

Hydroponics

Hydroponics Should Not Be Certified Organic

Hydroponic production is a method of growing where almost all the nutritional needs of a plant are provided through liquid feeding. Some hydroponic systems involve growing plants directly within nutrient-rich liquid solutions, while others use containers filled with solid mediums like shredded coconut husks, gravel or other materials to hold the plant up while using liquid nutrients to feed the plant.

Organic agriculture has always focused on soil health, yet hydroponic growers have recently sought organic certification. Organic farmers argue that organic regulations require that the plant get its nutrients from practices that support healthy soil. The USDA has allowed hydroponic production to be certified organic, and organic farmers disagree.

ORGANIC DEFINED:

The USDA's National Organic Standards Board (NOSB) in 1995 defined organic as "an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity." ² The core principles of organic include eliminating synthetic inputs and minimizing other off-farm inputs, as well as promoting long-term soil health through practices like cover crops and crop rotation. Underpinning these foundational principles is the potential for ecologically responsible and regenerative soil-based farming practices, not only to mitigate the harmful effects of conventional agriculture, but to positively impact human health, communities, and the environment.

Soil-based organic systems build healthy soil nutrient cycles, prevent erosion, provide habitat for biodiverse species, mitigate CO₂ emissions by sequestering soil carbon, and more.

WHAT'S AT STAKE

Consumer trust: The US' thriving organic market rests on consumers' willingness to pay premiums for certified organic foods, which they consider more nutritious, environmentally friendly, and natural than conventionally grown foods. It is not clear that consumers think hydroponics have these same characteristics. Indeed, early studies show that consumers consider organic hydroponics significantly less "natural" than equivalent soil-grown organic foods. If consumers cannot distinguish soil-grown organics from hydroponics, they may not be willing to pay the same premiums for organic, eroding the integrity of the organic label.

Global impact on American family farmers: Big investment by multinational corporations is driving the current unprecedented growth of the hydroponics industry. Because most other countries, including Canada, Mexico, and the EU, have prohibited organic certification of hydroponics, these countries' industrial 'organic' hydroponic producers export their produce to the US en masse, where, because the US permits hydroponics to be certified organic, they can still command an organic premium. The influx of organic-certified hydroponic imports without sufficient consumer transparency undercuts the price premiums American local organic produce farms rely on to survive, which imperils local food systems, jobs, and communities.

CO₂ mitigation: Soil carbon sequestration is key to mitigating the environmental impact of CO₂ emissions. The Rodale Institute estimates that with widespread adoption of organic regenerative farming, soils could sequester the entire 52 gigatons of CO₂ equivalents emitted globally every year. Hydroponic systems do not recycle carbon into the soil, squandering the opportunity to maximize soil carbon storage and effectively combat the climate crisis.

WHERE DOES THAT LEAVE HYDROPONICS?

OFA supports hydroponic producers--they just shouldn't be eligible for organic certification. With crises like infectious disease and climate change likely to continue to re-shape the food system, hydroponics may prove an important contributor to securing food security worldwide. By enabling farmers to grow fresh produce with minimal space, hydroponics can help eliminate the growing problem of urban food deserts while empowering land-poor regions to build sustainable local food systems.

Rather than inaccurately lumping hydroponics into the organic label, we feel strongly this separate industry should introduce a new, separate label for sustainable hydroponic production like the new Clean Hydroponic Produce Standard being developed by Alliance for Sustainable Hydroponics. This approach would more meaningfully acknowledge the important benefits these systems provide and provide consumers more transparency in the grocery store.

A BRIEF HISTORY OF HYDROPONICS & ORGANICS

Hydroponics has not always been allowed in organic certification. Here's a brief history of the controversy.

