

NORTHWEST HORTICULTURAL COUNCIL

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March 26, 2020

Ms. Michelle Arsenault
Advisory Committee Specialist
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Ave. SW
Room 2648-S Mail Stop 0268
Washington, DC 20250-0268

Dear Ms. Arsenault,

RE: Docket Number: AMS-NOP-19-0095-0006
Notice of Meeting of the National Organic Standards Board

The Northwest Horticultural Council (NHC) appreciates the opportunity to comment on the upcoming Sunset Review of organic materials listed in the most recent National Organic Standards Board (NOSB) Materials Report, as well as discussion documents and other topics of consideration listed in this report that are especially pertinent to those we represent.

The NHC represents growers, packers, and shippers of apples, pears, and cherries in Idaho, Oregon, and Washington on federal and international policy and regulatory issues.

The Pacific Northwest is the national leader in the production of organic apples, pears, and cherries. Over 18 million boxes of organic apples are now harvested from more than 28,500 acres in Washington state, amounting to over 90 percent of the fresh organic apple crop in the United States. There is also a significant volume of organic pears and cherries grown in our region, with more than 6,200 acres planted across the Pacific Northwest. Organic tree fruit production in the region is increasing, with additional acreage transitioning to organic each year.

In many ways, this region is the epicenter for organic pome fruit and cherry production in the United States. The total value of the organic tree fruit crop for the region topped \$620 million in 2017, of which organic apples alone accounted for approximately \$540 million. In fact, tree fruit accounted for 60 percent of farm gate sales for all Washington state organics that year.

We have compiled a list of materials from those listed by the NOSB for review that are of particular importance to organic tree fruit growers and packers. Below, you will find this list, complete with NOSB citation, a brief description of the item's standard usage, and a statement as to why the product is needed.

Crops

Discussion Document:

- **Biodegradable biobased mulch annotation change (citation 205.601(b)) as herbicides, weed barriers, as applicable (2) Mulches (iii) Biodegradable biobased mulch film as defined in §205.2. Must be produced without organisms or feedstock derived from excluded methods** - Currently, there is no biodegradable mulch that meets the necessary criteria to be used in tree fruit orchards. However, the Pacific Northwest tree fruit industry is interested in the potential to use this material in replacement of the plastic mulch currently utilized. In particular, cherry growers are facing an existential threat from Little Cherry Disease (LCD), and scientists are looking at biodegradable mulches as a potential suppression tool for leafhoppers, which are significant vector insects for the viruses the cause LCD.

2022 Crops Sunset Reviews: §205.601 & §205.602

- **Soap-based algicide/de-mossers (citation 205.601(a)(7)) as algicide, disinfectants, and sanitizer, including irrigation system cleaning systems** - These products are used as algicides, disinfectants, and sanitizers for tools in the orchard, including irrigation systems. While not widely used by the Pacific Northwest tree fruit industry, it is an important tool for some orchardists in combatting food-borne pathogens and assisting growers in complying with the Food Safety Modernization Act Produce Safety Rule.
- **Soaps, insecticidal (citation 205.601(e)(8)) as insecticides (including acaricides or mite control)** - This material is used by Pacific Northwest organic tree fruit growers to control soft-bodied insect pests (aphids, mealybugs, and spider mites) as part of an integrated pest management program (IPM). It is a valuable tool for growers that is currently being investigated for control of leafhoppers and mealybugs, vectors of LCD. Insecticidal soap is key to many integrated organic pest control programs. Use allows the grower options to initiate a ‘soft’ soap-based pest control program early in the season while pest pressure is low, and before stronger biocontrol material options, which may negatively impact predator populations, are required.
- **Vitamin D3 (citation 205.601(g)) as rodenticides** - While used sparingly, Vitamin D3 is one of the few materials that organic tree fruit producers can access for rodent control in the orchard. Availability of Vitamin D3 is especially important in situations where a grower is facing a high rodent population coupled with environmental factors, such as a heavy winter snow. It is primarily used around bins and in confined spaces around buildings. There is no non-synthetic alternative, although Vitamin D3 can be used in conjunction with other mechanisms such as mechanical bait boxes, traps, or birds of prey.
- **Aquatic plant extracts (citation 205.601 (j)) as plant or soil amendments. (1) Aquatic plant extracts (other than hydrolyzed) – Extraction process is limited to the use of potassium hydroxide or sodium hydroxide; solvent amount is limited to that amount necessary for extraction** - These materials are used by organic tree fruit producers as soil- and foliar-applied products for fertility programs to enhance soil and plant health. It is important to note that the current

formulation works well for the type of sprayers utilized in tree fruit. These materials are used sparingly on an as-needed basis when a nutrient deficiency is identified.

- **Lignin sulfonate (citation 205.601(j)) as plant or soil amendments. (4) Lignin sulfonate - chelating agent, dust suppressant** - This material is used by Pacific Northwest tree fruit growers as a plant and soil amendment, specifically as a chelating compound for foliar-applied nutrients to reduce fruit russeting and improve nutrient uptake through the foliage of the plant, and also for soil-applied to help facilitate root and cell uptake of metal nutrients (many micronutrients). The material is critical to making application of these nutrients more efficient for crop application and in assisting plants with absorption of critical macronutrients. This material is also applied in bulk for dust abatement. It is widely used by Pacific Northwest tree fruit growers.
- **Sodium silicate (citation 205.601 (l)) as floating agents in postharvest handling. (2) Sodium silicate—for tree fruit and fiber processing** - This material is used by pear packers without access to a mechanized process as a floating agent to allow pears to float onto packing line equipment. There is no alternative, absent substantial investments in mechanization that is not possible for many small pear packers.
- **EPA List 4 – Inerts of Minimal Concern (citation 205.601(m)) as synthetic inert ingredients as classified by the Environmental Protection Agency (EPA), for use with nonsynthetic substances or synthetic substances listed in this section and used as an active pesticide ingredient in accordance with any limitations on the use of such substances. (1) EPA List 4 – Inerts of Minimal Concern** - These materials have been used by tree fruit producers in the formulation of passive pheromone dispensers used for mating disruption of tortricid moth pests (codling moth, Oriental fruit moth and leafrollers) in apple and pear production (codling moth is a quarantine pest for some international export markets), which is a key part of most organic tree fruit producers' IPM. At present, manufacturers of these devices have few to no economically viable alternatives for these materials, and therefore it is important that they be maintained on the national list.

Handling

- **Ozone (citation 205.605(b))** - Ozone is used as a disinfectant and sanitizer in Pacific Northwest tree fruit packinghouses and storage facilities throughout the Pacific Northwest. It is a highly effective disinfectant and an important tool for organic producers in controlling potential microbiological pathogens that are of concern, from a food safety perspective, in water or on food contact surfaces, such as packing-line brushes. Ozone is also used to control the microorganisms that cause decay, such as reducing the ability of these decay microorganisms to become established in bins of fruit in storage and spread to other bins. It is widely used in our industry, with use increasing as more is learned about the benefits of ozone. Ozone leaves no chemical residue and returns to a stable oxygen state within seconds after application. It is worth noting that this material is also key to assisting handlers in complying with the requirements of the Food Safety Modernization Act.
- **Carnauba wax (citation 205.606)** - Carnauba wax is used by apple and pear handlers in the Pacific Northwest on an as-needed basis to protect against decay with certain pome fruit cultivars. For pears, carnauba wax may also reduce scuffing of pears during the packing process, which becomes increasingly important late-season. While used sparingly, carnauba wax is an important

and necessary tool for tree fruit handlers in certain circumstances.

Materials

- **Sanitizers: Assessing Cleaning and Sanitation Materials Used in Organic Crop, Livestock, and Handling: Expert Panel Discussion** - The NHC understands that the NOSB will also be discussing cleaning and sanitation materials used in organic crop, livestock, and handling. We emphasize the critical need for organic growers, packers, and processors to have access to multiple effective sanitizers, both now and into the future. The number of food-borne pathogen outbreaks related to fresh produce has increased in recent years, and cross-contamination of produce from food contact surfaces has often been identified as the primary contributor. Access to effective sanitizers is vital to preventing food-borne pathogens from becoming established in packinghouses and processing environments, which in turn will reduce levels of cross-contamination onto product.

During the Fall 2019 NOSB meeting, Marisol Oviedo, regulatory information specialist for the NHC, was asked while providing oral testimony, about scientific studies addressing the issue of the evolution of resistance of food-borne pathogens to sanitizers. A primary pathogen of concern for the tree fruit industry is *Listeria monocytogenes* (*Lm*). There have been a number of studies conducted in the last decade on the resistance of certain strains of *Lm*, and the biofilms that cover them, to different sanitizers on a variety of different surfaces. In particular, a 2006 study conducted by Y. Pan of North Carolina State University, entitled “*Resistance of Listeria monocytogenes Biofilms to Sanitizing Agents in a Simulated Food Processing Environment*”, may be of interest to the board. In addition to the issue of resistance, this study assesses the difference in survivability of *Lm* on different types of surfaces. Resistance evolution of *Lm* to different sanitizers is an ongoing area of study, with renowned *Listeria* expert Dr. Martin Weidmann of Cornell University currently conducting a study funded by the Center for Food Safety regarding the evolution of resistance or reduced sensitivity of certain *Listeria* species to sanitizers due to mutations or the development of resistance genes and repeated exposure to a single sanitizer.

While this continues to be an open area of study, there is no question that all sanitizers are not created equal when it comes to effectiveness against dangerous foodborne pathogens like *Lm*. The ability to access multiple sanitizers, as well as to use different sanitizers on different types of food contact surfaces, is essential to allow growers and packers to combat these dangerous, naturally-occurring pathogens. In addition, under the implementing regulations for the Food Safety Modernization Act (FSMA) that are now in effect, growers, packers, and processors are required by law to adequately sanitize food contact surfaces.

We are pleased that Congress recognized the importance of allowing organic producers to adequately protect their consumers in the Conference Report of the Agriculture Improvement Act of 2018 (Farm Bill), and directed the NOSB “...while following the material review requirements established in the Organic Foods Production Act, to establish procedures for timely consideration and review of materials directly related to food safety compliance for inclusion on the National List.”

We further ask you to consider additional language from the Conference Report directing the NOSB to:

“...be transparent and adhere to the best science and technical assistance available, including from other science agencies, to provide certainty and predictability to the agricultural community and consumers.”

We request that the NOSB formally consults with FDA subject matter experts regarding the sanitizer needs of growers, packers, and processors before taking any further action on this issue. Both public health and the regulatory requirements under FSMA must be paramount as you consider the inclusion of any current or proposed sanitizer on the National List, both now and into the future.

Conclusion

The products referenced in these comments are important – and in some cases critical – to organic tree fruit production. The loss of these products would negatively impact the abilities of our organic tree fruit growers and packers to manage insect and disease pests, and could consequently force our local tree fruit growers and packers out of organic production. We ask that members of the board consider their decisions carefully while recognizing the importance of these materials for the role each plays in organic tree fruit production and in preserving management options necessary to respond to food safety concerns and operational needs in organic production and packing.

Literature Cited

Pan, Y., F. Breidt Jr., and S Kathariou. 2006. Resistance of *Listeria monocytogenes* Biofilms to Sanitizing Agents in a Simulated Food Processing Environment, *Appl. Environ. Microbiol.*, 72(12): 7711–7717, (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1694257/>).

Weidmann, M. 2020. *Listeria* develops reduced sanitizer sensitivity but not resistance at recommended sanitizer use levels, Center for Food Safety, https://www.centerforproducesafety.org/researchproject/454/awards/Listeria_develops_reduced_sanitizer_sensitivity_but_not_resistance_at_recommended_sanitizer_use_levels.html

Thank you for your careful consideration of these comments.

Sincerely,
NORTHWEST HORTICULTURAL COUNCIL



David Epstein, Ph.D.
Vice President for Scientific Affairs

CC: NHC Science Advisory Committee’s Organic Subcommittee