

WILL HYDROPONIC AND AQUAPONIC PRODUCTION REMAIN ORGANIC?

BY BRIAN FILIPOWICH



National Organic Standards Board signals intent to revoke hydroponic and aquaponic organic certification eligibility.

The National Organic Standards Board (NOSB) met in November to deliberate on whether produce grown in water-based, soilless systems like hydroponics and aquaponics can remain eligible for organic certification. The issue has been percolating since the passage of the 1990 Organic Foods Production Act, as two sides debate what it means to be “organic”. In 2016, there are 52 certified organic hydroponic or aquaponic operations.

NOSB was scheduled to hold a vote to decide if these new growing methods should continue to be eligible for organic certification. Rather than making a decision, NOSB voted to send the issue back to the Crops Subcommittee because more details are needed before a final decision. NOSB did pass a non-binding resolution signaling its intent, which included the following: “The NOSB recognizes that the foundation of organic agriculture is based on a systems approach to producing food in the natural environment, which respects the complex dynamic interaction between soil, water, air, sunlight, plants and animals needed to produce a thriving eco-system.

“In the case of the hydroponic/bioponic/aquaponic issue, it is the consensus of the current members of the NOSB to prohibit hydroponic systems that have an entirely water-based substrate.”

Miles McEvoy, director of the National Organics Program (NOP), noted that even if

the NOSB does vote to exclude hydroponics and aquaponics it will be a long process for the NOP to write and implement the rules. NOSB is an advisory board to the NOP. In fact, the NOSB voted in 2010 to exclude these methods but the NOP did not act. However, observers believe that a second vote would force the NOP to act.

Differing views of organic production

At issue is what consumers expect when they see the organic label. Soil-only organic advocates argue that nurturing a healthy soil ecosystem is intrinsic to the philosophy and substance of organic produce. They also note that their markets for organic produce are being flooded with international hydroponic produce from countries where hydroponics is not organic-eligible. These advocates have been very active and have held large rallies with U.S. Senator Patrick Leahy (D-VT) and other members of Congress.

On the other side, “bioponic” advocates argue that their produce can meet consumers’ organic expectations:

1. Produce without synthetic chemicals and antibiotics.
2. Produce grown sustainably.
3. Produce that relies on biological activity to deliver nutrients to plants rather than inert chemical solutions.

NOP's Hydroponic and Aquaponic Task Force Report coined the phrase "bioponic" to refer to the methods that rely on active bacteria to feed plants in soilless systems. Dr. Sarah Taber, director of food safety for the Aquaponics Association, noted that extensive research has found the same quantity and diversity of bacteria on the roots of bioponic plants as in soil.

Limiting organic production

The original 2010 NOSB recommendation to ban organic hydroponics referred to the practice as "inert", and did not even mention aquaponics. But since then the industries have leapt forward.

Aquaponics has gone mainstream and offers a thriving ecosystem of plants, fish and bacteria. Hydroponics can employ active biological nutrient sources such as compost tea.

Bioponics gives urban areas the ability to grow organic produce because it does not require soil and can grow plants more densely than in soil. A soil-only organic rule would limit organic production to rural areas with access to plentiful arable land. And, as populations increase and climate change progresses, there will be less arable land for organic production which will drive up prices. Plus, the price premium that the organic label commands is a critical incentive to draw more entrants into these highly sustainable industries.

The next step in the deliberation is the NOSB meeting in April 2017 in Denver, Colo. NOSB will provide detailed meeting materials by March 1 which should provide more clarity about its intent. Written comments and reservations for a three-minute speaking slot are due by March 30. 🌱



For more information:

"What's Organic? A Debate Over Dirt May Boil Down to Turf," New York Times, Nov. 15, 2016.

Aquaponic and Hydroponic Organic Coalition's official comment to NOSB's recommendation to ban organic aquaponics and hydroponics.

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