

## Organic movement schism? Fight over hydroponics puts \$50 billion industry in limbo

Though it's too early to tell whether it's imploding — or merely suffering growing pains — the \$50 billion American organic industry is going through some serious soul-searching.

While some organic pioneers are bemoaning what they perceive as the ongoing degradation of a brand founded in an ideological movement, others see this as a time to critically reassess what organic really means, and how that ancient model of agriculture fits into the bigger picture of feeding and fueling 7.6 billion people in the 21st century.

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The industry has long grappled with internal philosophical fissures. But these recently turned into a [very public split](#) when the US Department of Agriculture ruled that hydroponic and aquaponic farms, which grow crops in nutrient solutions, and frequently indoors, could continue to display the economically valuable organic seal.

Organic pioneers were outraged, claiming the Nov. 1 decision [undermined the founding principles](#) of a movement dedicated to soil health and regeneration. “They did incalculable damage to the seal,” lamented organic tomato farmer Dave Chapman in an interview with [the Washington Post](#). “It’s just going to take them a while to realize it.”

Some of the reaction was grounded in the organic movement’s general disdain for large agribusiness firms, such as Driscoll’s, a conventional and organic grower that has used hydroponics to capture a significant share of the fresh berry market. A [similar uproar](#) occurred earlier this year around claims that certain producers, most notably “industrial” dairies, weren’t meeting the spirit —and perhaps not even the legal requirements —of the organic brand.

Though big business doesn’t dovetail with the bucolic, small farm image that the organic brand trades on, it’s part and parcel of the actual workings of the industry. Indeed, many organic food companies have already [sold out to multinational corporations](#) like General Mills, Post, Smuckers, Coca-Cola, Miller-Coors, Nestle, Perdue Farms, Kellogg’s and Hain-Celestial.

And some hydroponic growers, such as those represented by the Recirculating Farms Coalition, are in fact small, eco-friendly farmers who staunchly defended their practices. Following the ruling, Marianne Cufone, the Coalition’s executive director, [issued a statement](#) that read, in part:

*“By siding with current science and recognizing that existing law purposely leaves the door open for various farming methods, the NOSB is sending a critical message that sustainability and innovation are valuable in U.S. agriculture.”*

Still, as [National Public Radio pointed out](#), the fight really seems to be grounded in market share, since hydroponic operations are already dominating organic tomato, pepper, lettuce, cucumber and berry production. That economic reality may explain why the NOSB accepted hydroponics and aquaculture, but

rejected aeroponics, a related practice that has yet to attract the same consumer base.



And despite Cufone’s optimistic assessment, the NOSB appears to have ignored sustainability, innovation and science in its treatment of biotechnology, which is poised to deliver crops that can survive on minimal water and produce high yields without the use of chemical fertilizers. These applications and others now being developed by public sector researchers certainly appear compatible with the environmental and populist visions of the organic movement.

Nevertheless, the Board [last year reaffirmed](#) its complete rejection of gene editing and synthetic biology with the dubious claim that “every organic stakeholder is clear that genetic engineering is an imminent threat to organic integrity.”

However, at least two organic farmers, Raoul Adamchak and [Amy Hepworth](#), see value in GE. They’re at the forefront of an effort to make organic farming more inclusive, which could mean growing crops genetically engineered to ward off insects without the use of pesticide applications — synthetic or organic.

“The organic movement was successful in changing the way the agricultural industry operates,” Hepworth, a seventh-generation family farmer who grows 400 acres of certified organic vegetables in New York, told the Alliance for Science. “But the time has come to release ourselves from the tyranny of the label —

taking its valuable lessons and evolving beyond organic to create the safest, most ecologically, economically, and socially-just agricultural system possible. Advances in biotechnology are a natural fit to meet the demand of the population for sustainably grown food.”

Adamchak, who teaches organic farming at the University of California-Davis, has proposed a new certification program for “sustainable agriculture” that would include GE crops. “I think there can be improvements made to organic agriculture that are science-based,” he said. “It’s a time when we need all the tools possible.”

Dan Blaustein-Rejto, The Breakthrough Institute’s agricultural analyst, is taking it one step further. He’s begun arguing that organic production is a luxury we can’t afford to indulge in this era of increasingly erratic weather patterns and a burgeoning population:

Rather than focusing on organic production, we ought to promote any production method that minimizes land use and farming’s other environmental impacts while providing enough healthy food for everyone.

Biotech isn’t the only area where the organic industry has found itself on the wrong side of science. The Organic Consumers Association helps to [fund the anti-GMO movement](#), which associates with anti-vaccine activists and health quacks. This year, two documentaries — Food Evolution and Science Moms — brought the anti-GMO movement’s cognitive dissonance and scientific silliness to the screen.

Meanwhile, researchers have begun challenging the industry’s claims of environmental superiority, noting that organic growers do use pesticides and typically engage in more tillage than conventional farmers, a practice that contributes to erosion, topsoil loss and carbon emissions. Organic farmers also rely on animal fertilizers, and the livestock industry has been taking a beating for its contribution to climate change.

Other [studies have questioned](#) whether organic agriculture can produce sufficient quantities of food to meet global demand — without requiring everyone to go vegetarian and/or expand farming into wild areas.

Nutritionists fret that pesticide fears stoked by the organic industry are causing people to [shy away from eating](#) conventionally grown fresh fruits and veggies, even though samples consistently show they contain only trace residues. Others object to the way that organic marketing has contributed to food elitism and romanticized — some would say impractical — notions about farming.

As a result, some media sources have been [looking more critically](#) at core consumer assumptions about the organic brand, notably its claims to be [pesticide-free](#) and [more nutritious](#) than its conventionally grown counterpart.

And though the industry has been wildly successful at marketing, it’s now facing challenges in that arena — again [from within its own ranks](#). The Detox Project [recently launched](#) its “glyphosate residue-free” verification and labeling project with the ominous warning that “even organic isn’t enough” to ensure that a product is free of the widely used — and [heavily demonized](#) — herbicide. In the opportunistic world of



marketing, it seems someone is always ready to up the ante.

This new public scrutiny underscores a widening rift within the industry itself over what organic really means today, some 70 years after the movement [first began to take hold](#). Although some organic pioneers are [threatening to pack up their marbles](#) and go home, other farmers and researchers are questioning whether the original practices and philosophy can — or should — endure intact in the face of climate change and science-based agricultural innovations.

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