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# AGRICULTURAL LETTER

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## Crop reports highlighted

Three USDA reports released in recent weeks shed new light on corn and soybean price prospects. Final 1984 crop production estimates were issued in late January and showed slightly more corn and somewhat less soybeans were harvested last year than had been suggested in earlier reports. A mid-February report on grain stocks indicated less corn available at the beginning of this year than had been expected, implying surprisingly heavy domestic utilization in the fourth quarter of 1984. Another mid-February report suggested that farmers were planning to increase their corn acreage this year while cutting back on soybean plantings. These reports, despite some inconsistencies, will influence pricing trends over the next few months.

Final tabulations on 1984 crop production show that the nation's farmers harvested 7.66 billion bushels of corn and 1.86 billion bushels of soybeans last year. The corn estimate was 1.7 percent above the previous estimate for 1984, 83 percent above the drought-and PIK-reduced outturn of 1983, and virtually equal to the average annual harvest from 1978-82. The soybean estimate was 2.1 percent lower than the USDA's previous estimate for 1984, 14 percent above the 1983 harvest, but 8 percent below the 1978-82 annual average.

The latest *Grain Stocks* report provides estimates of the amount of various grains in all positions as of the first of the year. For both corn and soybeans, the January 1 report provides a helpful check on the size of the preceding year's harvest and an indication of usage rates since the previous stocks report. For soybeans, the indication of usage rates provided by the stocks report is less crucial since other reports offer up-to-date tabulations on soybean crushings and exports, the two activities that dominate soybean usage. Those reports show that in the last four months of 1984 soybean exports were off 9 percent from the year-earlier pace and soybean crushings were off 1 percent.

For corn, however, the indication of usage rates from the stocks report is critical because it is the best barometer of the amount of corn used domestically. The indicated 5.8 billion bushels of corn in all positions as of January 1, subtracted from the total stocks at the beginning of October, implies total utilization of corn approached 2.6 billion bushels in the fourth quarter of 1984. That amount, less the roughly 600 million bushels of corn exported in the fourth quarter—up 15 percent from the year-earlier pace—implies domestic usage of corn approached 2 billion bushels in the fourth quarter. That figure, if accurate, would represent a new high, surpassing the previous high of a year earlier by 6 percent.

Analysts are skeptical of the record pace in domestic usage of corn implied in the latest stocks report. For instance, it represents a dramatic departure from the pattern that prevailed during the first 9 months of 1984 when domestic usage was indicated to be down 23 percent from the year-earlier pace and the lowest for that period since 1976. Domestic usage of corn for food, beverages, and industrial pruposes was expected to be up in the fourth quarter, but such usage accounts for only a sixth of all corn used domestically. The remainder is fed to livestock.

Lower feed costs and higher broiler inventories in the latter part of 1984 would have provided some stimulus to livestock and poultry feeding. But smaller inventories of hogs and dairy cattle and curtailed cattle feeding in the Midwest would seemingly have provided a substantial counter-balance. Because of the apparent inconsistencies, analysts have downplayed the significance of the indicated record pace in domestic usage of corn. At a minimum, the pace is not expected to be sustained in the months ahead. Many are inclined to believe that, because it is a residual calculation, the high usage rate indicated for the fourth quarter may stem from an over-estimation of the 1984 corn harvest and/or an underestimation of the January 1 stocks of corn.

The USDA's *Planting Intentions* report indicated that farmers intend to plant 238 million acres to 13 major crops this spring, virtually equaling the area planted to those same crops in 1984. For major crops, the report suggested that farmers intend to boost corn plantings by 2 percent to 82 million acres and increase total feed grain acreage by 3 percent to 125 million acres. For spring wheat, their intentions point to an 8 percent rise, which—coupled with the smaller winter wheat seedings of last fall—foreshadows 74.7 million acres planted to all wheat, down 6 percent from last year's crop plantings. Planting intentions for most other major crops point to declines, including a 5 percent reduction that would lower soybean plantings to 64.4 million acres and a 2 percent cut that would pull cotton plantings down to 11 million acres.

Farmers in the five states included in the Seventh Federal Reserve District plan to increase corn acreage by 1 percent and boost total feed grain acreage by 1.5 percent. For soybeans, District state farmers plan to reduce the acreage planted this year by 1 percent.

The planting intentions report this year has attracted special interest because of concerns that a number of farmers might not be able to obtain sufficient financing to sustain normal operations. While the report does not provide a final answer to that question, it does suggest that the financial stress among farmers will not materially alter the acreage devoted to 1985 crops. Either new financing will not be as restrictive as some reports have indicated or else farmers unable to obtain new financing will make other arrangements to keep their land in production, such as renting to others who are able to expand their operations.

Historically, the planting intentions report has provided a fairly reliable indication of actual crop acreage. However, the report is designed to give farmers the opportunity to reconsider their planting intentions in light of what other farmers are planning. Such reconsiderations along with other factors—such as adverse spring weather or late changes in government farm programs—occasionally have led to considerable deviation between actual and intended plantings. The bill currently before Congress that would offer advance CCC loans to program participants could attract somewhat greater program participation and somewhat smaller plantings. But barring that and adverse spring weather, most analysts believe that actual plantings this year will come close to the reported planting intentions.

**Corn and soybeans: Final 1984 production estimates and 1985 planting intentions**

| | 1984 Production | | | 1985 Planting intentions | |
|---|---|---|---|---|---|
| | | % change from | | | |
| | million bushels | 1983 | 1978-82 average | million acres | % change from 1984 |
| **CORN** | | | | | |
| Illinois | 1,247 | 100 | -6 | 11.4 | 2 |
| Indiana | 706 | 107 | 4 | 6.3 | 2 |
| Iowa | 1,445 | 94 | -9 | 13.6 | 2 |
| Michigan | 220 | 33 | -11 | 3.0 | -2 |
| Wisconsin | 344 | 54 | 1 | 4.0 | -4 |
| District states | 3,962 | 89 | -5 | 38.4 | 1 |
| United States | 7,656 | 83 | 0 | 82.0 | 2 |
| **SOYBEANS** | | | | | |
| Illinois | 288 | 8 | -15 | 9.1 | -1 |
| Indiana | 150 | 23 | -5 | 4.4 | 0 |
| Iowa | 265 | -5 | -14 | 8.4 | -1 |
| Michigan | 32 | -5 | 7 | 1.2 | -4 |
| Wisconsin | 14 | 1 | 30 | 0.5 | 9 |
| District states | 749 | 5 | -11 | 23.6 | -1 |
| United States | 1,861 | 14 | -8 | 64.4 | -5 |

On balance, the three reports were mostly neutral on corn and soybean price prospects. The final estimates of the 1984 crop harvest, despite slight revisions, simply reconfirmed that last year's harvest was sufficient to cover this year's usage and to rebuild carryover stocks this fall. The stepped-up pace in corn and soybean exports in the latter months of 1984 was encouraging, but export prospects are still lackluster. With the value of the dollar still high, the volume of outstanding export orders low,and a pending large harvest in the Southern Hemisphere, corn and soybean exports in the remainder of the 1984/85 marketing year may only modestly exceed their respective year-earlier paces.

The indicated record pace in domestic usage of corn in the fourth quarter, while encouraging, is questionable. For the months ahead, analysts believe that domestic use of corn, while holding considerably above the abnormally low year-earlier level, will be well below the record pace of earlier years. Soybean crushings are expected to be moderately above the year-ago pace. With respect to farmers planting intentions, it appears that the 1985 acreage will be more than adequate, especially for corn and particularly so if per acre yields achieve their potential and if export prospects don't improve materially. Overall, these developments are likely to keep corn and soybean prices in close check, with a slight seasonal rise through the spring planting season.

Gary L. Benjamin

**Farm equipment sales continue slide**

Sales of farm machinery and equipment during the final months of 1984, although still at depressed levels, registered some year-to-year gains. Reports from the Farm and Industrial Equipment Institute (FIEI) reveal that unit retail sales of small balers, forage harvesters, mower conditioners, and corn heads during the fourth quarter ranged from 8 percent to 30 percent above the previous year's level. Fourth quarter sales of self-propelled combines were up 6.5 percent from 1983 levels. Farm tractor sales, despite slight gains in November and December, were well off the year-ago pace for the quarter. The slight upturn in fourth quarter unit sales of most types of equipment, however, was not sufficient to offset the sharp declines registered earlier in the year.

Annual declines were reported for all the major farm equipment items covered in the FIEI report. Unit retail sales of farm tractors with 40 horsepower or more dipped 6.5 percent below the 1983 level, the fifth consecutive year-to-year decline. However, the drop was the smallest recorded since the slide in sales began in 1979. The sharpest declines were recorded in sales of tractors with between 100 and 140 horsepower, off a third from a year ago, and in sales of four-wheel drive tractors, down more than a fifth. Some strength was exhibited by a 7 percent gain in unit sales of two-wheel drive tractors with more than 140 horsepower.

Other types of farm machinery and equipment also registered large declines in annual sales volume last year. Unit sales of self-propelled combines were down 10.5 percent from the previous year. Sales of forage harvesters and windrowers in 1984 were down 13.5 percent and 15 percent, respectively, from a year earlier, while sales of combination grinder-mixers were off more than 40 percent. Mower conditioners and small balers were both about 8 percent off the previous year's pace, while unit sales of corn heads in 1984 dropped about 6 percent.

Farm equipment sales in the five District states for the most part paralleled the national declines in 1984. Declines in unit sales of combines, balers, forage harvesters, and corn heads in District states virtually matched the national trends, while sales of mower conditioners recorded a somewhat smaller year-to-year decline. Farm tractor sales in District states, however, departed from the national trend, dropping 18 percent or almost triple the decline nationwide.

The drop in unit sales of farm machinery and equipment in 1984 extends the national downtrend that began about five years ago. Since 1979, the last relatively strong sales year for the industry, farm equipment purchases have plummeted. Unit sales of big ticket items such as farm tractors and combines have dropped 52 percent and 65 percent, respectively, from the 1979 levels. Sales of balers and mower conditioners in 1984 were off 50 percent or more from five years earlier, while forage harvester, corn head, windrower, and grinder-mixer sales were all 70 percent or more below 1979 levels.

The precipitous decline in farm machinery and equipment sales over the last few years is attributable to a number of factors. Periodic droughts through the 1980s in different regions of the country along with government programs such as PIK that curtail crop acreage have contributed to the downturn in sales. Moreover, low used-equipment prices because of equipment liquidations due to financial stress has cut into sales the last few years. In addition, declining purchases of farm equipment reflect the prolonged period of relatively low farm income compounded by high financing costs that has characterized the 1980s.

While high interest rates certainly discourage capital purchases, the more fundamental impediment during the first half of the 1980s may have been low farm earnings. Net cash income, which represents the amount of income available to farmers to service debt, purchase assets such as machinery, and cover other annual expenditures including those of the farm household, has been trending down. After adjusting for inflation to reflect changes in farmers' real purchasing power, per farm net cash income shows a declining trend since 1978, with last year's income almost a third below the earlier peak. Moreover, comparing the first half of the 1980s with the previous decade shows that real net cash income per farm has averaged almost 14 percent below the high-income 1970s and has been near the real per farm net cash income levels that prevailed in the early 1970s.

The steep decline in unit sales has been accompanied by a downtrend in expenditures on machinery and equipment by the farm sector. After rising at an annual compound rate of 12.5 percent during the 1970s, farm machinery and equipment expenditures have declined continuously from the 1979 peak of $12 billion. Expenditures in 1983, at $7.4 billion, were 38 percent lower than the peak and comprised less than 6 percent of total farm expenditures, compared to more than 9 percent of farm production expenditures that went to machinery purchases in the late 1970s. Given the level of sales in 1984, it is doubtful that expenditures for farm machinery and equipment showed additional strength last year.

Inventories of most types of farm machinery and equipment continued to decline in 1984, but remain quite large in relation to last year's sales. The only exceptions to the downtrend were inventories of mower conditioners, up 16 percent, and tractors with 40 or more horsepower, which slightly exceeded the year-ago inventory. At the end of December, inventories of combines and corn heads held by dealers and manufacturers were down a fourth from the prior year's level, while windrower and forage harvester inventories showed declines of about 17 percent. Inventories of small balers and grinder-mixers were down 1 percent and 3 percent, respectively, from December 1983 levels.

Despite the reductions for most items, inventories remain quite large relative to the depressed level of sales. Year-end inventories of combines and balers were equivalent to 84 percent and 93 percent of last year's unit sales, respectively, while farm tractors held by dealers and manufacturers about equaled 1984 sales. Stock piles of other major farm equipment items ranged from 124 percent to 173 percent of all units sold a year ago. These burdensome inventories, in the absence of indications of a dramatic surge in sales, have prompted a realignment of resources within the industry, including further labor force reductions and plant closings.

Although a number of positive factors are likely to lend some strength to farm equipment sales this year, prospects for a complete turnaround for the industry are not bright. One positive influence is the recent planting intentions report which suggests that planted acreage in 1984 will hold at the year-ago levels. While still below the record level of a few years ago, the substantial amount of acreage could boost sales. With farm equipment sales depressed for the last several years, the age of the equipment on farms may begin to require its replacement. Moreover, attractive financing arrangements and cash incentives from many dealers and manufacturers—in response to burdensome inventories—may spur purchases.

However, retail sales of farm machinery and equipment in 1985 will continue to be tempered by low sector income and the debt load of many farmers. Net cash income in 1984 dropped 10 percent from the previous year's level, with further declines expected this year. With less income to spend on capital purchases and many highly leveraged borrowers attempting to reduce debt to restructure their balance sheets, any upturn in farm machinery and equipment sales will be modest at best.

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## Selected Agricultural Economic Indicators

| | Latest period | Value | Percent change from: Prior period | Year ago | Two years ago |
|---|---|---|---|---|---|
| **Receipts from farm marketings** *($ millions)* | September | 11,634 | 4.2 | -10 | -5 |
| Crops* | September | 5,846 | 11.1 | -7 | -6 |
| Livestock | September | 5,685 | -0.8 | -1 | -5 |
| Government payments | September | 103 | -40.8 | -88 | -10 |
| **Real estate farm debt outstanding** *($ billions)* | | | | | |
| Commercial banks | September 30 | 10.2 | 2.1† | 12 | 20 |
| Federal Land Banks | December 31 | 47.7 | -0.9 | -1 | 1 |
| Life insurance companies | November 30 | 12.6 | -0.2† | -1 | -2 |
| Farmers Home Administration | September 30 | 10.2 | 0.9† | 6 | 9 |
| **Nonreal estate farm debt outstanding** *($ billions)* | | | | | |
| Commercial banks | September 30 | 41.7 | 0.9† | 7 | 13 |
| Production Credit Associations | December 31 | 17.2 | -2.8 | -8 | -15 |
| Farmers Home Administration | September 30 | 16.8 | 0.6† | 6 | 5 |
| Commodity Credit Corporation | September 30 | 6.47 | -0.8† | -47 | -38 |
| **Farms loans made** *($ millions)* | | | | | |
| Production Credit Associations | December | 2,535 | 34.7 | -13 | -22 |
| Federal Land Banks | December | 201 | 1.7 | -24 | -37 |
| Life insurance companies | November | 26 | -39.4 | -72 | -48 |
| **Interest rates on farm loans** *(percent)* | | | | | |
| 7th District agricultural banks | | | | | |
| Operating loans | January 1 | 13.64 | -5.6† | 0 | -5 |
| Real estate loans | January 1 | 13.36 | -4.6† | 0 | -6 |
| Commodity Credit Corporation | March | 9.13 | 0 | -8 | 1 |
| **Agricultural exports** *($ millions)* | December | 3,565 | 1.1 | 2 | 23 |
| Corn *(mil. bu.)* | December | 208 | -15.5 | 18 | 19 |
| Soybeans *(mil. bu.)* | December | 87 | -6.6 | 17 | -3 |
| Wheat *(mil. bu.)* | December | 134 | 33.8 | 2 | 49 |
| **Farm machinery sales**ᵖ *(units)* | | | | | |
| Tractors, over 40 HP | January | 4,987 | 3.9 | -7 | -6 |
| 40 to 139 HP | January | 3,615 | 3.3 | -5 | -10 |
| 140 HP or more | January | 1,372 | 5.3 | -11 | 4 |
| Combines | January | 743 | -16.0 | -32 | -59 |

* Includes net CCC loans.
† Prior period is three months earlier.
[p] Preliminary

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