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AGRICULTURAL COMMODITY OUTLOOK--1982-83

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The mild recessions of the past quarter of a century have had only a minor effect on the demand for food and consequently on farm prices and income. If we are able to manage the economy in such a way that future downturns are modest, the agricultural sector will continue to exhibit a certain independence within the business cycle. This is because food, in general, is a necessity and consumers have strong food consumption patterns not easily changed in a fundamental way by small changes in income. This is why we believe a stronger agriculture in Michigan will help provide the diversification and stability needed in a state so dependent on one industry. Automobiles and trucks, being durable goods, are postponable expenditures and are especially vulnerable to declining consumer buying power.

However, when recessions are as long and as severe as the one we are currently experiencing, the demand for certain types of food is affected. We have seen this in 1981-82 in the demand for beef and to a lesser extent in the demand for pork. In addition, our efforts to control inflation by controlling the money supply have strengthened the value of the dollar relative to some major currencies and this has held back on export demand. Also, other nations are employing measures to control inflation and to deal with sharply higher energy costs and this has shunted the trend toward more animal protein consumption and the attendant demands for feed grain and soybean meal.

The pressures on farm prices at this time are derived not only from slack demand, but also from large supplies. The 1981-82 world coarse grain and

ment programs in establishing what those prices will be. The Agriculture and Food Act of 1981 established support levels as indicated in Table 1.

lower prices. The advance payments appear to have replaced the diversion payment wheat growers were seeking and will be set at levels to encourage participation--perhaps as high as 25 cents.

An important aspect about the announcement of the wheat program is that it provides some clues about the feed grain program. If the feed grain program somewhat parallels the wheat program, we would look for a $2.55 loan rate in the 1983 crop, a $2.86 target, and a $2.90 reserve loan. Advance payments on the deficiency forecast would be made. Acreage reduction of 10-15 percent would likely be required of participants.

1982-83 Price and Cost Outlook

The U.S. farm price of corn is expected to average around $2.50 for the 1981-82 season. This is 60 cents under the season average for the 1980 crop and only 10 cents over the $2.40 regular loan rate. This has encouraged the placement of corn under the loan and also under the farmer-owned grain reserve which offers a $2.55 loan rate. The large amount going under the two programs will likely tighten the free supplies to the point that the market will have to draw corn out from the regular loan, but not likely from the reserves in the 1981-82 crop year. A similar situation appears likely for the 1982-83 crop year.

Farmers with corn under loan are not likely to redeem the loan (sell on the market and pay off CCC) unless market prices reach levels at least 20 cents over the loan. This is because no interest is charged on loans delivered to CCC in repayment.

While the large amounts entering the government program are providing a lower level support to the market, such volumes will also put a ceiling on the market except under the most extreme situations where yields are very small on 1982 crops. For this reason, the U.S. average price of corn on the 1982 crop is most likely to range between $2.40 and $2.80 with the "expected" or "best shot" price at $2.70. This is not a very attractive price considering that nonland costs of production are estimated at $2.47 per bushel and total costs at $3.29 (using acquisition costs as a basis for figuring land). Note in Table 2 that the "real" gross margins over nonland costs in 1981 and 1982 are low by historical standards.

Soybean prices are being maintained this year above the $5.02 per bushel loan rate because soybean meal prices are related to corn prices and such a relationship is helping to put a floor under the soybean market. Also, the export movement of soybeans has been brisk. Prices on the 1981 crop will likely average around $6.05 per bushel and nearer $6.50 on the 1982 crop. The support price will be 75 percent of the average price for the last 5 years (highs and lows excluded) with a minimum of $5.02. The minimum is expected to prevail in 1982-83 and 1983-84 (Table 1). Like corn, the "real" gross margin over nonland costs was low on the 1981 crop and will continue relatively low on the 1982 crop.

On wheat, prices on the 1981 crop were above the $3.20 loan rate, but were below the target price in the first 5 months of the crop year. This resulted in a 15 cent per bushel direct payment to wheat growers. U.S. farm prices are expected to average about $3.70 on the 1981 crop and $3.60 on the 1982 crop. While a large soft red crop is in prospect, supplies of soft white in Eastern U.S. (mostly Michigan) may be tight due to difficulties in getting the crop seeded in the fall.

Wheat prices have been particularly depressed relative to costs in recent years as indicated in Table 2. Participants in the 1982 RAP program will likely benefit and this may help encourage more participation in the 1983 program.

The sugar market, like grain, has come under the pressure of a crop larger than utilization with the consequence that stocks will build. This will tend to keep sugar prices near the support levels.

With the large supplies of dairy productss in the hands of the CCC and with milk production continuing to rise, the prospects are clear that milk prices will rest on the lower level of supports shown in Table 1 during the 1981-82 and 1982-83 fiscal years, i.e., about steady. The government is offering the dairy industry quite a challenge. If production could be cut enough to reduce net expenditures to below $1 billion, price supports would be at least $1 higher. If production could be cut enough to reduce purchases to levels below 4 billion pounds (compared to 12.7 billion pounds in fiscal 1981), supports would be more than $2 higher. In other words, a reduction of 7 percent in production could boost price supports by 16 percent in 1982-83 if the higher prices didn't affect sales. Perhaps it would take a 10 percent cut. We doubt if the dairy industry can achieve this.

In fact, the dairy program may be changed. Schemes to limit output, enhance demand and lower price supports are being discussed. The possibility that supports would be lowered to 60 percent of parity are illustrated in Table 3. The effects on gross margins would be difficult though perhaps not disastrous for most dairy farmers.

Cattle feeders suffered through two years of negative returns over direct costs in 1980 and 1981. Rising prices on finished cattle, lower feed costs and less aggressive bidding on feeder cattle have improved the profit

situation in 1982 (Table 4). Feeder prices, however, are not particularly encouraging. Unless prices move up significantly, the expansion in the beef herd may soon come to an end (Figure 7). Prices on both fed cattle and feeders are expected to continue to increase in 1983.

While hog prices did increase in 1981, prices were not highly encouraging and producers cut 1982 spring farrowings by 10 percent (Figure 8). This is the major reason for sharply higher prices (Table 5). It will take $60 to generate much expansion in hogs so that some further price gain is seen in 1983.

Returns to broiler and turkey producers were quite low in 1981. The profits increased in 1982 but were not particularly attractive (Table 6). The industry is expected to remain fairly stable production and profitwise in 1983. The situation is similar on eggs.

Grain and Soybeans--1982 and Beyond

Because of the price support levels and the cost structure of grain and soybean production, the 1981-82 crop year prices will likely represent a low. The downside price risks are minimal at these levels. Once the world economies get back on track, the demand will expand rapidly enough to draw off the excess supplies and drive up prices to the point necessary to bring additional resources into production.

Trends in production, utilization, stocks and prices are presented in Figures 1-6. Note in Figure 1 the close alignment between production and utilization of world coarse grains and wheat year-by-year since 1960. Only small margins are involved in surplus and deficit years. At times, such as in the early 1970s, consumption is cut back when production falls. It happened that U.S. consumers absorbed most of that shock in coarse grains by reducing livestock consumption.

It so happened that the excess of production of coarse grains over utilization in the 1981-82 crop year is estimated to be the largest of the past 20 years. Yields were above trends (Figure 4) and consumption has leveled off since 1978. The result is shown in Figure 2. World ending carryover of coarse grain, about average in percent of total utilization at the outset of this crop year, is expected to reach nearly 15 percent of annual utilization at the end of 1981-82. These stock levels are inversely correlated with farm prices as illustrated in Figure 3.

While world wheat production was a record in 1981-82, it was very near utilization. Similarly, prospects for 1982-83 are for a very close balance. Consequently, the carryover of wheat shown in Figure 2 will remain at a relative low level.

In the longer-run of the 1980s, utilization will grow at least as rapidly as in the past 20 years. This is the conclusion from the MSU Agriculture Model, an econometric representation of U.S. and world agriculture.[1/] The assumptions behind these projections, derived from World Bank studies, are that industrial market economies will grow as nearly as rapidly as in the 1970s, although the nonmarket industrial economies will not match their performance of the 1970s. Real incomes in developing countries will continue to grow at the rate of 5 percent per year. The world economic growth is expected to be more rapid in the last half of the decade of the 1980s.

The projections of world coarse grain and wheat utilization to 1988 are presented in Figure 1. This will involve a rapid growth in imports by the developing nations.

1/ "A Forecast of U.S. and World Agriculture to the Year 1990," MSU Agriculture Model, Department of Agricultural Economics, Michigan State University, Spring 1982.

Trends and projections of U.S. soybean crushings and exports are shown in Figure 5. Since world data are not available for an extended period, the utilization since 1977 is included.

The level of carryover is an important factor in soybean prices as indicated in Figure 6. This shows the U.S. ending stocks as a percent of use since 1970 and the farm price of soybeans divided by the price of corn. Note the strong inverse relationship. World ending stocks since 1977 are also included in Figure 6. Both U.S. and world stocks are expected to be at relatively high levels at the end of the 1982-83 crop year.

Projected Prices and Costs to 1985

Trends and projections in costs and prices on major agricultural enterprises are presented in Tables 2-6. On crops and feeder cattle, costs were divided into nonland and land costs; on milk and livestock into direct and other costs and on poultry into feed costs and other costs. Except on feeder cattle, gross margins over major cost components were calculated. These gross margins along with feeder cattle prices were divided by the Consumer Price Index, 1982=1.00. This provides a perspective on the "real" returns over time, 1982 dollars.

On crops, real gross margins over nonland costs declined to relatively low levels in 1981 and are expected to remain low in 1982. Returns are expected to increase in 1983-85 but not to levels of earlier years. However, these figures do not include deficiency payments to farmers under the feed grain and wheat programs. This amounted to 15 cents per bushel to wheat growers on the 1981 crop and will likely be 50 cents per bushel on the 1982 crop and 25 cents per bushel on the 1983 crop. Of course, some additional costs are involved in compliance in 1982 and 1983.

On corn, deficiency payments on the 1982 crop could be as much as 15 cents per bushel and perhaps on the 1983 crop an advance payment will add to returns.

Real gross margins on milk are expected to decline over the next few years. How much depends on whether dairy support prices are lowered. Even if they are lowered to 60 percent of parity, real returns over direct costs would be higher than in 1965.

While the real price on feeder cattle is expected to increase over the next few years, prices will likely remain below nonland costs of production. On fed cattle, real gross margins over direct costs will remain positive but below average in 1983-85.

Real gross margins over direct costs on hogs vary widely from year to year due to the cycle. Rising returns in 1982-83 will eventually cause an expansion that will bring profits down in 1984 and 1985, if the cyclical tendencies continue.

On broilers and turkeys, real gross margins over feed costs have declined over time but are expected to stabilize somewhat in the next few years with prices about in line with total costs. On eggs, real gross margins over feed costs held up reasonably well in 1981 and 1982 and are expected to ease somewhat in the next few years.

The price outlook for 1983-85 does not appear very bright when <u>total</u> costs are considered. The costs presented here are based on USDA studies and do include competitive returns on labor, management and capital. Consideration of capital gains from rises in land prices which have helped offset relatively low incomes in the past was not included. However, realistically, producers should not count on rising land values in the near-term future.

The longer term outlook is somewhat brighter. In the last half of the 1980's, we believe prices will have to be bid up closer to total cost levels in order to generate the necessary growth in agriculture to meet projected domestic and export demands.

Table 1. Support Prices Provided in the Agriculture and Food Act of 1981 with Comparisons to 1981

	Unit	Supports Provided in 1981 Act				
		1981-82	1982-83	1983-84	1984-85	1985-86
Corn						
Loan	$/bu.	2.40	2.55		Minimum	
Target[a/]	$/bu.	2.40	2.70	2.86	3.03	3.18
Wheat						
Loan	$/bu.	3.20	3.55		Minimum	
Target[a/]	$/bu.	3.81	4.05	4.30	4.45	4.65
Soybeans	$/bu.	5.02	(75% of 5-year average price)			
Sugar[b/]	¢/bu.		17.00	17.50	17.75	18.00
Milk[c/]	$/cwt.	13.10	13.25	14.00	14.60	
70% of parity[d/]	$/cwt.		14.40	15.30	17.00	
75% of parity[e/]	$/cwt.		15.43	16.39	18.21	

[a/] Minimum.

[b/] Raw cane sugar price. The support for sugar beets will be at such a level as the Secretary determines to be fair and reasonable in relation to sugarcane.

[c/] Minimum support levels in fiscal years ending September 30.

[d/] Minimum support level if Secretary determines purchases will cost less than $1 billion (level estimated).

[e/] Minimum support level if Secretay determines purchases will be less than 4.0 billion pounds (1983 fiscal year) 3.5 billion (1984 fiscal year) and 2.69 billion pounds (1985 fiscal year). The prices are estimated.

Table 2

Production Costs and Gross Margins on Corn, Soybeans and Soft Wheat, Selected Years 1965-82 and Projected to 1985[1]

Crop		Year 1965	1975	1980	1981	1982	Projected[2] 1983	1984	1985
					$/Bushel				
Corn									
Nonland costs		.67	1.56	2.13	2.24	2.47	2.57	2.67	2.77
Land cost, acquisition basis		.24	.41	.67	.68	.82	.85	.88	.91
Total cost		.91	1.97	2.80	2.92	3.29	3.42[3]	3.55[3]	3.68[3]
Price received by farmers		1.16	2.54	3.11	2.50	2.70	3.06[3]	3.38[3]	3.60[3]
Gross margin	Nominal	.49	.98	.98	.26	.23	.49	.71	.83
over	Real	1.50	1.76	1.15	.28	.23	.46	.64	.70
Nonland costs	(1982 $)								
Soybeans									
Nonland costs		1.33	2.83	4.37	4.93	5.10	5.33	5.55	5.78
Land cost, acquisition basis		.63	1.11	2.00	2.20	2.45	2.65	2.86	3.07
Total cost		1.96	3.94	6.37	7.14	7.55	7.98[3]	8.41[3]	8.85[3]
Price received by farmers		2.54	4.92	7.57	6.05	6.50	7.58[3]	8.39[3]	8.60[3]
Gross margin	Nominal	1.21	2.09	3.20	1.12	1.40	2.25	2.84	2.82
over	Real	3.70	3.75	3.75	1.19	1.40	2.12	2.55	2.39
Nonland costs	(1982 $)								
Wheat, Soft, Midwest									
Nonland costs		1.00	2.40	3.58	4.12	4.25	4.43	4.61	4.79
Land cost, acquisition basis		.46	.89	1.51	1.68	1.81	1.84	1.87	1.90
Total cost		1.46	3.29	5.09	5.80	6.06	6.27[3]	6.48[3]	6.69[3]
Price received by farmers		1.35	3.56	3.96	3.70	3.60	4.45[3]	4.81[3]	4.89[3]
Gross margin	Nominal	.35	1.16	.38	-.42	-.65	.02	.21	.10
over	Real	1.07	2.08	.44	-.45	-.65	.02	.19	.08
Nonland costs	(1982 $)								

[1]Nonland cost data for 1975-81 were based on USDA studies such as "Costs of Producing Selected Crops in the United States--1978, 1979, 1980 and Projections for 1981," ESS, USDA for the Committee on Agriculture, Nutrition and Forestry, U.S. Senate, August 1981. Land costs are the estimated "acquisition" costs of the owner. Costs are based on "trend" yields.

[2]Projected costs involve the assumption that the CPI increases about 6 percent per year from 1982 to 1985, that land prices remain stable and the interest rates decline by 1.5 percentage points.

[3]Based on MSU Agriculture Model's "Long Term Forecast," Spring 1982.

Table 3

Production Costs and Gross Margins on Milk Production,

Selected Years, 1965-82 and Projected to 1985[1]

Item	Year					Projected		
	1965	1975	1980	1981	1982	1983	1984	1985
	$/cwt.							
Direct costs	3.25	5.29	5.95	7.07	6.06	5.97	6.37	7.06
Other costs[2]	2.60	3.42	5.66	6.25	6.63	7.03	7.39	7.83
Total costs	5.85	8.71	11.61	13.32	12.69	13.00	13.76	14.89
Price received by farmers	4.23	8.75	13.00	13.75	13.53	13.94[3]	14.11[3]	15.10[3]
Alternative at 60% of parity						11.95	12.09	12.94
Gross margin over direct costs								
Current program								
Nominal	.98	3.46	7.05	6.68	7.47	8.07	7.74	7.83
Real (1982 $)	3.00	6.20	8.26	7.08	7.47	7.62	6.95	6.63
60% of parity								
Nominal						5.98	5.72	5.88
Real (1982 $)						5.64	5.13	4.98

[1]Cost data were based on USDA studies, including "Costs of Producing Milk in the United States--Final 1977, Preliminary 1978, and Projections for 1979," ESCS, USDA, for the Committee on Agriculture, Nutrition and Forestry, U.S. Senate, August 1979.

[2]Includes ownership costs on machinery, buildings and livestock, costs of operator and family labor, and a management return (7% of total costs).

[3]MSU Agriculture Model's "Long Term Forecast," Spring 1982.

Table 4

Production Costs and Gross Margins on Cattle,

Selected Years, 1965-82 and Projected to 1985[1]

Item	Year					Projected		
	1965	1975	1980	1981	1982	1983	1984	1985
	$/cwt.							
Feeder Calves								
Nonland costs								
Direct	14.92	30.40	44.80	54.10	47.63	50.87	54.51	59.08
Other[2]	15.61	32.14	83.58	77.89	82.64	87.47	92.07	97.52
Total	30.53	62.54	128.38	131.99	130.27	138.34	146.58	156.60
Land costs, acquisition basis	3.44	7.19	12.57	14.19	15.81	17.03	18.65	20.28
Total costs	33.97	69.73	140.95	146.18	146.08	155.37	165.23	176.88
Price in medium No. 1 feeder steers (400-500 lbs. at Kansas City)								
Nominal	25.30	32.55	84.64	71.89	73.58	84.16[3]	92.88[3]	97.59[3]
Real (1982 $)	77.37	58.33	99.11	76.20	73.58	79.45	83.41	82.66
Cattle on Feed, Midwest								
Direct costs	21.07	38.32	68.85	68.82	66.36	73.63	80.67	86.13
Other costs[2]	3.21	6.94	11.19	12.05	12.79	13.53	14.24	15.09
Total costs	24.28	45.26	80.04	80.87	79.15	87.16	94.91	101.22
Price on Choice steers at Omaha	25.12	44.61	66.96	63.84	71.23	76.75[3]	84.97[3]	89.58[3]
Gross margin over direct costs								
Nominal	4.05	6.29	-1.89	-4.98	4.87	3.12	4.30	3.45
Real (1982 $)	12.38	11.27	-2.21	-5.28	4.87	2.95	3.86	2.92

[1]Costs were based on USDA studies including "Costs of Producing Livestock in the United States--Final 1979, Preliminary 1980, and Projections for 1981," ESS, USDA, for the Committee on Agriculture, Nutrition, and Forestry, Committee print 72-550, March 1981.

[2]Includes ownership costs on machinery, buildings and livestock, costs of operator and family labor, and a management return (7% of total costs, except that feeder cattle are not included in the computation of management costs for cattle feeding). An allowance for cull cows was deducted from these costs on feeder calves.

[3]MSU Agriculture Model's "Long Range Forecast," Spring 1982.

Table 5

Production Costs and Gross Margins on Hogs (Primary Enterprise), Selected Years, 1965-82 and Projected to 1985[1]

Item	Year					Projected		
	1965	1975	1980	1981	1982	1983	1984	1985
	$/cwt.							
Direct costs	13.30	32.46	41.07	48.29	42.96	46.03	49.39	53.96
Other costs[2]	9.00	15.33	19.23	20.90	22.17	23.47	24.70	26.17
Total costs	22.30	47.79	60.30	69.19	65.13	69.50	74.09	80.13
Prices on barrows and gilts at 7 markets	21.30	48.32	40.04	44.45	55.36	61.00[3]	59.65[3]	57.27[3]
Gross margin over direct costs								
Nominal	8.00	15.86	-1.03	-3.84	12.40	14.97	10.26	3.31
Real	24.46	28.42	-1.21	-4.07	12.40	14.13	9.21	2.80

[1]Costs were based on USDA studies including "Cost of Producing Livestock in the United States--Final 1979, Preliminary 1980 and Projections for 1981," ESS, USDA, for the Committee on Agriculture, Nutriton and Forestry, Committee Print 72-550, March 1981.

[2]Includes ownership costs on machinery, buildings and livestock, costs of operator and family labor, and a management return (7% of total costs).

[3]MSU Agriculture Model's "Long Term Forecast," Spring 1982.

Table 6

Production Costs and Gross Margins on Poultry,

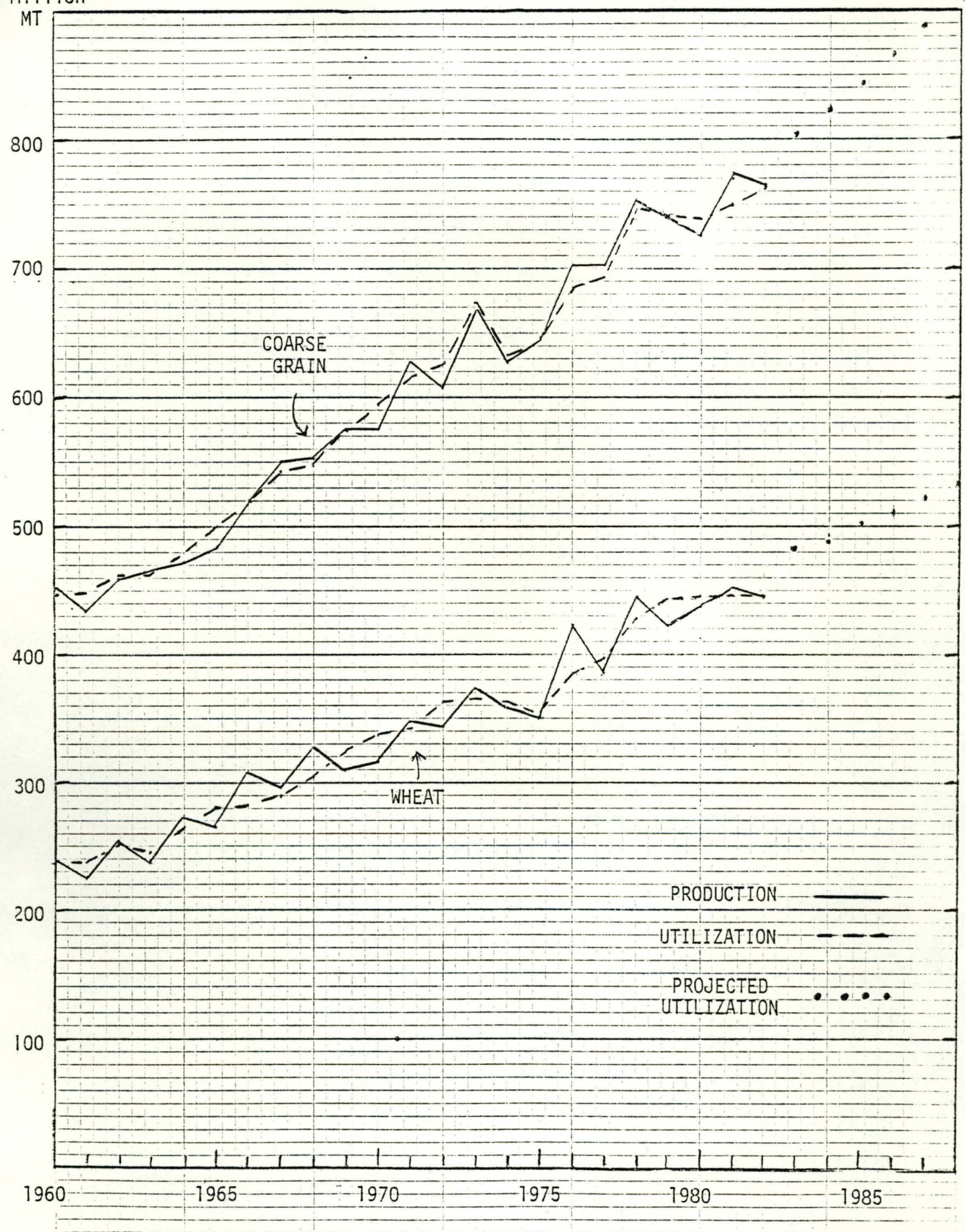
Selected Years, 1972-82 and Projected to 1985[1]

Item	Year 1972	1975	1980	1981	1982	Projected 1983	1984	1985
				¢/lb.				
Broilers								
Feed costs	17.7	27.9	32.8	36.1	29.8	32.1	34.0	37.8
Other costs	10.5	11.5	15.5	15.2	16.1	17.1	18.0	19.0
Total costs	28.2	39.4	48.3	51.3	45.9	49.2	52.0	56.8
Price, 9-city weighted avg.	28.2	45.2	46.8	46.3	47.0	50.6	52.3	54.4
Gross margin over feed costs								
Nominal	10.5	17.3	14.0	10.2	17.2	18.5	18.3	16.6
Real (1982 $)	24.2	31.0	16.4	10.8	17.2	17.5	16.4	14.1
Turkeys								
Feed costs	22.4	35.6	42.9	48.5	40.2	43.2	45.3	50.3
Other costs	11.7	13.8	18.1	17.6	18.7	19.8	20.8	22.0
Total costs	34.1	49.4	61.0	66.1	58.9	63.0	66.1	72.3
Price, 3-city composite	35.8	55.1	66.0	64.0	62.6	65.8	69.3	73.3
Gross margin over feed costs								
Nominal	13.4	19.5	23.1	15.5	22.4	22.6	24.0	23.0
Real (1982 $)	30.9	34.9	27.1	16.4	22.4	21.3	21.6	19.5
				¢/doz.				
Eggs								
Feed costs	25.9	41.2	47.0	43.9	36.1	38.9	41.7	46.3
Other costs	17.4	20.6	23.4	28.9	30.7	32.5	34.2	36.2
Total costs	43.3	61.8	70.4	72.8	66.8	71.4	75.9	82.5
Price, 13 metro areas	40.5	62.9	66.9	73.2	76.1	77.0	73.0	75.5
Gross margin over feed costs								
Nominal	14.6	21.7	19.9	29.3	40.0	38.1	31.3	29.2
Real (1982 $)	33.6	38.9	23.3	31.1	40.0	36.0	28.1	24.8

[1]Cost data were based on USDA series as reported in regular issues of the Poultry and Egg Situation, ERS.

Figure 1

WORLD PRODUCTION AND UTILIZATION OF GRAIN



WORLD ENDING STOCKS OF WHEAT AND COARSE GRAINS

AS A PERCENT OF ANNUAL UTILIZATION

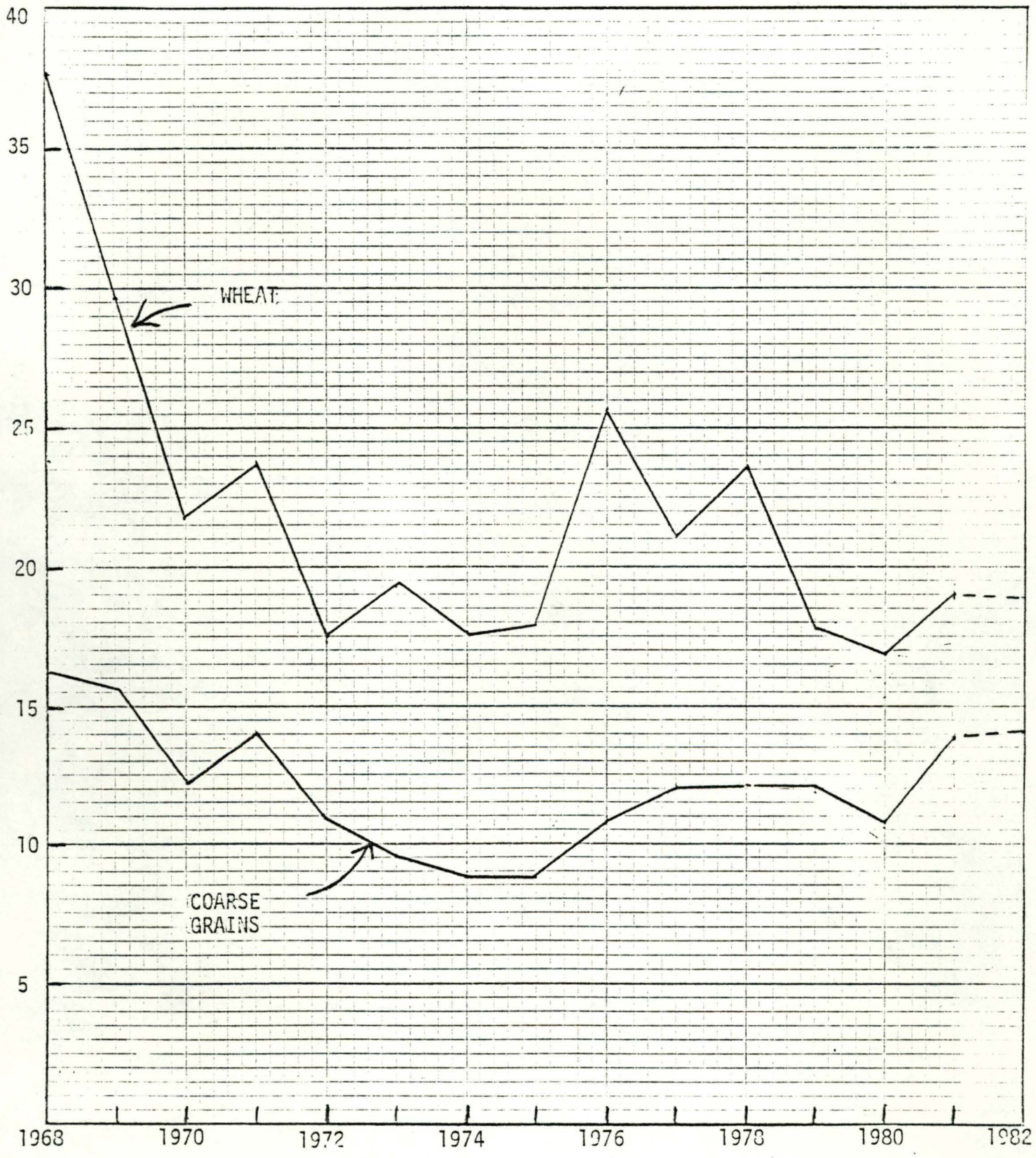
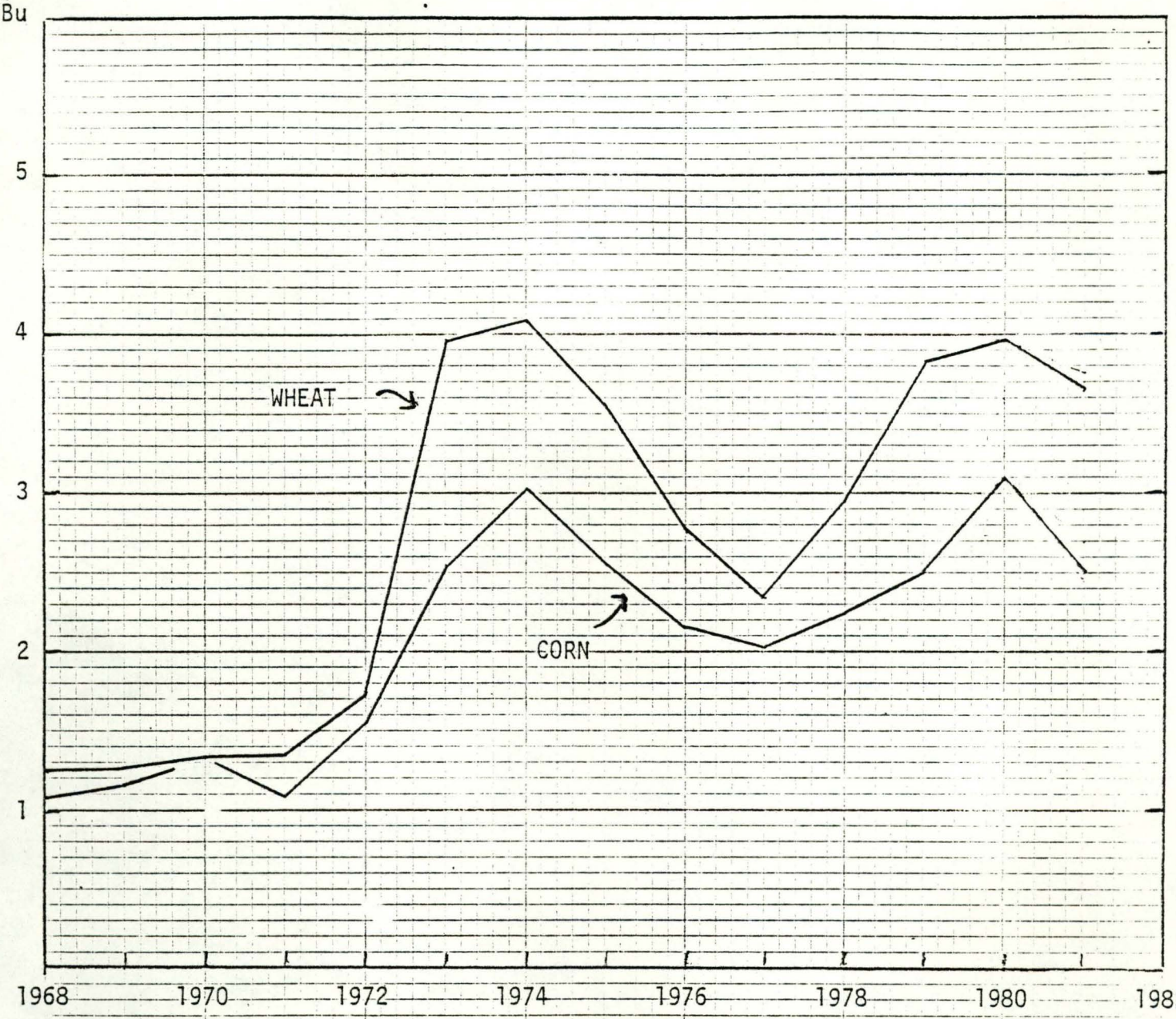


Figure 3

U.S. FARM PRICES OF WHEAT AND CORN



Crop Year Beginning June 1 for Wheat and October 1 for Corn

Figure 4

WORLD GRAIN YIELDS

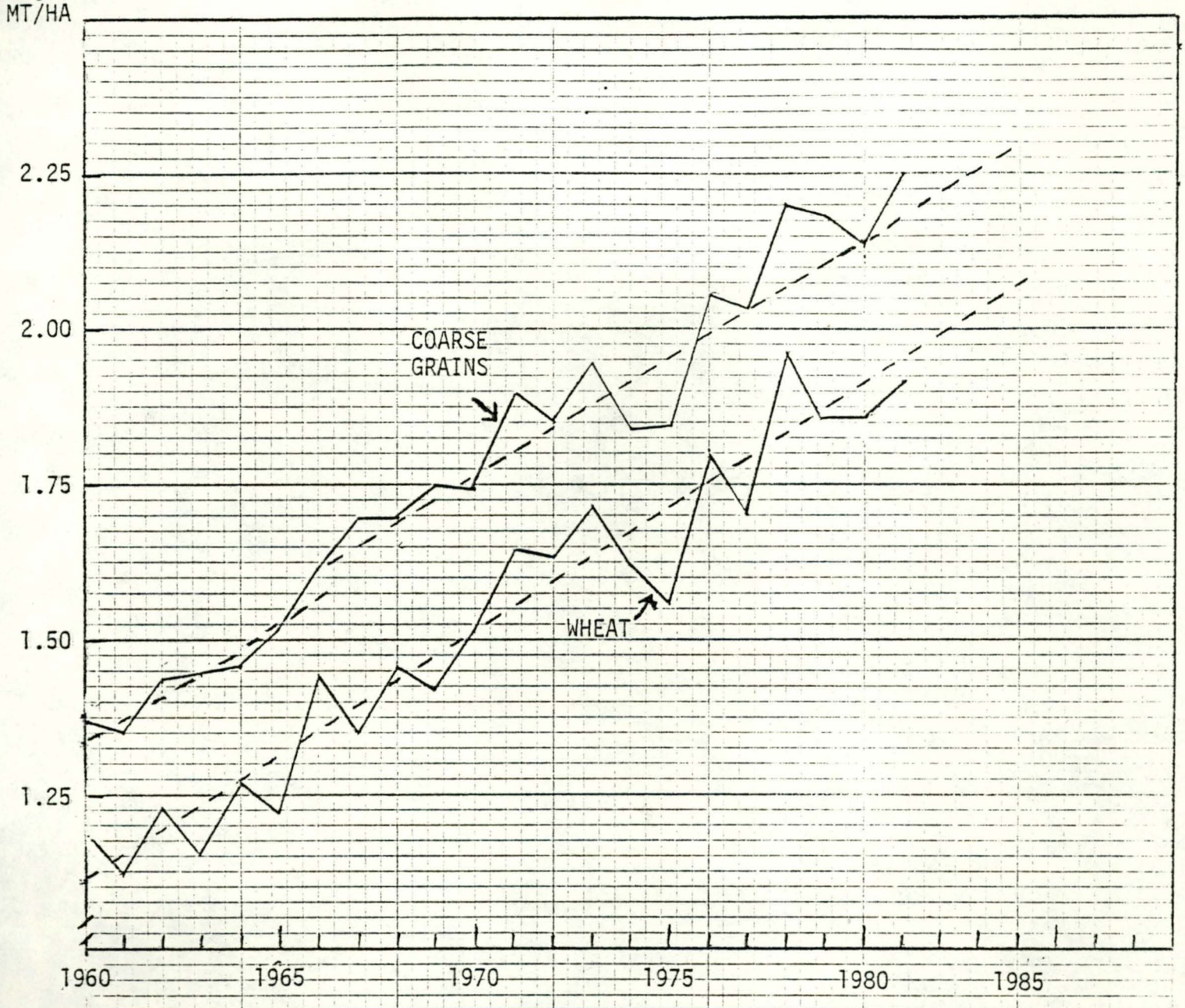


Figure 5

U.S. CRUSHINGS PLUS EXPORTS OF SOYBEANS
AND WORLD UTILIZATION

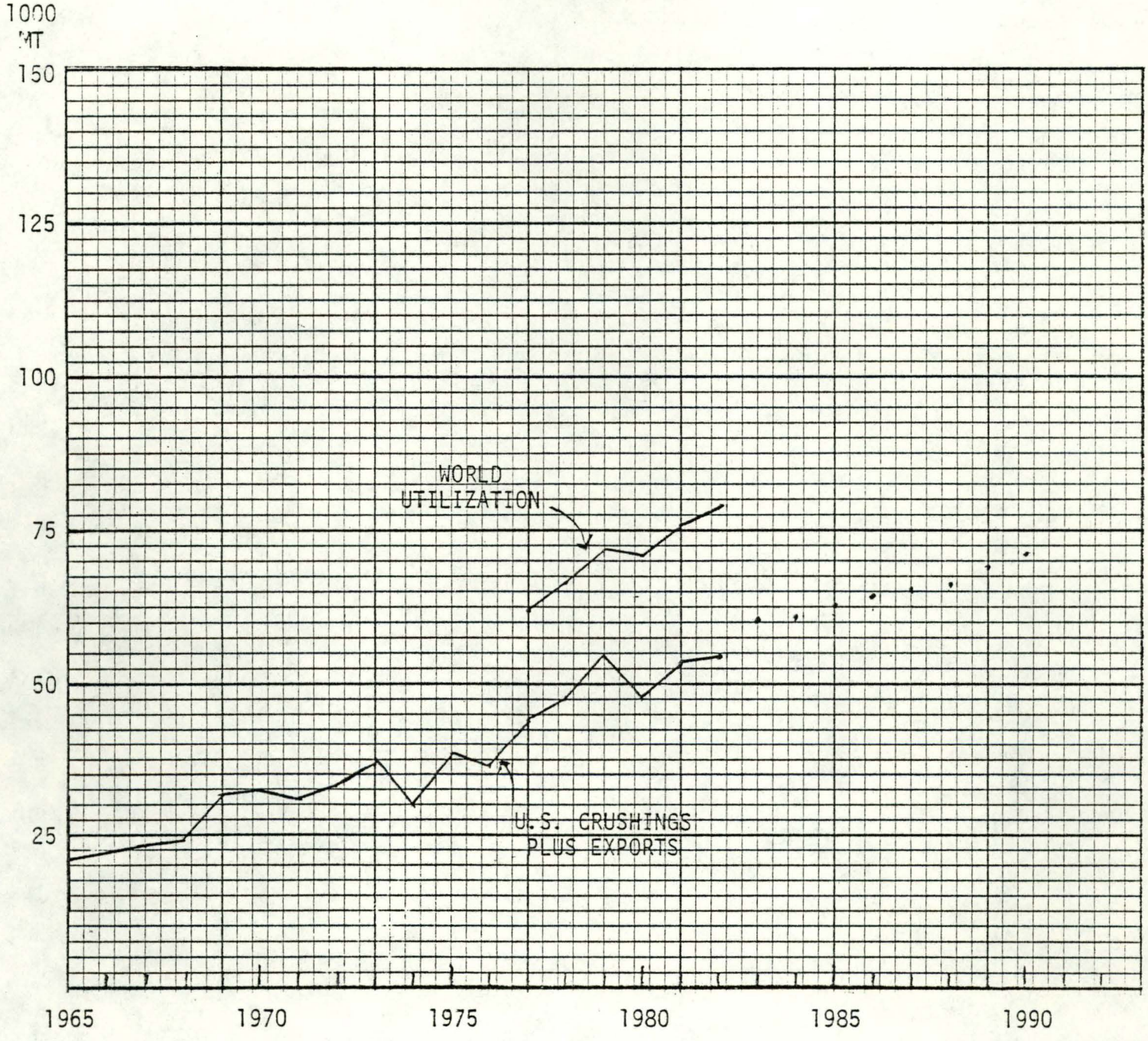
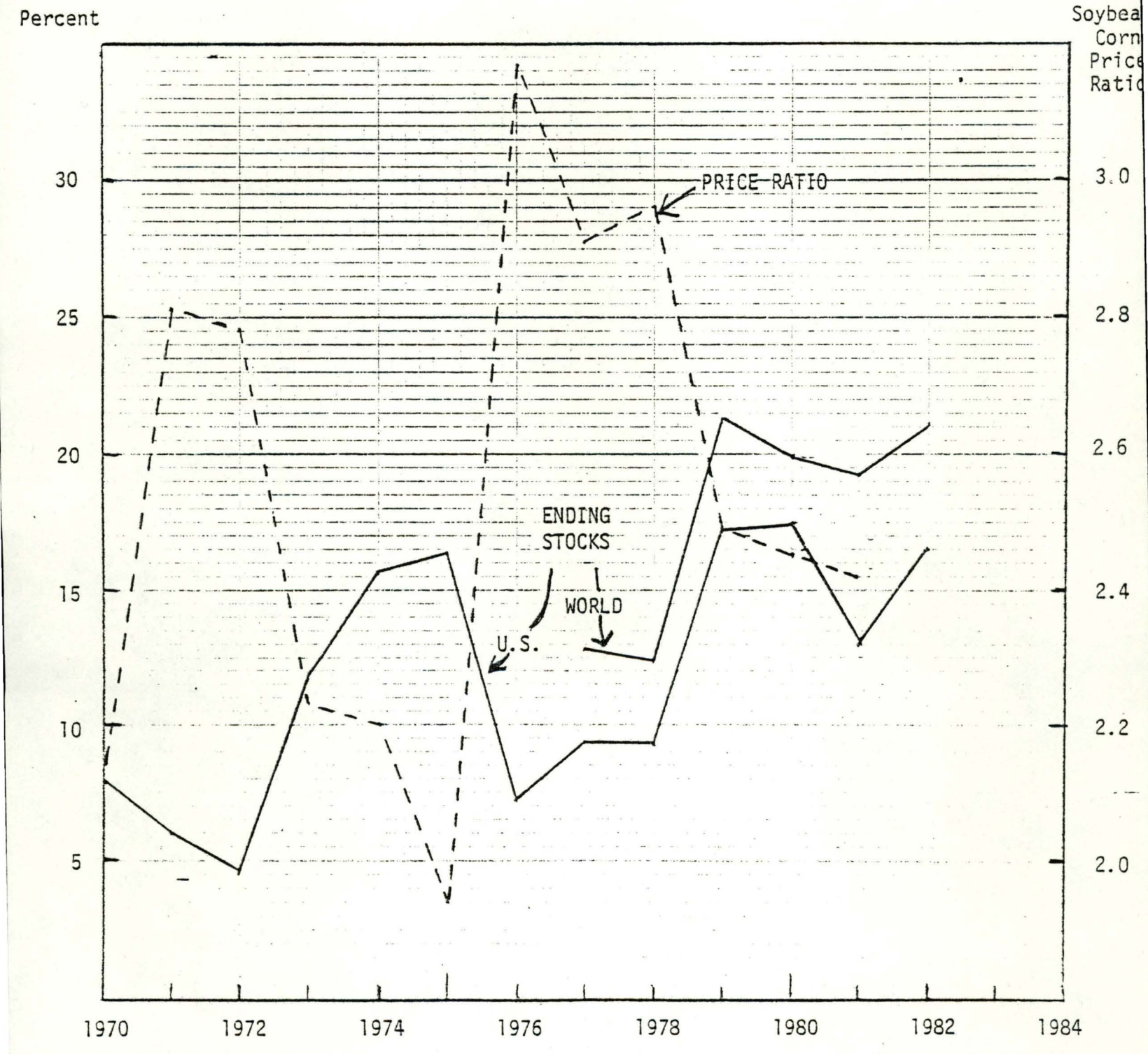


Figure 6

ENDING STOCKS OF SOYBEANS AS A PERCENT OF ANNUAL UTILIZATION VERSUS RATIO OF SOYBEAN PRICES TO CORN PRICES[a/]



[a/] Price ratio is U.S. farm price of soybeans ÷ U.S. farm price of corn.

Figure 7

Beef Cows on Farms Vs. Cow Slaughter

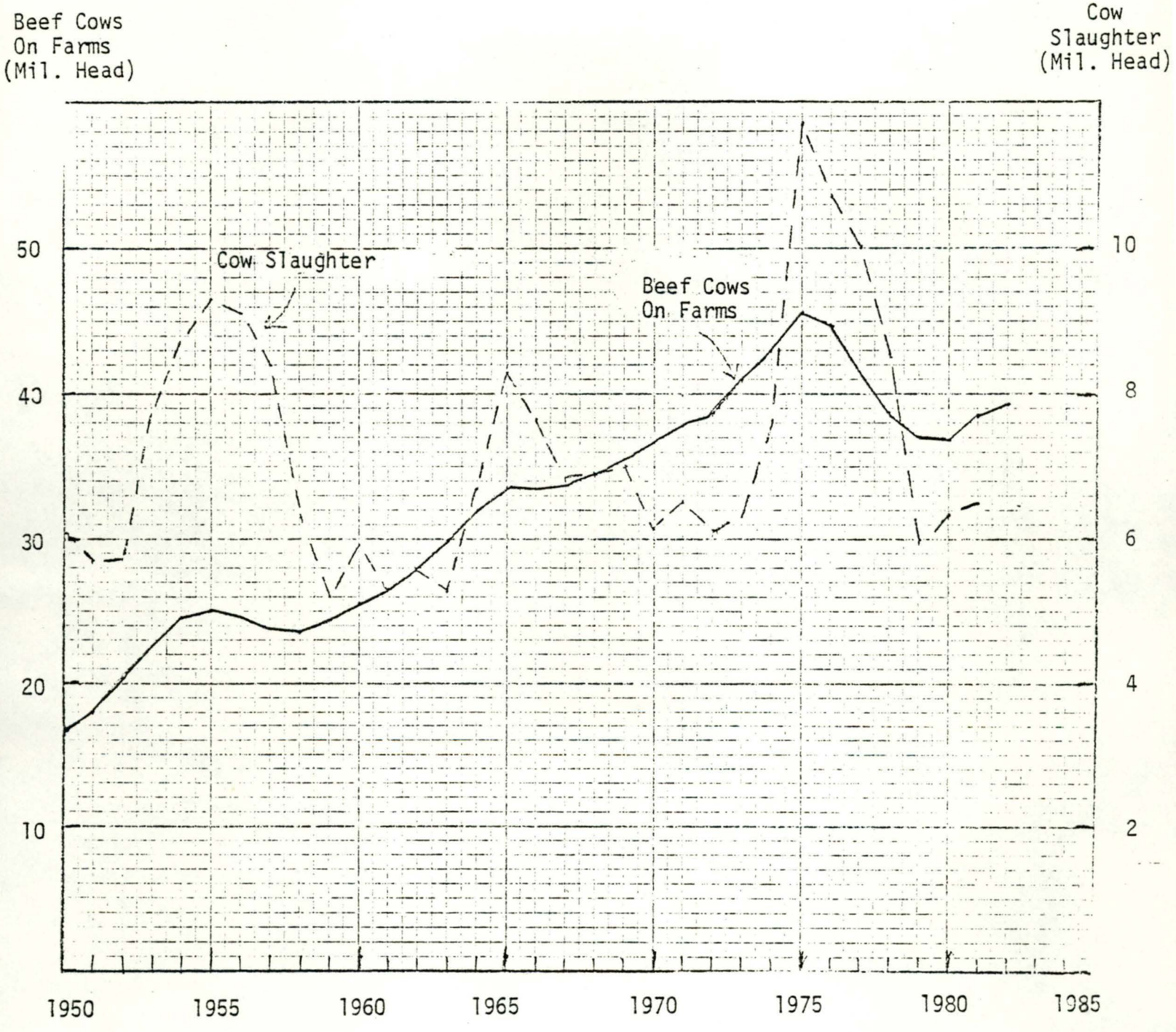


Figure 8

NUMBER OF SOWS FARROWING IN THE SPRING AND FALL