

**Aniket Aga**, *Genetically Modified Democracy: Transgenic Crops in Contemporary India*, New Haven: Yale University Press, 2021. ISBN: 9780300245905 (cloth)

The past few decades of social research on genetically modified (GM, or transgenic) crops have featured a persistent divide. Many scholars examine GM crops in terms of capitalist political economy, including processes of globalisation, neoliberalisation, control of plant reproduction, and social movement opposition to these forces. At the same time, there are numerous writers who, viewing GM crops as beneficial (or at least neutral) technologies, focus on explaining why these products have become tangled up in messy politics, hindering their advance. In *Genetically Modified Democracy: Transgenic Crops in Contemporary India*, Aniket Aga critiques both of these strands of GM research for overly emphasising transnational firms, Western policies and priorities (including those of anti-GM groups like Greenpeace), and international institutions like the World Trade Organization and the Cartagena Protocol on Biosafety. As a corrective, Aga goes in-depth with a study of the history and governance of GM crops in India, carefully unravelling truisms about the Green Revolution, Monsanto, farmer protests, neoliberalism, and technocratic governance. The result is a nuanced study that starts with the construction of India's bureaucratic system for promoting and regulating biotechnology, moves into a detailed account of how that bureaucracy, as well as the courts and state governments, have responded to anti-GM activists' multi-pronged opposition strategies, and finally considers the on-the-ground realities of India's seed industry and the farmers who interact with it.

Aga is an anthropologist who has been studying and writing about the GM crop debates in India since 2011. His sustained attention to this topic has enabled him to develop access to documents, individuals, and settings that are not often represented. We get a view of India through interviews with the scientists who initiated the "new biology", ethnographic observation of one of the overworked offices that reviews regulatory permits for GMOs, and close analysis of

farmer conversations with seed dealers. While the focus is on national, state, and local dynamics, global forces are not absent. Those new biologists were trained in US and UK institutions, the regulatory offices were attuned to the global discourse of “biosafety”, and the seeds being sold are engineered with Monsanto’s Bt trait. However, in a clear and direct voice, Aga shows the flaws in common generalisations about the power of these global forces.

First, Aga shows how biotechnology research began in India in the 1960s, in parallel with—not stemming from—the Green Revolution. Indeed, the fervent advocates of biotechnology seemed to have little interest in applying their work to food production, though in the pursuit of public funding, they hyped the possibilities (such as nitrogen fixation for a wide variety of crops, which proved impossible). In another revealing chapter, Aga explains that the anti-GM movement in India does not share a vision for the future of agriculture or environmental protection. Instead, the movement is a loose coalition across a wide political spectrum, united by a singular focus on GM crops. For instance, right-wing nationalism is one of the motivations for protecting the domestic seed industry against multinational corporations. This characterisation of the movement balances accounts that focus primarily on the agri-ecological visions espoused by prominent figures like Vandana Shiva and transnational activist networks. The final third of the book is the strongest, relating Aga’s ethnographic observations of petty retailers of agricultural inputs in Maharashtra and analysing the changing structure of the private seed industry. Here, Aga shows that while the trajectory of change in India has been toward privatisation and liberalisation of seed exchange, farmers do not experience this as conflict with multinational companies. Instead, farmers become reliant—for both inputs and advice—on local retailers, themselves once small-scale farmers in the region, who sometimes resort to “underhand measures” (p.236) in order to earn enough to pay their debts to the suppliers.

Each of these points is well made, challenging many accounts of the “global” GM controversy. However, as a reader, I was dissatisfied with the style of Aga’s engagement with

other authors. At various points in the text, it is clear that Aga is arguing with particular writers, but he does not describe their work sufficiently to allow readers to evaluate these arguments. If one has not read the work of Kaushik Sunder Rajan, Ronald Herring, or others Aga mentions differing with, one would only get a shallow impression of why Aga is distinguishing his work from theirs. Likewise, theoretical work that Aga relies upon in framing his arguments (particularly that of Sheila Jasanoff) is only lightly summarised. This may very well be the result of an editorial process that encouraged him not to get bogged down in academic debate, focusing instead on the story. Or it may be that the intended audience for this book are those deeply immersed in these conversations and do not need further explanation of the literature. However, oblique references to particular scholars and their claims appear throughout the text, and as a reader (and as a recipient of some of Aga's criticism) I thought this distracted from his otherwise compelling storytelling.

The overarching story that Aga tells is one of democratic transformation. He contends that, through the GM controversy, the "last two decades saw a significant expansion in citizens' scrutiny of and dissidence against state science", though this has begun to "roll back under the Modi regime" (p.245). The early days of biotechnology research in India were, by Aga's account, lacking in public input or scrutiny, but participation has expanded. Activists have developed technical critiques of GM crops, while publics have formed around the idea of GM crops as "food"—giving everyone who eats standing to express an opinion. His comments about the construction of publics around a "food" framing are important for understanding the variability of GM politics across contexts and even across crops. Bt cotton and Bt eggplant, the two crops considered most extensively in this book, have had very different paths for this reason.

While I deeply appreciated the fine-grained attention to bureaucratic processes, arguments made in court, regional differences, and other processes that are commonly overlooked in sweeping assessments of GM crop debates, as a non-specialist in Indian politics I

sometimes wished for more explanation of the broader context. The story Aga tells is also a story of privatisation—diminishing state control of the production of seeds, even as bureaucratic institutions and public participation have grown, and here I wanted more explanation. Why, for instance, did the Agriculture Ministry have so little to do with GM crops and why has its power diminished? What was going on in the 1980s that made politicians support the formation of a Biotechnology Department, despite their lack of understanding of the new biology (p.91-93)? What was behind the major suite of changes that liberalised the seed industry in the late 1980s and early 1990s (p.184)? Aga acknowledges that this book is “only an initial step in mapping the controversy over GM crops in India” (p.250), and I will be eager to see the research that continues in this vein, answering the above questions as well as the ones that Aga poses in the book’s conclusion.

Ultimately, this is an important and necessary study of India’s GM politics, from the 1950s to the present. Aga corrects many false assumptions about, for instance, the relationship between the Green Revolution and biotechnology in India, the way the Monsanto operates vis-à-vis local seed dealers, and the political valence of anti-GM protests. For this reason, it should be required reading for anyone seeking to use the case of India to make political points about GM crops.

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