

Opinion

Don't let GM technology die

Ram Kaundinya | Updated on March 29, 2021



Activists and those with vested interests are blocking the technology that will help farmers

The status of GM crops in India is like that of Karna in *Mahabharata*. A peerless archer who was done in by six curses. Some vested interests in the country want GM technology to go the same way. Biotech developers have been going around in circles for last 15 years.

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Different governments, at the Centre and in States have been influenced by ideologies and activism against scientific progress in agriculture and against farmer interests. The announcement by the Environment Minister in the Rajya Sabha that trials of field crops need recommendations of States is the final nail in the coffin.

The only GM crop approved so far, Bt cotton, has been a success. Although activists claim that it is a failure, data show that Bt cotton has helped double the yields, boost cotton production three-fold and make India the largest producer of cotton and the second largest exporter. Also, the use of pesticides for bollworm control has more than halved, which underscores the success of the technology.

The claim that yields went up because of higher fertiliser consumption is flawed. According to government data, fertiliser used in cotton cultivation went up from 158.7 kg/ha in 2001 to 180.1 kg/ha by 2012. This is natural because the plant is producing more cotton. With yield going up from 302 kg/ha to 489 kg/ha during the same period, fertiliser consumption per kg of cotton produced actually fell from 0.52 kg to 0.36 kg. While farmers and the textile industry prospered due to Bt cotton, it also helped the edible oil sector. Consumers are using 15 lakh tonnes of cottonseed oil for cooking now compared with 5 lakh tonnes before Bt cotton was introduced.

Yet, the activists keep harping that Bt cotton is a failure. In fact, Bt cotton is a victim of its success. The Government brought in price control, making it practically impossible for technology developers to justify investing more money. With seed cost forming less than 5 per cent of the revenues of farmer, the seed price was not a variable in farmers' calculations. Even the seed companies have not been investing much in developing new varieties because there is no differentiation between good and bad varieties.

Killing tech

To make matters worse, there was a dispute on the Intellectual Property protection of biotech trait and seed which went all the way to the Supreme Court and is yet to be resolved.

The Government's interference in determining the trait fee created uncertainty amongst trait developers on pricing. These issues have killed any incentive for technology providers to bring new traits into the country. In fact, regulatory application for HT cotton was withdrawn by a company.

India has produced other GM technologies that haven't gone commercial yet. Bt Brinjal was approved by the GEAC (Genetic Engineering Appraisal Committee) in 2009 but was rejected by the political leadership.

The status of the GEAC itself was downgraded to an Assessment Committee. For reasons not based on science, a moratorium was imposed on Bt Brinjal by the Environment Minister in 2010.

In 2013, Bangladesh introduced the same Bt Brinjal and the results have been noteworthy.

When GM Mustard came out of Delhi University in 2017, it answered all the objections that opponents of the technology used for blocking Bt Brinjal. Developed by an Indian university, it is a technology for increasing the yield of the oilseed crop and reduce the bloating edible oil imports. And, it is not a Bt gene.

This time round the activists used a different set of arguments. They said the technology uses Herbicide Tolerance in the seed-production stage and HT was against the interests of farm labour, herbicides were dangerous for health, and similar specious arguments.

Now, Bt Brinjal is coming out from IARI, a national research institute. While it is time to test the IARI technology, the activists want the field trials to be stopped.

Similar to GM Mustard, this technology is completely indigenous and has been licensed to an Indian company. The safety of GM technology is proven across the world, especially in the case of Bt Brinjal in Bangladesh. Brinjal is the largest pesticide consuming vegetable crop and Bt technology will reduce pesticide usage, making it safe for consumers and improving the profitability of the farmers.

Opposing field trials is a definite way of blocking progress of science. Probably, the activists are worried that that the trials may produce good results and then it will be difficult for them to oppose. The Government should make sure that GM field trials are carried out in the research farms of ICAR centres or in the agriculture universities in different States so that there is complete control on them. There should be no need for NOC from States.

Sowing seeds of doubt in people's minds is enough to block a technology that can help crores of farmers. This is reflected in the unfulfilled demand for HT Cotton. Labour costs have shot up and availability has dwindled. Also, farmers problems with weed management must be understood. Future GM traits can help save water, reduce fertiliser consumption, improve nutrition and improve yields. All these possible benefits are being given up.

India's regulatory system is robust, and on a par with the best in the world. But the activists are deliberately casting aspersions on the GEAC to stop the progress of technology. One should not fall prey to this propaganda.

The Government funds thousands of crores on biotech research in health and agriculture annually. The Government has to believe in the science it is funding and in the robustness of our regulatory system. Undue importance being given to activists with vested interests and ideological agendas have derailed the progress of technology in agriculture. A decade or more has been lost chasing the wrong goals. This is a costly mistake which will jeopardise the competitiveness of Indian farmer and our agriculture in the global markets. Perhaps that is what some of the other countries want and our activists are playing into their hands.

Vested activism is having a field day. Both the Central and State government need to act firmly and decisively. Ambiguity has caused enough damage and dried up investments. Time to have a clear strategy for the benefit of farmers. Else, the GM technology will die as Karna did in the battle field through discrimination and deceit.

The writer is Director General, Federation of Seed Industry of India

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