On October 31 – November 2, the National Organic Standards Board (NOSB) held its biannual public meeting in Jacksonville, Florida. NOSB received 2,318 written comments prior to the meeting, and listened to oral testimony from approximately 150 commenters (over 13 hours of oral comments) on a wide range of issues. Over the course of the three-day meeting, NOSB, under the leadership of NOSB Chair Tom Chapman, voted on 16 proposals and 43 Sunset Review inputs. Of the 16 proposals, 6 passed, 6 failed and 4 were tabled. Under the Sunset 2019 National List review process, NOSB recommended the removal of 4 production inputs that were deemed no longer necessary or essential in organic production and handling.

The hot topic of this meeting included whether hydroponically grown crops align with organic production principles and should continue being allowed under organic production standards. NOSB’s charge was to pass a recommendation that would give USDA’s National Organic Program (NOP) the additional information needed to act on NOSB’s 2010 recommendation to prohibit hydroponics and aeroponics, but allow soil-based container production systems according to specific guidelines. The issue brought to the meeting a wide range of differing viewpoints. Despite great efforts to reach consensus, the balance of interest remained divided. One camp insisted that only farms growing crops in soil, in the ground, can be called organic. Another camp promoted inclusion for organic hydroponic and aquaponic operations provided they follow strong standards based on organic principles. A third camp advocated for prohibiting air/water-based aeroponic, hydroponic and aquaponic operations but allowing soil-based container systems provided certain restrictions and requirements be met. In the end, the organic community and NOSB were not able to find a workable solution and the proposal to prohibit hydroponics and aquaponics practices under the USDA organic standards failed by a margin of 8 to 7. As there are 15 NOSB members, 10 votes are needed to decisively pass any recommendation. In addition, the proposal to create guidelines for other soil-based container production systems failed by a vote of 8 to 7. NOSB, however, did vote to prohibit aeroponics by a vote of 14 in favor of the ban with one member abstaining from the vote. The aeroponics recommendation will now go to the U.S. Department of Agriculture for rulemaking. A number of commenters suggested NOSB consider a labeling approach to hydroponics, whereby hydroponics and aquaponics remain allowed in organic production, but those producers would be required to label their products as “hydroponically grown” so that consumers can have transparency on the growing methods. While not a proposal formally considered by NOSB at this meeting, a number of NOSB members appeared to see a labeling approach as an alternative compromise and expressed their wish that this topic be considered at future NOSB meetings. It is unclear whether labeling of soil-less production systems will be added to NOSB’s work plan for 2018. As clarified by NOP following the votes, USDA organic certification of hydroponics, aquaponics and container production will continue to be allowed as it has been since 2002.

Other significant topics of this meeting included a proposal to address the issue of organic fraud, a proposal on how to best strengthen the requirement for using organic seed, a proposal to eliminate incentives to convert native ecosystems to organic production, and a proposal that classifies three new genetic technologies as “excluded methods” and therefore prohibited in organic production and handling.

Below is a detailed report of the meeting including an at-a-glance review of the meeting outcomes and votes. For a summary of each topic and OTA’s comments, check out our NOSB resource booklet guide! Live coverage of the meeting is provided on OTA’s Twitter Account.
AT-A-GLANCE MEETING OUTCOMES (see voting charts & discussion below for more detail):

National Organic Standards Board Actions:
NOSB considered 16 proposals at this meeting. Six proposal PASSED, six FAILED, and four were TABLED.

- **PASSED**:
  - Sulfur - Petition to add to the National List as a restricted parasiticide (mites, ticks, etc.) in organic livestock production
  - Excluded Operations in the Supply Chain - Proposal to revise existing guidance to better clarify the types of operations that may be excluded from certification provided products remain in an enclosed container and are properly labeled
  - Excluded Methods Terminology – Proposal to designate cisgenesis, transgenesis and agrofiltration as “excluded methods” (prohibited) and add several more to the terminology chart for consideration
  - 2017 Research Priorities - Proposal to accept the 2017 Research Priorities and pass along to applicable agencies for review
  - Potassium Acid Tartrate (Cream of Tartar) - Reclassification from synthetic to agricultural since it is derived from wine making
  - Aeroponics - Proposal to prohibit in organic production; USDA will now pursue rulemaking

  *The above recommendations now go to USDA for further rulemaking that will include an additional comment period.

- **FAILED**:
  - Aquaponics, Hydroponics, and Container Systems - Proposal to prohibit in organic production; will continue to be allowed
  - Hypochlorous Acid - Petition to allow in organic livestock production; will continue to be prohibited
  - Fatty Alcohols and Anaerobic Digestate - Petitions to allow in organic crop production; will continue to be prohibited

- **TABLED (back to subcommittee for additional work)**:
  - Native Ecosystems – Proposal to eliminate the incentive to convert native ecosystems to organic farmland
  - Emergency Treatment – Proposal to clarify the definition as it relates to the use of parasiticides in organic livestock production
  - Use of Organic Seed - Proposal to strengthen the requirements to source and use organic seed
  - Marine Algae Materials - Proposal to clarify the listings on the National List and provide guidance on the use of “kelp”

- **SUNSET REVIEW 2019**: NOSB discussed and voted on 43 National List inputs. Public comments were generally in favor of relisting the majority. See the complete list of items reviewed in the chart below. NOSB recommended **REMOVAL** of the following:
  - Crops: Vitamin B1
  - Livestock: Oxytocin, Procaine
  - Handling: Konjac Flour

These sunset items will be removed from the National List based on the outcome of the NOP rulemaking process, which includes a subsequent public comment period.
NOSB Discussion Documents: The topics of creating a standard for Seed Integrity (Purity) Standard and developing guidelines for Field and Greenhouse Production will remain on NOSB’s work plan for proposal development (see discussion below) and further consideration at the spring 2018 meeting in Tucson, Arizona.

Officer Elections: NOSB elected the following officers:
- Chair: Tom Chapman
- Vice Chair: Harriet Behar
- Secretary: Scott Rice

SPRING 2018 NOSB MEETING: Tucson, Arizona, Wednesday, April 25, 2018, to Friday, April 27, 2018, at the Tucson Marriott University Park.

DISCUSSION OF MAJOR TOPICS
Crops
- HYDROPONICS (PROPOSAL): The topic taking up most of the oxygen in the room at the fall 2017 NOSB meeting was the ongoing discussion on hydroponics and container production. NOSB heard passionate comments from a wide spectrum of organic stakeholders. Many continue to believe that organic production must occur in soil in the outer crust of the earth, while others feel that hydroponic and other soil-less growing systems can adhere to organic production principles and should continue to be allowed under the USDA organic regulations. NOSB’s Crops Subcommittee characterized its four proposals as a compromise approach to the issue, despite the fact that it was clear from an August NOSB conference call that there was not consensus among NOSB members in support of the proposals. After hearing public comments, NOSB members each shared their own perspectives and opinions on how to move forward with the debate on soil-less production systems. Some members focused on ensuring that soil, and the complex diversity it supports, be the measure for whether a system complies with organic principles. Other members focused on ensuring that organic production be inclusive of alternative and innovative production systems like hydroponics and urban agriculture. Ultimately, the Board voted 14-0 (with 1 abstention) to prohibit aeroponics, which is defined as a system where the roots of plants are suspended in air and misted with a nutrient rich solution. On the other three motions (to prohibit aquaponics and hydroponics and to restrict how and when producers fertilize in container production) the majority of the Board voted in opposition to the motions, with all three failing by a vote of 7 in support and 8 opposed. A number of members of the Board expressed interest in discussing a labeling option whereby hydroponic and aquaponic producers remain eligible for organic certification and would be required to include a statement on the label indicating how the product was grown. This approach would provide transparency in the marketplace and give consumers the ability to choose how their organic products are grown. It is unclear, however, whether this discussion will be added to NOSB’s work plan for 2018. Overall, NOSB’s discussion was deliberate and respectful, yet the Board was unable to come to consensus on a recommendation to USDA on how to move forward on an issue that has caught national attention.
• **ANEROBIC DIGESTATE (PROPOSAL):** NOSB discussed a proposal developed in response to a petition to remove the 90- or 120-day pre-harvest restriction on anaerobic digestate that contains manure. NOSB generally acknowledged that anaerobic digestate was an important waste reduction method for recycling organic waste into valuable fertilizer. However, it also acknowledged that the current standards for compost and dehydrated poultry manure outlining specific metrics that remove the 90- or 120-day pre-harvest interval are based on scientifically based recommendations from FDA and EPA. There is currently a lack of consensus from food safety regulators on which processes are necessary to ensure that anaerobic digestate is safe. Until NOSB can reference such standards, the Board indicated that anaerobic digestate containing manure should be subject to the 90/120-day pre-harvest interval. As such, NOSB voted unanimously to reject the petition to remove the pre-harvest interval on anaerobic digestate containing manure.

• **FIELD AND GREENHOUSE PRODUCTION (PROPOSAL):** NOSB was receptive to feedback on the three areas pertaining to organic container production presented in this discussion document: 1) Use of artificial lighting; 2) Use of synthetic mulches; and 3) Reuse and recycling of containers and media. NOSB indicated that it would continue work on developing proposals for these and other areas relating to greenhouse production. It also acknowledged that some of these issues, in particular the use of artificial lighting and synthetic mulches, should also apply to soil production as the same resource concerns could arise whether the crops are grown in the field, in containers, or in a greenhouse. We expect a further developed proposal on these issues to be presented at the spring meeting in Tucson, AZ.

• **FATTY ALCOHOLS (PROPOSAL):** NOSB reviewed a petition to allow the use of fatty alcohols to control suckers on tobacco. Suckers currently are removed by hand. EPA has only allowed the use of fatty alcohols on tobacco, so even if NOSB had approved its use, the label restrictions would have only allowed its use on organic tobacco. There was concern, however, that should they allow its use and the EPA label restrictions be expanded to include other crops, it could be used on crops that NOSB had not evaluated. Ultimately, the concern was moot, as NOSB’s motion to add fatty alcohols to the National List unanimously failed.

• **ORGANIC SEED USAGE REQUIREMENTS (PROPOSAL):** NOSB started soliciting public comment in 2016 on ways the NOP organic seed guidance could be strengthened to better help organic producers achieve full compliance with the requirement to use organic seed when it is commercially available. NOSB’s proposal recommended a regulatory change as well as several revisions to existing guidance (NOP 5029) on the use of seeds, annual seedlings and planting stock used in organic crop production. Commenters were generally supportive of the intent behind the proposal, but several stakeholders expressed the need for revisions in multiple sections to ensure that both the regulations and guidance can be reasonably implemented by certifiers and organic producers and to ensure that the organic seed requirements do not inadvertently result in the loss of seed diversity. Commenters also expressed the need to clearly state the requirement to use non-GMO seed in the seed guidance but develop more specific guidance on seed purity and GMO contamination prevention separately. In conclusion, while the subcommittee believes the proposal is about 95% of the way there, it was decided to take it back to subcommittee for further work so they can get it 100% right.
• **CLARIFYING “EMERGENCY USE” OF PARASITICIDES IN LIVESTOCK (PROPOSAL):** Synthetic parasiticides are allowed for use in organic livestock production only on dairy animals not destined for organic slaughter and only under emergency situations. Numerous commenters felt that the proposal was too specific to be appropriate for an update to regulations and suggested that the step-wise approach brought forward by the Livestock Subcommittee be developed into guidance for certifiers. Other commenters did not believe that the proposal fully defined “emergency use” in a clear and consistent way for certifiers to enforce in a level playing field. The Livestock Subcommittee acknowledged that enough public comment had been received with suggestions for improving the recommendation so it wanted additional time to refine and modify the proposal. NOSB voted to refer this proposal back to subcommittee and will revisit the issue at the spring meeting.

• **HYPOCHLOROUS ACID (PROPOSAL):** NOSB discussed a proposal to allow hypochlorous acid as a medical treatment for pink eye in organic livestock and for direct application to wounds and surgeries. NOSB acknowledged that chlorine materials are currently allowed in organic livestock production with the caveat that they can only be used for sanitizing facilities and equipment. NOSB did not agree that organic livestock producers should be allowed to use this chlorine material in direct contact with organic livestock, and voted unanimously to reject the petition.

• **SULFUR (PROPOSAL):** A petition to add sulfur to the list of tools farmers can use to prevent and treat external parasites, particularly on poultry, was discussed by NOSB. Members acknowledged that sulfur is currently allowed in organic crop production as a soil amendment and disease control material. They also acknowledged that there are no viable alternatives for mite control on organic livestock and poultry farms. The allowance of this material gained support from organic poultry producers who testified at the meeting, and ultimately, NOSB voted to recommend adding sulfur to the National List for use as an external parasiticide on livestock and poultry. The recommendation will go to USDA where it must first undergo notice and comment rulemaking prior to the allowance of this material in organic livestock and poultry production.

• **OXYTOCIN (SUNSET 2019):** The Livestock Subcommittee brought forward a motion to recommend removing oxytocin from the National List. Oxytocin is used in post-parturition therapy, primarily in cattle, to treat conditions such as retained placenta. Commenters indicated that there were a number of natural alternative methods to treating these conditions and that it was time for this tool to be removed from the National List. Ultimately, the public comments convinced the Board to vote unanimously recommending removal of this material. This recommendation will next go to USDA for review and notice and comment rulemaking.

• **PROCAIN (SUNSET 2019):** The Livestock Subcommittee brought forward a motion to recommend removing procaine from the National List. Procaine is used as a local anesthetic to reduce pain when performing minor surgeries or allowed physical alterations (de-horning, castration, etc.) on organic livestock. Public commenters indicated to NOSB that currently it is not possible to find procaine products that
are not combined with antibiotics. Since antibiotics are prohibited in organic livestock production, there are no compliant procaine formulas currently available. Additionally, commenters did not bring forward any situations where the alternative to procaine, lidocaine, would not perform adequately. NOSB voted 14 in favor, 1 against recommending removal of procaine from the National List. This recommendation will next go to USDA for review and notice and comment rulemaking.

**COMPLIANCE, ACCREDITATION, AND CERTIFICATION SUBCOMMITTEE**

- **CONVERSION OF NATIVE ECOSYSTEMS (PROPOSAL):** NOSB was unanimous in its beginning discussion that organic production requirements should not be incentivizing the conversion of native ecosystems to organic farming. Reducing or eliminating the incentive, however, while preserving flexibility for farmers to expand operations onto wild-lands they own is challenging. There was discussion that most of the lands across the US have, at some point in history, been grazed or cropped, so concerns were expressed that the proposed 10-year wait time following conversion of lands that had never been grazed or cropped would not actually protect native ecosystems.

Additional concerns were raised that some producers may want to expand their operations into woodlots that they also own, and some felt that the proposal would not have adequate flexibility for those farmers. Still other commenters indicated that NOSB must first define what constitutes a “native ecosystem” and work to ensure those types of systems are not converted, rather than tie the disincentive to whether or not the land had previously been grazed or cropped. Ultimately, NOSB acknowledged the proposal needed additional work and consideration of the public comments, so it referred it back to subcommittee. We expect this proposal to be refined and updated for the spring 2018 meeting.

- **EXCLUDED OPERATIONS IN THE SUPPLY CHAIN (PROPOSAL):** In an effort to address the issue of organic fraud that has recently come to the attention of the organic sector, the Compliance, Accreditation and Certification Subcommittee drafted a proposal that seeks to further clarify and limit what operations are excluded from certification (traders, brokers, ports, warehouses, etc.) via a revision to existing NOP Guidance 5031 – “Certification Requirements for Handling Unpackaged Organic Products.” The proposal largely focuses on the requirements of labeling bulk packages and containers, as well as what constitutes an enclosed package or container. Specifically, NOSB proposed revising NOP 5031 to say that an operation is excluded from certification if it only handles organic products that are enclosed in a package or container and remain in the same package or container for the entire period handled AND (italicized is the new language) the package or container must be labeled as “organic” and contain the “certified organic by” certifier statement, the name of the handler and list of ingredients (if applicable). In general, comments were supportive and stakeholders felt the proposal would have an overall positive impact, primarily by re-issuing a guidance document that needs greater attention and by improving labeling practices in the supply chain. NOSB and the public pointed to some minor needed revisions. However, there was consensus that such tweaks could be addressed at the rulemaking stage or through clarification from NOP. It was also acknowledged that this is the first of many actions NOSB will take on the issue of organic fraud. NOSB unanimously passed the recommendation.
GMO/MATERIALS

- **EXCLUDED METHODS TERMINOLOGY (PROPOSAL):** The subcommittee proposed that the following three terms—Cisgenesis, Intragenesis and Agro-infiltration—be considered “excluded methods” and thus prohibited in organic production and handling because they meet the criteria NOSB adopted for making such determinations for the new genetic technologies that are quickly emerging. They also voted to accept eight additional terms that will be added to the terminology chart and researched. Commenters generally agreed that the three terms should be classified as “excluded methods” and the eight terms should be added to the chart. However, commenters were also concerned that the proposal itself did not include the actual definitions the subcommittee considered, and questions were raised on whether classifying ‘cisgenesis’ as an excluded method without a clear definition could inadvertently cause cell fusion (traditional breeding technique) to become a prohibited method. A vote to send the proposal back to subcommittee to include definitions failed. NOSB decided to pass the recommendation given the proposal is a working document. They plan to bring the proposal back in the fall and include definitions or descriptions for all of the terms being considered.

- **2017 RESEARCH PRIORITIES:** Since adopting its Research Priorities Framework in 2012, NOSB has presented a list of research priorities for organic food and agriculture. The priorities are proposed by NOSB’s Livestock, Crops, Handling, and Materials/GMO Subcommittees, and are published each year prior to the fall meeting. The purpose is to advocate for research related to use of materials in organic production or handling and other organic standards related issues. This document reflects an effort by each subcommittee to review and prioritize all previous years’ priorities from 2012-2017. Commenters were strongly in favor of the current list of research priorities. In response to comments received on how to improve the efficacy this process may have in defending and soliciting funds for organic research, NOSB will be reevaluating its process and how to best deliver the list to the appropriate recipients for optimal recognition and use. Also of note, NOSB member Emily Oakley, producer seat, expressly called out the comments from The Organic Center requesting that NOSB ensure that organic stakeholder voices are represented by requesting mandatory organic representation on USDA research boards and committees.

HANDLING

- **MARINE ALGAE LISTINGS (PROPOSAL):** NOSB’s work on this topic covers both crops and handling. However only handling was covered at this meeting. During the recent Sunset Review of almost 200 National List items, NOSB and the public noted that the listings of 9 marine materials include overlap in species and lack scientific clarity. A discussion document was posted for the fall 2016 meeting and commenters recommended that Latin binomials be added where possible, or by Class, and that NOP clarify the listing of “kelp” used in organic production and if marine materials should be classified as agricultural or non-agricultural. NOSB released a proposal for this meeting to annotate the marine algae listings with specific information on Latin binomials for crops, and recommended that NOP develop guidance to clarify the term “kelp” as used in organic production and wild harvesting.

- **CLASSIFICATION OF POTASSIUM ACID TARTRATE (PROPOSAL):** Potassium acid tartrate (PAT) is used in many types of organic baked goods as a leavening agent. Information received in a January, 2017 Technical Review demonstrated that this substance could very well be
classified as agricultural given how it is derived from a crop (grapes). Given its agricultural origin and using the decision tree for an agricultural vs. non-agricultural material in the Classification of Materials guidance (NOP 5033-2), the Handling Subcommittee proposed to change its classification from a synthetic substance to an agricultural non-synthetic substance and move the substance from § 205.605(b) to § 205.606 of the National List. Commenters strongly supported the proposal because of the greater consistency it brings to the National List and because it could potentially incentivize the production and use of organic cream of tartar. One commenter noted that organic cream of tartar would need to come from “organic” wine (no sulfites) rather wine “made from organic grapes.” NOSB voted unanimously to pass the recommendation.

- **UPDATE: ANNOTATION CHANGE ON TOCOPHEROLS (PROPOSAL):** Tocopherols are currently classified on the National List as a synthetic substance. However, tocopherols are derived from plant oils and non-synthetic forms are available. Organic forms are potentially available as well. To encourage industry to source non-synthetic and organic forms, the Handling Subcommittee was exploring an annotation change to the listing. However, after extensive discussion and consultation with NOP alongside with the fact that organic forms do not currently exist, NOSB decided that the sound and sensible approach would be to maintain the listing as a synthetic that in turn allows for the use of both non-synthetic and synthetic forms and does not prevent the production and use of organic. Should organic forms become available, NOSB would take the issue back up.

- **UPDATE: ANCILLARY SUBSTANCES FOR CELLULOSE (PROPOSAL):** Ancillary substances are intentionally added to a formulated generic handling substance on the National List. However, these substances do not have a technical or functional effect in the finished product and do not get listed on the National List. However, NOSB is undergoing a process to review and approve the substances based on a NOSB recommended procedure that NOP has yet to act on. In spring 2018, NOSB considered a proposal to specify the ancillary substances permitted within cellulose, a material currently listed at §205.605(b) for use in regenerative casings, as an anti-caking agent, and as a filtering aid. The proposed list of permitted ancillary substances contained an error, so NOSB referred the issue back to subcommittee for further consideration. Upon further examination of the process, NOSB decided it would continue to collect and review ancillary substances but would hold off on any formal recommendations until NOP releases final guidance on the ancillary review process that should be followed by NOSB and certifiers.

### FINAL NOSB VOTES

**PETITIONS TO ADD PRODUCTION INPUTS TO THE NATIONAL LIST**

<table>
<thead>
<tr>
<th>Use Area</th>
<th>Petitioned Input</th>
<th>Subcommittee Motion &amp; Vote</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| Crops    | Fatty alcohols (Octanol/Decanol mix) | **Classification:** Synthetic  
**Motion:** To add fatty alcohols to §205.601 for use in organic crop production.  
**Vote:** 0 Yes, 15 No. Motion fails | FAILED – Input will remain prohibited |

| 8 |
### Crops

**Anaerobic Digestate**
- **Classification:** Non-synthetic
- **Motion:** To amend section 205.601 of the regulations to allow raw animal manure when it has “undergone an anaerobic digestion process” and also to allow “anaerobic digestion products that have been processed to reduce pathogens.
- **Vote:** 0 Yes, 15 No. Motion fails.

**Livestock**

**Hypochlorous Acid**
- **Classification:** Synthetic
- **Motion:** To add hypochlorous acid to 205.603 as an allowed organic livestock treatment for wounds and pink eye.
- **Vote:** 15 No, 0 Yes. Motion fails.

**Livestock**

**Sulfur**
- **Classification:** Synthetic
- **Motion:** To add sulfur to 205.603 as an allowed livestock parasiticide
- **Vote:** 13 Yes, 0 No, 2 abstain. Motion passes.

* (National List References: 205.601=allowed synthetics for crops / 205.603=allowed synthetics for livestock / 205.603(b)=prohibited non-synthetic in livestock / Handling: 205.605(a)=allowed non-synthetics / 205.605(b) = allowed synthetics / 205.606=allowed non-OG agricultural ingredient when OG is not available)

### PRACTICE STANDARDS AND OTHER RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Use Area</th>
<th>Agenda Topic</th>
<th>Motion &amp; Vote</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops</td>
<td>Strengthening the Organic Seed Guidance Requirements</td>
<td><strong>Final Motion:</strong> To refer proposal back to subcommittee. <strong>Vote:</strong> 15 Yes, 0 No</td>
<td>Referred back to subcommittee</td>
</tr>
<tr>
<td>Crops</td>
<td>Aeroponics</td>
<td><strong>Final Motion:</strong> To prohibit aeroponics in organic production <strong>Vote:</strong> 14 Yes, 0 No, 1 Abstain</td>
<td>Passed – Aeroponics to be prohibited following rulemaking</td>
</tr>
<tr>
<td>Crops</td>
<td>Hydroponics</td>
<td><strong>Final Motion:</strong> To prohibit hydroponics in organic production <strong>Vote:</strong> 7 yes, 8 No</td>
<td>FAILED – Hydroponic production will continue to be allowed</td>
</tr>
<tr>
<td>Crops</td>
<td>Container Production</td>
<td><strong>Final Motion:</strong> To restrict organic container production with limits on liquid feeding (20%) and nitrogen fertilizer additions (minimum 50% in pot before planting). <strong>Vote:</strong> 7 yes, 8 No</td>
<td>FAILED – Container production will continue to be allowed without the proposed restrictions.</td>
</tr>
<tr>
<td>Crops</td>
<td>Aquaponics</td>
<td><strong>Final Motion:</strong> To prohibit aquaponics in organic production</td>
<td>FAILED – Aquaponics</td>
</tr>
</tbody>
</table>
### SUNSET REVIEW 2019

NOSB must review every substance (input) on the National List every five years to confirm that it continues to meet all required criteria under the Organic Foods Production Act and USDA organic regulations. This review is known as “Sunset Review.” Any substance NOSB votes for removal moves forward for USDA approval and additional rulemaking.

*Asterisk and highlight* marks the inputs NOSB voted for removal. All others were renewed.

<table>
<thead>
<tr>
<th>Use Area</th>
<th>National List Input</th>
<th>Discussion &amp; Final Vote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling</td>
<td>Attapulgite</td>
<td>3 votes of support for relisting; 2 certified clients use for oil filtration; 2 comments to remove due to lack of support—thereby not meeting essentiality requirements; 2 certifiers reported no use in their client base</td>
</tr>
<tr>
<td>Handling</td>
<td>Substance</td>
<td>Details</td>
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<tr>
<td>Handling</td>
<td>Bentonite</td>
<td>Most supported relisting and that bentonite is critical to their products (wine industry especially); some commenters requested further review to examine mining activities and alternatives (no new information on these issues were provided in comment); 1 certifier reported no use; 1 certifier reports 39 clients use; 1 certifier reports 7 clients use</td>
</tr>
<tr>
<td>Handling</td>
<td>Diatomaceous Earth (food filtering aid only)</td>
<td>16 total comments. 14 to relist and 2 to review mining practices. Strong support from wine industry.</td>
</tr>
<tr>
<td>Handling</td>
<td>Nitrogen</td>
<td>All comments were in support.</td>
</tr>
<tr>
<td>Handling</td>
<td>Sodium carbonate</td>
<td>Most comments were in support. One comment requested a Technical Review (TR) for production and one organization wanted clarification on the manufacturing and processing practices that are permitted.</td>
</tr>
<tr>
<td>Handling</td>
<td>Acidified sodium chlorite</td>
<td>Several comments in support stated it is critical and essential to food safety. Some commenters requested a comprehensive review of sanitizers in general.</td>
</tr>
<tr>
<td>Handling</td>
<td>Chlorine Materials</td>
<td>Broad support for relisting however some commenters request a comprehensive review of sanitizers. Good discussion on the need to research and develop alternatives.</td>
</tr>
<tr>
<td>Handling</td>
<td>Carbon dioxide</td>
<td>All comments in favor for retaining; NOSB voted unanimously in 2015 to relist. No new information.</td>
</tr>
<tr>
<td>Handling</td>
<td>Magnesium chloride (derived from sea water)</td>
<td>NOSB requested public comment on whether this material should be listed as non-synthetic. TR stated it can be classified as synthetic and non-synthetic. A classification change is on NOSB’s work plan.</td>
</tr>
<tr>
<td>Handling</td>
<td>Potassium acid tartrate</td>
<td>Comments in favor although some encourage that it be made only from organic grapes. In a separate proposal, NOSB voted to reclassify as agricultural. This will require organic forms when commercially available.</td>
</tr>
<tr>
<td>Handling</td>
<td>Sodium phosphates (for use only in dairy foods)</td>
<td>Comments were diverse with the majority supporting the relisting but calling for research to develop alternatives. Concerns on this material rise from accumulative impact of phosphate not from isolated use. NOSB has identified this material as a research priority.</td>
</tr>
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</table>
| Handling | Casings, from processed intestines | This material brought to the forefront a discussion about critical mass and how NOSB determines when an ingredient is commercially available in organic form and how it understands the barriers to organic production.  
**Final Vote:** 14 renew; 1 remove |
| Handling | *Konjac flour* | There appears to some availability in organic. However, specific information was not made available therefore NOSB was challenged on whether to relist or not.  
**Final Vote:** 4 renew; 11 remove |
| Handling | Pectin (non-amidated forms only) | Extensive comments about essentiality. One commenter said that only high-methoxy be allowed, and noted that pesticides are used during the non-organic raw material production.  
**Final Vote:** 15 renew; 0 remove |
| Crops | Chlorine Materials (Calcium Hypochlorite, Chlorine Dioxide, Sodium Hypochlorite) | NOSB recognized that EPA is undergoing comprehensive review of sanitizers and will incorporate changes at EPA into NOSB review of sanitizers.  
**Final Vote:** 15 renew; 0 remove |
| Crops | Herbicides, soap-based | Most comments support relisting, and NOSB recognized that continued allowance of this material allows producers to manage weeds in non-production areas (ditches and roadways) without turning to prohibited toxic substances.  
**Final Vote:** 14 renew; 0 remove; 1 abstain |
| Crops | Biodegradable bio-based mulch film | NOSB recognizes that no materials meet current annotation restrictions. New science indicates that the polymers are fully biodegradable regardless of source (i.e. bio-based vs. petroleum-based), and NOSB will be looking at a possible annotation change at a future meeting.  
**Final Vote:** 15 renew; 0 remove |
| Crops | Boric acid | NOSB recognizes the need for effective structural pest control materials, including boric acid.  
**Final Vote:** 15 renew; 0 remove |
| Crops | Sticky traps/barriers | Majority of commenters supported relisting. NOSB recognizes that scouting and monitoring pests is a foundational element of integrated pest management systems.  
**Final Vote:** 15 renew; 0 remove |
| Crops | Copper sulfate | NOSB recognizes that there are no alternatives for some of the uses for copper materials, and that these substances should not be removed.  
**Final Vote:** 14 renew; 0 remove; 1 absent |
| Crops | Coppers, fixed | NOSB recognizes that there are no alternatives for some of the uses for copper materials, and that these substances should not be removed.  
**Final Vote:** 15 renew; 0 remove |
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| Crops    | Humic acids | NOSB discussed sustainability of some parent materials for manufacturing of humic acids, but did not hear comments strongly opposed to relisting humic acids. Comments indicated humic acid is important for transitioning farmers and organic farmers in arid regions where soil biological activity is low.  
**Final Vote:** 15 renew; 0 remove |
| Crops    | Micronutrients – (i) Soluble boron products, (ii) Sulfates, carbonates, oxides, or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and cobalt | NOSB recognizes that micronutrients are necessary and continue to support the annotation change passed in 2015.  
**Final Vote:** 15 renew; 0 remove |
| Crops    | *Vitamin B1 | NOSB heard from public comments that this product is rarely, if ever, used in organic crop production and is no longer necessary.  
**Final Vote:** 0 renew; 15 remove |
| Crops    | Vitamin C and E | NOSB and commenters believe Vitamin C and E should continue to be allowed.  
**Final Vote:** 15 renew; 0 remove |
| Crops    | Lead salts - Prohibited | NOSB and commenters believe lead salts should continue to be prohibited.  
**Final Vote:** 15 renew; 0 remove |
| Crops    | Tobacco dust (nicotine sulfate) - Prohibited | NOSB and commenters believe tobacco dust should continue to be prohibited.  
**Final Vote:** 15 renew; 0 remove |
| Livestock | Chlorine Materials (Calcium hypochlorite, Chlorine Dioxide, Sodium Hypochlorite) | General support, but similar to comments for Handling, some stakeholders would like to see a comprehensive review done on all sanitizers.  
**Final Vote:** 15 renew; 0 remove |
| Livestock | Chlorhexidine | Minimal comments; no concerns were expressed.  
**Final Vote:** 15 renew; 0 remove |
| Livestock | Glucose | Minimal comments; no concerns were expressed.  
**Final Vote:** 15 renew; 0 remove |
| Livestock | *Oxytocin | NOSB concluded that alternative treatments are effective and have been widely embraced by organic livestock producers, and, therefore, oxytocin should be removed.  
**Final Vote:** 0 renew; 15 remove |
| Livestock | Tolazoline | Very few comments were received and none indicated it should be removed.  
**Final Vote:** 15 renew; 0 remove |
| Livestock |  | Zinc sulfate is an alternative, and NOSB recently received a petition to add thymol as a potential effective alternative. However, NOSB agrees that copper sulfate should not be removed until alternatives are added and proven to be effective.  
**Final Vote:** 15 renew; 0 remove |
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<td>Livestock</td>
<td>Lidocaine</td>
<td><strong>Final Vote:</strong> 15 renew; 0 remove</td>
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| Livestock | *Procaine* | Procaine is always found in conjunction with antibiotics, which means that no current formulas are approved in organic. Additionally, lidocaine is allowed and appears to provide equally effective pain relief in all situations. NOSB concluded that Procaine was no longer necessary in organic production.  
**Final Vote:** 1 renew; 14 remove |

*(National List References: 205.601=allowed synthetics for crops / 205.603=allowed synthetics for livestock / 205.603(b)=prohibited non-synthetic in livestock / Handling: 205.605(a)=allowed non-synthetics / 205.605(b) = allowed synthetics / 205.606=allowed non-OG agricultural ingredient when OG is not available)*

**NOSB Spring 2018 Work Plan**

**CROPS:**
- **Petitions:** Polyoxin D Zinc Salt, Allyl Isothiocyanate, Sodium Citrate, Natamycin, Sulfur
- **Standards:** Manure treatments, Biodegradable bio-based mulch, Marine materials, Field and Greenhouse Production
- **Sunset 2020:** Alcohols. Sodium Carbonate peroxyhydrate, Newspaper or other recycled paper, Plastic Mulch Covers, Aqueous potassium silicate, Elemental Sulfur, Lime Sulfur, Sucrose Octanoate Esters, Hydrated Lime, Liquid Fish Products, Sulfurous Acid, Ethylene, Microcrystalline Cheesewax, Potassium Chloride

**HANDLING:**
- **Petitions:** Sodium Dodecylbenzene Sulfonate, Sodium Chlorite for the generation of chlorine dioxide gas, Silver Dihydrogen Citrate, Japones Pepper, Ethiopian Pepper, Tamarind Seed Gum
- **Standards:** Packaging substances used in organic food handling – including BPA, Marine Materials, Magnesium Chloride Classification
- **Sunset 2020:** Calcium Chloride, Flavors, Gellan Gum, Oxygen, Potassium Chloride, Alginates, Calcium Hydroxide, Ethylene, Glycerides (mono and di) Magnesium Stearate, Phosphoric Acid, Potassium Carbonate, Sulfur Dioxide, Xanthan Gum, Fructooligosaccharides, Gums (Arabic, Guar, Locust Bean), Lecithin (de-oiled), Tragacanth Gum

**LIVESTOCK:**
- **Petitions:** Thymol, Glycolic Acid
- **Sunset 2020:** Alcohols, Aspirin, Biologics (Vaccines), Electrolytes, Glycerine, Phosphoric Acid, Lime (hydrated), Mineral Oil, Sucrose Octanoate Esters
Organic Trade Association’s NOSB Report: As a service to its members, OTA attends National Organic Standards Board meetings. The NOSB Report, a member publication, summarizes the meeting and provides an overview of the agenda topics, public commentary, and key decisions made by NOSB. The items included in this report represent recommendations that NOSB developed and reviewed at its meetings. If accepted by the Board, recommendations pass to the National Organic Program, which determines the final form of the NOSB recommendations. OTA members are alerted to steps in rulemaking through OTA’s News Flash or other member communications.

OTA’s NOSB Report archives are available on OTA’s website. Please contact Gwendolyn Wyard, OTA’s Vice President of Regulatory and Technical Affairs or Nathaniel Lewis, OTA’s Farm Policy Director, for more information.