

SEPTEMBER 4, 2007

BIO-DIESEL PRODUCTION SUPPORTS SOYBEAN OIL CONSUMPTION

Much of the strength in soybean prices since the fall of 2006 has been provided by soybean oil prices, even though U.S. soybean oil stocks have been record large. The strength in soybean oil prices has been associated with rising world bio-diesel production.

The cash price of soybeans in central Illinois averaged \$7.82 during August 2007. That price is 42 percent higher than the average during September 2006 when a record U.S. crop was being harvested. The average price of soybean oil and soybean meal at central Illinois processing plants increased by 48 percent and 28 percent, respectively, over that same period. The higher soybean oil prices came in the face of record large soybean oil inventories being held at U.S. processing plants. New record large month-end soybean oil stocks have been reported every month since June 2006. Year-over-year increases in monthly stocks averaged 29 percent from October 2006 through June 2007. Month-end stocks reached a record of 3.362 billion pounds in March 2007. Stocks remained extremely large, at 3.246 billion pounds, at the end of July 2007. Soybean oil stocks are large due to the record pace of the domestic soybean crush in order to meet record consumption of soybean meal. Use of U.S. produced soybean meal, domestic plus exports, during the period October 2006 through July 2007 was a record 36.05 million tons, almost 6 percent more than consumed during the same 10 months in the previous year.

Even though U.S. soybean oil stocks have been increasing, consumption of soybean oil has been record large as well. Domestic use plus exports of U.S. soybean oil reached a record 16.93 billion pounds in the 10 months from October 2006 through July 2007, an 8 percent year-over-year increase. Percentage wise, the largest increase, 13 percent, was in exports. Still, domestic use of soybean oil was nearly 5 percent larger than during the same period last year. That is well above the long term growth rate of about 2 percent per year. Much of the increase in domestic soybean oil consumption was for the production of methyl esters which is used in the production of bio-diesel.

The U.S. Census Bureau started reporting the amount of once-refined soybean oil used in the production of methyl esters in January 2006. Beginning in January 2007, the Census Bureau included estimates of crude soybean oil and all fats and oils used in the production of methyl esters. In January 2007, it was estimated that about 168 million pounds of

soybean oil and 202 million pounds of all fats and oils were used to produce methyl esters. That use accounted for 10 percent of the consumption of U.S. soybean oil and nearly 8 percent of the consumption of oil fats and oils during the month. In July 2007, the Census Bureau reported that about 346 million pounds of soybean oil and 392 million pounds of all fats and oils were used in the production of methyl esters. That use represented almost 19 percent of the consumption of U.S. soybean oil and 13 percent of the consumption of all fats and oils during the month.

The use of soybean oil to support bio-diesel production will remain sensitive to the price of soybean oil and the price of diesel fuel, but further increases are expected. Use was very large during July 2007 when the average soybean oil price was nearly 10 cents higher than the average in July 2006 and only slightly below the record average monthly price in May 1983. As the production of distillers grain increases and as South America expands soybean production, soybean oil demand will become increasingly important in determining the magnitude of the domestic soybean crush. Currently, the crush is still being determined by the demand for soybean meal. If the size of the crush in the future is determined by soybean oil demand, meal could be in surplus. Since soybean meal is not easily stored, the surplus would have to be consumed, potentially driving soybean meal prices lower.

The rate of growth in U.S. bio-diesel production, and the related consumption of soybean oil, will be heavily dependent on U.S. energy policy. Even though bio-diesel production continues to grow, profit margins are narrow and production would not be profitable at all without the current large subsidies.

Issued by Darrel Good Extension Economist University of Illinois