

AGRICULTURE

AN EIGHTH DISTRICT PERSPECTIVE

Federal Reserve Bank of St. Louis # 7 CAROL THAXTON

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Drought Raises Crop Prices Now . . . Meat Prices Later

Until midsummer, many analysts were projecting a continuation of the large surpluses and low prices that have prevailed in grain markets for several years. Excellent growing conditions and strategic plantings by farmers were expected to raise yields and minimize the effects of the payment-in-kind (PIK) program on production and grain stocks. Most trade talk centered not on whether PIK would be extended, but on what additional steps Congress would take to reduce the mounting imbalance between the quantity of grain produced and quantity of grain demanded in the United States.

The worst drought in 50 years has changed the tone of this talk dramatically. Centered on the prime corn and

soybean areas of the Eighth District, the drought has lowered average corn and soybean yields to 85.1 and 24.9 bushels per acre; yield estimates for both crops declined by more than 15 percent in August alone. As the table below indicates, only wheat and rice escaped the drought's damaging effects; cotton yields, down 15 percent from 1982, were damaged prior to August 1.

Drought Effects on U.S. Crop Yields¹

Crop	1982 average	Aug. 1, 1983	Sept. 1, 1983
Corn	114.8	99.9	85.1
Soybeans	32.2	29.7	24.9
Wheat	35.6	39.8	39.5
Cotton	590.0	503.0	501.0
Rice	47.4	46.4	46.3

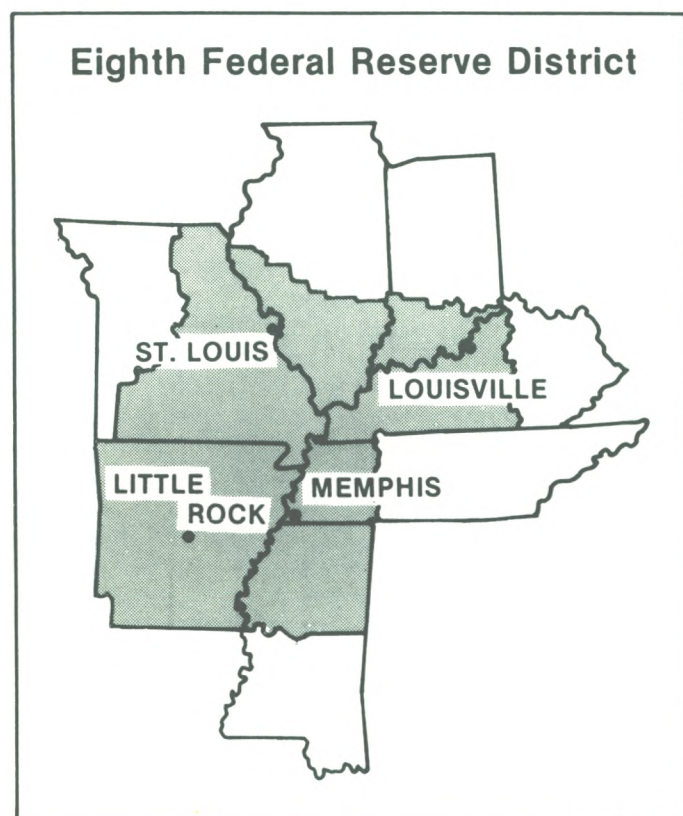
¹ Yields for corn, soybeans and wheat are measured in bushels per acre. Cotton yields are pounds per acre. Rice yields are measured as hundreds of pounds per acre.

SOURCE: U.S. Department of Agriculture.

These sharp declines in yields have reduced corn and soybean production estimates substantially. The table on the following page compares 1982 corn and soybean production figures for Eighth District states to the USDA's September 1 production estimates. The reduced acreage planted under PIK and the drought have combined to reduce the national corn crop by nearly 50 percent from a year ago.

The attractiveness of PIK incentives to farmers in Illinois and Indiana, two of the nation's leading corn states, contributed to reducing Eighth District production by 12 percent more than the national decline. The concentration of the drought in Missouri, Illinois and Indiana also pushed the decline in Eighth District soybean production to nearly 40 percent, about 7 percent more than the national figure.

What do these sharp reductions in corn and soybean output imply for the future? First, a PIK program for



feed grains in 1984 is no longer a possibility. Had normal weather produced the 6 billion bushel corn crop that was expected earlier in the summer, reserve stocks would have declined only marginally and government storage and interest costs would have continued to grow. Now, however, the much smaller 4.4 billion bushel harvest is expected to reduce carryover stocks from the 3.4 billion bushels on hand this September 30 to less than one billion bushels next September 30; this will be the first time in seven years that corn reserves will have fallen below the one billion bushel level. Many analysts feel this is nearer to the reserve level desired by government officials: adequate to meet short-term needs but not so large as to impose the substantial subsidy costs of recent years. The smaller soybean crop—combined with strengthening export demand—implies a reduction in domestic usage near 13 percent during 1984.

Unless loan rate and target price provisions of current price support programs are altered substantially, only another drought in 1984 is likely to keep grain and soybean prices high in the year ahead. The reduction in reserve stocks also is likely to be transitory unless surplus production capacity is removed from agriculture or declining export demand is increased suddenly. So, barring major changes in price support legislation, export demand or normal weather patterns, the effects of PIK and the 1983 drought on crop prices and production will be short-lived.

This year's events, however, will affect *meat* prices and production for several years. Currently, high grain prices are inducing many cattle and hog producers to

September 1 Corn and Soybean Production Estimates for Eighth District States (millions of bushels)

	CORN		SOYBEANS	
	1983	Percent change from 1982	1983	Percent change from 1982
Arkansas	2.625	6.3%	70.200	-35.7%
Illinois	608.400	-60.1	247.800	-32.5
Indiana	345.000	-57.7	109.760	-40.1
Kentucky	48.500	-69.3	26.980	-49.2
Mississippi	4.480	-19.7	54.360	-41.9
Missouri	82.500	-59.7	96.900	-47.4
Tennessee	28.800	-52.9	32.640	-48.6
EIGHTH DISTRICT	1,120.305	-59.6	638.640	-39.4
U.S. TOTAL	4,390.000	-47.7	1,534.970	-32.6

SOURCE: U.S. Department of Agriculture.

slaughter more animals than usual. After this temporary increase in meat supplies lowers red meat prices during fall and winter, fewer animals for slaughter in 1984 will tend to increase red meat prices, perhaps by 15 percent or more from current levels. Aside from higher feed costs, red meat producers also are earning less because the drought has prevented animals from gaining or even maintaining weight; thus, producers are receiving fewer dollars per pound on the smaller animals marketed.

Farm Exports Continue to Decline

U.S. Export Inspections (billions of dollars)

Product	Fiscal year 1982	Fiscal year 1983	Percent change
Soybeans	\$ 6.5	\$ 5.8	-10.5%
Corn	6.0	5.7	-4.4
Wheat and flour	7.6	6.2	-18.6
Rice	1.1	0.8	-30.4
Cotton and linters	2.2	1.7	-21.4
Livestock and products	3.2	2.9	-8.3
All other products	12.5	11.4	-8.8
U.S. Total	39.1	34.5	-11.8

SOURCE: U.S. Department of Agriculture.

During the 1970s, the dollar value of farm product exports grew at an annual rate of nearly 20 percent. It now represents nearly 20 percent of total U.S. exports. For the first time in over a decade, however, farm export value declined in 1982 and is expected to decline again this year. This fiscal year farm exports are expected to be valued at about \$34.5 billion, down from \$39.1 billion a year ago. From the 1981 peak export value of \$43.8 billion dollars, the estimate for fiscal year 1983 represents a 21 percent decline in the value of farm exports in just two years. Further details on the exports of some Eighth District farm products are shown in the table at left.

—Michael T. Belongia

Agriculture—An Eighth District Perspective is a quarterly summary of agricultural conditions in the area served by the Federal Reserve Bank of St. Louis. Single subscriptions are available free of charge by writing: Research and Public Information Department, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, Missouri 63166. Views expressed are not necessarily official positions of the Federal Reserve Bank of St. Louis or the Federal Reserve System.

EIGHTH DISTRICT AGRICULTURAL DATA

<u>Prices and Costs¹</u>	June 1983	July 1983	August 1983	Average for 1982	Percent Change	
					Year-To-Date ² 1983	Same Period Year Ago
CONSUMER PRICE INDEX (% change)						
Nonfood	0.3%	0.5%	0.5%	0.3%	2.6%	2.8%
Food	-0.6	-0.1	0.0	0.2	0.8	0.6
PRODUCTION COSTS FOR FARMERS (% change)						
All inputs	0.0	0.0	0.3	0.4	2.8	2.2
Fertilizer	0.0	0.0	0.0	-0.3	-0.4	-5.3
Agricultural chemicals	0.0	0.0	0.0	0.7	4.2	4.2
Fuels and energy	1.0	0.5	0.5	-0.2	0.0	-1.6
PRICES RECEIVED BY FARMERS (% change)						
All products	-2.4	-2.0	5.0	0.0	8.2	3.3
Livestock	-1.6	-2.8	1.3	0.4	0.0	-6.2
Crops	-2.4	-0.8	9.2	-0.5	19.1	16.4
FEEDER CATTLE						
Wholesale price - Kansas City (\$/cwt.)	\$64.75	\$60.41	\$60.29	\$64.82	-3.3	-11.1
FEEDER PIGS						
Wholesale price - So. Missouri (\$/cwt.)	\$26.09	\$21.52	\$24.55	\$51.14	-48.2	-59.3
BROILERS						
Wholesale price - 12-city (¢/lb.)	49.07¢	53.30¢	54.24¢	46.67¢	21.7	17.8
TURKEYS						
Wholesale price - New York, 8-16 lb. young hens (¢/lb.)	60.91¢	58.49¢	57.59¢	60.75¢	6.3	-10.2
CORN						
Wholesale price - St. Louis (\$/bu.)	\$ 3.27	\$ 3.39	\$ 3.68	\$ 2.57	47.8	52.1
SOYBEANS						
Wholesale price - N.C. Illinois (\$/bu.)	\$ 6.02	\$ 6.33	\$ 8.31	\$ 5.88	49.5	45.8
WHEAT						
Wholesale price - No. 1, hard winter - Kansas City (\$/bu.)	\$ 3.92	\$ 3.71	\$ 3.88	\$ 4.00	-2.5	4.9
LONG-GRAIN RICE						
Wholesale price - Arkansas (\$/cwt.)	\$18.50	\$18.50	\$18.50	\$17.72	0.5	8.1
COTTON						
Wholesale price - all markets (¢/lb.)	61.10¢	64.60¢	64.50¢	55.27¢	12.6	22.2
<u>U.S. Exports</u>						
Corn (mil. bu.)	152.0	125.0	118.9	161.2	-31.9%	4.3%
Soybeans (mil. bu.)	67.7	51.6	60.2	78.0	-33.2	4.7
Wheat (mil. bu.)	125.0	116.7	87.8	130.1	-2.4	-31.9
Rice (rough equivalent, mil. cwt.)	7.6	5.1	5.1	6.3	22.0	-53.4
Cotton (thou. bales)	458.0	377.1	403.0	532.7	2.0	11.9

<u>Receipts³</u>	April 1983	May 1983	June 1983	Average for 1982	Percent Change	
					Year-To-Date ² 1983	Same Period Year Ago
CROPS (millions of dollars)						
United States	\$6,568	\$5,837	\$6,092	\$6,124	-19.2%	16.3%
District (seven-state total)	931	1,200	1,370	1,275	-18.1	9.9
LIVESTOCK (millions of dollars)						
United States	6,129	5,505	6,062	5,815	14.7	-0.1
District (seven-state total)	896	862	914	928	12.9	-3.7

EIGHTH DISTRICT AGRICULTURAL DATA

Crop Production⁴	Marketing Year		
	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>
CORN (October 1 - September 30)			
Acres planted (mil. acres)	84.0	84.2	81.9
Production (bil. bu.)	6,644.8	8,201.6	8,397.3
Yield (bu. per acre)	91.0	109.8	114.8
Ending stocks (bil. bu.)	2,774.2	3,904.1	5,079.8
SOYBEANS (September 1 - August 31)			
Acres planted (mil. acres)	70.0	67.8	72.2
Production (bil. bu.)	1,792.1	2,000.2	2,277.0
Yield (bu. per acre)	26.4	30.1	32.2
Ending stocks (bil. bu.)	679.4	652.2	866.9
WHEAT (June 1 - May 31)			
Acres planted (mil. acres)	80.6	88.9	87.3
Production (bil. bu.)	2,374.3	2,798.7	2,808.7
Yield (bu. per acre)	33.4	34.5	35.6
Ending stocks (bil. bu.)	988.8	1,163.9	1,541.4
RICE (August 1 - July 31)			
Acres planted (mil. acres)	3.4	3.8	3.3
Production (mil. cwt.)	146.2	182.7	154.2
Yield (cwt. per acre)	44.1	48.2	47.4
Ending stocks (mil. cwt.)	16.5	48.9	68.2
COTTON (August 1 - July 31)			
Acres planted (mil. acres)	14.5	14.3	11.3
Production (mil. bales)	11.1	15.6	12.0
Yield (net bales per acre)	0.8	1.1	1.2
Ending stocks (mil. bales)	2.7	6.6	8.7

¹ The consumer price index and its components are seasonally adjusted. All other data are not seasonally adjusted.

² Percent change from December 1982, based on the most recent month available.

³ Data for receipts are seasonally adjusted.

⁴ Annual data for crops are based on each crop's marketing year. *SOURCE: Crop Production*, Statistical Reporting Service, Crop Reporting Board, USDA.