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REASONS BEHIND THE BUILD-UP IN SOYBEAN OIL STOCKS

Soybean oil stocks have increased sharply during the 1991-92 marketing year. The Census Bureau reported mill stocks at 1.786 billion pounds at the end of September 1991. By the end of March 1992, those stocks had grown to 2.401 billion pounds. Stocks were at the second highest level for that date. The record of 2.9 billion pounds occurred in 1989. The primary reason for the build-up has been the record pace of soybean crush to meet the increased demand for soybean meal. During the first half of the 1991-92 marketing year, the domestic soybean crush totaled 653.3 million bushels, a 6.7 percent increase from the crush of a year ago and 5.7 percent above the previous record crush in 1982-83. (Calculations based on an October-September marketing year.) During that period, a total of 15.5 million tons of soybean meal were consumed. Consumption of soybean meal is up 8 percent from use of a year ago and 1.6 percent above the previous record use during the first half of the 1987-88 marketing year. During the first half of the marketing year, meal exports were up 29 percent from exports of a year ago.

A second reason for the build-up in oil stocks is the relatively low level of soybean oil exports. At 782 million pounds, oil exports during the first half of the marketing year were 3.7 times larger than exports of a year ago. Exports last year, however, were at a 30 year low. During the late 1970s and early 1980s, exports during the first half of the marketing year averaged about 1 billion pounds. In contrast, domestic soybean oil consumption continues near the record pace of the past two years. Domestic use during the first half of the 1991-92 marketing year totaled 6.03 billion pounds, compared to 6.06 billion last year and 6.05 billion two years ago.

A third, and more subtle, factor contributing to large oil stocks has been the high level of oil yield from the 1991 soybean crop. Based on Census Bureau figures, for the period October 1991 through March 1992, an average of 11.35 pounds of oil was produced for each bushel of soybeans crushed. That figure is .21 pounds above the average yield for the same period last year, .15 pounds above the previous record yield established in 1983-84, and .35 pounds above the 5 year average yield. If the oil yield this year had been equal to that of last year, stocks at the end of March would have been 137 million pounds smaller. If the yield had been at the 5 year average, stocks would have been 229 million pounds smaller.

The increase in oil yield is somewhat surprising. It has not come at the expense of meal production. Again, based on Census Bureau figures the yield of soybean meal (including hull meal) per bushel of soybeans during the first half of the marketing year averaged 47.53 pounds. The yield was fractionally higher than the yield of a year ago and about .05 pounds above the previous 5 year average.

Historically, high oil yields per bushel of soybeans were associated with dry growing conditions and low average soybean yields. For the period 1975-76 through 1988-89, oil yields were highest in 1976-77, 1980-81, 1983-84, and 1988-89. Soybean yields averaged 26.45 bushels per acre in those four years. The average in the other ten years was 31.2 bushels per acre. However, oil yields remained very high in 1989-90 and 1990-91 when average soybean yields were 32.3 and 34.1 bushels per acre, respectively. Perhaps the recent trend in high oil yield is associated with the regional shift in soybean production. A significant shift in production out of the southern regions into the midwest began in the mid-1980s and continued through 1991. In 1991, 76.5 percent of the soybean acreage was in the midwest and 20.6 percent was in southern regions. About 5 percent of the acreage shifted from the south to the midwest between 1986 and 1991. The March *Prospective Plantings* report indicated that the trend is continuing in 1992.

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