



WHY HYDROPONICS SHOULD NOT BE CERTIFIED ORGANIC

HYDROPONICS ARE CROPS that are grown in nutrient rich solutions rather than soil.¹ The majority of hydroponic crops are grown indoors in greenhouses, storage containers, and other structures.²

Many variations of hydroponic support systems deliver nutrients to a plant's roots through liquid solutions, and sometimes solid materials such as peat moss, vermiculite, and perlite.³ Another variation, known as aeroponics, suspends a plant's roots in air and continually mists them with nutrient solutions.⁴

While many plants could be grown hydroponically, the most common commercial hydroponic crops grown today include leaf lettuce, tomatoes, peppers, cucumbers, strawberries, watercress, celery, and herbs.⁵

WHY HYDROPONICS SHOULD NOT BE CERTIFIED ORGANIC

The United States Department of Agriculture (USDA) currently allows hydroponic production to be certified organic.⁶ However, **hydroponic systems are fundamentally different from organic production systems as defined by federal law**

and therefore should not be eligible for organic certification. As isolated systems, hydroponic production does not build soil fertility, the hallmark of organic farming. For example, the most common nutrients used in hydroponic solutions are synthetic salts, most of which are not permitted in products labeled organic.⁷

ORGANIC STANDARDS TIMELINE

1990—The Organic Foods Production Act (OFPA) establishes baseline requirements for organic production and handling systems that not only apply to agricultural materials like seeds and herbicides but also to farming practices.⁸ OFPA's framework for organic crop production includes provisions designed to "foster soil fertility" through soil management methods.⁹ OFPA also established the National Organic Standards Board (NOSB), a 15-member board composed of farmers, handlers, environmental experts, scientists, certifiers, and other representatives of the public interest, to provide the USDA with recommendations on the implementation of the OFPA, and how organic labeling should be carried out.¹⁰

The Organic label and standards for organic production were created by Congress with input from organic farmers, producers, certifiers, retailers, and consumers. In creating these standards, consumers, farmers, producers, certifiers, and retailers have defined organic agriculture as an ecologically-

balanced production system. This is reflected in part in requirements in the organic statute and regulations which require organic producers to foster soil fertility, improve soil quality, and use environmentally beneficial farming methods such as manure application, cover crops, and crop rotation.

ORGANIC

VS

HYDROPONICS

Most hydroponics are grown in liquid solutions or other isolated ecosystems and therefore are unable to enhance soil fertility or increase biodiversity.

2010—The NOSB is tasked with reviewing the issue of whether and how hydroponic production can meet the requirements of organic production and recommended that the USDA prohibit certification of hydroponic systems.¹¹

2015—NOSB's recommendation prompts the USDA to form the Hydroponics and Aquaponics Task Force in 2015 to determine whether hydroponic production could comply with organic regulations. Every subcommittee on the Hydroponics and Aquaponics Task Force agrees that not all hydroponic production systems comply with organic regulations.¹² In response, at the fall 2016 NOSB meeting, the NOSB passed a resolution stating the Board's consensus that "hydroponic systems that have an entirely water based substrate" do not meet the standards of organic production and thus cannot be certified organic.¹³

2017—NOSB releases *another* document proposing to prohibit aeroponics, hydroponics, and aquaponics under OFPA's regulatory section dealing with allowed substances, methods, and ingredients.¹⁴ USDA fails to respond to the NOSB's proposal and issued a statement contradictory to both the Task Force and NOSB recommendations on its website, stating that hydroponics may be certified organic.

2018 (January)—Center for Food Safety (CFS) and 13 other organic trade groups and organic farmers submit the Hydroponics Rulemaking Petition to USDA and the Agricultural Marketing Service (AMS) requesting that USDA issue regulations prohibiting organic certification of hydroponic agricultural production.

2018 (June)—The National Organics Program (NOP) denies the Hydroponics Petition and states that hydroponic production may be certified organic "if done in compliance with OFPA and the USDA organic regulations."¹⁵ USDA does not explain how hydroponic production can meet the mandatory soil fertility requirements that mark the hallmarks of organic crop production, but argues that hydroponic production systems do not need to improve soil conditions since they do not use soil.¹⁶ USDA's failure to prohibit hydroponic crops eligibility for organic certification is inconsistent with organic standards and the OFPA.

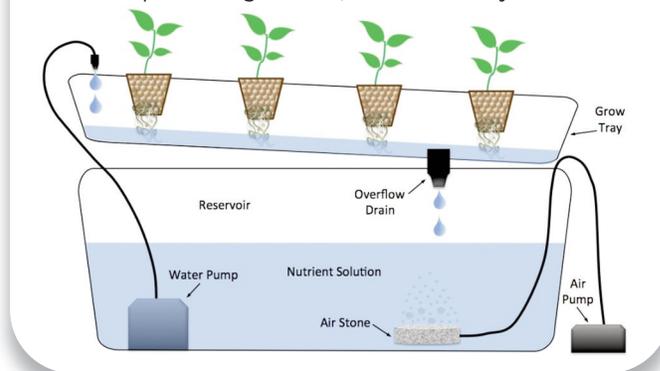
BENEFITS OF HYDROPONIC PRODUCTION

While hydroponic systems do not meet the standards for organic certification due to their inability to increase soil health, CFS supports hydroponic practices for their other environmental and social benefits. For example, hydroponic systems can be grown in urban areas where soil-based crop production is difficult due to unfavorable climate, lack of natural resources, and limited physical space. Urban horticulture with a focus on hydroponics can also have a positive impact on the greening and cleaning of cities by improving air quality and offering green zones for microclimate changes including shade, temperature, and sequestration of carbon dioxide.¹⁷

A GROWING INDUSTRY

Since the federal Certified Organic label was introduced more than 20 years ago, the organic food market has grown exponentially and is expected to reach \$70 billion by 2025.¹⁸

In 2015, the hydroponic industry was valued at \$19.95 billion. The global hydroponics crop value is anticipated to grow to \$27.33 billion by 2020.¹⁹



HOW FALSE LABELING HURTS ORGANIC CONSUMERS

By allowing hydroponic production to be certified as organic, USDA is misleading consumers and undermining the integrity of the Certified Organic label. Consumers trust the USDA Certified Organic label and pay extra for these foods that are grown in a more healthful and environmentally-friendly way. Within the organic industry, multinational corporations are buying organic brands to compete with small food producers using environmentally-friendly methods.

HOW FALSE LABELING HURTS ORGANIC FARMERS

Organic certification requires organic farmers to make significant investments because organic farms are often more labor and management intensive compared to conventional farms. By allowing hydroponic farms to obtain organic certification without actually benefiting soil health and ecosystem stability, USDA puts soil-based organic farmers at a significant economical disadvantage.

HOW CFS IS FIGHTING FOR STRONG ORGANIC STANDARDS

CFS has been protecting the integrity of the federal organic standard since the 1990s. As a representative for all organic stakeholders, CFS has a strong vested interest in maintaining the integrity of the National Organic Program and ensuring that consistent principles and standards of organic certification apply to all products with the Certified Organic label.

WHAT'S NEXT

In March 2020, CFS, along with a coalition of organic farms and stakeholder groups, filed a lawsuit in federal court challenging USDA's denial of CFS's legal petition requesting USDA to prohibit organic certification of hydroponic agricultural production.