The corn market in the US has historically been characterized by large supplies and generally low prices, often below the total economic cost of production, with occasional price spikes associated with production shortfalls. That landscape appears to be changing. The main driver is the rapid expansion in corn used for ethanol production, encouraged by a combination of political and economic forces. Regardless of the long term viability of corn-based ethanol production, near term expansion is in the works. The Renewable Fuels Association identifies 101 “ethanol biorefineries” in operation with 7 under expansion and an additional 34 under construction. The capacity of those plants is estimated at just over 7 billion gallons [June 23, 2006]. The USDA projects that 1.6 billion bushels of corn will be used for ethanol production during the current marketing year and projects use at 2.15 billion in the 2006-07 marketing year. Use could reach 3 billion bushels in the very near future. This expansion is coming at a time when exports of US corn have surged and have potential for further growth, depending on Chinese corn production and export policy.

Consumption of US corn for all purposes was in the range of 9.3 to 9.8 billion bushels from 1997-98 through 2002-03, but expanded to 10.2 billion in 2003-04 and 10.7 billion in 2004-05. Use is projected at 11.2 billion this year and 11.7 billion next year. Use exceeding 12 billion bushels is on the horizon. Use can expand as projected, however, only if production continues to expand. If market size grows as expected, a failure to expand production would require prices high enough to limit consumption. Based on current conditions, the rationing would most likely occur in domestic livestock feeding of corn. Some reduction in corn feeding may occur regardless, as production of by-product feed from ethanol production expands.

While US average corn yields continue to trend higher, more corn acreage harvested for grain will likely be required to meet growing market requirements. Planted acreage of corn likely needs to increase beginning in 2007. In addition, more corn acreage may need to be harvested for grain and less for silage. About 6 million acres are currently harvested for silage. If market size increases to 12 billion bushels by 2007-08, and the average 2007 yield is near the trend value of 151 bushels, about 78.5 million acres of corn will need to be harvested for grain in 2007 to maintain year ending inventories at a minimal level. That implies that about 85.5 million acres of corn will need to be planted in 2007, up from 79.4 in 2006 and the recent high of 81.8 million in 2005. Under current policy, that increase would have to come at the expense of other crops.
A continuation of the rapid growth of corn consumption will require increased corn acreage in the US, implying that the rest of the world may need to expand production of wheat and oilseeds. The market will have to direct those decisions. There may also be implications for the Conservation Reserve Program which currently idles over 30 million acres of former crop land.