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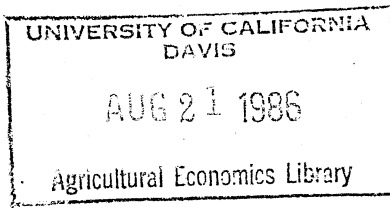
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Agricultural Economics  
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AAEA ANNUAL OUTLOOK SURVEY  
1986 <sup>1/</sup>

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Background

The 1986 survey was the ninth in an annual series which began in 1978 for the purpose of capitalizing on the broad expertise in agricultural outlook in the profession and providing a focus for discussion at the Annual Meeting. The survey was directed toward those members actively engaged in outlook work. Members contacted were urged to respond in those areas in which they had some basis for making forecasts. We also asked them to check those areas where they had special expertise.

Over 200 schedules were distributed in June to a subset of members compiled from several sources including: (1) names in the AJAE 1984 Handbook Directory classified under "commodity supply/demand analysis" and "agricultural situation/outlook" as their areas of interest; (2) a list of institutional members and their representatives; and (3) members who have made presentations at recent national or regional outlook meetings. Sets were sent to Chairpersons of Departments of Agricultural Economics to be distributed to appropriate faculty to ensure contacts with new entrants into outlook programs. In the past, over 500 surveys have been sent out; however, due to time and expense, forms were only sent out this year to people who had responded one of the past two years.

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<sup>1/</sup> Presented at the AAEA Annual Meeting in the Industry-Extension Outlook Session, Reno, Nevada, July 1986.

1986  
Agricultural outlook

Thirty-eight responses were received by the end of the third week of July when the results were compiled. Fifty-five percent of the respondents were from universities, 24 percent from industry, and 21 percent from government--about the same make-up as the last several years. Forty-two percent were making major or moderate use of formal econometric models. Thirty-nine percent of the respondents had major and 42 percent had moderate outlook responsibilities.

### Results

A summary of the results is presented in Table 1. Written in the survey schedule are the mean values of the responses.<sup>2/</sup>

Red meat production is expected to decrease in 1987, the rate of decrease in beef production is expected to be nearly 3 percent, but the cutback in pork production is expected to turn around the second half of 1987 and end up positive. Broiler production is expected to increase 4-5 percent annually over the entire forecast period. Egg production is expected to grow just under 1 percent in 1986 and just over 1 percent in 1987.

Cattle prices are expected to strengthen about \$4.00 per cwt. in 1987. Feeder steers are expected to bring a fairly normal premium over steers throughout the forecast period. Steer prices are expected to follow the same seasonal pattern they followed the three years previous to 1984 and unlike 1985 and 1986 have their seasonal high in the spring quarter of 1987. Annual hog prices are expected to stay about the same in 1987 as 1986. However, they are expected to be in the \$50.00 per cwt. range in the first three-quarters of 1987 before falling off to \$14.00 in the fourth quarter.

Broiler prices are expected to fall off from now through 1987, with annual prices in 1987 being 1.5¢ per pound below the 1986 annual price. Egg prices are expected to pick

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<sup>2/</sup> Inconsistencies between the predicted quarterly and annual changes on livestock is due to the fact that all respondents did not make both quarterly and annual forecasts.

up through the remainder of this year. The price pattern for 1986 will be the same in 1987 with the low in the second quarter. However, the annual price is projected to be down 2.5¢ per dozen.

The wheat production and carryover projections for 1986-87 are close to the USDA's July 11 Supply/Demand Report. But the export figure is slightly more pessimistic than the USDA, meaning expected domestic use will be higher than the USDA figure. Corn production in 1986 is projected to be 60 million bushels less than the USDA July report and 1986-87 exports of corn about the same at 1.56 billion bushels, but the expected carryover is 244 million bushels less, meaning AAEA members are more optimistic on domestic use by about 170 million bushels. Soybean 1986-87 production, export, and carryout projections are in the same range as the July USDA estimates. Cotton exports are expected to be up in 1986-87 and carryout projections are for lower ending stocks.

The corn, wheat, cotton, and soybean price projections for 1986-87 are 19, 24, 25, and 5 percent lower, respectively, than for 1985-86 as would be expected with the lower loan rates and the projected increases in carryover. The soy oil price projection is for an 11 percent drop. The composite soy meal projection is for lower prices in 1986-87, the same as the USDA is projecting.

Cash receipts are expected to drop 11 percent in 1986 and another 3 percent in 1987. Livestock cash receipts as expected to remain level. Net cash income is expected to drop 3 percent in 1986 and then hold its own in 1987. Total net farm income is projected to drop 11 percent in the survey results in 1986 and another 7 percent in 1987.

The decline in land prices experienced over the past several years is expected to continue at a rapid rate, another -6.2 percent by April 1, 1987. This indicates that the survey respondents feel that not only are the producers' revenues going to be down this next year, but the debt to equity ratios, and therefore the borrowing capacity, of many farmers will also be hurt by continued deterioration of their equity.

Real GNP is expected to grow 3.2 percent in 1986, which is higher than the rate we have seen the first half of the year and is projected to level off at 3.2 percent in 1987. Inflation, as measured by the CPI, is expected to increase 2.7 percent in 1985 and 3.5 percent in 1987. Food price increases are projected to grow about the same pace in 1986 versus 1985 before picking up marginally in 1987.

### Variation in the Most Likely Forecasts

Tables 2-6 present the number of responses to each of the items, the mean values of the forecasts (the probability aspects are shown in a later section), the standard deviation (S.D.), and the minimum and maximum values in the range of forecasts. In livestock production (Table 2), the greatest differences among forecasters is in the beef sector where projections ranged from a decrease of 12 percent to an increase of 2 percent in some quarters, but the overwhelming consensus is for beef production to drop in 1987. The conclusion of whether pork production will increase or decrease in 1987 is unclear according to the survey results. The variation of poultry forecasters is much less than the red meats.

Livestock prices are generally expected to go up, given the composite forecasts of all the respondents. However, among the forecasters there are substantial variations as can be seen by studying the ranges and the S.D.s as a percent of the means.

As might be expected, variance in the exports and carryover for the 1985-86 season are relatively small since these values are fairly well established at this time. While the range of estimates for 1986 crop production are fairly wide, the S.D. as a percent of the mean range from 2-4 percent, showing there is a fairly strong consensus on the crop production forecasts. However, the variation among forecasters on 1986-87 exports and carryout are not as similar as shown by the ranges and S.D.

The crop price forecasts, as seen by the wide ranges, show there is always a wide range of opinion in every crowd. But the S.D.s are actually fairly narrow for the 1986-87 crop years, especially given the number of scenarios that could unfold over the next year.

The other items forecasted, as presented in Table 6, show various degrees of variability. However, a message comes through the differences, farm income will continue down. We were not able to separate out those with major forecasting responsibilities, because most of the respondents did.

### Probability Forecasts

Over the past several years, there has been much discussion on the value of probability forecasts. Therefore, for the second year a version of probability forecasts were included in the survey. On selected items, each respondent was asked to give a low, most likely, and high forecast. "Low" was defined as only a 5 percent chance of the price being lower and "High" as only a 5 percent chance of the price being higher. Some results of these forecasts are shown in Table 7. Due to surveys still coming in up to the last minute, there has been little time for analysis of the findings, but there is an interesting point that might be made. It is evident that if a producer listened to just any one of the forecasters, they could put themselves in serious jeopardy. This evidence contributes to a stronger case for producers using composite forecasts.

Further analysis of the probability forecasts will hopefully be made available. While the forecasts themselves become dated as more information becomes available, as is true of all forecasts, these forecasts clearly give a better sense of the analyst's confidence in his point forecasts. From a grower's perspective, this fact and the skewness in the forecast distributions has significant implications for producer decision making.

### Conclusions

On the whole, the respondents verified the belief that agriculture is not out of the woods, and the next couple of years are likely to be worse years financially than the last few, which have not been good years. Supply is expected to grow faster than demand in most of the surveyed crops which means ending stocks will increase and continue to put pressure on prices. Red meat demand is expected to continue to put pressure on prices.

Red meat demand is expected to continue its fall as evidenced by the minimal price increase expected, given the expected cutbacks in production and the expected continued growth in incomes.

Some positive findings in the survey are the expected continued growth in real GNP and the expected moderate increases in inflation. These conclusions are the same as last year's.

TABLE 1

## AAEA ANNUAL OUTLOOK SURVEY

## AAEA Members Involved in Market Analysis, Outlook, or Forecasting

## I. Personal Information

- A. Name AAEA (38) \* B. Affiliation Universities (22),  
Independents (9), Government (8)
- C. How much use do you make of formal econometric models in developing your forecast? (Major 7) (Moderate 9) (Minor 10) (None 7)
- D. Forecasting is a (Major 15) (Moderate 16) (Minor 5) responsibility in my position.

Please make estimates where you feel you have professional competence. You need not respond in all areas. Please put a check (✓) next to the commodities and/or economic areas for which you have major forecasting responsibility.

## II. Commodity Outlook

## A. Livestock &amp; Poultry

	1986					1987				
	I	II	III	IV	Annual	I	II	III	IV	Annual
	Percent Change From Previous Year									
( ) Beef (comm. prod.)	+1	+6	-.8	-2.4	-.4	-1.5	-4	-3	-1.9	-2.9
( ) Pork (comm. prod.)	-1	-5	-4	-5.5	-3.6	-4.8	-3.5	1.9	4.7	.7
( ) Broilers (FI prod.)	+5	+4	3.9	4.6	4.5	5.1	4.9	4.8	4.6	4.6
( ) Eggs (farm prod.)	-1	0	1.8	2.0	.9	1.7	1.4	1.0	.8	1.2

Prices

Choice slaughter steers (Omaha, \$/cwt)	57.22	54.52	58.39	60.86	57.92	61.36	63.36	62.14	62.55	61.73
Feeder steers, med. frame #1 600-700 lb., Kansas City (\$/cwt)	62.60	59.66	62.33	64.20	62.35	66.20	67.90	67.00	66.85	66.17
Barrows & gilts, 7 markets (\$/cwt)	43.30	47.14	54.89	53.04	49.33	53.00	51.32	51.00	47.09	49.27
Broilers, 12 city area (¢/lb.)	50.3	54.30	56.62	52.33	52.44	51.38	51.81	52.06	48.63	50.96
Eggs, New York, Grade A, large (¢/doz.)	74.2	63.40	69.33	71.17	69.8	68.83	63.16	66.83	69.83	67.25

Pick one of the above commodities you are most familiar with and give a low, most likely, and high price for the II quarter of 1987.

<u>Commodity</u>	<u>Low</u>	<u>Most Likely</u>	<u>High</u>
Not Enough Respondents			

Low = only a 5% chance prices will be lower.  
High = only a 5% chance prices will be higher.

\*Names necessary to insure credibility of the survey, but will not be recorded with data nor used in analysis of survey results.

(OVER)



## B. Crops

Supply & Utilization

	<u>1985-86 Crop Year</u>		<u>1986-87 Crop Year</u>		
	<u>Exports</u>	<u>Carry Out</u>	<u>Production</u>	<u>Exports</u>	<u>Carry Out</u>
( ) Wheat (mil. bu.)	<u>XXX</u>	<u>XXX</u>	<u>2165</u>	<u>1070</u>	<u>1849</u>
( ) Corn (mil. bu.)	<u>1275</u>	<u>3924</u>	<u>7850</u>	<u>1564</u>	<u>4780</u>
( ) Cotton, upland & ELS (mil. bales)	<u>2.14</u>	<u>9.35</u>	<u>11.19</u>	<u>5.83</u>	<u>7.96</u>
( ) Soybeans (mil. bu.)	<u>772</u>	<u>498</u>	<u>1922</u>	<u>764</u>	<u>489</u>

Prices

	<u>1985-86</u>	<u>1986-87</u>		
		<u>Low</u>	<u>Most Likely</u>	<u>High</u>
Corn (\$/bu.) (U.S. farm)	<u>2.33</u>	<u>1.73</u>	<u>1.88</u>	<u>2.03</u>
Wheat (\$/bu.) (U.S. farm)	<u>3.16</u>	<u>2.26</u>	<u>2.40</u>	<u>2.55</u>
Cotton (¢/lb.) (U.S., SLM, 1-1/16 in.)	<u>48.0</u>	<u>31.9</u>	<u>35.9</u>	<u>40.8</u>
Soybeans (\$/bu.) (U.S. farm)	<u>5.12</u>	<u>4.61</u>	<u>4.85</u>	<u>5.15</u>
Soybean Oil (¢/lb.) (Decatur, IL)	<u>18.4</u>	<u>14.3</u>	<u>16.4</u>	<u>18.8</u>
Soybean Meal (\$/ton) (Decatur, IL)	<u>150.46</u>	<u>128.90</u>	<u>143.35</u>	<u>158.45</u>

## III. Agricultural and General Economic Outlook

	<u>1985P</u>	<u>1986</u>	<u>1987</u>
( ) Cash receipts from marketings			
All crops and products (bil. \$)	<u>71</u>	<u>63.1</u>	<u>61.2</u>
All livestock and products (bil. \$)	<u>70</u>	<u>70.1</u>	<u>71.4</u>
( ) Net cash income (bil. \$)	<u>42.5</u>	<u>41.2</u>	<u>41.9</u>
( ) Total net farm income	<u>30.5</u>	<u>27.0</u>	<u>25.2</u>

Percent Change From Previous Year

	<u>1985</u>	<u>1986</u>	<u>1987</u>
( ) Land values, April 1	<u>-12</u>	<u>-12</u>	<u>-6.2</u>
( ) Real GNP (1972 \$)	<u>3.3</u>	<u>3.2</u>	<u>3.2</u>
( ) CPI, all items (1967 = 100)	<u>3.6</u>	<u>2.7</u>	<u>3.5</u>
( ) Food prices (all, at home and away)	<u>2.3</u>	<u>2.5</u>	<u>2.9</u>

Mail responses to Jim Hilker, Department of Agricultural Economics, Room 4  
Agriculture Hall, Michigan State University, East Lansing, MI, 48824-1039.

Must be received by: July 16, 1986.

TABLE 2

## LIVESTOCK PRODUCTION PREDICTIONS

Product	Percent Change From Previous Year				
	N	Mean	S.D.	Min.	Max.
<b>BEEF</b>					
<u>1986</u>					
III	15	-0.77	2.50	-8.00	3.00
IV	15	-2.43	2.04	-6.00	1.00
Annual	17	-0.39	1.44	-3.00	2.50
<u>1987</u>					
I	15	-1.47	1.75	-5.00	1.00
II	13	-4.00	3.90	-12.00	2.00
III	13	-3.00	2.96	-10.00	1.00
IV	13	-1.92	2.34	-6.00	2.00
Annual	16	-2.87	2.83	-8.00	2.00
<b>PORK</b>					
<u>1986</u>					
III	14	-4.04	2.29	-7.00	2.00
IV	14	-5.82	2.26	-10.00	-1.75
Annual	16	-3.58	1.35	-6.00	-0.39
<u>1987</u>					
I	12	-4.75	2.17	-8.00	-1.00
II	12	-3.50	2.81	-7.00	2.00
III	12	1.92	4.35	-5.00	11.00
IV	12	4.75	4.48	-2.00	16.00
Annual	15	0.69	3.58	-5.00	8.13
<b>BROILERS</b>					
<u>1986</u>					
III	10	3.90	1.14	2.00	5.00
IV	10	4.60	1.11	3.00	6.00
Annual	12	4.48	0.68	3.00	5.00
<u>1987</u>					
I	8	5.13	0.93	3.00	6.00
II	8	4.88	1.83	2.00	8.00
III	8	4.75	1.39	2.00	7.00
IV	8	4.63	0.99	3.00	6.00
Annual	11	4.64	0.88	3.00	6.00
<b>EGGS</b>					
<u>1986</u>					
III	6	1.80	1.37	0.00	4.00
IV	6	2.08	1.17	0.50	4.00
Annual	6	0.88	0.63	0.00	2.00
<u>1987</u>					
I	6	1.72	1.65	0.00	5.00
II	6	1.38	1.05	0.00	3.00
III	6	1.00	1.29	-1.00	3.00
IV	6	0.83	1.07	-1.00	2.00
Annual	7	1.20	0.75	0.00	2.50

TABLE 3

## LIVESTOCK PRICE PREDICTIONS

Product	N	Mean	S.D.	Min.	Max.
Choice slaughter steers, Omaha					
1986					
III	14	58.39	2.32	54.00	64.00
IV	14	60.86	2.64	53.00	65.00
Annual	14	57.92	1.24	55.00	60.00
1987					
I	11	61.36	2.93	58.00	66.00
II	11	63.36	4.37	58.00	72.00
III	11	62.14	3.62	56.00	68.00
IV	11	62.55	3.65	56.00	68.00
Annual	14	61.73	3.58	54.00	68.00
Feeder steers, med. frame, No. 1, 600-700 lbs., Kansas City					
1986					
III	12	62.33	2.95	58.00	68.00
IV	12	64.21	3.00	58.00	67.00
Annual	13	62.35	1.59	60.00	66.00
1987					
I	10	66.20	2.60	63.00	72.00
II	10	67.90	3.48	62.00	74.00
III	10	67.00	3.66	60.00	71.00
IV	10	66.85	5.13	58.00	76.00
Annual	13	66.17	3.59	60.00	73.00
Barrows and gilts, 7 markets					
1986					
III	14	54.89	3.41	49.00	60.50
IV	14	53.04	2.24	49.00	57.00
Annual	14	49.33	1.99	43.50	52.00
1987					
I	11	53.00	2.95	49.00	58.00
II	11	51.32	3.82	46.00	58.00
III	11	51.00	5.62	43.00	60.00
IV	11	47.09	3.53	42.00	53.00
Annual	14	49.27	4.36	38.00	55.00
Broilers, 12 city area					
1986					
III	8	56.63	4.61	49.00	65.00
IV	9	52.33	2.49	47.00	55.00
Annual	11	52.44	2.64	48.00	56.00
1987					
I	8	51.38	2.83	48.00	56.00
II	8	51.81	3.10	46.00	56.00
III	8	52.06	4.08	44.00	57.50
IV	8	48.63	3.43	42.00	52.00
Annual	10	50.98	3.28	44.00	55.00
Eggs, N.Y., grade a, large					
1986					
III	6	69.33	1.60	67.00	72.00
IV	6	71.17	1.34	69.00	73.00
Annual	6	69.80	0.70	69.00	70.80
1987					
I	6	68.83	3.72	65.00	74.00
II	6	63.16	3.89	59.00	71.00
III	6	66.83	3.31	62.00	70.00
IV	6	69.83	2.96	66.00	74.00
Annual	6	67.25	2.58	63.00	70.20

TABLE 4  
CROP SUPPLY AND UTILIZATION PREDICTIONS

Product	Million Bushels or Bales				
	N	Mean	S.D.	Min.	Max.
WHEAT					
<u>1986-87</u>					
Production	14	2165.43	90.65	2020.00	2422.00
Exports	14	1070.14	67.89	980.00	1200.00
Carryout	14	1849.07	127.07	1650.00	2050.00
CORN					
<u>1985-86</u>					
Exports	15	1275.00	128.13	1100.00	1625.00
Carryout	15	3923.80	200.94	3402.00	4100.00
<u>1986-87</u>					
Production	15	7849.87	273.63	7450.00	8470.00
Exports	15	1563.66	120.97	1450.00	1925.00
Carryout	15	4780.47	479.39	3570.00	5300.00
COTTON					
<u>1985-86</u>					
Exports	8	2.14	0.36	1.80	2.80
Carryout	8	9.34	0.27	8.85	9.70
<u>1986-87</u>					
Production	8	11.19	0.38	10.50	11.80
Exports	8	5.84	0.92	4.50	7.20
Carryout	8	7.96	1.26	6.30	10.70
SOYBEANS					
<u>1985-86</u>					
Exports	19	771.84	17.26	750.00	800.00
Carryout	19	497.52	28.26	400.00	525.00
<u>1986-87</u>					
Production	19	1921.95	48.26	1800.00	2010.00
Exports	19	764.47	26.69	700.00	820.00
Carryout	19	488.58	68.45	300.00	625.00

TABLE 5  
CROP PRICE PREDICTIONS

Product	Unit	N	Mean	S.D.	Min.	Max.
Corn, U.S. farm	\$/bu					
1985-86		16	2.33	.05	2.20	2.42
1986-87		16	1.88	.10	1.70	2.12
Wheat, U.S. farm	\$/bu					
1986-87		14	2.40	.08	2.30	2.60
Cotton, U.S., SLM, 1-1/16 in.	¢/lb					
1985-86		7	55.64	1.86	54.00	59.00
1986-87		7	35.87	7.34	25.00	46.00
Soybeans, U.S. farm	\$/bu					
1985-86		16	5.11	.07	5.00	5.28
1986-87		18	4.85	.10	4.70	5.00
Soybean Oil, Decatur, Illinois	¢/lb					
1985-86		11	18.40	.28	18.00	19.00
1986-87		12	16.38	1.26	14.00	19.00
Soybean Meal, Decatur, Illinois	\$/ton					
1985-86		13	150.46	3.57	145.00	160.00
1986-87		13	143.35	5.42	135.00	151.00

TABLE 6

PREDICTIONS OF FARM INCOME, LAND  
VALUES AND THE GENERAL ECONOMY

	Unit	N	Mean	S.D.	Min.	Max.
<u>Cash Receipts From Marketings</u>						
Crops	Bil \$					
1986		8	63.08	2.43	60.00	67.00
1987		8	61.18	2.74	56.00	65.00
Livestock	Bil \$					
1986		8	70.13	1.76	68.00	73.00
1987		8	71.44	2.34	67.50	74.00
<u>Net Cash Income</u>						
	Bil \$					
1986		7	41.16	1.24	40.00	43.00
1987		7	41.87	2.55	39.00	45.10
<u>Total Net Farm Income</u>						
	Bil \$					
1986		10	26.95	2.20	23.00	32.00
1987		9	27.94	3.42	20.00	32.00
<u>Land Values, April 1</u>						
	% Change					
1986	From					
1987	Previous	--	-12.00	--	--	--
	Year	16	-6.28	3.14	-10.00	3.00
<u>Real GNP</u>						
	% Change					
1986	From					
1987	Previous	15	3.23	1.11	2.20	7.00
	Year	13	3.17	1.09	1.00	6.00
<u>CPI, All Items</u>						
	% Change					
1986	From					
1987	Previous	16	2.70	0.77	1.50	4.00
	Year	14	3.49	0.77	2.00	5.00
<u>CPI, Food (All)</u>						
	% Change					
1986	From					
1987	Previous	12	2.53	0.32	2.00	3.00
	Year	10	2.86	0.38	2.50	3.50

TABLE 7

CROP PROBABILITY PRICE FORECASTS  
FOR 1986-87 CROP YEARS

Product	Unit	N	Mean	S.D.	Min.	Max.
Corn, U.S. farm	¢/bu					
Low		13	1.73	.08	1.60	1.85
Most likely		16	1.88	.10	1.70	2.12
High		13	2.03	.10	1.85	2.25
Wheat, U.S. farm	¢/bu					
Low		13	2.26	.08	2.15	2.40
Most likely		14	2.40	.08	2.30	2.60
High		13	2.55	.11	2.40	2.80
Cotton, U.S., SLM, 1-1/16 in.	¢/lb					
Low		6	31.87	8.32	22.00	42.00
Most likely		6	35.87	7.35	25.00	46.00
High		7	40.80	7.83	28.00	50.00
Soybeans, U.S. farm	¢/bu					
Low		16	4.61	.19	4.00	4.80
Most likely		18	4.85	.09	4.70	5.00
High		16	5.15	.18	4.95	5.50
Soybean Oil, Decatur, Illinois	\$/bu					
Low		12	14.25	1.22	12.00	16.00
Most likely		12	16.38	1.26	14.00	19.00
High		12	18.83	1.58	16.00	22.00
Soybean Meal, Decatur, Illinois	\$/ton					
Low		11	128.90	4.48	120.00	135.00
Most likely		13	143.35	5.42	135.00	151.00
High		11	158.45	10.10	150.00	175.00