

Why GM is facing rough weather

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Today when GM supporters are trying hard to get approval for the commercial production of Genetically Modified mustard, supposedly developed by Deepak Pentel, Ex. Vice-Chancellor of University of Delhi, the chief promoter of GM/BT, Monsanto Company has been going into deep trouble. The Ministry of Agriculture is contemplating price control on its BT seeds, citing the argument that the Monsanto BT seed has become ineffective against pink bollworm, which was the claim of the company for charging huge royalty from farmers. Courts also seemingly are in no mood to give any relief to the company.

The issue of approval for commercial production of GM mustard is being hotly debated. As per rules and also the directions of the Supreme Court and even logically, the Genetic Engineering Appraisal Committee (GEAC) is supposed to place the data emanating from field trials and also scientific outcome of the trials for public and scientific scrutiny. This had been the convention earlier also. However, GEAC has been shying away from publishing (placing on its website) this data. Deviating from past practice, GEAC is not even placing minutes of meetings on its website. The secretive manner in which the whole exercise has been going on naturally creates doubts amongst the stakeholders that possible ill effects health and environment are deliberately being withheld from public domain. Responding to the concerns expressed by those opposing commercial products of GM mustard, GEAC has put now the decision on hold and has outlined several steps to be taken before it is reviewed.

There is nothing new in bringing reforms by introducing



new technology in agriculture. However, scientists are not one on the subject of GM crops, and that is the reason why GM supporters have not been able to promote these crops, or even get any new field trial done. Opposition is so sharp that 19 countries of Europe including Italy, France, Germany, England, Norway and New Zealand and host of other countries including Russia have already banned GM crops.

Despite all efforts of MNCs at promoting "their science", hardly 10 per cent of cultivated area in the world grows BT/GM crops and of total GM production in the world, more than 90 per cent is in five countries, of which, more than half is in the US. Therefore, the claim of GM supporters that it is a worldwide phenomenon is not tenable. Dur-

ing the last UPA government, initially GM could not go ahead.

In later period GEAC under environment minister Veerappa Moily brought a flood in field trial of GM/BT during his regime; however it is also a fact that no approval has been given so far for commercial production of GM/BT (after the start of BT cotton production, though without permission). After the Narendra Modi government came to power, GEAC recommended for field trial of 15 crops approval of which was withheld by the Ministry of Environment.

In fact, what happened about a decade and a half back without there being a regulator of GM in place and absence of public awareness about the implications of GM/BT technology, Monsanto was successful in spread of its

BT cotton seeds through its dealers, on the main plank of its effectiveness against pink bollworm. It is really surprising that the success story of BT Cotton is being cited to argue for GM/BT crops.

Leaving aside scientists, who are generally associated with and some of them also the 'beneficiaries' of GM technology, there are 'some other' advocates of this technology. They argue that with BT cotton, farmers have benefited from increase in per hectare productivity, reduced use of pesticides and therefore increase in their income.

It is notable that area under BT underwent a major shift between 2006 and 2013 from 34.6 lakh hectare to 114.6 lakh hectare. In 2006 hardly 37.7 per cent area was covered by BT,

which increased to 95.7 per cent in 2013. During this period, yield per hectare increased from 421 kg/hectare to 532 kg/hectare. In terms of growth in productivity it comes to 3.36 per cent per annum. It may be noted that in the same period growth in productivity in food grains was 2.6 per cent per annum. We also find great upheavals in productivity during this period when productivity declined to 403 kg/hectare in 2009, before reaching 532 kg/hectare in 2013. Therefore the claim of the GM/BT supporters that BT cotton has been a great success in increasing the production and/or incomes of the farmers is not supported by the data on productivity.

Yet another claim that use of BT reduces the use of insecticides/pesticide is also not supported by the data, which shows that use of insecticides on cotton was 4623 metric tonnes, which increased to 11598 metric tonnes. This has happened because although the requirement of pesticide declined initially due to effectiveness of the seed against bollworms, and with now reduced effectiveness of the seed against pink bollworm and also attack of sucking and other pests, requirement of pesticide has multiplied. With these facts coming to the fore, Monsanto company is in no position to defend itself. It has so far reportedly collected more than Rs 4,000 crore from farmers in the name of royalty. It is heartening to note that the government panel on genetically modified BT cotton has recommended a steep reduction in royalty fees payable to technology companies. This decision of the government is likely to benefit millions of cotton farmers.

Farmers incurring huge costs in the form of costly seeds, pesticides and other inputs; could not gain even in the early days of BT cotton. Rather failure of crop in various parts of the country drove them to misery and thousands committed suicide. Therefore there is no need to fall for the claims of interested sections about the benefits of GM/BT. We must keep in mind that GM technology is irreversible, because we know that once GM/BT is adopted we will not be able to go back to natural seeds.

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