Guideline No. P1/2020

Pacific Organic Standard(POS)

1. Purpose

This guideline provides clarification on the use of chemically treated potable water in crop production for organic farms certified to the Pacific Organic Standard.

2. Scope

This guidance applies to all POETCom Approved Certification Partners (ACPs) and Registered Participatory Guarantee Systems (RPGS).

3. Background

Chemical treatment of public drinking (potable) water for use in irrigating organic crops is not clearly addressed in the POS. Other Organic Standards are also unclear, some, including New Zealand and the US NOP Organic standards allow public water use in organic systems deferring water potability to food safety regulations.

A central premise of Organic Growing is sustaining soil health through natural processes and avoiding the use of synthetic chemicals including fertilizers, pesticides and herbicides. The 'Pacific Organic Principles' (specifically Health, Ecology, and Care), imply that the use of irrigation water containing water treatment chemicals including chlorine could pose a risk to soil health and so should be avoided in favor of natural, uncontaminated water sources such as rainwater or streams etc.

Physical filtration typically does not affect water quality, however, chemical treatment methods may pose a risk to organic integrity by affecting the bacterial content of the water and the health of soil microorganisms.

A study from the Produce Marketing Association (United States) titled: 'Impacts of chlorinated irrigation water on soil health and the soil microbiome: State of the Science'. 6 June 2019. Concludes that chlorinated water is likely to reduce the levels and diversity of the organisms that make-up the soil microbiome, however the specific impacts of this reduction diversity on specific crops is uncertain. Since there is precedent to defer to food and water safety regulations where they do not clearly jeopardize organic integrity, and since the impacts of chemically treating public drinking water effect soil health more than organic product integrity, this guideline is stated as SHOULD rather than SHALL. It should be noted however that in some cases the organic certifying body (PGS or 3rd Party) may determine that the chemical treatment of public drinking water does pose significant risk to organic integrity. In such cases the certifying body may impose stricter requirements in a farmer's Organic Management Plan.

4. Guidelines

Organic farmers should ideally use only natural, uncontaminated water sources such as rainwater or streams etc. When water is sourced from the public supply, organic farmers should investigate the treatment method. In order to preserve microbial biodiversity where chemical methods have been used to treat the public supply, a producer should include an intervention step such as carbon filtration, an open air holding tank or mist/spray system to remove chemicals before using water for irrigation.

Details of chemical methods to treat the public water supply, the risks to the organic integrity of the farm, and mitigation/intervention steps to neutralize the risks should be included in the Organic Management Plan to be reviewed by the PGS Committee or 3rd party certifier for compliance to the POS.

5. References

Pacific Organic Standard (2008)
2.2 states the importance of responsible, efficient water use on organic farms.

2.2.6 Operators shall not deplete or excessively exploit water resources, and shall take action to preserve water quality. Where possible, they shall recycle rainwater and monitor water extraction.

To demonstrate action in this area, operators can prepare an Organic Management Plan that identifies potential impacts on water resources and describes how negative impacts can be mitigated.

2.2.7 Operators shall apply water and inputs in a way that does not pollute water sources through runoff to surface water or leaching into ground water.

2.2.8 Operators shall use techniques that conserve water.

Table 4: Additives and Processing Aids for Organic Food Processing lists Water without any Limitation/note

Table 5: Cleansers and Disinfectants Applied Directly to Food Preparation Surfaces lists Chlorine (Chlorine dioxide) without any Limitation/note

European Union Commission Regulation (EC) No 889/2008 allows Chlorine as a cleanser

IFOAM Norms (2014) allows chlorine in processing with an intervening event or action to eliminate risks of contamination

National Association of Sustainable Agriculture Organic Standard (2012) [NASA]

USDA National Organic Standards [NOP] allows chlorine for farming, handling and as a processing cleanser in compliance with the Federal Safe Drinking Water Act

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