



# National Organic Coalition

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## NOC Position on Hydroponic Production

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### *NOC MEMBERS*

*Beyond Pesticides*

*Center for Food Safety*

*Consumers Union*

*Equal Exchange*

*Food & Water Watch*

*Maine Organic Farmers and Gardeners Association*

*Midwest Organic and Sustainable Education Services*

*National Cooperative Grocers Association*

*Northeast Organic Dairy Producers Alliance*

*Northeast Organic Farming Association - Interstate Council*

*Ohio Ecological Food and Farm Association*

*Organic Seed Alliance*

*Organically Grown Company*

*Rural Advancement Foundation International -USA*

*Union of Concerned Scientists*

The central theme and foundation of organic farming is the maintenance and management of organic matter in the soil, along with the diverse populations of organisms that are the foundation of soil ecosystems. Macro and micro organisms found in abundance in a well-maintained soil tie together a web of interactions that conserve and recycle the elements between all the living organisms and minerals in the system. It is the management of this ecological balance that defines organic production. Any system labeled organic, (including hydroponics) should also be based on management of this ecological balance.

Hydroponics is the most widely used term for the production of crops without soil. That system of production most often provides nutrients needed to produce a crop by suspending the roots in a nutrient rich solution grown in moist inert material.

Nutrients most commonly used in hydroponic nutrient solutions are synthetic salts. Hydroponic solutions can be made using only natural materials, including natural mineral salts and organic residuals. While some certifiers believe that this makes the production system organic, other certifiers do not because they believe that there is much more to organic production than simply adding materials for crop fertilization or crop protection.

Based on these differing interpretations, some organic certifiers are certifying some hydroponic operations, while others are not allowing the certification of hydroponics. NOC finds this differing implementation of the NOP standards by certifiers disturbing. Inconsistencies among certifiers weaken the organic label and reflect poorly on the industry. The NOSB agrees. In 2010 the NOSB made a recommendation to the NOP in which they provided guidance on which kinds of soilless production systems should or should not be labeled organic.

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The NOSB Crops Committee Recommendation "Production Standards for Terrestrial Plants in Containers and Enclosures"<sup>1</sup> underscores this point. The recommendation stresses that organic farmers are not just tillers of the soil, but also stewards of the soil ecology on the farm and shepherds of the myriad organisms that support thriving soil ecosystems. They do not just open bags of nutrients to feed crops and then become certified organic farmers.

The USDA National Organic Program recognized this foundation of organic when they wrote the Organic Rule. At the heart of the regulation of organic production (7 CFR Part 205 National Organic Program; Final Rule) is the definition:

**Organic Production-** A production system that is managed in accordance with the Act and regulations in this part to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.

In organic agriculture, soils are valued for the multiple functions a biologically diverse soil food web provides, not just as a substrate for holding plant roots so the plant grows upright.

Many soilless systems, including hydroponics, represent the antithesis of organic production systems because they aim to diminish the ecological complexity of the natural production systems. By reducing the living organisms in a hydroponic system to solely the crop, the ecological balance is lost. Such a 'system' merely feeds the crop with simple inputs of 'required' nutrients. On the other hand, some soilless crop production that is part of a complex ecological system may fit the definition of organic as laid out in the Rule (for example, transplants which eventually are planted in soil, or a system of aquaponics that cycles nutrients from fish through plants and back, and adds wormcastings and compost).

Until a clear definition has been provided by the NOP, certifiers should not be allowed to certify hydroponic systems. Certifiers need to be directed as to which systems may be certified, and which do not meet the criteria and are not eligible for organic certification. NOC urges the NOP to write "NOP Instruction to Certifiers" that leads to Rulemaking. The instruction should include clear criteria that follow the NOSB 2010 recommendation, and adhere to the definition of organic production presented in the Rule.

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<sup>1</sup> (January 23, 2010 <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5084677>)