

## WHERE IS THE GOVERNMENT GOING WITH BT COTTON?

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Two days ago, the government admitted for the first time that Bt cotton had indeed failed in parts of India. The Agriculture Minister conceded in the Rajya Sabha that Bt cotton had failed in Rajasthan and Andhra Pradesh. He asked state governments in all cotton growing regions to constitute an enquiry into the quality of seeds available to farmers and the spread of spurious seeds. At the same time, in Madhya Pradesh, the Governor has asked the state government to find out the causes of the failure of Bt cotton and called for compensation to farmers. The Mahyco- Monsanto and Rasi varieties of Bt cotton have reportedly failed in large parts of Madhya Pradesh causing serious losses to farmers. A report from Nimad district in Madhya Pradesh states that Bt cotton is causing allergic reactions in those coming into contact with it and cattle have perished near Bt cotton fields in another district.

Reports of the failure of Bt cotton have been coming in steadily after the harvest of the first crop of 2002- 2003. Gene Campaign's study of the first Bt cotton harvest in Andhra Pradesh and Maharashtra had shown that 60% of the farmers who cultivated Bt cotton in these regions had suffered such losses that they could not even recover their investment. Several agencies including governmental and non-governmental organisations, independent media groups, academic institutions and state governments have been reporting that Bt cotton is failing in many parts of the country. Based on the Andhra Pradesh government's report of Bt cotton failure, the state has banned the sale of the Mahyco-Monsanto varieties of Bt cotton because it caused large scale losses to farmers. Recently a 20 member group of NGOs have conducted surveys in several cotton growing regions and found the seed had failed to germinate in many places like Tamil Nadu, so farmers had to buy expensive Bt cotton seed two, even three times to sow their crops. In addition, wilt which started in Bt cotton fields in Madhya Pradesh was now to be found to be spreading. The reasons for this are not yet known.

In addition to these reports came scientific data that showed why the Bt cotton crop was failing in India. The Central Institute for Cotton Research (CICR), Nagpur, published a paper to show that India's Bt cotton technology is faulty and inadequate to protect India's cotton crops where the major pest is the bollworm. Bt cotton hybrids being produced in India were found to be unstable and unpredictable and not very effective against the bollworm because the Bt technology being used here was created for the US, to protect America's cotton crops against its major pest, the tobacco budworm, not the bollworm.

The CICR study says that poor Bt cotton performance in India is also likely to be due to the fact that in India, Bt cotton is produced as **hybrids**, not true **varieties**, like in China, Australia and South Africa. Indian regulators must also answer why **hybrids** are being promoted, when they will force the farmer to buy seeds for every new planting? Why did the GEAC not take the decision that only **true breeding varieties** of Bt cotton would be permitted in India, not only because they perform better but also because they would be a cheaper option for farmers who could save seeds for the next harvest?

Along with these developments is the continuing spread of illegal Bt cotton varieties which began with the appearance of Navbharat 151 in Gujarat some years ago but which has since proliferated into a number of variants being bred in several parts of the country. Now, Bt cotton varieties are being sold which do not even contain the Bt gene. Farmers are being

fooled by unscrupulous seed providers and no action is taken against them by the principal regulating authority, the Genetic Engineering Approval Committee (GEAC). The GEAC has failed to check the problem of illegal seeds, it refuses to answer queries from the public or share information with it. The GEAC has further refused to press for compensation for losses suffered by farmers; instead, it has continued to release a slew of new Bt cotton varieties even though it knows that the cultivation of Bt cotton is taking place without the implementation of the mandated insect refuge management strategy that the GEAC itself has prescribed.

Even as these issues remain unaddressed, comes the report that the GEAC has already approved the first stage of tests of the new Monsanto cotton, Bollgard II which contains not one Bt gene, as the older varieties but two. Monsanto has been given permission for the final field trials for Bollgard II, which it boasts is “ten times better” than the older Bt cotton. Monsanto, government scientists and members of the GEAC would be fully aware that scientific papers in prestigious journals have already pointed out that the one gene Bt cotton and the two gene Bt cotton cannot be cultivated in the same region, they cannot coexist. If they are made to do so, the development of resistance in the bollworm will be very rapid and the technology will fail even faster than predicted earlier.

Scientists recommend that if the two –gene Bt cotton is to be introduced, the one that Monsanto claims is ‘ten times better’, the existing one gene Bt cotton must be withdrawn from cultivation. It does not need a genius to figure out that this is absolutely impossible in India. Where we have failed to check the spread of illegal variants, does some one seriously believe that all the existing legal and illegal one gene Bt cottons can be withdrawn from farmers fields? Will companies who have licensed the expensive one gene technology from Monsanto and are just bringing their varieties to the market, be prepared to abandon their investments so that Monsanto can be exclusively allowed to plant its two gene Bt cotton? Or does the GEAC simply not care what happens to the farmer, so far as Monsanto gets to release its varieties?

The Bt cotton saga has gone on long enough, so has the obduracy of government’s regulatory agencies and their anti-farmer stance. Scientific evidence is disregarded; field reports of crop failures seem to make no dent. What will it take to get a policy on GM crops in this country that work for the farmers, not against them? If Bt cotton is a technology that could benefit our farmers, it should be developed for Indian conditions, farmers must be adequately trained in the use of this complex and alien technology and provisions for compensation in the event of crop failure must be rigorously enforced.