



Review of Genetically Modified Democracy — Transgenic Crops in Contemporary India: Calling out the genes

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Aniket Aga on the debate around genetically

modified crops and the dynamics of technological change in populous, unequal polities

In the midst of all the excitement over the ‘immense possibilities’ of gene-edited crops, here comes a shocker. Scientists at the Tel Aviv University in Israel have warned that “the gene-editing technology, despite its substantial advantages, is not always safe and that sometimes rearranging pieces of DNA compromises genomic stability, possibly trigger cancer in the long run.” (*The Jerusalem Post*, July 24, 2022)

While several countries, including India, have already announced gene-editing technique to be free from the purview of GMO (genetically modified organisms) regulations, there are some countries, like New Zealand, which want gene-editing to be regulated like the GMOs. This clearly shows that while the debate on the safety of gene-edited crops remains inconclusive, the latest study by the Tel Aviv University in a way questions the hurry with which some countries are ensuring that the risk potential of these crops remains outside the public glare.

In fact, over the years, the campaign to keep GM crops outside the regulatory mechanism has been gaining ground. So much so that some countries, like the U.S., is even questioning the refusal by some other countries, including the European Union, to allow agricultural commodities, which have transgenic material beyond the permissible limit, as a trade distortive policy threatening to draw them to the WTO Dispute Settlement mechanism. Nevertheless, the continuing debate on GM crops does not remain confined to regulation and compliance but is mired in risk-benefit analysis and ‘questions of deep democratic significance that GM crops pose’.

In his book, *Genetically Modified Democracy: Transgenic Crops in Contemporary India*, Aniket Aga, an associate professor of environmental sciences at Ashoka University, has not only examined the various contexts in which the controversy surrounding the entry of GM crops in India is seen, but also provides an insight into the democratic debate — which he calls as a story not just of farmers and private companies but transcending to bureaucrats, political parties, State governments, scientists, policy makers, courts, and activists. As someone who was involved in the GM debate, I found the analysis not only deeply grounded but also providing a fascinating insight into the way the entire debate played out in the realm of democracy.

Agrarian capitalism

The book is organised in three parts — institutionalising biotechnology, the government of biotechnology and remaking agrarian capitalism. Based on three years of meticulous research, which included spending two years in the fields, Aga traces the beginning of biotechnology research, looks into the policy making on GM crops, and finally dwells into the political economy foraying into what he calls as “agrarian capitalism.” I find this term to be particularly useful when in the context of the ongoing debate on growing inequality, the international charity Oxfam lists the emergence of 68 more billionaires from the food sector during the pandemic years. The spate of recent mergers and acquisitions has narrowed down the control over food into the hands of a few multinationals, and this extends powerful influence over the way global policies on food and agriculture are being laid out.

GM crop is a part of this approach. Controlling seeds, through an IPR-Plus regime, ultimately extends control over food. Biotechnology interventions, through the introduction of an external gene, are cited as an invention therefore requiring patents. At the same time, IPR laws are being suitably amended, and in many countries traditional seeds are being outlawed, making it easier to introduce GM crops. The opposition from Indian activists, especially the Coalition for GM Free India, which repeatedly questioned the ‘sound science’ principle offered by GM advocates, actually used scientific arguments to dispel the industry propaganda. Deftly, the book traces the growing public opinion against the entry of first genetically-modified food crop, Bt brinjal, that eventually led to a moratorium on its commercial approval that the then environment minister Jairam Ramesh announced.

Role of seed retailers

Besides the role played by scientists, policy makers and activists, the book looks into an unaccounted but very important role played by seed retailers in promoting seeds of Bt cotton, the only GM crop that has been approved for commercial application in India. Calling them ‘merchants of knowledge’, Aga finds out how retailers try different techniques of persuasion with different farmers. This not only conforms to GM seeds but also to other agriculture inputs. The logic of margins and incentives governs the sale of seeds, and through a series of interviews he brings out the enormous economic relation that retailers play out in agrarian life.

Eventually, this leads to the bigger question of GM crops in relation to the pressing problems of sustainable agriculture, nutrition and dignified livelihoods that the book explores. In India, agrarian distress emanates from public policy gaffes, and to believe that technological innovations alone can

provide the answers may perhaps be too short-sighted. It hasn't done so far. "The same holds true for gene-edited crops which are being sold again with the same promise — as a solution to the global problem of hunger and farming," says the author.

For all its historical importance, the book is an excellent treatise into the GM debate, and the way it has influenced democracy.

Genetically Modified Democracy: Transgenic Crops in Contemporary India; Aniket Aga, Orient BlackSwan, Rs. 1,245.

The writer is a researcher and food policy expert.