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# AGRICULTURAL LETTER 

FEDERAL RESERVE BANK OF CHICAGO January 19, 1990

## Recent reports on grains and soybeans

The U.S. Department of Agriculture recently released several reports relating to supplies and usage of grains and soybeans. In general, the reports were somewhat supportive to prospective grain prices but neutral to soybean prices. For corn, the reports indicated that the 1989 harvest was marginally below the previous forecast and that domestic usage of corn in the early months of the 1989/90 marketing year rebounded considerably. An indication that the rise in seedings of winter wheat fell short of expectations also tended to add support to grain prices. For soybeans, the final 1989 production estimate was also lowered marginally. But the price implications of the lower production estimate for soybeans was largely offset by a cut in estimated usage for the 1989/90 marketing year.

Most analysts were expecting the final estimates of the 1989 corn and soybean harvest to be revised upward slightly from the last projections made in November. However, the USDA trimmed the final corn estimate by 63 million bushels and the final soybean estimate by 10 million bushels. At 7.53 billion bushels, the final estimate of the 1989 corn harvest marked a 53 percent rebound from the drought-reduced harvest of 1988 and was about 5.5 percent above the harvest of two years ago. Overall, some 64.8 million acres of corn were harvested for grain last year. That marked a three-year high for harvested corn acreage but was still a tenth below the average acreage harvested from 1975 through 1986, excluding 1983. On average, last year's corn crop yielded 116.2 bushels per harvested acre, the third highest on record and well above the 1988 average of 84.6 bushels.

The final soybean production estimate was placed at 1.93 billion bushels, up 24 percent from the 1988 harvest and nearly equal to the harvest of two years ago. Farmers harvested 59.4 million acres of soybeans last year that yielded, on average, 32.4 bushels per acre. The soybean acreage harvested in 1989 was the highest in four years but a tenth below the average for the 8 years ending with 1985. Last year's per acre soybean yield was the fourth highest on record and 5.4 bushels above the drought-reduced level of 1988.

The price-enhancing implications of the lower corn production estimate were augmented by evidence that domestic use of corn rebounded during the first
three months of the 1989/90 corn marketing year. Most corn used domestically is fed to livestock and poultry. Since it is virtually impossible to track such flows, estimates of domestic corn use are calculated as a residual from quarterly reports on corn stocks. A recent USDA report indicated that U.S. corn stocks on December 1 approximated 7.08 billion bushels. Compared to total supplies (consisting of old-crop carryover stocks and the 1989 corn harvest) at the beginning of the marketing year three months earlier, the December 1 stock estimate implied that total use of corn during the September-November quarter rose 12 percent above the year-earlier pace to 2.38 billion bushels. Paced by a November surge in shipments to the USSR, known exports of corn for the quarter rose a sharp 22 percent to more than 580 million bushels. Subtracting exports from total use implies that domestic use of corn in the September-November quarter approximated 1.80 million bushels. That marked a 10 percent rebound from the year-earlier pace in domestic use and was only 3 percent short of the record September-November pace of two years ago.

Because of the stronger-than-expected first-quarter pace, the USDA revised its estimate of domestic use

Final 1989 corn and soybean production estimates

|  | Yield per acre |  | Production |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (--bushels---) |  | $\frac{1987}{(\cdots \cdots-n}$ | $\frac{1988}{\text { lion bus }}$ | $\frac{1989}{s-\cdots-1}$ | $\frac{\text { Change }}{(\%)}$ |
| Corn |  |  |  |  |  |  |
| Illinois | 73 | 123 | 1.214 | 701 | 1,322 | 89 |
| Indiana | 83 | 133 | 659 | 415 | 692 | 67 |
| lowa | 84 | 118 | 1,320 | 899 | 1,446 | 61 |
| Michigan | 70 | 113 | 192 | 112 | 223 | 99 |
| Wisconsin | 67 | 111 | 330 | 131 | 311 | 137 |
| Dist. states | 78.2 | 121.1 | 3,715 | 2,257 | 3,993 | 77 |
| United States | 84.6 | 116.2 | 7,131 | 4,929 | 7.527 | 53 |
| Soybeans |  |  |  |  |  |  |
| Illinois | 27.0 | 40.0 | 331 | 235 | 354 | 51 |
| Indiana | 27.5 | 37.0 | 174 | 116 | 168 | 46 |
| lowa | 31.0 | 39.0 | 344 | 251 | 323 | 29 |
| Michigan | 29.0 | 36.0 | 39 | 35 | 39 | 11 |
| Wisconsin | 23.0 | 37.0 | 12 | 9 | 15 | 69 |
| Dist. States | 28.6 | 38.8 | 900 | 646 | 899 | 39 |
| United States | 27.0 | 32.4 | 1,938 | 1,549 | 1.927 | 24 |

of corn for the entire 1989/90 marketing year to 5.70 billion bushels, up 230 million bushels from the previous forecast and up 9 percent from the 1988/89 marketing year. The implications are that the strong pace in domestic use will continue during the final three quarters of the marketing year. The estimate for corn exports for the 1989/90 marketing year was left unchanged at 2.15 billion bushels, foreshadowing a 4 percent rise from last year. Given the surge in firstquarter shipments, the corn export forecast for all of 1989/90 implies USDA analysts believe that corn shipments during the final three quarters of the marketing year will only nominally exceed the year-ago pace.
The latest export and domestic use projections suggest that total use of corn in the current marketing year will exceed the 1989 harvest. Consequently carryover stocks of corn at the end of the marketing year are expected to retreat to a six-year low of about 1.61 billion bushels. Relative to projected usage, such a level would be at the lower end of the range of what might be labeled as "normal" from an historical perspective.

A smaller than expected rise in estimated winter wheat seedings also helped to support prospective grain prices. The USDA indicated that farmers nationwide seeded about 57.0 million acres to winter wheat last fall. Although up 3.4 percent from the seedings of a year earlier and at a five-year high, the indicated rise in seedings was only about half of what analysts had expected in view of the comparatively high wheat prices and the relaxed acreage restrictions and options in the 1990 wheat price support program. Among the three largest winter wheat states (Kansas, Oklahoma, and Texas), seedings were only nominally above the year-earlier level of 26.4 million acres. Conversely, in the five-states of the Seventh Federal Reserve District of Chicago, winter wheat seedings rose 12 percent above the year-earlier level and 39 percent above the level of two years ago. Farmers in Illinois, where plantings have jumped more than 60 percent over the past two years, account for half of the 4.2 million acres of winter wheat seeded in District states.

The early season pace in soybean usage has been disappointing in view of the larger supplies from the 1989

## Carryover stocks of corn are expected to decline further this year, but soybean carryover will be up


harvest. Soybean exports during the three months ending with November were up more than a fifth from the unusually sluggish pace of a year earlier. Despite the rebound, the 169 million bushels of soybeans actually exported during that period were among the lowest for any September-November quarter since 1977/78. Moreover, domestic crushings of soybeans (into meal and oil) during the quarter were off 1 percent from the lackluster 275 million bushel pace of the year before. For the most part, the continuing sluggishness in domestic crushings indirectly reflects declines in actual and prospective exports of soybean meal.

Because of the slow, early-season pace, the USDA revised its estimate of soybean crushings for the entire 1989/90 marketing year downward by 10 million bushels. However, the revised figure, at 1.10 billion bushels, implies that crushings in the months ahead are expected to move above the year-earlier pace and be up 4 percent for the entire marketing year. In contrast, the strong, early-season gains in soybean exports are expected to narrow considerably during the remainder of the 1989/90 marketing year. With another potential record crop of soybeans now growing in South America, U.S. soybean exports for the entire 1989/90 marketing year are expected to total only 580 million bushels. Although up a tenth from the previous year, such a level would be the second lowest for soybean exports for any marketing year since 1976/77.

With prospects for only modest gains in usage, carryover stocks of soybeans will be rebuilt considerably this year. The USDA's current estimates imply that carryover stocks of soybeans by the end of the 1989/90 marketing year will reach 335 million bushels, more than 150 million bushels above the year before and the highest since the end of the 1986/87 marketing year. Judged from both an historical perspective and from the recent history of expanding production elsewhere in the world, the anticipated soybean carryover is likely to be burdensome to prices.

Corn and soybean prices, after retreating considerably last summer continue well below year-earlier levels. Prices over the next few months will be mostly influenced by emerging trends in exports and domestic use, the prospective harvest of crops now growing in the Southern Hemisphere, and various factors (such as weather patterns and farmers planting intentions) that will influence the domestic crop harvest in 1990. Prospects for another record harvest in South American imply U.S. exports of soybeans and soybean meal will continue to face competitive pressures in the months ahead. For coarse grains, the picture with respect to recent and/or pending harvests in major exporting countries of the Southern Hemisphere is somewhat mixed. The harvests in both Australia and

Argentina will be up from a year earlier, but low by historical standards (particularly in Argentina). Moreover, South Africa's corn harvest may turn down after rebounding last year. In short, it would appear that near-term U.S. corn exports will be influenced more by demand factors in major importing countries than by shifts in available supplies in other coarse grain exporting countries.

As is always the case, forthcoming weather patterns could potentially be a major influence on prices, especially for grains. Lingering concerns about persisting drought conditions in the western Corn Belt and in the major winter wheat areas have been eased somewhat by recent precipitation patterns. But conditions between late winter and the summer months will be more critical in terms of the potential 1990 crop harvest. For 1990 plantings, most analysts are looking for a further modest rise in U.S. corn acreage and a slight decline in soybean plantings. Spring wheat plantings may also rise somewhat.

Corn prices received by farmers so far in the current marketing year have averaged about $\$ 2.25$ a bushel, down from $\$ 2.55$ during the same months a year ago. Soybean prices have averaged about $\$ 5.60$ a bushel, well below the year-earlier average of $\$ 7.60$. The USDA believes that corn prices for the entire 1989/90 marketing year will average somewhere between $\$ 2.20$ and $\$ 2.40$ a bushel, up 20 cents from the forecast range of two months ago. Based on the midpoint of the latest forecast range, the USDA is suggesting that corn prices during the final 8 months of the 1989/90 marketing year may average only nominally above the average of the first four months of the marketing year. For soybeans, the USDA is expecting prices will average somewhere between $\$ 5.35$ and $\$ 5.65$ a bushel for the entire marketing year. Compared to the average from September through December, the USDA is suggesting that soybean prices are likely to average lower during the final 8 months of the marketing year.

Gary L. Benjamin

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## Selected Agricultural Economic Indicators

|  | Latest period |  | Percent change from |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Value | Prior period | Year ago | Two years ago |
| Receipts from farm marketings (\$ millions) | September | 15,076 | 26.0 | 3 | 16 |
| Crops* | September | 7,788 | 51.8 | 7 | 29 |
| Livestock | September | 7,109 | 5.5 | 2 | 7 |
| Government payments | September | 179 | 92.5 | -57 | -48 |
| Real estate farm debt outstanding (\$ billions) $\dagger$ |  |  |  |  |  |
| Commercial banks | September 30 | 15.2 | $1.1+$ | 7 | 16 |
| Farm Credit System | September 30 | 26.5 | $-0.5 \dagger$ | -8 | -14 |
| Life insurance companies | Septmeber 30 | 8.62 | -0.7 ${ }^{\dagger}$ | -1 | -8 |
| Nonreal estate farm debt outstanding (\$ billions) Commercial banks |  |  |  |  |  |
| Commercial banks <br> Farm Credit System | September 30 September 30 | 29.8 9.70 | $2.5{ }^{\dagger}+$ | 2 4 | 3 -2 |
| Interest rates on farm loans (percent) |  |  |  |  |  |
| 7th District agricultural banks |  |  |  |  |  |
| Operating loans | October 1 | 12.19 | $-1.9{ }^{\dagger}$ | 4 | 8 |
| Real estate loans | October 1 | 11.34 | -1.8 | 3 | 6 |
| Commodity Credit Corporation | January | 7.75 | -1.6 | -13 | 9 |
| Agricultural exports (\$ millions) | November | 3,650 | 21.2 | 9 | 29 |
| Corn (mil. bu.) | November | 296 | 66.7 | 96 | 141 |
| Soybeans (mil. bu.) | November | 77 | 3.4 | 25 | -24 |
| Wheat (mil. bu.) | November | 76 | -19.1 | -23 | -4 |
| Farm machinery sales ${ }^{p}$ (units) |  |  |  |  |  |
| Tractors, over 40 HP | December | 5,475 | 22.4 | 20 | 15 |
| 40 to 139 HP | December | 3,255 | 19.5 | 11 | -9 |
| 140 HP or more | December | 2,220 | 26.9 | 37 | 83 |
| Combines | December | 1,013 | 5.0 | 101 | 26 |

* Includes net CCC loans.
${ }^{\dagger}$ Prior period is three months earlier.
${ }^{\mathrm{p}}$ Preliminary


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[^0]:    AGRICULTURAL LETTER (ISSN 0002-1512) is published bi-weekly by the Research Department of the Federal Reserve Bank of Chicago. It is prepared by Gary L. Benjamin, economic adviser and vice-president, Peter J. Heffernan, economist, and members of the Bank's Research Department, and is distributed free of charge by the Bank's Public Information Center. The information used in the preparation of this publication is obtained from sources considered reliable, but its use does not constitute an endorsement of its accuracy or intent by the Federal Reserve Bank of Chicago.

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