

From plate to plough

From Vajpayee to Modi

One introduced Bt cotton which benefited farmers, the other may unwittingly end the Bt revolution



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It was March 26, 2002, when NDA-1 government, under the visionary leadership of the then Prime Minister Atal Bihari Vajpayee, took a bold and decisive decision. It approved the use of genetically-modified (GM) seeds of cotton in India. It was the 16th country to do so, despite opposition from political parties and NGOs. But Vajpayee was quite clear and convinced about the role of science in shaping agriculture. In one of his famous speeches, he stated, “The next big revolution that is unfolding in the world is the biotechnology revolution. This too is going to touch the lives of ordinary people in ways that we cannot even fully imagine today. We must not lag behind others in this revolution. Indeed, India should aspire to be one of the leaders of this revolution. We must plant its healthy saplings in different parts of the country so that we can reap their fruits soon.” No wonder, Vajpayee also added science in the famous slogan of “Jai Jawan, Jai Kisan, Jai Vigyan.”

What were the results of this bold decision? India witnessed an astounding revolution in the cotton sector, never seen for any other crop in Indian agriculture. Cotton production shot up from 14 million bales in 2000-01 to 39 million bales in 2014-15, a 178% increase (Cotton Advisory Board esti-

mates). Cotton yields rose by 84%, from 278 kg/ha to 511 kg/ha during the same period. Consequently, India emerged as one of the largest global players in cotton. From a net importer in 2000-01, India became a net exporter (the second largest, after the US) in 2014-15 as well as the largest producer (surpassing China that produced 38.4 million bales).

If Vajpayee had not taken this bold decision, and if India had continued in a business-as-usual (BAU) scenario, projecting from the trend since 1990-91, India's cotton production would not have been more than 21 million bales by 2014-15, way below its consumption needs. It would have made

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India as one of largest importers of cotton by now. In reality, the net benefit of the Bt cotton decision was that cumulatively India produced 140 million bales “extra” (compared to BAU scenario) during 2002-03 to 2014-15.

Let us try to see this counter-factual (vis-a-vis BAU scenario) in terms of foreign exchange savings and earnings. Had cotton production not dramatically increased since 2002, India would have been importing cotton to meet its domestic consumption each year. At unit value of imports, this aggregates to an import bill of \$24.2 billion cumulatively from 2002 to 2015 that India saved. Besides, due to surplus production, India's exports of raw cotton soared and added around \$21.2 billion to our export earnings. Further, India earned about \$9.3 billion from the “extra” yarn exports,

made possible due to the enhanced cotton production during the same period. All combined, the introduction of Bt cotton has so far helped India to the tune of about \$55 billion, a bonanza that we owe solely to the vision and courage of Vajpayee to take a pro-science bold decision.

Interestingly, while Vajpayee's vision sowed the seeds of this revolution, Gujarat, under the then chief minister Narendra Modi, harvested the largest fruits. From 2001-02 to 2013-14, Gujarat's agriculture grew at 9.7% per annum, which was spearheaded by cotton. In 2002-03, Gujarat, with 3 million bales, produced 22% of India's cotton, which rose to 11.6 million bales

and a 31% all-India share in 2013-14. Cotton yields grew by 131% in Gujarat, way above all-India gains, over the same period. Of course, complementary infrastructure in terms of irrigation, roads, etc, also played their role, but the catalyst of change was the Bt cotton seed. This presumably also contributed to Modi's back-to-back wins in the state elections.

However, today, as Prime Minister Modi leads the NDA-2, the government is becoming control-centric in Bt cotton seeds pricing, including trait fees between the parent company (Mahyco Monsanto Biotech Ltd) and various licensee companies, which have entered into private contracts. This would be the first death-knell to cotton revolution. Government's Gazette notification of March 8, 2016, brings down the price of Boll-

gard-II seeds from ₹830 to ₹800 per packet (of 450gm), and reduction in the trait fee from ₹163 to ₹49. So, while the cost of seed to the farmer has reduced by only 4%, the royalty being paid by domestic licensees to the parent company goes down by a whopping 70%! As they say, you follow the money trail, and even a blind man can see who is driving this change.

What will happen now? Most probably, the case will go into litigation. A government order overriding private company contracts is a fertile area for corporate lawyers. The Vodafone case is still fresh. This one will hit India's credibility in protecting IPR, and no wonder most of the global seed companies feel hesitant in bringing their latest technologies to India precisely for this reason. Our public research is at a pitiable low level. Look at the entire budget of the Indian Council of Agricultural Research (ICAR) for the country, which was around ₹4,840 crore (\$0.8 billion) in 2014-15. But Monsanto alone spent \$1.7 billion on R&D in 2014. It is clear that future agri-wonder seeds are going to come increasingly from global private players, and India needs to learn to acquire them in an amicable manner. Look at China, how they have acquired Syngenta for \$43 billion. There is something to learn from that.

If Monsanto decides to quit India, as some newspapers suggest, Bollgard-III may not come, and Bollgard-II will wear off its potency in the next 3-5 years. Then the cotton revolution will be buried forever, and biggest losers will be the farmers of India. Is this what the Modi government wants? One the Prime Minister knows.

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