April 5, 2021

Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP

Docket: AMS-NOP-20-0089

RE: Crops Subcommittee – 2023 Sunset Reviews

Dear Ms. Arsenault:

Thank you for this opportunity to provide comment to the National Organic Standards Board (NOSB) on its 2023 Sunset Review.

The Organic Trade Association (OTA) is the membership-based business association for organic agriculture and products in North America. OTA is the leading voice for the organic trade in the United States, representing over 9,500 organic businesses across 50 states. Our members include growers, shippers, processors, certifiers, farmers' associations, distributors, importers, exporters, consultants, retailers and others. OTA's mission is to promote and protect organic with a unifying voice that serves and engages its diverse members from farm to marketplace.

OTA thanks NOSB for carefully considering each crop production material scheduled for review as part of the 2023 Sunset Review cycle. Materials placed on the National List for use in organic crop production should remain on the National List if: 1) they are consistent with organic farming; 2) they are still necessary to the production of the agricultural product because of the unavailability of wholly natural substitute products in organic production; and 3) no new information has been submitted demonstrating adverse impacts on humans or the environment (OFPA SEC. 2118 [7 U.S.C. 6517] National List). Furthermore, decisions must be transparent, non-arbitrary, and based on the best current information and in the interest of the organic sector and public at large. It's critical that NOSB hears from certified farmers on whether these inputs are consistent with and necessary for organic production, or whether there are other effective natural or organic alternatives available.

About OTA Sunset Surveys
OTA is submitting results to our Sunset Surveys created for each input under review as part of the 2023 Sunset Review cycle. These electronic surveys include about 10 questions addressing the **necessity (crop and livestock)** or **essentiality (handling)** of each input. See Appendix A for a sample survey. Our surveys do not address information regarding the impacts on human health or the environment.

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The surveys are open to any NOP certified organic operation. The names of the companies submitting the information are confidential (not disclosed to OTA). To ensure wide distribution of the surveys beyond OTA membership, OTA worked with Accredited Certifying Agencies (ACAs) to distribute the survey to all of their clients as well as to targeted clients they know are using the inputs under review. OTA also worked through its Farmers Advisory Council (ota.com/FAC) to help assist in distribution to NOP certified farmers.

Results of OTA Sunset Surveys
OTA has received **19** responses on our 2023 Crops Sunset Surveys. Below is a summary of the feedback received via OTA's Sunset Surveys to date.

§205.601 – Synthetic substances allowed for use in organic crop production.

Substance	Summary of Responses	Average rating of Necessity (from 1 to 5, with 1 being "unnecessary" and 5 being "critical /would leave organic without it")
Copper sulfate for aquatic rice production as an algicide and tadpole shrimp control. One application per field during any 24-month period. Application rates are limited to those which do not increase baseline soil test values for copper over a time frame agreed upon by the producer and accredited certifying agent. §205.601(a)(3) & (e)(4)	**8 Responses** received from certified organic operations that produce a variety of aquatic rice including long grain, short grain, medium grain, colored rice, aromatic rice, and other specialty/premium varieties; white, brown, basmati, jasmine, etc. **Copper sulfate is necessary for aquatic rice production because:** - Copper Sulfate control algae blooms which stunt young rice plants reducing yield. Copper Sulfate controls tadpool shrimp which dislodge, eat and strip up muddy water blocking sunlight to seedling rice reducing yields. - Algae control because higher organic soils that crate problems in organic rice production - Copper sulfate, as a bordeaux mix component, is one of a very limited selection of tools available to organic rice growers in California to combat several serious threats to plant health and overall production in California organic rice production systems. - Copper sulfate provides protection from three problems: disease, tadpole shrimp, and algae. These three problems are common, but they don't always need to be treated with copper sulfate -- timing is everything. An organic rice farmer needs to watch newly seeded fields very carefully. If the newly seeded rice field can get established quickly -- these three problems can emerge, but not need copper sulfate. If the newly seeded rice struggles and is slow to grow, the field will likely need the protection provided by copper sulfate. - Helps with scum control on organic rice. Scum usually comes at a critical time during deep water grass control Without this product there could be substantial losses in yields and death to rice in certain areas of our fields. We apply typically once a year during deep water grass control at 10-15lbs to the acre. Some fields we might not get an application but in organic rice it is a critical and tool in our toolbox. - Necessary to control tadpole shrimp. Necessary to control scum - It is the only material that controls tadpole shrimp during rice seedling. - Primarily as an aligicide and shrimp population control. They lay eggs on the stems of rice stems and the larva bore cause plant damage. Prohibiting copper sulfate would virtually eliminate the ability to dry seed fields.	5 **(critical, would leave organic without it)**

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Copper sulfate, continued	**Frequency and application rates:** - Once at 15lbs./ac. - 2 times a season on half of fields. - I generally apply bordeaux mix slightly less than one time per year, per planted field on average. Average application rate when I do apply the material is 10 lbs/acre. - Application Rate: 10 pounds to 15 pounds per acre. Frequency: It is hard to predict how often copper sulfate is needed. The NOSB allows once in a 24 month period. The prescriptive nature of the annotation is a problem. Organic rice farmers rotate their fields -- some more than others. Copper sulfate is not needed during the seasons when aquatic rice is not in rotation. It may be possible for half of my aquatic rice fields to not need copper sulfate in a given year, but I can't predict which ones will need it and which ones won't. On average I may only use copper sulfate on half my fields, but the rule doesn't provide flexibility. - We apply typically once a year during deep water grass control at 10-15lbs to the acre. Some fields we might not get an application but in organic rice it is a critical and tool in our toolbox. - 1-2x per season, per field, at 15 lbs ac. - It would be nice to use it at any frequency that it is needed. 10 to 15 lbs/ac **Alternative are not sufficient because:** - Other substances don't have efficacy on all three problems [disease, tadpole shrimp, and algae]. Copper Sulfate provides overlap for all three -- which provides good value and makes sense. - Organically we rely on copper sulfate. Conventionally, I have tried many other pesticides to control shrimp and scum. Most are not nearly as effective as copper sulfate. Most are more expensive than copper sulfate. - Depends heavily on the soil type and production system. - Transplanting requires a low paid work force to work in water in the heat. - Drill seeding promotes weeds which is unworkable in an organic system. - Draining fields or dry seeding and flushing will control/prevent scum, and shrimp, but in an organic system your fields would be taken over by weeds. Deep water is our only effective means on controlling watergrass organically. - You would have to handplant rice like they do in Indonesia **What are the roadblocks to transitioning to a dry-seeding or transplanting of rice seedlings in U.S. rice production?** - Reduced yields to unsustainable levels. Extreme cost over existing methods. Rice being an aquatic tropical plant needs constant flooded conditions to stabilize temperatures in the shorter growing season of Calif. Rice grown in flooded conditions gives it a growing advantage over its weed competition. - We have no control of rice weeds with dry planting systems. The use of deep water helps sustain some weeds. - The feasibility of drill-seeded and/or dry-seeded organic rice production in most rice-producing regions of California depends most heavily on soil type. There are some regions in California with light soil, capable of wicking moisture where organic rice growers can be successful in drill-seeding. Although drill-seeded organic rice does have associated risks, I would argue that many rice growers wish they could use drill-seeding methods as a part of their organic rice production system. There are many benefits to drill-seeding organic rice when the soil type is right and conditions are favorable. However, the fact is most rice fields in California (80+%) are on heavy clay ground that is not at all suitable for drill-seeding organic rice. In fact, my family has invested a great deal of time (decades), effort, and money into	

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Copper sulfate, continued	developing organic drill-seeded techniques with very little success. To this point, it has been our experience that drill-seeded organic rice on heavy clay ground does not work. - Dry seeding promotes weeds while the seedlings are established. Water seeding provides rice with a competitive advantage over grass weeds. Transplanting is practiced in many rice growing regions of the world. However, transplanting requires workers to work in muddy hot conditions -- not acceptable in the US. Some Asian nations have mechanized transplanting equipment, but it is not practiced on large scale fields as in the US - Equipment and man power. there would still be chances of scum in this system as well and copper sulfate would still need to be used to help fight scum - Costs/efficiency/yields loss/labor/weed control. - No one who has tried dry-seeding or transplanting in my area continues to do them, because the systems seem to have too many failures. - We do use copper sulfate aka: Bluestone, in California rice fields, both conventional and organic, primarily as an algicide, but it will also knock down the shrimp population (they lay eggs on the rice stems and when the eggs hatch the larva bore into the stems and cause damage to the plant). In higher doses Bluestone will also kill crawdads. Algae is typically only a problem early in the season when the rice is just coming out of the water. If the surface algae get too thick the seedlings have trouble breaking through and you could have a significant reduction in field yield. - Dry seeding would not impact algae development as you still have to flood the rice field. The idea behind dry seeding is that you flash flood after the rice is seeded and the weeds will germinate before the rice. When the weeds germinate you hose the field down with herbicide to kill the weeds before the rice emerges. That's obviously not possible in organic production. Intermittent watering, which has been touted lately as a more "sustainable" method of rice production is not possible in organic as the weeds would overtake the rice quickly. The only effective method of weed control in organic rice production is keeping the water deeper in the early stages to flood out the weeds, then backing off once the rice comes through the surface. **If copper sulfate was prohibited:** - Reduced yields to unsustainable levels under our current pricing for the crop. Organic rice prices would have to increase by yield reduction % in order for production to continue. - Eliminate 80 percent of production. May be too risky to making profit. I believe over time we would eliminate organic production. - My organic rice production would be impacted severely if I were unable to use copper sulfate any longer. The increased level of risk in producing organic rice would be severe. Unless the price of organic rice was significantly increased to offset the risk of farming organically without copper sulfate, I would likely be forced to consider moving to conventional rice production even though it would not be my preference. Because I farm on heavy clay soil, there essentially no other crops that I could rotate to instead of rice. - If copper sulfate was no longer allowed, it would become much more risky to farm organic rice. I would expect a much higher failure rate due to loss of newly seeded rice stand. - It would directly affect product quality agronomic, and economically affect our company. It would limit our ability to grown high quality organic rice and bring high quality rice to our customers. - It would cause high yield losses, and in some fields, it would result in complete crop failures. - The risks of crop failure would increase to the point that organic rice might not be possible.	

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Oxone gas an irrigation system cleaner. §205.601(a)(5)-	**1 Response received from certified organic operations.** **The material is necessary because:** - Routine sanitization **Alternative are not sufficient because:** - No alternative substances or practices are sufficient to eliminate need of this substance **If the material were prohibited:** - Economic effects	4
Peracetic acid for use in control fire blight bacteria and for disinfecting equipment, seed, and asexually propagated planting material. §205.601(a)(6) & (i)(8)	**6 Responses** received from certified organic operations that include Peracetic Acid in their organic system plans for producing a wide range of products including apples, pears, cherries, blueberries, wine grapes, vegetables, baby leaf salad mix, peaches, strawberries, tomatoes, etc. **The material is necessary because:** - Used as disinfectant and fire blight control in the apples and pears orchards. - Used in the formulation of hydrogen peroxide which we spray on our apple and pear trees to control fire blight. - As a disinfectant in our berries cherries and grapes to help keep disease and fungi pathogens from spreading - It helps to slow down the decay process on apples and pears by reducing microbial activity. - Control disease - Powdery & downey mildew control - Sanitizer - Principally used as a response to an active bacterial infection. - As a sanitizer of tools and equipment. - We apply directly to apples, peaches and blueberries. Occasional use in strawberries and tomatoes. Principally used as a response to an active bacterial infection. We also use it as a sanitizer of tools and equipment. Apples and peaches - as needed. Typically less than annual use. Blueberries - we use it annually as part of a rotation related to Spotted Wing Drosophila. Other crops - seldom, only during observed infections. **Frequency / application rates:** - We use it as the situation dictates. This could be several times a year during the growing season - Seldom as a post harvest treatment on the packing line. - When certain conditions arise. - Routinely in warmer months. - Routinely (as sanitizer) - annually as part of a rotation related to Spotted Wing Drosophila - seldom, only during observed infections	4.5

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Peracetic acid, continued	**Alternative are not sufficient because:** - Other practices will help take the pressure off of PAA, but not replace it, simply serve to aid in our control measures. - We will look at the chlorines as a substitute for PAA as a disinfectant. We will look at a variety of other materials as alternatives for fire blight control, but only as part of an integrated approach to control of this disease. - Fire blight in apples has limited options. No other management practice would eliminate need for peracetic acid. - Have tried Sulfur, however there are extensive label restrictions - We have used Hydrogen Peroxide, diluted, and chlorine bleach (no response regarding efficacy) **If Peracetic Acid were prohibited:** - As a disinfectant we would have problems replacing it in certain areas. As a component of hydrogen peroxide materials sprayed onto our trees to help control blight, it would create severe issues for our growing practice. - A lot of fruit would be lost contributing to food waste by not having peracetic acid as a too, and the economic impact on the farm returns would be significant as well. - Economic effects - Fewer tools for controlling mildew. - Fewer tools for controlling fireblight. Previously, NOSB removed streptomycin. That was used as a preventative. I was in favor of removing, in part because we have a tool in paracetic acid to respond to fireblight. We could still use hydrogen peroxide, but handling hydrogen peroxide in commercial formulation (typically 35%) can be dangerous to people and harmful to equipment. Paracetic to my knowledge is an effective and safer substitute for Hydrogen Peroxide.	
EPA List 3 Inerts for use in passive pheromone dispensers. §205.601(m)(2)	No survey responses have been submitted so far. **Please also see the separate comment submitted by the Organic Trade Association on this material.**	
Chlorine materials (Calcium hypochlorite, Chlorine dioxide, Hypochlorous acid, Sodium hypochlorite) for use as a sanitizer and disinfectant. For pre-harvest use, residual chlorine levels in the water in direct crop contact or as water from cleaning irrigation systems applied to soil must not exceed the maximum	**4 Responses** received from certified organic operations that include Chlorine materials in their organic system plans for producing organic vegetables, lettuces, other leafy greens, row crops, etc. **Please also see further comments from OTA on chlorine in our Handling Subcommittee Sunset Review comments.** **The material is necessary because:** - Irrigation water sanitation (chlorine dioxide) - Sanitation - Prevention of spread of human pathogens - To bring wash water to potable water standards **Frequency / application rates:** - Routinely - Daily **Alternative are not sufficient because:** - No alternative substances or practices are sufficient to eliminate need of this substance	4.3

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residual disinfectant limit under the Safe Drinking Water Act, except that chlorine products may be used in edible sprout production according to EPA label directions. §205.601(a)(2)	- I have looked, but not been able to find appropriate products that are readily available - Chemical sanitation is the our only option for cleaning our surfaces - we would have to find another way to get water to potable standard **If Chlorine materials were prohibited:** - Economic effects - food safety would be impacted - There would be a significantly increased risk of human pathogen spread.	
Magnesium oxide – §205.601(j)(5)	No survey responses have been submitted so far.	

§205.602 – Non-synthetic substances prohibited for use in organic crop production.

Substance	Summary of responses
Calcium chloride – §205.602	No survey responses have been submitted so far.
Rotenone – §205.602	No survey responses have been submitted so far.

On behalf of our members across the supply chain and the country, the Organic Trade Association thanks the National Organic Standards Board for the opportunity to comment, and for your commitment to furthering organic agriculture.

Respectfully submitted,

Johanna Mirenda

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cc: Laura Batcha
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Appendix A – Sample Survey for Crop and Livestock Inputs

1. Is your operation certified organic? Yes / No

2. Is [SUBSTANCE] included in your organic system plan? Yes / No

3. Which types of organic crops or livestock products do you use [SUBSTANCE] on/for? (e.g., lettuces, fruit trees, broiler chickens)

4. What function does [SUBSTANCE] provide and why is it necessary? (e.g., to control a specific pest or disease, sanitation, etc.)

5. With what frequency does your operation use [SUBSTANCE]? (e.g., seldom, as needed when a certain condition arises, routinely, etc.)

6. Have you tried using any *other substances* as an alternative to [SUBSTANCE]? (e.g., other substances that are on the National List and/or other natural substances.)
If yes, please describe which substances you've tried and whether it was effective to fulfill the required function:

7. Are there any other *management practices* that would eliminate the need for [SUBSTANCE]? (e.g., hand weeding instead of using an herbicide; or using a particular harvesting practice to avoid a disease instead of using a fungicide).
If so, please describe the efficacy of the alternative management practices:

8. How would your organic production be impacted if [SUBSTANCE] was no longer allowed? (describe the agronomic, environmental or human health effects, product quality, economic effects)

9. [If applicable - Insert specific questions from NOSB Subcommittee about the necessity of the substances and the availability of alternatives]

10. On a scale from 1 to 5 stars, rate the overall necessity of [SUBSTANCE] for your organic operation

Unnecessary (don't need it at all)		Neutral (nice to have but could live without it)		Critical (would leave organic without it)
★	★	★	★	★

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