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Final estimates confirm banner fall harvest

The U.S. Department of Agriculture recently released its final estimates of 1992 crop production. The estimates for both corn and soybeans were revised upward from the previous tallies made in November. As such, the final numbers confirmed the anticipated record high for corn production and a near-record for the soybean harvest. The revisions indicated in the final estimates for District states were mixed, with those for Illinois, Indiana, and Iowa showing sizable upward adjustments while those for the weather-plagued harvest in Michigan and Wisconsin were unchanged or reduced. For the entire five-state region, the final estimates show the combined corn and soybean harvest exceeded the previous high set in 1985 by 8 percent.

The ease by which the 1992 fall harvest surpassed the old record was especially remarkable in that it was achieved despite less acreage and the occurrence of several weather-related setbacks at various times during the cropping season. Through June, such things as delayed plantings, late spring frosts, and critical drought conditions were the prevalent concerns about crops in many areas. The summer brought unusually heavy rainfall and some of the coolest seasonal temperatures of record. These developments were ideal for yields, but slowed the normal maturation of crops. Concerns about the slow-to-mature corn crop were heightened in late September when killing frosts hit many areas in northern Illinois and Iowa, as well as much of Michigan and Wisconsin. The ensuing harvest was widely characterized as abundant in quantity but below normal in quality. Moreover, the corn harvest encountered major delays due to frequent rains and the excessive moisture content of the grain which led to costly drying charges. The biggest delays were in Michigan and Wisconsin where about a fourth of the corn acreage was still not harvested as of early January.

Despite all the problems during the growing and harvesting season, the final estimates show the 1992 corn crop approached 9.48 billion bushels. That marked a sharp rebound from the weather-plagued crop of the year before and was nearly 7 percent above the former high set in 1985. The bumper corn harvest was gathered from 72.1 million acres—4 percent more than in 1991—which generated record-breaking yields that averaged 131.4 bushels per acre. The former yield record was set in 1987 at 119.8 bushels per acre. The 1992 soybean harvest was up more than a tenth from the previous year and—at 2.20 billion bushels—was second in size only to the 1979 record of 2.26 billion bushels. Harvested soybean acreage was up only marginally from the year before while the average yield, at a record-high 37.6 bushels per acre, was up nearly a tenth from the short-lived peak set in 1991.

Three District states—Illinois, Indiana, and Iowa—achieved new highs in both corn and soybean production and per acre yields. Michigan and Wisconsin were unique among District states in setting new highs in harvested soybean acreage. But particularly adverse weather patterns in those two states undermined per acre yields and total production. Overall, the five states comprising the Seventh Federal Reserve District accounted for more than 52 percent of the nation's corn harvest and 47 percent of the soybean crop.

The implications of the banner harvest on prices will continue to hinge heavily on rates of usage. Usage of corn and soybeans—both domestically and through export shipments—has gotten off to a strong start so far this marketing year. But USDA projections imply the year-over-year gains will narrow the rest of the marketing year as exports again turn sluggish. After plunging a third during

Corn and soybean production estimates

	Yield		Production		
	1991	1992	1990	1991	1992
	(bu. per acre)		*(——million bushels——)*		
Corn					
Illinois	107	149*	1,321	1,177	1,646*
Indiana	92	147*	703	511	878*
Iowa	117	147*	1,562	1,427	1,904*
Michigan	110	105	238	253	242
Wisconsin	119*	104	354	381*	307
District states	109.5	141.3*	4,178	3,749	4,976*
United States	108.6	131.4*	7,934	7,475	9,479*
Soybeans					
Illinois	37.5	43.0*	355	341	405*
Indiana	39.0	43.0*	171	172	194*
Iowa	40.5	44.0*	328	350	364*
Michigan	38.0*	33.0	43	53*	48
Wisconsin	42.0*	32.0	18	23*	22
District states	39.0	42.4*	915	938	1,033*
United States	34.2	37.6*	1,926	1,987	2,197*

*Indicates record high.
Source: U.S. Department of Agriculture.

the last two marketing years, corn exports since the September 1 start of the current marketing year are up more than a fifth from the same period a year ago. Moreover, the amount of corn export sales still awaiting shipment is high relative to recent years. But there is doubt that the stepped-up pace in corn export shipments and sales will continue in the months ahead. This is reflected in the USDA's latest estimate for all of 1992/93 which, net of shipments to date, implies that corn export shipments from January through August will only match the sluggish pace of last year.

Domestic use of corn has risen at an annual rate of 5 percent the past two years. The latest USDA forecast points to a rise of 5.5 percent for the current marketing year. The recently released *Grain Stocks* report suggested the year-over-year gain in domestic use of corn during the first three months of the marketing year was on the order of 7 percent. But the validity of the indicated pace is subject to more than the usual amount of skepticism. This is because the late fall harvest may have led to an underestimation of December 1 stocks which, in turn, would translate into an overestimation of the implied pace in domestic consumption of corn during the September-November period. Nevertheless, with the lower quality of last year's corn crop and the larger inventories of livestock and poultry, domestic use of corn will likely remain above year-earlier levels in the months ahead.

The pace in soybean usage also has been strong so far this year. During the first four months of the 1992/93 marketing year soybean exports were up a fifth from last year's improving trend. The strong, early-year export pace has prompted the USDA to repeatedly hike the soybean export estimate for the entire marketing year. But despite the upward revisions, the latest estimate—net of indicated shipments through December—suggests the pace in soybean exports will drop down to year-earlier levels during the remainder of the marketing year. Similarly, the estimates of soybean crushings—into meal and oil—indicate that the gains achieved in the early part of the year will account for the bulk of the marginal rise projected for the entire marketing year.

Overall, the USDA currently projects that total usage of corn during the 1992/93 marketing year will reach about 8.34 billion bushels. Such a level would mark a rise of 5 percent from last year and exceed the previous high set in 1989/90 by 3 percent. However, it would still fall well short of the supplies added by the 1992 harvest. The implications are that carryover stocks of corn will double by the end of the 1992/93 marketing year, pushing the projected stocks-to-use ratio to a five-year high. Similarly, total usage of soybeans during the 1992/93 marketing year is projected to rise 4 percent to a new high of 2.12 billion bushels. Even so, carryover stocks at the end of the marketing year could be up a fourth. These prospects will likely weigh heavily on the seasonal recovery in corn and soybean prices, at least through the winter months.

Gary L. Benjamin

Hogs and Pigs

The USDA's latest quarterly survey indicates continued expansion among the nation's hog farmers. Buoyed by firm demand and expectations of lower feed costs, the number of hogs and pigs on farms as of December 1 was up 4 percent from a year ago and up 10 percent from two years ago. Furthermore, sow farrowings are expected to increase 2 percent during the first half of 1993. These developments suggest that per-capita pork production will post a gain of about 3 percent in 1993. Although much smaller than the rise of the previous year, this gain—along with an anticipated increase in beef and poultry supplies—will likely keep a lid on hog prices in the months to come.

The current expansion has been underway for nine consecutive quarters and now appears likely to extend at least through mid-1993. To some extent, the increase in hog numbers may have been influenced by the trend towards larger and relatively more capital-intensive operations. As long as hog prices are above variable costs, producers have incentive to improve net returns by spreading fixed costs over a larger number of animals. Furthermore, corn represents a sizable portion of variable production costs. The record corn harvest and lower fall prices suggest lower feed costs for the coming year.

Continued gains in the number of sow farrowings and the average litter size combined to boost the September-November pig crop 5 percent over a year earlier. The increase in fall farrowings pushed the 1992 annual pig crop to over 101 million head, the largest since 1980. The number of sows that farrowed during the September-November period was up 3 percent from the year before, coinciding with the increase predicted by a survey of producers' farrowing intentions last September. The number of pigs per litter came in at 8.05, up from 7.89 a year earlier. For all of 1992, the number of pigs saved per litter registered an unusually large rise of 2.2 percent , due mostly to mild temperatures last winter and cool temperatures during the summer months.

The September-November pig crop was more than offset by rising hog slaughter, resulting in a typical seasonal decline in hog numbers during the fall months. Nevertheless, the 52.4 million head of market hogs in inventory as of December 1 was still 4 percent larger than a year ago and the highest level for that date since 1980. The number of hogs weighing less than 60 pounds was up 5 percent, reflecting the gains in the fall pig crop. The number of market hogs weighing from 60 to 119 pounds was up 3 percent from a year ago, while the supply of heavier hogs was up 4 percent. Similarly, the number of hogs kept for breeding numbered 7.4 million head, 2 percent more than last year and 8 percent above the level of two years ago.

Trends were mixed among the five Seventh Federal Reserve District states. September-November farrowings were up 9 percent and 8 percent in Iowa and Wisconsin, respectively. Conversely, the number of farrowings in Indiana and Michigan showed little change from a year earlier while farrowings in Illinois declined 2 percent. Pig crops posted year-over-year gains in each state except Illinois, which was unchanged. Indiana was the only District state to exceed the national average litter size, coming in at 8.1 pigs per litter. Iowa was close behind at 8.0, while the average in the other District states fell between 7.7 and 7.9. The pattern in the fall pig crops, net of marketings, left the December 1 hog inventory in Iowa and Wisconsin up 9 percent and 3 percent, respectively, from a year ago. In contrast, hog numbers were off 2 percent in Michigan and unchanged in Illinois and Indiana. Together, the Seventh District states account for just under half of all hogs in the U.S.

Red meat and poultry supplies are expected to register another increase this year. Beef and poultry production are expected to post moderate gains of 2 and 3 percent, respectively. According to USDA analysts, the rate of increase in pork production is expected to be slightly higher at 4 percent. Based on the number of hogs in the current inventory—as well as the size of recent pig crops—the first-half increase is likely to be comparatively large, perhaps on the order of 4 to 6 percent. Based on the current producer's farrowing intentions, the USDA expects the year-over-year increase in pork production will narrow to between 2 and 3 percent in the second half.

Average barrow and gilt prices in Iowa and Southern Minnesota were down nearly a fourth last winter from the prior year, reflecting strong production gains, abundant supplies of beef and poultry, and a relatively weak economy. Unexpectedly firm demand helped narrow the decline through the spring and summer, and fall prices posted a modest year-over-year gain. Despite the late improvement, the average barrow and gilt price for all of 1992 was down 13 percent. Furthermore, prices are expected to be down slightly this year. With anticipated production gains easing, the USDA projects winter prices to average between \$38 and \$44 per hundredweight. Though the midpoint of this range is moderately higher than the average price of a year ago, it is a fifth below two years ago. USDA projections also suggest prices will average in the low-to-mid \$40's during the spring and summer and then move down slightly in the fall.

The trend towards larger and fewer hog operations continues within Seventh Federal Reserve District states, as well as across the country. Nationwide, the number of farm operations with hogs dropped nearly one-quarter over the past five years. The five-year decline in the number of hogs operations in Seventh District states was a somewhat more modest 14 percent. All five individual District states experienced a decline, ranging from 10 percent in Iowa to nearly 30 percent in Michigan. Large operations with at least 1000 head of hogs account for 5 percent of all hogs farms nationally and nearly half of all hogs on farms. Five years ago, hog operations of that size accounted for 3 percent of all hogs farms and only 35 percent of all hogs on farms. Large operations also represent a significant proportion of hog numbers in District states, accounting for over 50 percent of hogs in Iowa, Indiana, and Michigan. Over 41 percent of the hogs in Illinois are quartered on operations with at least 1000 head, compared to 27 percent in Wisconsin. In contrast, over 90 percent of the hogs in North Carolina—a state which has experienced rapid expansion in recent years—are located on operations with at least 1000 head. As a result of these structural changes, the size of the average hog operation within Seventh District states has increased by about half over the last five years, while that for North Carolina has nearly tripled.

Mike A. Singer

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Selected agricultural economic indicators

	Latest period	Value	Percent change from: Prior period	Year ago	Two years ago
Prices received by farmers *(index, 1977=100)*	December	138	1.5	1	−3
Crops *(index, 1977=100)*	December	117	1.7	−3	−3
Corn *($ per bu.)*	December	2.01	1.5	−14	−9
Hay *($ per ton)*	December	73.80	−0.4	7	−6
Soybeans *($ per bu.)*	December	5.46	1.9	0	−5
Wheat *($ per bu.)*	December	3.34	1.5	−3	39
Livestock and products *(index, 1977=100)*	December	157	0.6	3	−4
Barrows and gilts *($ per cwt.)*	December	42.80	3.1	9	−12
Steers and heifers *($ per cwt.)*	December	76.70	1.5	7	−6
Milk *($ per cwt.)*	December	12.90	−1.5	−7	10
Eggs *(¢ per doz.)*	December	64.4	−0.8	−10	−16
Consumer prices *(index, 1982-84=100)*	December	142	−0.1	3	6
Food	December	139	0.3	2	3
Production or stocks					
Corn stocks *(mil. bu.)*	December 1	7,902	N.A.	21	14
Soybean stocks *(mil. bu.)*	December 1	1,834	N.A.	3	9
Wheat stocks *(mil. bu.)*	December 1	1,589	N.A.	10	−17
Beef production *(bil. lb.)*	November	1.78	−11.5	−2	−3
Pork production *(bil. lb.)*	November	1.45	−8.4	0	6
Milk production* *(bil. lb.)*	December	10.7	4.6	3	2
Receipts from farm marketings *(mil. dol.)*	August	13,325	3.6	1	−2
Crops**	August	6,122	1.1	−1	2
Livestock	August	7,147	6.3	2	−8
Government payments	August	55	−31.3	−17	N.A.
Agricultural exports *(mil. dol.)*	October	4,166	23.4	23	35
Corn *(mil. bu.)*	October	139	−9.4	2	29
Soybeans *(mil. bu.)*	October	98	95.6	94	229
Wheat *(mil. bu.)*	October	136	43.2	9	55
Farm machinery sales *(units)*					
Tractors, over 40 HP	December	4,366	−5.9	−7	−36
40 to 100 HP	December	2,272	−17.9	4	−21
100 HP or more	December	2,094	11.9	−17	−48
Combines	December	798	−34.0	−9	−26

N.A. Not applicable
*21 selected states.
**Includes net CCC loans.

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