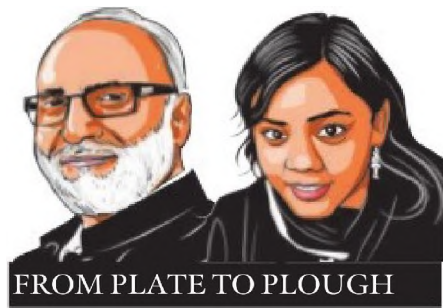


Heading backwards

The cotton revolution is in danger of being reversed by government control over GM seed pricing



FROM PLATE TO PLOUGH

BY ASHOK GULATI AND SHREYA SARKAR

IT WAS March 26, 2002, when NDA I, under the visionary leadership of then PM Atal Bihari Vajpayee, took a bold decision. It approved the use of genetically modified (GM) seeds of cotton. India was the 16th country to do so, despite opposition from political parties and NGOs. But Atalji was quite clear and convinced about the role of science in shaping agriculture. In one of his 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, Atalji also added science in the famous slogan of "Jai Jawan, Jai Kisan, Jai Vigyan".

What were the results? India witnessed an astounding revolution in the cotton sector, not seen for another crop. Cotton production shot up from 14 million bales in 2000-01 to 39 million bales in 2014-15, a 178 per cent increase (Cotton Advisory Board estimates). Cotton yields rose by 84 per cent, 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's 38.4 million bales).

If Atalji hadn't 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 wouldn't have been more than 21 million bales by 2014-15, way below its consumption needs. It would have made India one of the largest importers of cotton. In reality, the net benefit of the Bt cotton decision was that, cumulatively, India produced 140 million bales "extra" (compared to BAU) during 2002-03 to 2014-15.

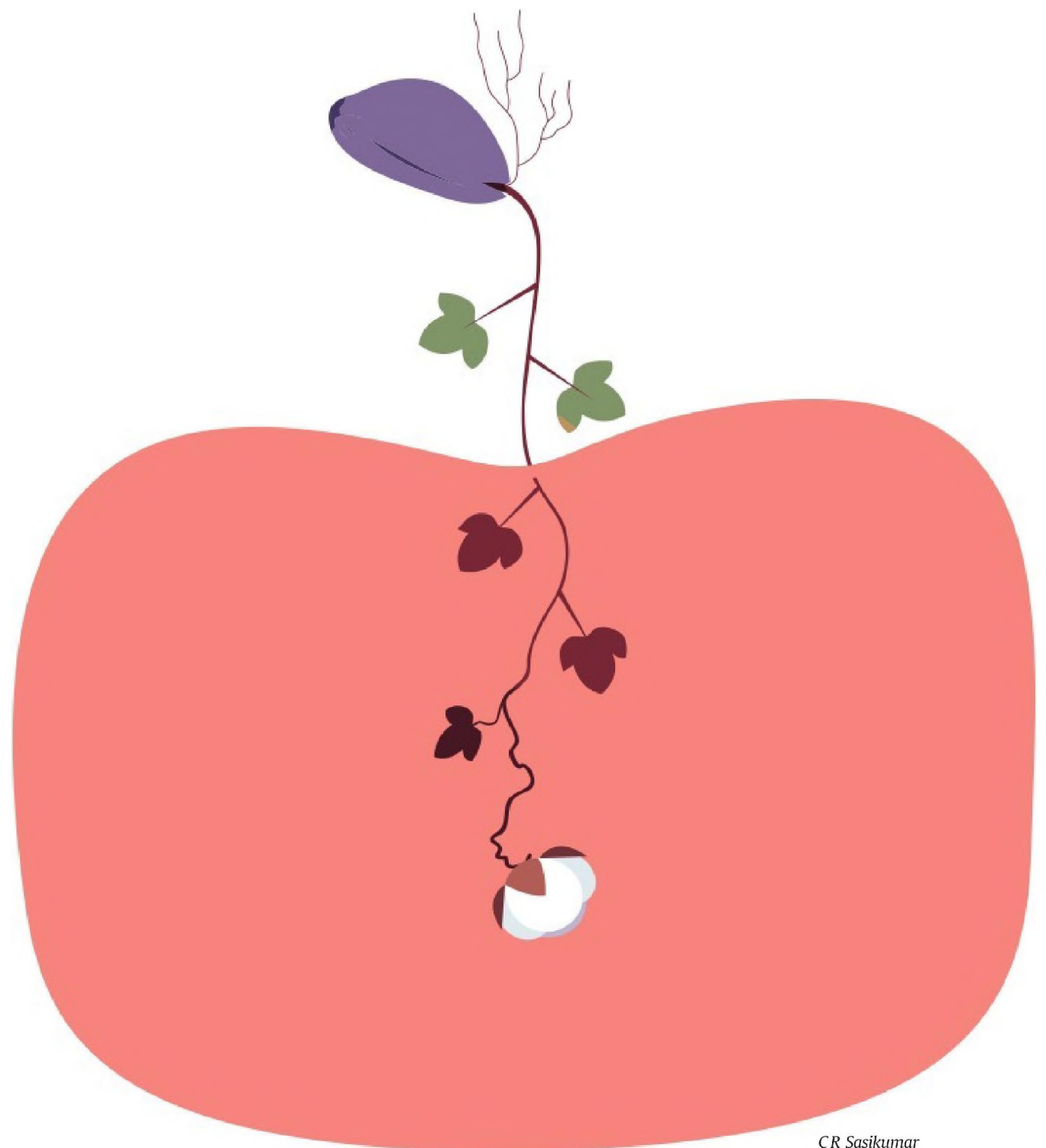
Let's try to see this counter-factual in terms of foreign exchange savings and earnings. Had cotton production not dramatically increased, India would have been importing cotton to meet its domestic consumption each year. At unit value of imports, this aggregates to an import bill of \$24.2 billion, cumulatively, in 2002-15 that India saved. Besides, due to surplus production, India's exports of raw cotton soared and added around \$21.2bn to our export earnings. Further, India earned about \$9.3bn from the "extra" yarn exports, made possible by enhanced cotton production. All combined, the introduction of Bt cotton has so far helped India to the tune of about \$55bn, a bonanza we owe solely to Atalji's vision and courage.

Interestingly, while Atalji's vision sowed the seeds of this revolution, Gujarat under then CM Narendra Modi harvested the largest fruit. From 2001-02 to 2013-14, Gujarat's agriculture grew at 9.7 per cent per annum, spearheaded by cotton. In 2002-03, Gujarat, with three million bales, produced 22 per

cent of India's cotton, which rose to 11.6 million bales and a 31 per cent all-India share in 2013-14. Cotton yields grew by 131 per cent in Gujarat, way above all-India gains, over the same period. Of course, complementary infrastructure in terms of irrigation, roads, etc also played its role, but the catalyst was the Bt cotton seed. This presumably also contributed to Modi's back-to-back victories in state elections.

However, today, as PM Modi leads 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 licensee companies, which have entered into private contracts. This would be the first death-knell for the cotton revolution. The government's gazette notification of March 8, 2016 brings down the price of Bollgard II seeds from Rs 830 to Rs 800 per packet (450 grams), and reduction in the trait fee from Rs 163 to Rs 49. So, while the cost of seed to the farmer has reduced by only 4 per cent, the royalty being paid by domestic licensees to the parent company goes down by a whopping 70 per cent! As they say, you follow the money trail, and even a blind man can see who's driving this change.

What will happen now? Most probably,



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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 global seed companies feel hesitant in bringing their latest technologies to India precisely for this reason. Our public research is pitiable. Look at the entire ICAR budget for the country, which was around Rs 4,840 crore (\$0.8bn) in 2014-15. But Monsanto alone spent \$1.7bn in R&D in 2014. It's clear that future agri-wonder seeds are going to increasingly come from global private players, and India must learn to acquire them amicably. Look at how China has acquired Syngenta for \$43bn. There's something to learn from that.

If Monsanto decides to quit India, Bollgard III may not come, and Bollgard II will wear off its potency in the next three to five years. The cotton revolution will be buried forever and the biggest losers will be Indian farmers. Is this what the Modi government wants? Only the PM knows.

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