

## **A place for GMOs in Food Sovereignty?**

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## **A place for GMOs in Food Sovereignty?**

Over the past two years I have been developing research on the geopolitics of knowledge in food sovereignty knowledge exchange. As part of this work I travel with groups of people who are interested in how farmers and others involved in agriculture and food production are working to build food sovereignty in their communities. In January, 2017, I was traveling with a group in Cuba. While visiting a farm that practiced agroecological principles visitors asked questions about what the farmer was growing and about the impact of the U.S. blockade. Visitors are often curious about the blockade and especially changes in U.S. foreign policy towards Cuba. One person asked: “Are you worried about Monsanto coming in if the blockade is lifted?” To which the farmer replied (to the general surprise of the visitors): “What is Monsanto? I haven’t heard of that before.” To be in a place where the long arm of Monsanto has not reached—even in name—seems astounding. Transnational corporations—such as Monsanto—have cultivated horizontally and vertically integrated platforms that allow them to extend agricultural technologies, such as genetically modified organisms (GMOs) across the globe. This concentration of resources and profit in the broader food and agricultural production system have allowed for a simultaneous concentration of knowledge and power. Yet, cracks in this system continue to grow.

In my contribution to this forum, I ask if there is place for GMOs in food sovereignty. With the stated goals of ending hunger, improving nutrition, reducing chemical use, and sustaining farmers and consumers on a global scale GMOs seem a likely candidate to be adopted by those participating in a movement that seeks rights to food and agricultural resources. However, I argue that due to the apolitical, corporate trusteeship, profit-driven, and knowledge enclosure model behind most GMO production, there is no place for GMOs in food sovereignty. Furthermore, if food sovereignty aims to strike at the heart of the structural conditions that create inequality in the food system, the narrow focus of corporations on proximate problems through GMO production tends to reinforce those inequalities.

There is little doubt that from local to global scales our food and agricultural system is in distress. The concentration of land and agricultural resources in the hands of the few has exacerbated the imbalance in the allocation and distribution of food creating a two-fold crisis of resource and nutrient scarcity. Activism around food justice and food sovereignty represent key interventions and demands for a sustainable response to this crisis. GMOs are a proposed solution, yet is there a place for GMOs as part

of an agenda that seeks secure and just access to food and agricultural resources? GMOs offer the promise of crop stability in a climate-changed world, nutrient density for the worlds malnourished, and more food. However, GMOs are also a solution that suits the existing system, which privileges neoliberal discourses of food security that focus on the economic choices of the individual (cf. Fairbairn 2010), the financialization of food, industrial-scale production, and profit. Indeed, the utilization of GMOs has created a new type of private enclosure, whereby access to resources and knowledge is increasingly curtailed. At the same time as corporations and proponents of GMOs herald the benefits of their use, other voices are seeking radical change. Food sovereignty, broadly defined as the rights of states and peoples to the food system, has emerged as a potential path out of crisis. The discourses of food sovereignty call for the democratization of the food system (cf. La Vía Campesina 2007; Trauger 2017; Wittman et al. 2010).

Food sovereignty is simultaneously a movement and a narrative for change. It is a call for radical social, political, and economic change in food and agricultural systems. Despite the use of the term sovereignty, which we tend to tie to state and territory, food sovereignty has been deployed at a number of scales, from small towns to national constitutions. It is a global movement, mobilized across producer-consumer divides, and is a call for rights to the food and agricultural system. Proponents of food sovereignty stress rights to culturally appropriate food, access to land and resources, and the ability to define and sustain their food and agricultural systems. Ultimately, food sovereignty is about sharing and multiplying knowledge while building more sustainable, diverse, and just systems. It is a site for seeking solutions that get at the root of issues present in a neoliberal food regime (cf. McMichael 2009).

Proponents of GMOs claim another site of solution-seeking. When discussing the aims in adopting GMOs in the context of my food justice course, I find that it is easy for students to point the finger at Monsanto (and their contemporaries) and imagine evil plots to rule the world. Yet, drawing on the work of Schurman and Munro (2010), I caution my students to remember that there are researchers and scientists working for or funded by these corporations (and other means) who are likely not part of some world-domination scheme, but are instead seeking answers to what they view as serious problems in agriculture and food production that need to be addressed. They seek to advance science both in for-profit and non-profit venues. Problems such as weeds, pests, and viruses in farmers' fields become targeted for solution-seeking. Narratives about increasing the food supply and providing additional nutrition (such as with Golden Rice, or Cassava) are targeted at consumers of food, and in particular

marginalized or malnourished consumers. However, in proposing GMOs as a solution to these stated problems the power dimensions and political-economic unevenness embedded in broader food and agricultural systems tend to be ignored and rendered apolitical. Conversely, a food sovereignty approach makes visible the uneven power dimensions in the food system. Food sovereignty proponents maintain that the allocation and distribution of food and agricultural resources is political.

As we seek to locate power and right the wrongs of the food system, GMOs offer a lens for the promises and pitfalls of apolitical technical fixes. The introduction of GMOs as part of a corporate-led, global-industrial food system is a demonstration of trusteeship, which renders technical and anti-political (cf. Ferguson 1994) the issues faced in an unequal agricultural arena. Trusteeship is not about dominance, but about directing and providing tools for action—it is a claim to help others help themselves and an intervention to fix what are viewed by the trustee as problems. By pointing to a need for seeds with higher and more nutrient-rich yields, improved pest and weed control, and anti-viral capacities proponents of GMOs tend to erase the political foundations of such problems. Put differently, through promoting a narrative that casts into a future in need of a technological fix, the underlying political economies of industrial agricultural production are erased. It no longer becomes necessary to question how we got to this agricultural place, but instead how to get out of it. By rendering issues in food and agricultural production technical, and through a positioning as the trustee, corporate GMO harnesses and controls the knowledge of the problems—and their solutions.

Engineering seed in a lab and patenting the process consolidates control over knowledge. The introduction of GMO technology underscores a paradigm of technological fixes that only address the proximate, allowing for the potential perpetuation of endless problems and technical fixes. This results in a twofold enclosure: first, through enclosing knowledge; and second, through enclosing production. The enclosure of knowledge is tied to making seed and the process to generate GMO seed private property. Yet, and possibly more importantly, it is tied to the dismissal of producer knowledge and attempts to fix systems of production (trusteeship). The promotion and adoption of GMOs effectively alienates producers from their land and systems of production, while delegitimizing their practices. The enclosure of production is simultaneous as industrial monoculture (which came long before GMOs) becomes tied to corporate surveillance. Producer practices are surveilled and the control over private property (the GMO seed) multiples this surveillance among producers. This consolidation of knowledge and property intensifies many problems that the very system that perpetuated them is called on to then fix.

The major claims of corporate GMO of the benefits of transgenic seed have been consistently disputed by scholars and activists. Claims that the RoundUp Ready generation of seeds and Starlink corn have reduced chemical use are complicated by competing evidence of super-weeds and -pests. Likewise, arguments about feeding the world fall flat as the vast majority of GMO production is in soy, corn, sugar beets, and cotton, products that ultimately go to animal feed and hyper-processed foods or textile production. GMOs often miss their mark in attempting to address these proximate problems. Indeed, such claims address surface issues while eliding the role that corporate, industrial agriculture played and continues to play in creating them. Such surface issues are not the stuff of food sovereignty, which would be used instead, for example, to argue for small-to-medium sized, polycultural production, and an emphasis on grain production that is not primarily allocated to fuel and animal-protein production or hyper-processed foods.

It is perhaps difficult to argue against providing solutions to hunger as corporate GMO claims to do, but as Bill Moseley contends (this forum) the conflation of producing more food with feeding the hungry is problematic. We do not have a problem with production yields, people are not hungry because we are not producing enough. We have a problem of allocation and distribution of food and agricultural resources (including land and water). Furthermore, the introduction of the Arctic Apple, which is engineered to not turn brown when sliced, raises additional questions about who benefits from such technology. Very little focus in the genetic engineering of seeds appears to be directed at providing accessible, culturally appropriate, and healthful food. Instead, GMOs appear to be corporate solutions to corporate problems. My colleague McKay Jenkins at the University of Delaware, when discussing his new book on the GMO debate (2017), makes the case that a non-browning apple would help McDonalds in its efforts to recast meals for kids as healthier by having pre-sliced (and still appealing) apples included. This type of for-profit genetic modification is an anathema to food sovereignty principles, which are used to increase diversity in the field and on the table and address the imbalances in access to healthful food.

The underlying issues identified by corporate GMO for “fixes” are tied to much larger structural conditions pointing to a food system where profit is valued over people. World-domination plots aside, there is a clear focus on controlling knowledge through a corporate, profit-driven model in most GMO production (GMO papaya and cassava stand out as non-profit examples). GMOs are a band-aid. They are not a long-term solution, nor do they address the root causes of the most pressing problems we face in a global-industrial food system. In fact, in many cases, GMOs exacerbate these problems. GMOs enclose

land, resources, and knowledge, further concentrating power in the hands of a few. In the classroom, I often describe seed-based genetic engineering as ‘something that could not happen outside the lab.’ Access to knowledge is restricted. Again, I point not to GMOs as *the* problem, but as a set of proximate solutions to the broader challenges posed by corporate-industrial agriculture, which privileges monoculture production, chemical inputs, contracts, and the concentration of resources and wealth. The integration of seed production into the portfolios of for-profit chemical companies aggravates these challenges even as, in their trustee role, corporate GMOs are presented as solutions.

In a small minority of cases, issues that farmers are dealing with that stem from industrial agriculture such as increased susceptibility to disease due to monoculture production and climate change (to which industrial agriculture is a major contributor) can potentially be addressed, in the immediate, using transgenic seeds. Rainbow Papaya was engineered (not for profit) to resist a virus (Jenkins 2017) and researchers are also developing seeds that can withstand flooding and incursions of salt water in fields (see also Ronald in this forum). However, these types of technical fixes should not be adopted in place of striving for radical change in the way we *do* agriculture.

There is a real need to re-politicize the broader challenges in our food and agricultural production systems and to bring a diversity of knowledges to the discussion. We cannot begin to address the imbalanced allocation and distribution of food and agricultural resources until we begin to value people over profit. This is not to say that GMOs are a non-politicized issue, we need only look to the ballot measures across the United States to see that their introduction into the food system is contentious. However, through rendering technical, the focus has turned to concerns over the safety GMOs. What must be politicized is the injustices that are perpetuated through a corporate-industrial food system and GMOs as an extension of that. The application of food sovereignty principles is one way to do this.

I do not point to food sovereignty as the panacea. Moreover, scholars continue to debate the application and merits of food sovereignty. Nonetheless, food sovereignty narratives are an important site for thinking about how to address the root causes of the problems that are elided by many proposed solutions—and GMOs are not the only culprit. I bring it to the table for this conversation because the concerns raised by food sovereignty activists and scholars point to a mismatch between what are construed as priorities in the exchange of food and agricultural products and resources—feeding people—and the realities of an industrial-corporate model, which must generate profit. If we think more about food and agricultural resources as sites of interpersonal exchange rather than sites of

commodity exchange for surplus value we might find a new approach to addressing the challenges faced.

GMOs provide a balm to the proximate causes of problems in a global-industrial agricultural system. Simultaneously, their adoption serves as a site of enclosure and an apolitical fix that ignores power imbalances and promotes corporate trusteeship. The movement for food sovereignty is focused on getting at the root causes through addressing the structural inequities in access to land and resources, in the allocation and distribution of food, and in attempting to democratize the food system. The question we should be asking as we seek to address issues facing producers and consumers is not, “should we have GMOs?” but is instead, “why GMOs?”

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