



UK fears US decision on organic hydroponics post-Brexit

In early November the United States Department of Agriculture's (USDA) advisory body, The National Organic Standards Board (NOSB), met in Jacksonville, Florida, to vote on a proposal to outlaw organic hydroponic systems under US Organic Standards. The vote came down narrowly in favour of allowing organic hydroponics. **Phil Sumption** considers the consequences.



Organic tomatoes growing at Wholesum Harvest

The decision raises a number of issues for organic production both in the US and in the UK and Europe. One of the IFOAM Principles of Organic Agriculture is the Principle of Ecology. This states that: Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them. In the case of crops this means that production should be based on the living soil.

These principles, wholly endorsed by ORC, are reflected in UK and EU organic standards. We believe that ecological systems feeding the soil and not the plant are fundamental to organic production. In the last few years some US organic certifying bodies have allowed organic hydroponic production to carry the USDA organic label, which has mobilised pioneer organic farmers and growers to protest against this. Despite these protests and rallies the National Organic Standards Board (NOSB), which comprises 15 invited representatives from industry (including organic farmers), voted narrowly to allow hydroponics.

They also voted to allow container growing and aquaponics, while outlawing aeroponic production. The EU regulation is clear: hydroponic production is outlawed and very strict rules are applied to container growing. This means that it is not possible to have equivalence between the two systems of organic certification either side of the Atlantic. ORC Director Nic Lampkin said: "This is not organic farming or organic food. Shame on the NOP for taking this position. Now we need to go for global rejection of the US position."

He continued, "In the short term, I would hope that the organic equivalence agreement between the EU and US will stop US hydroponic products entering the EU, as they are not permitted under the EU regulation."

"Of more concern is what happens when we leave the EU. Currently all the signs are that the UK will adopt the EU organic regulation and will attempt to secure bilateral equivalency agreements with the 12 countries that currently have EU agreements on similar terms. My concern though is that when the UK tries to get bilateral agreements we may be forced to accept compromises, for example, accepting US hydroponics in return for UK organic dairy producers continuing to be able to export to the US. At this stage, there is no actual proposal for this to happen. However, this is a risk that we need to consider, especially in light of trade discussions in the future."

Why grow in the soil?

The principle of soil-based production in organic farming is fundamental. This should encompass both the idea of the soil as an ecosystem and the maintenance of its biological activity and the interaction between soil, sub-soil and bedrock. While biological activity may be considered more important than connectivity with bedrock (this issue is pertinent as demarcated beds, with plants grown in a growing medium on top of concrete, are permitted in some Member States), organic production should not normally take place without both elements present. The mantra 'Feed the soil, not the plant' is well known—Healthy plants, animals, and humans result from balanced, biologically active soil.

Hydroponic production uses nutrients in solution. Reliance on liquid nutrient sources should not be permitted because a further basic principle of organic farming is that nutrients should primarily be provided from the soil and low solubility sources. Liquid feeding should only be permitted as a 'top up' to the system providing the materials used are compatible with the principle of promoting soil biological activity.

Hydroponics is a long way from agroecology - where's the ecology and interaction with other species in an agroecosystem? Some systems rely on artificial light, whereas organic farming should be about direct photosynthesis. It is an industrial process with high capital, large infrastructure and high energy intensity, even if mitigated by waste heat or solar PV.

Alan Schofield, chair of the Organic Growers Alliance said: "The implications as I see them could be very serious for all organically grown UK fruit and protected cropping and could undermine the whole market for these crops if we accept equivalence with the NOP in a post-Brexit world. At present under the 2011 USA/EU trade deal the NOP is deemed equivalent to the EU regulation with one or two exceptions. If the UK was to go for a quick trade deal with the USA, this area of organic standards will have to be revisited, as this vote could mean that the NOP has manifestly changed since 2011."

"The present UK organic market has been built on the integrity of all those who grow in the soil and this is what the consumer expects when purchasing organically grown fresh produce. This [vote] is certainly a victory for those who wish to use the organic brand but not grow in the soil."

Further reading

1. ORC (2013) Final expert report on organic protected cropping. ORC Bulletin No.113.
2. EGTOP Final Report On Greenhouse Production (Protected Cropping): https://ec.europa.eu/agriculture/organic/sites/orgfarming/files/docs/body/final_report_egtop_on_greenhouse_production_en.pdf
3. See also: Towards protected cropping standards - a principled approach in ORC Bulletin 110
4. Reports, submissions, photos and videos from the campaign Keep the soil in organic www.keepthesoilinorganic.org