Planted acreage of corn in the U.S. in 2010 totaled 88.222 million acres, 1.74 million more than planted in 2009, but 5.305 million fewer than planted in 2007. Planted acreage of soybeans in 2010 was a record 77.714 million, 263,000 more than planted in 2009. Acreage of all crops was about 2 million less than planted in 2009. While the mix of crops changed from 2009 to 2010, the overall decline reflected a reduction of about 2.3 million acres of double cropped soybeans.

Current strong demand and high prices of grains, oilseeds, and cotton have triggered intense interest in acreage needs for 2011. There are three issues that are important for corn and soybeans as they compete for acreage in 2011. First is the question of how many acres of these crops are needed to meet consumption needs at “reasonable” prices. Second, how many acres are available for planting of all crops in 2011. Third, what is the likely strength of competition from other crops.

The size of the corn and soybean crops needed in 2011 depends on the expected size of stocks at the end of the current year, expected market size in 2011-12, and desired level of stocks at the end of the 2011-12 marketing year. These factors are not known with certainty and assessments will change between now and spring planting. Prospective year ending stocks will become clearer as consumption is revealed over the next several months and with the release of the December 1, 2010 and March 1, 2011 stocks estimates. Market size will be influenced by the strength of demand, price levels, the size of crops in the southern hemisphere, and 2011 production prospects in the rest of the northern hemisphere. These assessments will also change over time. Finally, there is not agreement about the desired level of stocks at the end of the 2011-12 marketing year or what constitutes “reasonable” prices for corn and soybeans. These unknowns result in a wide range in current assessments of acreage needs.

As a starting point for corn, assume that 2010-11 marketing year ending stocks total 902 million bushels as currently projected by USDA; that 2011-12 marketing year consumption will decline modestly to 13.4 billion bushels, as feed and residual use
declines from the inflated projection for this year and combined processing and exports increase; and that the desired level of 2011-12 marketing year ending stocks is 1.2 billion bushels. Under that scenario, the 2011 crop would need to total 13.688 billion bushels. With a 2011 yield at the trend value of 160 bushels, harvested acreage would need to total 85.55 million acres. Allowing for silage and abandonment, planted acreage of 92.55 million would be needed, 4.328 million more than planted in 2010.

For soybeans, 2010-11 marketing year ending stocks of 265 million bushels, 2011-12 consumption of 3.325 billion bushels, and 2011-12 year ending stocks of 250 million bushels would require a crop of 3.3 billion bushels. A 2011 yield near the trend value of 43.2 bushels would require harvested acreage of 76.389 million and planted acreage of 77.389 million, 325,000 fewer than planted in 2010. The market currently appears to expect that 2010-11 year ending stocks will be smaller than 265 million and that 2011-12 market size will be larger than 3.325 billion bushels, implying that more soybean acreage will be required in 2011.

Combined acreage of corn and soybeans may need to increase by 4 to 5 million acres or more in 2011, depending on the market’s assessment of yield risk. Corn and soybean prices required to attract such an increase depends in part on the size of the acreage pie. Acres of principal crops, including hay, totaled 318 million in 2010, but has recently varied from 315.6 million (2006) to 329.3 million (1999). Acreage appears to fluctuate with the level of crop prices – higher prices resulting in more acres. The size of the pie could increase by 6 to 7 million acres in 2011, making it easier to increase corn and soybean acreage, particularly with an increase in double-cropped soybean acreage.

High prices of other crops suggest there will be competition for acreage in 2011, with winter wheat producers getting the first planting opportunity. Winter wheat supplies are ample and a large increase in acreage may not be needed, but may occur due to attractive prices. Soft red winter wheat acreage in particular could rebound from last year’s sharp decline. The USDA’s January 12, 2011 estimates of 2010 final crop size, December 1 stocks, winter wheat seedings, and South American crop prospects, will be important in determining corn and soybean acreage needs.

Issued by Darrel Good
Agricultural Economist
University of Illinois