

# Happenings of the agricultural biotechnology in 2016

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Year 2016 marked 21 years (1996-2016) of the commercialization of biotech or genetically modified (GM) crops across the globe. Over this period, over 2 billion hectares of biotech crops have been successfully cultivated globally resulting in farmer benefits estimated at over US\$150 billion. Globally, the primary biotech crops cultivated are soybean, maize, cotton and canola, with new crops being added each year. This year new crops like apple and potato have been added to the list. While in India the story has revolved around Bt Cotton. Since Bt cotton was introduced in India in 2002, yields and farmers' incomes have soared. Bt cotton lifted farm incomes by US\$18.3 billion between 2002 and

2014 and reduced insecticide applications. An estimated 60 % ( ISAAA Report ) of the benefits of Bt cotton has accrued to small farmers. The success of Bt Cotton cultivation in India over the past 14 years confirms that the early promise of crop biotechnology has been fulfilled and is attested by over 7.7 million farmers. In the Asia Pacific region countries like Vietnam, Bangladesh, Pakistan, Malaysia and Taiwan have moved ahead with other crops. But in India, despite the continued success of Bt Cotton and continued farmer benefits, no other biotech crop has seen the day of light in the country. Rather, agri - biotech industry got a cautious note when the government decided to bring in price control on Bt cotton seeds. It became further challenging when the draft GM trait licensing guidelines were introduced. Thankfully, it has been put on hold for now. The protection of Intellectual Property for the technology developers remains challenging with the different interpretations of the existing laws and regulations. The bright spot, though, was the regulatory bodies clearing GM Mustard for biosafety. However, certain organizations in India continue to oppose biotechnology. The No Objection from the States continued to remain the most challenging hurdle for research on agricultural biotechnology in India. As the scourge of climate change and the imperative of food security make agri-biotechnology a critical requirement for the country, we go into 2017 with renewed optimism and hope that India will make attempts to reclaim its leadership in agricultural biotechnology in the region which has been lost to other countries who have adopted biotechnology in a big way in 2016.

**- Dr. Shivendra Bajaj**