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FEED USE OF CORN

Feed and residual use of corn fell below expectations during the 1989-90 marketing year. At 4.456 billion bushels, use was nearly 12 percent larger than during the 1988-89 marketing year, when prices were inflated by widespread drought. Use, however, was 7 percent less than the record level established during the 1987-88 marketing year. The shortfall last year can be partially attributed to the sharp increase in wheat feeding last summer. Based on USDA's quarterly estimates of wheat stocks, feed and residual use of wheat last summer totaled 406 million bushels, nearly 135 million bushels more than fed the previous summer and about 40 million bushels above the previous record established in 1987.

With the sharp reduction in corn exports being experienced this year, the magnitude of feed and residual use of corn has taken on added significance. The level of stocks at the end of the marketing year will depend largely on how much corn is fed. In essence, the poor export demand is forcing corn back into the domestic market. Livestock producers are being asked, through relatively low corn prices, to consume large quantities of corn.

During the marketing year, estimates of feed and residual use of corn are derived from the USDA's quarterly grain stocks estimates. The estimate of the level of stocks allows for the calculation of total corn consumption during the previous quarter. Subtracting export and processing uses of corn from that total, yields an estimate of feed and residual use. The USDA's December 1, 1990 stocks estimate indicated a record rate of feed and residual use of corn during the first quarter of the 1990-91 marketing year. Use in that category totaled 1.651 billion bushels, an increase of 157 million bushels from use the previous year, and 96 million bushels above the record use of 3 years earlier. The large apparent feed use of corn was surprising because of the expectation of the continuation of a higher level of wheat feeding in the fall quarter. That expectation was not confirmed by the USDA's stocks report, which showed a typical feed and residual use of wheat during the fall of -37 million bushels. The negative use is in contrast to reports that livestock feeders did feed significant quantities of wheat.

The feed and residual use of corn during the first quarter of the year is not necessarily a reliable indicator of feed use for the entire year. Over the past 5 years, use during the first quarter of the year has ranged from 29 percent to 34 percent of the total for the year. First

quarter use, then, projects to a total for the current year between 4.855 billion and 5.69 billion bushels. Feed and residual use during the first half of the year is a better predictor of use for the entire year. Over the past 5 years, use during the first half of the year has ranged from 60.4 percent to 62.4 percent of the annual total. The average was 61.4 percent.

For the current year, the USDA projects feed and residual use at 4.85 billion bushels. To be on target for that projection, use during the second quarter of the marketing year needs to be near 1.33 billion bushels. That figure is about 40 million bushels larger than feed and residual use during the same quarter last year, 145 million less than the record of 4 years ago, and about equal to the 5 year average. The estimate of March 1 corn stocks, to be released on March 28, should be near 2.125 billion bushels if feed and residual use is on target to reach the USDA projection. A figure within 50 million bushels of that figure would be confirmation that use will be near the USDA projection.

It seems reasonable to expect that feed use was at least as large as 1.33 billion bushels during the winter quarter. Hog numbers were slightly less than a year ago, but poultry numbers were larger and there were more cattle on feed than a year ago. More importantly, hog and cattle prices were very favorable during that period. History shows that feed and residual use of corn per animal increases during periods of profitable livestock prices.

In addition to the *Grain Stocks* report, the USDA will also release a *Prospective Plantings* report on March 28.

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