

CONCLUSION

As this book goes to press, all three lawsuits have reached their countries' highest courts. In the Bt cotton trait fee dispute, the out-of-court settlement between Bayer-Monsanto and Nuziveedu has put an end to all ongoing litigation. In the Bt brinjal case, both the public interest litigation and the criminal prosecution are before the Indian Supreme Court but have been in limbo for years. As for the RR soybean class action, all the appeals have been exhausted, though the farmers' unions and their lawyers do not rule out bringing a rescissory action questioning the Court's understanding that the object of the patent is a microorganism.¹ The rural unions are also considering filing a nullity action against 18 biotechnology patents that have already been granted as well as a number of patent applications under examination.

Independently of the final outcome, the decisions rendered thus far have already broken with the dominant paradigm by offering legal interpretations that balance the rights of patent holders against those of farmers, food security, and the public interest. Indeed, these lawsuits have evolved to challenge fundamental dimensions of the corporate food regime in agriculture.

First, these legal challenges aimed to redefine the relationship between public and private orderings. A defining characteristic of the corporate food regime has been the penetration of private capital into the public

sphere through mechanisms such as public–private partnerships. The result, as evidenced most clearly by the Bt brinjal case, is that boundaries between public and private interests are blurred and it becomes more difficult for the state to act in the public interest.

In all three cases examined in this book, corporations have used private intellectual property (IP) instruments to bypass existing safeguards in public laws regulating IP rights in agriculture. In Brazil, the private IP regime was implemented in the form of private contracts among the different players in the soybean industry for testing soybeans and charging royalties when farmers sell their harvests to the grain elevator. That system effectively prevented farmers from freely saving seeds for replanting. In India, a private IP regime was implemented more upstream in the soybean production chain, through sublicensing agreements with the seed companies producing Bt cotton. These agreements stipulated that the Bt trait could only be introgressed in hybrid varieties whose seeds cannot be efficiently saved for replanting. In both countries, these private IP systems ensured that Monsanto was able to exact high rates of royalties, regardless of whether the corporation held a valid patent (in the case of Roundup Ready 1 soybean) or had even applied for one (in the case of BG-I Bt cotton). Most important, these private IP systems ensured that farmers could not exercise the right to freely save and replant seeds guaranteed under the domestic plant variety protection (PVP) legislation. In their legal challenges, litigants questioned this subordination of constitutional rights and public law to private contract law. In Brazil, farmers' unions argued that a private contract signed between Monsanto and the producers' federation, without farmers' having been consulted, could not deprive those farmers of their statutory rights. In India, the private arrangements signed with seed producers were even further removed from farmers, yet the cost of royalties was ultimately passed on to farmers in the high price of Bt cotton seeds. Moreover, Brazilian and Indian litigants alike argued that the state has an obligation to guarantee the constitutional rights of its citizens, and therefore cannot recuse itself from intervening in these disputes on the grounds that the matter is the object of a private agreement.

Second, these legal cases—in particular, the Roundup Ready soybean class action lawsuit—sought to revert the three-decade-old trend toward

the strengthening of property rights over plant varieties and to establish the right to save seeds as a fundamental right. Increasing restrictions on age-old seed-saving practices have been accompanied by a subtle yet disturbing shift in legal language, with farmers' rights to seeds increasingly couched as "privileges" and "exceptions" being subordinated to the dominant "rights" of plant breeders. There is an irony here for, as Susan Sell (2003, 5) reminds us, "IP rights used to be considered 'grants of privileges' that were explicitly recognized as exceptions to the rules against monopolies." With the shift toward proprietary seeds, the original meaning of "farmers' rights to save seeds" is being distorted, diluted, and ultimately lost. It is not uncommon to hear that the collection of royalties on grains harvested from saved seeds is "nothing but a due charge," since the farmer has in fact not paid royalties on saved seeds. This is, however, a distortion of the original meaning of farmers' rights. When farmers buy seeds from a protected variety, they pay royalties embedded in the price of that seed and, in exchange, they have the unfettered right to save seeds from that protected variety.² At the transnational level, the inclusion of rights to seed and to biological resources, as stated in the Declaration on the Rights of Peasants and Other People Working in Rural Areas, adopted by the United Nations in 2018, must be understood in this context (United Nations 2018). By incorporating these rights in the international human rights framework, agrarian movements along with their allies aim to revert the trend toward the marginalization of seed-saving practices and reassert the primacy of both individual and collective rights to seeds over trade and IP rights.

Third, these legal cases raised the thorny issue of the conflict between PVP law and patent law when it comes to biotech seeds. Monsanto has invariably argued that biotech traits fall under the exclusive protection of patent law, an interpretation upheld by the Supreme Courts of both Canada and the United States. In Brazil and India, where the patent and PVP legislation differ significantly from those of the United States and Canada, this conflict had not been addressed until recently. As I have detailed, Brazilian and Indian courts have wavered in their approach to this issue. Like its US and Canadian counterparts, the Brazilian Superior Court of Justice solved the conflict in favor of patent law. In contrast, India's Delhi High Court held that plant cells and seeds are explicitly

excluded from patentability under the Indian Patents Act and that transgenic seeds or plants therefore fall under the purview of the Protection of Plant Variety and Farmers Rights Act and its research and seed-saving exemptions.³

Fourth, the Delhi High Court came closest to addressing the more fundamental issue at stake in these legal disputes: that of the patentability of genes and plants. In its ruling, the high court questioned whether biotech traits—described in patent applications as nucleic acid sequences—could qualify as microorganisms patentable under the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This ties back to the ambiguous wording of Article 27.3(b) and to the lack of an agreed-on definition of what constitutes a microorganism. Breaking with the tendency of patent offices and courts to gloss over these discrepancies, the High Court held that a nucleic acid sequence is *not* a microscopic organism because it has no existence of its own and has no usefulness unless it is introgressed into plants, which are not themselves patentable.

While the Delhi High Court had the merit of addressing the more complex issues surrounding biotech patents, it has only scratched the surface. Indeed, patent law is increasingly out of step with the state of the art of scientific knowledge. Social scientists have shown how the reduction of a gene to a chemical compound that could be isolated has been instrumental in turning it into something considered patentable (McAfee 2003; Calvert and July 2011). Scientific advances over the past twenty years, however, have made this convenient simplification increasingly untenable. As epigenetics and postgenomics⁴ reveal the complex expression and regulation of genes, proteins, and their interactions with cells and organisms, they have rendered obsolete earlier conceptualizations of the gene, to the extent of questioning the concept of “gene” as a meaningful ontological category (Calvert and July 2011). Yet in a compelling example of discontinuities and ruptures among knowledge domains (Lock 2005), patent law continues to be based on reductionist conceptualizations of the gene. It is high time that IP law takes stock of these scientific developments and fully considers their implications for the patentability of life forms.

Taken together, these legal cases challenge the legitimacy of the TRIPS global IP regime in agriculture and contribute—even if only

incipiently—to the emergence of a new legal “common sense” concerning the patentability of seeds and plants (Souza Santos 2002). These cases illuminate the deeply political nature of patents. They also show how legal disputes around IP regimes for biotech crops in the Global South are forging the development of alternative legal interpretations of the balance between, on the one hand, property rights and, on the other, individual and collective rights to seeds. I fully concur with Shobita Parthasarathy (2017) that despite sustained efforts and pressures on the part of transnational corporations and their governments to further harmonize IP laws, true harmonization is likely to be impossible insofar as life forms are concerned.

The agricultural IP landscape is clearly in flux, and I will end by outlining emerging trends that will inflect future conflicts around IP and seeds. One major trend is the unabated pressure on countries to amend their domestic legislation so that plant breeders’ rights become akin to patents. By joining the 1991 Act of the UPOV Convention, a country reinforces the exclusive rights of plant breeders—for example, by extending these rights to the product of the harvest. In practice, this would institutionalize the private royalty collection systems implemented in countries like Brazil. Moreover, under UPOV 1991, a plant can be protected simultaneously by a patent and by plant breeders’ rights. In practice, this “dual protection” means that the more extensive protection granted by a patent ends up prevailing and thereby nullifying the exemptions under plant breeders’ rights. These legislative changes would foreclose the possibility of arbitrating the conflict between patent law and plant variety protection law in favor of the latter and would also prevent the kind of legal challenge mounted by farmers’ unions in Brazil.

The looming expiration of the first major agbiotech patents in agriculture—notably of the last foundational patent covering the Roundup Ready herbicide tolerance trait, in 2014⁵—prompted much speculation around what form a “post-patent era” might take. If the fierce fight around patents on new gene-editing technologies is any indication, patents will remain an important tool for industry to appropriate and profit off new technologies (Egelie et al. 2016; Montenegro de Wit 2020). Gene or genome editing (GE) refers to a range of techniques increasingly used since 2015

to alter the genetic material of plants, animals, and other organisms. The most commonly used GE technique, known as CRISPR Cas9, relies on the inherent ability of Cas9 enzymes to cleave foreign DNA (part of a bacteria's immune system). In contrast to earlier recombinant DNA techniques, whereby a trait is randomly inserted in the genome of a living organism, GE allows the insertion, deletion, or substitution of DNA sequences at specific sites in the genome.⁶ Genome editing could significantly expand the scope of proprietary rights in plants. Indeed, by overcoming a cell's protective mechanisms, genome editing opens access to the whole genome. Genome editing also expands the types of edits possible (knocking out, activating, silencing, altering, enhancing, deleting, or inserting) and increases the array of organisms in the agroecosystem that can be modified using genome editing techniques (animals, plants, soil microbes, insects).⁷ With genome editing, all of these become putatively subject to IP, leading some analysts to argue that there needs to be fundamental redesign of the IP system for plant innovation toward openness rather than exclusivity (Kock 2021).

Moreover, as the private IP systems discussed here make abundantly clear, it is imperative to look beyond public orderings through patents and plant variety protection. Indeed, the industry is actively devising new marketing strategies, including the use of regulatory data and approvals to retain control over its products in what has been labeled "IP-regulatory complexes" (Jefferson and Padmanabhan 2016; Marden, Godfrey, and Manion 2016). Even if a patent expires, the original patent holder can retain a significant level of market control through ownership of the regulatory data required to obtain approval. In fact, the cost of generating new data and documentation means that it is often cheaper for other companies to obtain a license from the original patent owner for an already-approved trait, even if the technology has entered the public domain.

Finally, a further development of relevance is the dematerialization of plant genetic resources—that is, the digitalization of genetic sequences and their storage in electronic databases. This raises daunting new challenges, since the international instruments in the matter of equitable access to genetic resources and benefit sharing have been built around access to and the circulation of material seed samples. Their

dematerialization renders these mechanisms obsolete and makes it more difficult to trace these resources back to the communities that cultivate them, therefore opening the door to biopiracy on a new scale.

Given the rapid pace at which biotechnology and IP regimes are coevolving, the challenge for farmers and agrarian activists alike will be to stay ahead of the game. One thing is certain: after over a decade of legal activism around intellectual property and biotech crops, they have become increasingly law-savvy.

This is a section of [doi:10.7551/mitpress/14484.001.0001](https://doi.org/10.7551/mitpress/14484.001.0001)

Seed Activism

Patent Politics and Litigation in the Global South

By: Karine E. Peschard

Citation:

Seed Activism: Patent Politics and Litigation in the Global South

By: Karine E. Peschard

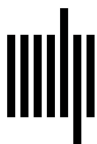
DOI: [10.7551/mitpress/14484.001.0001](https://doi.org/10.7551/mitpress/14484.001.0001)

ISBN (electronic): 9780262372237

Publisher: The MIT Press

Published: 2022

The open access edition of this book was made possible by generous funding and support from the Swiss National Science Foundation



The MIT Press

© 2022 Karine E. Peschard

This work is subject to a Creative Commons CC-BY-ND-NC license. Subject to such license, all rights are reserved.



The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Avenir by Westchester Publishing Services.

Published with the support of the Swiss National Science Foundation.
The prepress of this publication was funded by the Swiss National Science Foundation.

Library of Congress Cataloging-in-Publication Data is available.

ISBN: 9780262544641 (paperback); 9780262372220 (pdf); 9780262372237 (epub)