	78.9
Turkeys	26.2	36.5	48.6	41.1	28.1	33.5	52.5	45.2	157.0	152.4	159.3	173.2
Chicken (Bil. Lb.)	2.9	3.2	3.1	3.0	3.1	3.4	3.4	3.3	11.6	12.2	13.2	13.7

TABLE 8. FINANCIAL SUMMARY OF CANCELLATION CASE

	1981				1982							
	I	II	III	IV	I	II	III	IV	1980	1981	1982	1983
Spot Market Prices of Major Crop Commodities ($/Bu., Crop-Year Basis)												
Corn.....	3.51	3.52	3.64	3.50	3.63	3.79	3.94	3.73	2.81	3.53	3.72	3.89
Cotton ($/Cwt.)...	83.31	81.72	80.65	79.24	81.07	86.02	89.14	89.14	70.05	83.94	81.75	87.38
Soybeans.....	7.38	7.39	7.91	8.02	8.70	10.10	10.37	9.55	6.53	7.71	9.30	10.83
Wheat.....	4.48	4.23	4.19	4.55	4.31	4.37	4.33	4.71	4.18	4.46	4.36	4.60
Livestock Spot Market Prices ($/Cwt.)												
Choice Steers.....	61.91	65.63	70.94	75.89	78.80	87.28	87.19	84.80	67.04	68.59	84.52	91.81
Feeder Steers.....	70.83	72.81	73.78	74.77	73.90	80.29	72.89	72.65	75.23	73.05	74.93	67.13
Hogs.....	40.67	41.36	46.48	54.28	63.36	61.48	59.73	65.10	40.04	45.70	62.42	73.42
Broilers.....	48.48	50.32	53.49	51.43	55.59	57.06	56.74	53.68	46.32	50.93	55.77	61.44
Turkeys.....	76.94	72.69	76.21	88.40	84.47	91.06	97.20	97.12	76.28	78.56	92.46	83.98
Farm Cash Receipts ($ Billion)												
Livestock.....	16.3	17.0	18.3	20.2	19.3	20.4	20.2	21.5	69.3	71.8	81.5	87.2
..Meat Animals....	9.9	10.2	11.1	12.9	12.0	12.6	12.3	13.8	43.0	44.2	50.7	54.2
..Dairy.....	4.4	4.4	4.4	4.5	4.6	4.9	4.7	4.7	16.4	17.6	18.9	20.3
..Poultry & Eggs..	2.0	2.2	2.5	2.6	2.6	2.7	2.9	2.8	9.3	9.3	11.0	11.8
Crops.....	16.7	13.4	21.8	31.4	19.7	14.4	19.7	32.3	69.1	83.3	86.0	95.7
..Food Crops.....	2.2	1.6	3.6	2.4	1.6	1.6	3.8	2.6	10.0	9.8	9.6	10.3
..Feed crops.....	4.5	4.3	7.2	8.6	6.5	4.5	5.0	8.2	17.1	24.6	24.3	28.3
..Cotton.....	1.3	0.2	0.2	2.8	1.2	0.2	0.3	3.1	5.4	4.6	4.7	4.7
..Oilseeds.....	3.7	2.2	2.6	8.3	4.1	2.2	2.6	8.7	14.7	16.8	17.6	20.2
Total (inc CCC)...	33.0	30.4	40.1	51.6	39.0	34.8	39.9	53.8	138.5	155.1	167.5	182.9
Farm Income ($ Billion, SAAR)												
Cash Receipts.....	142.00	137.66	159.97	181.07	165.58	156.01	158.96	189.18	140.50	155.17	167.43	182.91
Prod. Expenses....	140.00	143.75	147.04	149.35	153.61	158.97	161.93	164.18	132.00	145.03	159.67	171.26
Realized net.....	14.71	11.71	26.94	45.31	30.33	16.62	13.56	38.68	23.25	24.67	24.80	30.57
Net Farm Income...	18.00	13.16	28.39	46.76	32.28	18.57	15.51	40.63	21.75	26.58	26.75	31.27
Real Net Income...	9.61	6.87	14.50	23.36	15.79	8.89	7.28	18.66	12.28	13.58	12.65	13.70
Price Indexes (% Change at Compound Annual Rates)												
WPI Farm Products.	-15.64	6.52	35.27	30.39	8.22	11.29	3.20	10.47	3.47	11.44	14.99	10.28
WPI Proc. Foods...	-11.80	5.56	22.63	21.78	10.04	10.60	6.21	9.54	8.41	8.52	12.88	9.85
CPI Food & Bev....	5.49	4.57	12.51	16.37	12.25	9.80	7.70	7.97	8.58	9.70	11.21	8.88
CPI All Urban.....	10.85	6.90	8.55	8.25	8.09	9.61	9.16	8.99	13.51	9.76	8.58	8.43
Farm Prices Paid..	13.98	7.30	6.84	7.91	18.35	9.80	3.77	4.46	12.47	9.71	9.84	7.60
Farm Prices Recd..	-0.51	-9.47	27.69	14.93	15.69	13.05	0.38	0.63	2.15	9.24	11.64	6.22

TABLE 9. PHYSICAL SUMMARY OF CANCELLATION-RELATED IMPACTS

	1981				1982							
	I	II	III	IV	I	II	III	IV	1980	1981	1982	1983
Major Crop Planted Acreage (Million Acres)												
Corn.....	...	...	...	...	...	...	...	...	0.0	0.0	0.0	-1.2
Cotton.....	...	...	...	...	...	...	...	...	0.0	0.0	-0.2	-0.2
Soybeans.....	...	...	...	...	...	...	...	...	0.0	0.0	1.0	0.7
Wheat.....	...	...	...	...	...	...	...	...	0.0	0.0	-0.3	-1.1
Major Crop Yields (Bu./Harvested Acre)												
Corn.....	...	...	...	...	...	...	...	...	0.0	0.0	0.0	0.0
Cotton (Lb.).....	...	...	...	...	...	...	...	...	0.0	0.0	-0.1	-0.1
Soybeans.....	...	...	...	...	...	...	...	...	0.0	-2.6	-2.6	-2.6
Wheat.....	...	...	...	...	...	...	...	...	0.0	0.0	0.0	0.1
Domestic Use of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn.....	0	0	14	19	19	15	16	14	NA	14	69	61
Cotton (1000 Ba.).	0	0	0	0	0	0	0	0	NA	0	0	0
Soybeans.....	0	0	-4	-6	-7	-16	-29	5	NA	-5	-58	-52
Wheat.....	0	0	0	-1	-1	-1	-1	-1	NA	0	-4	-6
Exports of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn.....	0	0	-1	-6	-6	-5	-7	-3	NA	-1	-23	-33
Cotton (1000 Ba.).	0	0	0	0	0	1	0	0	NA	0	1	0
Soybeans.....	0	0	0	-8	-7	-5	-10	-33	NA	0	-31	-68
Wheat.....	0	0	0	0	0	0	-1	0	NA	0	-1	-1
Carryout Stocks of Major Crop Commodities (Million Bu., Crop-Year Basis)												
Corn.....	0	0	-13	-26	-39	-49	-58	-75	0	-13	-58	-91
..Reserve.....	0	1	-4	-7	-9	-11	-32	-39	0	-4	-32	-69
Cotton (1000 Ba.).	0	0	0	6	6	6	-2	-150	0	0	6	-159
Soybeans.....	0	0	5	-161	-146	-125	-86	-216	0	5	-86	-123
Wheat.....	0	0	1	2	3	5	-3	-2	0	0	5	2
..Reserve.....	0	0	0	0	0	0	0	0	0	0	0	0
Ending Inventories of Cattle and Hogs (Millions)												
Cows.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cattle on Feed....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Cattle.....	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.1	-0.1
Breeding Hogs.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Hogs.....	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
Fed. Insp. Livestock Slaughter (Million Head)												
Cattle.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hogs.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Turkeys.....	0.0	0.0	0.0	-0.1	-0.3	-0.5	-0.8	0.1	0.0	-0.1	-1.5	-0.4
Chicken (Bil. Lb.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 10. FINANCIAL SUMMARY OF CANCELLATION-RELATED IMPACTS

	1981				1982							
	I	II	III	IV	I	II	III	IV	1980	1981	1982	1983
Spot Market Prices of Major Crop Commodities ($/Bu., Crop-Year Basis)												
Corn	0.00	0.00	0.02	0.01	0.02	0.02	0.05	0.03	NA	0.00	0.02	0.04
Cotton ($/Cwt.)	0.00	0.00	-0.01	-0.03	-0.05	-0.07	-0.05	0.01	NA	0.00	-0.04	0.05
Soybeans	0.00	-0.01	0.33	0.42	0.54	1.20	1.66	0.93	NA	0.08	0.95	1.55
Wheat	0.00	0.00	0.00	-0.01	-0.01	-0.01	0.00	0.00	NA	0.00	-0.01	0.00
Livestock Spot Market Prices ($/Cwt.)												
Choice Steers	0.00	0.01	-0.01	-0.18	-0.20	-0.39	-0.11	-0.14	0.00	-0.04	-0.21	-0.29
Feeder Steers	0.00	-0.05	-0.24	-0.44	-0.68	-0.60	-0.24	-0.24	0.00	-0.18	-0.44	-0.72
Hogs	0.00	0.01	0.03	0.00	-0.02	-0.18	-0.26	-0.36	0.00	0.01	-0.21	-0.36
Broilers	0.00	0.03	0.10	0.05	0.04	-0.21	-0.22	-0.11	0.00	0.05	-0.13	-0.10
Turkeys	0.00	-0.65	-2.82	-2.87	-3.59	1.18	2.12	-1.28	0.00	-1.58	-0.39	-4.66
Farm Cash Receipts ($ Billion)												
Livestock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4
..Meat Animals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
..Dairy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3
..Poultry & Eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Crops	0.0	0.0	0.1	0.3	0.3	0.3	0.4	0.8	0.0	0.4	1.7	2.9
..Food Crops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
..Feed crops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
..Cotton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
..Oilseeds	0.0	0.0	0.1	0.3	0.2	0.3	0.4	0.7	0.0	0.3	1.6	2.8
Total (inc CCC)	0.0	0.0	0.1	0.3	0.2	0.3	0.4	0.7	0.0	0.3	1.6	2.5
Farm Income ($ Billion, SAAR)												
Cash Receipts	0.00	-0.07	0.32	1.12	0.99	1.10	1.55	2.90	0.00	0.34	1.63	2.56
Prod. Expenses	0.00	-0.05	-0.18	-0.39	-0.67	-0.67	-0.43	-0.50	0.00	-0.15	-0.57	-1.12
Realized net	0.00	-0.02	0.50	1.51	1.66	1.77	1.98	3.40	0.00	0.50	2.20	3.67
Net Farm Income	0.00	-0.02	0.50	1.51	1.66	1.77	1.98	3.40	0.00	0.50	2.20	3.67
Real Net Income	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC