

NORTHWEST HORTICULTURAL COUNCIL
105 S. 18th Street, Suite 105
YAKIMA, WASHINGTON 98901 USA
(509) 453-3193 FAX (509) 457-7615
www.nwhort.org

September 30, 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

RE: Docket Number: AMS-NOP-20-0041; Notice of Meeting of the National Organic Standards Board

Dear Ms. Arsenault,

The Northwest Horticultural Council (NHC) appreciates the opportunity to comment on the National Organic Standards Board (NOSB) proposals and discussion documents pertaining to organic materials listed in the most recent NOSB meeting materials posted in the Federal Register on September 1, 2020. The NOSB proposals and discussion documents referenced in this letter are especially pertinent to the growers, packers, and shippers of organic apples, pears, and cherries in Idaho, Oregon, and Washington that the NHC represents on federal and international policy and regulatory issues.

In many ways, the Pacific Northwest region is the epicenter for organic pome fruit and cherry production in the United States. 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. 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.

Organic tree fruit production, handling, and shipping is very complex. Our farmers must routinely manage dozens of pests that have the potential to make fruit unmarketable, or that

suppress tree growth and overall production. The Food and Agriculture Organization estimates that 20 to 40 percent of global crop production is lost each year due to pests, with plant diseases costing the global economy \$220 billion. In the Pacific Northwest, growers must protect fruit from injury by 33 direct insect pests (those that feed directly on the fruit), 47 indirect insect pests (feed on the tree), two common bacterial pathogens, eight fungal pathogens, ten viral pathogens, and five phytoplasmas and viroids. Another seven postharvest diseases can cause fruit decay, costing the fruit industry millions of dollars in losses each year after farmers have already invested in growing and harvesting the crop (Washington State University, 2020).

The Organic Food Production Act states that synthetic substances may be permitted, if, among other things, it is “necessary to the production or handling of the agricultural product because of the unavailability of wholly natural substitute products.” We ask the NOSB Board members to be cognizant of the impacts to practical abilities of organic growers and packers to produce organic food considering these diverse pest management needs, when considering whether a listed material truly has a wholly natural alternative. In particular, the evolution of insect, pathogen, weed, and microbe resistance means that producers and packers need access to multiple tools to deploy season-long pest management programs that allow for the rotation of products with differing modes of action to manage resistance evolution in order to continue sustainable production and handling of organic food in the long term. One product often cannot and should not be considered as a full substitute for another.

Also, not all alternatives provide equal efficacy in controlling the target pest organism; nor, is it a given that an alternative product is compatible with all pest management programs in all regions of the country in vying to manage varying pest complexes under a myriad of weather and soil conditions. Impacts to material supply chains is another consideration when considering delisting existing materials. Manufacturers and distributors may not have the capacity to simply step up production and distribution of alternative products to fill a void created by delisting, leaving end users without the materials they need to produce and pack organic produce.

The NHC has 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 Subcommittee

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 (FSMA) Produce Safety Rule. The NHC supports the continued listing of this material on the National List, as recommended by the Crops Subcommittee.

- **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, vectors of Little Cherries Disease, which is epidemic in the Pacific Northwest, resulting in removal of many cherry trees across the region. 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. The NHC supports the continued listing of this material on the National List, as recommended by the Crops Subcommittee.
- **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. The NHC supports the continued listing of this material on the National List, as recommended by the Crops Subcommittee.
- **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 extensively 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, and provides a material that is consistent in quality. These materials are used sparingly on an as-needed basis when a nutrient deficiency is identified. We would emphasize that aquatic plants are considered nursery stock and regulated under existing nursery inspection laws of most states, including an evaluation of their value to local ecosystems before harvest. The NHC requests that the board consider state harvest regulations in its delisting deliberations, and how a decision to delist any material will impact production and supply of materials important to organic production before deciding to delist. It is possible to be so restrictive and protective in sourcing of products as to make use in organic farming impractical. The NHC supports the continued listing of this material on the National List.
- **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 russetting and improve nutrient

uptake through the foliage of the plant. It is also soil-applied to help facilitate root and cell uptake of metal nutrients (*e.g.*, iron, copper, zinc, manganese, molybdenum, nickel, boron and silicon). The material is critical to making application of these nutrients more efficient for crop application and in assisting plants with absorption of critical macronutrients. In addition, this material is applied in bulk for dust abatement. It is widely used by Pacific Northwest tree fruit growers. The NHC supports the continued listing of this material on the National List, as recommended by the Crops Subcommittee.

- **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. The NHC supports the continued listing of this material on the National List, as recommended by the Crops Subcommittee.

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 – According to the Washington State Department of Agriculture (WSDA) Organic Program, the majority of all pesticide products used by organic producers are formulated with List 4 inerts (Brenda Book, WSDA organic program manager, comments to NOSB Fall 2020 meeting). One particularly critical use of List 4 inerts for organic pome fruit producers is in the formulation of passive pheromone dispensers used for mating disruption of tortricid moth pests (codling moth, Oriental fruit moth and leafrollers). Pheromone-mediated mating disruption is not applied to the fruit. The pheromone is contained within devices and is emitted into the orchard air to prevent males from locating and mating with females, leaving no residue on the fruit. Codling moth is a quarantine pest for some international export markets, in addition to having a negative effect on the fruit itself. The List 4 inert ingredients are used to stabilize pheromone within a pheromone dispenser, allowing the devices to remain effective throughout a growing season. Dimethyl ether (DME) is the propellant used in many aerosol pheromone dispensers. Without the addition of the inerts, both hand-applied and aerosol dispensers will not remain viable for use by organic growers.

At present, manufacturers of these devices have few to no economically viable alternatives for these materials, and therefore it is extremely important that they be maintained on the National List. Organic apple production in the Pacific Northwest (PNW) accounts for over 90 percent of all organic apple production in the United States. Loss of mating disruption as a principal control tactic for control of the codling moth would be catastrophic to the organic tree fruit industry here in the Pacific Northwest. Mating disruption is the cornerstone of IPM programs in both organic and conventional production. The Washington State University website for organic codling moth management, “How to Effectively Manage Codling Moth” (<http://treefruit.wsu.edu/article/how-to-effectively-manage-codling-moth/>), states “Organic programs should always use mating disruption, without it, codling moth control is extraordinarily difficult.” Organic ovicides and larvicides targeting codling moth control become far less effective as stand-alone materials. A decision to delist these inerts could lead to the loss of 50 percent of organic pome fruit production from the Pacific Northwest within the next five years, and even steeper decline in years five through ten. It is incumbent on the NOSB to understand the impacts that delisting will have on organic pome fruit production – as there is no viable substitute to mating disruption in controlling codling moth – and therefore allow the List 4 inerts to continue on the National List until suitable alternatives are determined.

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 cross contamination of microbiological pathogens that pose a food safety risk to consumers 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 and management 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 FSMA. Multiple products are necessary to accomplish compliance with FSMA and help deliver safe pome and cherry fruit, while managing against the evolution of microbial resistance to any one product. Ozone is a very important component used in this rotation to disinfect and sanitize storage and handling facilities. The NHC supports the continued listing of this material on the National List, as recommended by the Handling Subcommittee.

- **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 in the season. While used sparingly, carnauba wax is an important and necessary tool for tree fruit handlers in certain circumstances. The NHC supports the continued listing of this material on the National List, as recommended by the Handling Subcommittee.

Materials

- **Sanitizers: Assessing Cleaning and Sanitation Materials Used in Organic Crop, Livestock, and Handling: Expert Panel Discussion** - The NHC understands that the NOSB has removed the panel discussion on cleaning and sanitation materials used in organic crop, livestock, and handling from the Fall meeting schedule and has rescheduled this discussion for some time in November 2020. Should a panel discussion move forward on this critical issue, we strongly encourage the NOSB conduct it as an open, public meeting where there will be ample opportunity for public comment. The Sunshine Act requires all federal agencies governed by “collegial bodies” (groups of two or more decisionmakers that act jointly) to hold open meetings and to provide sufficient notice to allow the public to attend those meetings. We also encourage the NOSB to be fully transparent in how panel participants are selected. Organic tree fruit producers, processors, and packers emphasize the critical need for access to multiple effective sanitizers, both now and into the future. Rescheduling this panel discussion must follow an open public meeting format so that the NHC and other stakeholders can participate and provide important information for consideration by the NOSB on the continued need for sanitizers by tree fruit producers.

The number of food-borne pathogen outbreaks related to fresh produce has increased in recent years (CDC website: <https://www.cdc.gov/foodsafety/outbreaks/multistate-outbreaks/outbreaks-list.html>), and cross-contamination of produce from food contact surfaces, and then to other produce, 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. Until we know more, we should exercise caution and keep all available sanitizers available to tree fruit handlers to minimize the risk of outbreaks.

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 FSMA that are now in effect, growers, packers, and processors are required by law to adequately sanitize food contact surfaces. Tree fruit packers have established protocols to ensure that sanitizers are not present on food contact surfaces after cleaning and sanitizing, and before fruit are run on the packing line.

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.*”

The NHC further asks 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.

- **Marine Microalgae Materials Proposal (Citations 205.601(j)(1); 205.602):** Products derived from marine microalgae are commonly used in tree fruit fertility programs. The NHC understands and appreciates the board’s work to ensure that marine materials used in fertilizers are not harmful to the environment by adversely impacting the ecosystem provisioning of the marine environment. We appreciate the five-year phase-in period and the intent of the board to pursue a middle ground where achievable. We do ask that the board duly consider impacts of decisions in limiting sources of microalgae on maintaining an adequate supply of marine materials for organic operations, and that the board allow products to continue on the National List until suitable alternatives are determined.

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 have the unintended impact of forcing our local tree fruit growers and packers out of organic production. This is particularly true for pheromone mating disruption products, the loss of which directly jeopardizes almost all of organic pome fruit 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.

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

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/>).
- Washington State University. 2020. Crop Protection Guide for Tree Fruits in Washington, Extension Bulletin 0419, <http://cpg.treefruit.wsu.edu>
- 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