

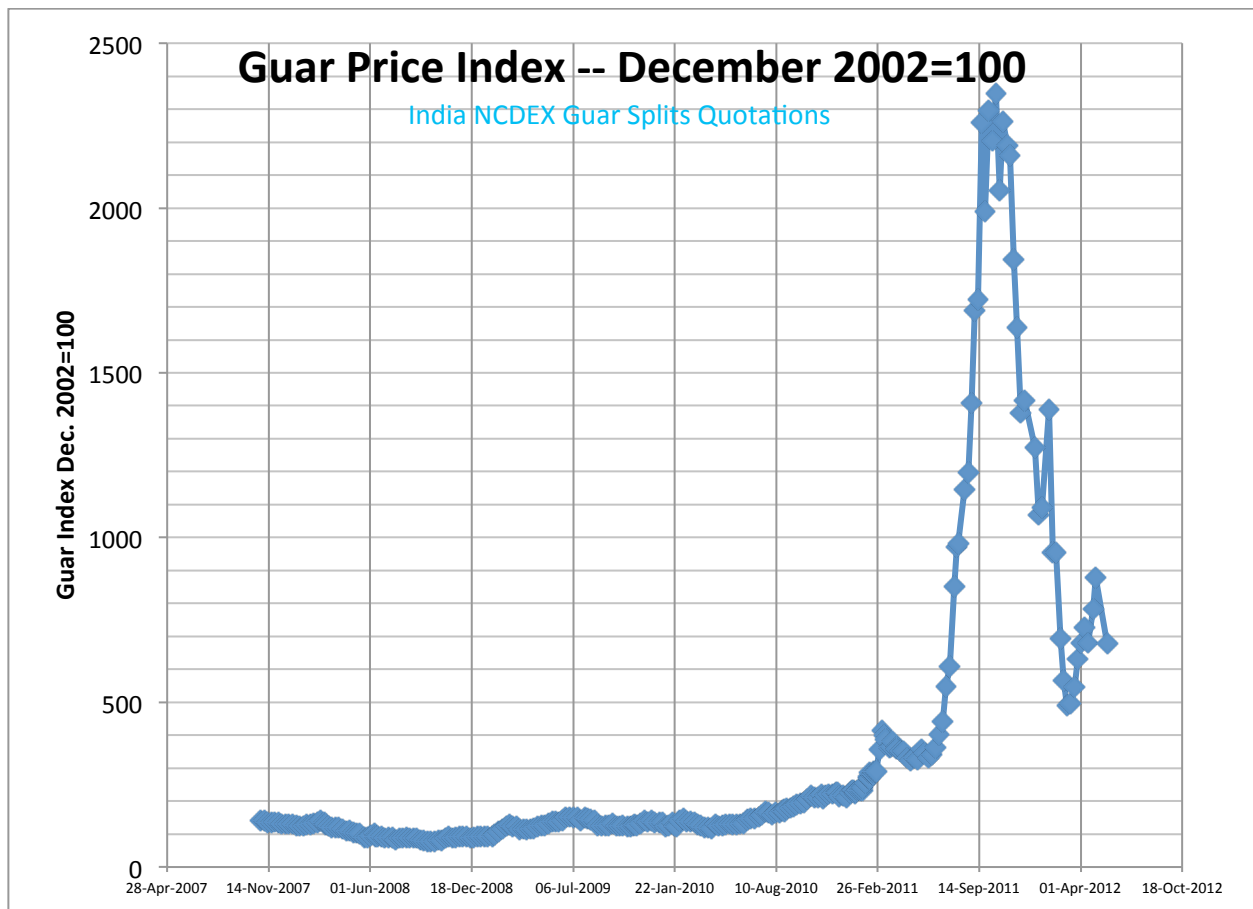


Guar Pricing and History

11 January 2013

We have seen a very significant movement in guar pricing in the past 18 months. During this period prices have also seen very high volatility. A number of factors as far as back three years ago are affecting pricing of a product that was historically quite stable.

The chart below shows the relative price movement during the past 5 years.



CROP SIZE

Guar powder is derived from the dried guar beans grown primarily in western India and eastern Pakistan. The growing area extends on both sides of the Indus river valley and also further east in Gujarat in India. The plant is a desert plant traditionally grown for cattle feed, but also consumed as

green pods by people. In the driest regions of western Rajasthan the crop is often the only possible agricultural crop to grow. The crop in those areas is completely dependent upon monsoonal rains of the summer months.

The size of each year's crop has usually been highly dependent upon the amount and timing of rainfall in western Rajasthan. Favorable rain patterns lead to large production and less than favorable rain reduce the crop. The past few year's crop volumes have been approximately:

2012 20 million bags x 100-kg

2011 12 million bags

2010 8 to 10 million bags

GUAR MARKET

In an attempt to bring accountability and predictable pricing for the guar bean crop the India Government added guar beans, splits and powder to its agricultural exchange, the NCDEX. Very quickly the limited number of persons usually involved in the specialized trade of guar took advantage of the market to use speculation to make money. The speculation caused further volatility in the guar market to the detriment of the actual end users.

HISTORY

The worldwide recession of 2008 through 2010 also affected the guar market. Demand was considerably reduced due to lack of industrial activity. Prices dropped relative to previous years. The very low crop production of 2010 had little effect on the market since demand had slowed significantly.

In 2011 as the world economy started to climb out of recession, the guar market saw several new developments. Weather and monsoonal rainfall was quite favorable for the 2011 guar crop and a very good crop volume was produced. Even during the middle of the growing season the good crop became obvious. At the same time demand from historical users had re-bounded to usual levels and a new player came onto the scene. Oil service companies and drilling companies brought new technology on line. The use of hydraulic fracturing to follow long horizontal drilling in tight shale formations was kicking into high gear after several years of development. By the summer of 2011 guar demand from the fracturing market was growing strongly. By the time the guar beans were being harvested prices for guar products had reached unprecedented price levels.

Pricing was exacerbated by a bottleneck in supply. All guar powder producing plants were running at full capacity by October and November of 2011. Pricing of guar products provided enough incentive for most manufacturers begin addition of capacity, about 60% additional capacity was in the works by November of 2011. That capacity would be available by June of 2012.

In the late part of 2011 demand was high, plants were at capacity and more and more people became interested in guar as a commodity. There were many new people coming into the market to manufacture and supply the product. Also coming into the rising price market were speculators. Some were already experienced players and some were new comers. At the same time the crop export

reporting agency in India made a serious error in over-reporting the volume of guar going out of the country. In combination with an actual demand much higher than previous years the reported material going out gave fuel to the market. Speculators took advantage of the situation to push further on prices.

Panic on the consumer side also feed the pricing frenzy. Service companies could not fulfill fracturing contracts without supplies of guar. Due to high capital and labor investments by the service companies, they could not afford to allow shortage of one reagent, guar gum, to idle their trucks, pumps and crews. Purchasing managers chased the limited producing capacity of the milling plants, often with multiple inquiries that gave a false sense of even more demand. By March of 2012 prices had reached levels nearly 10 times historical. Price movements of 2011 were minor by comparison.

In the spring of 2012 with prices at unheard of levels, the farming community in India was gearing up to take advantage of the potential for profit. Initial reports indicated the possibility of a 30 million bag crop, even before the planting season had come. The first forecasts for the monsoon season, posted on schedule in April, indicated a near normal rainfall. By May with continued good forecasts and many farmers with irrigation capability reported to be switching to guar growing, the market expectation was that a large crop was coming in. At the same time a significant increase in milling capacity was coming on line.

The Indian government through early 2012 was investigating the huge run-up in guar prices. Significant irregularities and violations in trading policies led to some criminal charges being made and the trading of guar gum pulled off the NCDEX.

Prices dropped significantly and a full market crash was expected by summer of 2012. Service companies found themselves with full warehouses of very expensive guar that was having profound negative effects on their bottom lines. Defaults on higher priced contracts were reported. It was expected that after the Diwali holidays in November, at the height of the guar bean harvest, the market price would descend further.

That did not happen. Many players in India however needed to keep the price up. Farmers withheld beans from the market needing to see the record high prices to cover bank loans on equipment. Manufacturers needed higher prices to cover the costs of raw materials in their warehouses. And overall everyone in India expected that the demand must recover to the levels erroneously reported the year before.

So, in early January of 2013 we see an unresolved tension between buyers and sellers. Both wait to see what the market will do. The Indian government is considering re-listing of guar on the NCDEX market. Small amounts of rumors or information make for daily moves in the quoted prices for supply of guar powder. It is unclear exactly what direction the market may take. If demand at high levels returns from the fracturing market it is likely the market will be strong.

Please balance our opinion with those of others.