

NOSB FALL 2019

SUMMARY OF SUBCOMMITTEE PROPOSALS AND DISCUSSION DOCUMENTS

The fall 2019 National Organic Standards Board (NOSB) Meeting will be October 23-25 at the DoubleTree by Hilton Hotel & Suites Pittsburgh City Center in Pittsburgh, PA. The [Meeting Agenda](#) and [Meeting Materials \(all proposals and discussion documents to be considered at the meeting\)](#) are posted, and the public comment period is open. The meeting materials have been voted on by subcommittees of NOSB, and the full Board will discuss and/or vote on the materials at the in-person meeting.

The meeting is open to the public. The primary purpose of NOSB meetings is to provide an opportunity for organic stakeholders to give input on proposed NOSB recommendations and discussion items. The meetings also allow NOSB to receive updates from USDA's National Organic Program (NOP) on issues pertaining to organic agriculture.

NOSB PUBLIC COMMENT OPPORTUNITIES

Members of the public are invited to provide written and/or oral comments on the topics included on the NOSB meeting agenda.

Oral comments may occur during one of two webinar sessions, or at the in-person meeting. Individual commenters may only sign up for one comment option, and must register in advance.

- **Webinars:** October 15 & 17, 2019, from 1:00 - 4:00 p.m. Eastern (three-minute comment slot). [SIGN UP to comment on a webinar.](#)
- **In-person meeting:** October 23 & 24, 2019 (three-minute comment slot). [SIGN UP to comment at the meeting.](#)

Written comments must be submitted in advance of the meeting and should be submitted via [Regulations.gov](#).

The **final deadline** to submit written comments and sign up for oral comments is **October 3** at midnight Eastern.

AT-A-GLANCE LIST OF TOPICS

PROPOSALS (vote)

- **Sunset Review 2021** - *see full list below*
- **Fatty alcohols** - *petitioned for use as sucker control in tobacco production*
- **Potassium hypochlorite** - *petitioned for use as irrigation water treatment*
- **Genetic integrity of seed grown on organic land** - *proposed instructions to certifiers*
- **Vaccines made with excluded methods** - *clarifying restrictions on GMO vaccines used in preventive livestock health care*
- **Excluded methods determinations** - *proposals induced mutagenesis and livestock embryo transfer*
- **Research priorities** - *see full list below*
- **Updates to Policy and Procedures Manual**

DISCUSSION DOCUMENTS (no vote)

- **Paper Pots** - *petitioned for use as planting aids in crop production*
- **Marine Materials** - *discussion about ensuring sustainable harvesting of seaweeds for use in crop fertilizers and soil amendments*
- **Fenbendazole** - *petitioned for in poultry production as parasiticide for laying hens*

SUMMARY OF PROPOSALS AND DISCUSSION DOCUMENTS

2021 SUNSET REVIEW

Over 50 currently allowed generic inputs (fertilizers, pest control, livestock treatments, processing aids, etc.) are undergoing sunset review. At the fall 2019 meeting, NOSB will vote on whether the substances should continue to be listed or should be removed from the list. Now is your chance to provide feedback. See the **2021 Sunset Review** section below for details, and [weigh in using our sunset surveys!](#)

CROPS SUBCOMMITTEE

Fatty Alcohol (Petition) – Proposal

- **BACKGROUND:** Fatty alcohol is petitioned for use as sucker control on organic tobacco crops. The substance is produced from natural fats or petroleum sources, requiring chemical changes to produce the final product. Fatty alcohol is applied as a broadcast spray over top of tobacco plants in the early flower stage when suckers (auxiliary lateral buds) are tender, desiccating the sucker. Sucker control reduces drain on plant resources, and supports growth and yield of marketable tobacco leaves.

This is the second time that NOSB is reviewing this substance. The first petition was for a much broader use of the substance in tobacco and other crops, and did not specify the range of fatty alcohols. NOSB rejected (Fall 2017) the original petition, citing among other issues that the use of a synthetic growth regulator is not compatible with a system of sustainable and organic agriculture. The revised petition on the current meeting agenda is limited only to use on tobacco, and is limited only to the active ingredient C6, C8, C10, C12 naturally derived fatty alcohol.
- **SUBCOMMITTEE PROPOSAL:** The majority opinion of the subcommittee is to accept the petition and allow fatty alcohols for tobacco sucker control because of the limited scope of the petition and the essentiality of the substance for production of tobacco crops. Numerous public comments from tobacco growers indicate that this substance is essential for tobacco production because alternative substances and practices are not effective. Manual suckering exposes field workers to potential health issues such as tobacco poisoning from skin contact with tobacco leaves. Fatty alcohol is rapidly biodegradable and poses low concern for environmental contamination. The subcommittee proposal also includes a minority opinion that does not support the petition because labor savings and greater economic returns are insufficient criteria for allowing a synthetic material in organic production.
- **SUBCOMMITTEE VOTE:** Motion to add fatty alcohols C6, C8, C10, C12 Naturally Derived Fatty Alcohol at §205.601 for sucker control on organic tobacco crops.
PASSED (Yes: 4 No: 2 Abstain: 1 Absent: 1 Recuse: 0)

Potassium hypochlorite (Petition) – Proposal

- **BACKGROUND:** Potassium hypochlorite is petitioned for use as an irrigation water treatment under the same conditions as other chlorine materials on the National List: “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 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.” Potassium hypochlorite is produced by reacting chlorine with an aqueous solution of potassium hydroxide.
- **SUBCOMMITTEE PROPOSAL:** The subcommittee proposes to accept the petition for potassium hypochlorite because its chemistry and human and environmental risk are nearly identical to currently

allowed chlorine materials sodium and calcium hypochlorite.

- **SUBCOMMITTEE VOTE:** Motion to add potassium hypochlorite at §205.601(a)(2): Chlorine materials--For use in water for irrigation purposes, 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 residual disinfectant limit under the Safe Drinking Water Act.
PASSED (Yes: 7 No: 0 Abstain: 0 Absent: 1 Recuse: 0)

Paper (Plant Pots and Other Crop Production Aids) (Petition) – Discussion Document

- **BACKGROUND:** Paper planting pots have been petitioned by Small Farm Works for inclusion on the National List. Paper pots and other growing containers are used as a vessel for growing transplants intended to be planted directly in the ground. Nitten paper chain systems, which are the subject of the petition, are used to facilitate transplanting closely spaced crops such as onions, salad greens, herbs, and others crops. In addition to paper, the products are formulated with several adhesives. Newspapers and other recycled papers are already allowed as synthetic substances for use as mulch and as a compost feedstock. Certifiers have historically extended the allowance for paper to its use in transplant pots, even though paper isn't specifically on the National List for this use. This petition was submitted for NOSB to specifically address the use of paper as a production aid for transplants intended to be planted into soil. At the fall 2018 meeting, NOSB presented a discussion document to solicit public comments on the necessity and environmental impact of the material and the availability of alternatives. At the spring 2019 meeting, NOSB presented a discussion document that expanded the scope of its review to include a variety of paper-based production aids including pots, seed tape, collars, and hot caps. Out of concern for the use of synthetic fibers in paper-based planting aids, NOSB requested a technical report to evaluate the types of synthetic fibers and the biodegradability of the synthetic fibers used in these types of products. The technical report clarified that synthetic fibers in paper pots and containers are also found in other paper materials currently allowed in organic production as mulches and compost feedstocks.
- **SUBCOMMITTEE DISCUSSION DOCUMENT:** The subcommittee sees few differences between the current paper allowances and the petitioned paper pots and other paper-based planting aids, and has developed a listing and annotation for the possible allowance of paper pots and other production aids. Public comments are requested on the following discussion questions.

Discussion Questions:

1. Please comment on the following options under consideration by the subcommittee for listing at §205.601(o) as production aids:
 - a. "Virgin or recycled paper, without colored or glossy inks," or
 - b. "Virgin or recycled paper, without colored or glossy inks; any synthetic polymer fibers included must not exceed 15% of the paper and must be 100% bio-based with content determined using ASTM D6866 (incorporated by reference; see 205.3), and demonstrates at least 90% biodegradation absolute or relative to microcrystalline cellulose in less than two years, in soil, according to one of the following test methods: ISO 17556 or ASTM D5988 (both incorporated by reference; see §205.3)"
2. Synthetic polymer content—
 - a. Should a maximum synthetic polymer content be stated explicitly? If so, what is the appropriate level?
 - b. What is the amount (or range) of synthetic polymer content in products currently available?
 - c. How would synthetic content be measured? How would a certifier or Material Review Organization verify content? For example, if a product included recycled paper as an ingredient, how would the synthetic polymer content be determined?

- d. Is it possible to manufacture paper production aids that use only natural fiber sources and that meet the product specifications for their intended use?
 3. Biodegradability—
 - a. Should a biodegradability standard be included for these products? If so, is this the appropriate biodegradability standard?
 - b. Does maximum synthetic polymer content need to be stated if there is a biodegradability requirement?
 - c. As the products biodegrade, what is the impact on the soil? Also, can fragments be consumed by wildlife or livestock before it is completely degraded?
 4. Bio-based content—
 - a. Should a minimum bio-based content standard be included for these products?
 - b. Is 100% bio-based content achievable for these products? If not, what should be the minimum bio-based content requirement?
 5. Is genetic engineering involved in the production of these products?
 6. Does the annotation need to specify that added fungicides, insecticides, or other synthetic materials not typically found in paper would not be allowed, or is that already understood?
- **SUBCOMMITTEE VOTE:** Motion to accept the discussion document.
DISCUSSION ONLY (Yes: 8 No: 0 Abstain: 0 Absent: 0 Recuse: 0)

MATERIALS SUBCOMMITTEE

Excluded Methods: Induced mutagenesis and embryo transfer in livestock – Proposal

- **BACKGROUND:** NOSB is addressing two items related to excluded methods: 1) induced mutagenesis, and 2) embryo transfer in livestock. These items represent a continuation of work by NOSB over the past few years. On November 18, 2016, NOSB passed a recommendation on Excluded Methods Terminology that provided a new framework of definitions for determining a genetic manipulation as an excluded method and requested that NOP incorporate the information into a guidance document. This recommendation provided improved definitions and attempts to address the increased diversity in types of genetic manipulations performed on seed, livestock and other inputs used in agriculture. It is understood that genetic engineering is a rapidly expanding field in science at this time, and that NOSB and NOP will need to continually review new technologies to determine if they would or would not be acceptable in organic agriculture. Also in November 2016, NOSB presented a discussion document with a running list of new technologies under review to determine if they are within the definition of excluded methods and thus prohibited. Several of the technologies in the document are identified as “to be determined,” with the understanding that NOSB will continue to resolve these issues at future meetings.
- **SUBCOMMITTEE PROPOSAL:** The subcommittee has presented a proposal on two technologies that are currently “to be determined” in the November 2016 discussion document described above: 1) Induced mutagenesis, and 2) Embryo transfer in livestock.

Induced Mutagenesis: The subcommittee proposes that induced mutagenesis developed through in vitro nucleic acid techniques meets the criteria to be determined as an excluded method and should be identified as such in NOP Guidance on Excluded Methods. Other methods of induced mutagenesis need further discussion, so the subcommittee proposes that induced mutagenesis developed through exposure to UV light, chemicals, irradiation, or other stress-causing activities remain as “to be determined.”

Embryo Transfer in Livestock: The subcommittee proposes that embryo transfer (or embryo rescue) in livestock is not an excluded method and should be identified as “not excluded” in NOP Guidance on Excluded Methods. Use of hormones is not allowed in recipient animals.

- **SUBCOMMITTEE VOTE:** Motion to accept the proposal on excluded methods determinations.
PASSED (Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0)

Genetic Integrity Transparency of Seed Grown on Organic Land - Instructions to Certifiers – Proposal

- **BACKGROUND:** Since 2012, NOSB has issued several discussion documents on the topic of “seed purity” (i.e., keeping seed stock used for organic production free from contamination by GMOs via a seed purity standard). Public commenters have expressed strong support for exploring the feasibility of a seed purity standard recognizing the importance of reducing inadvertent introduction of GMOs into crops through seeds. At the same time, there is concern that setting a standard without the proper infrastructure may penalize farmers for trespass of genetic contamination that is the fault of others. It could also ultimately narrow the availability of needed crops traits. Six years of discussion and public comment led to a conclusion that public data on seed contamination is needed to inform an effective and fair seed purity standard if one is to be established. NOSB continues to explore solutions to this complex problem.
- **SUBCOMMITTEE PROPOSAL:** The subcommittee proposes that NOP provide an “Instruction to Certifiers” that encourages certifiers and farmers to be proactive in obtaining information about GE contamination before planting seed that has a GE equivalent. There is no specific requirement, other than for certifiers to instruct their clients about the option to request GE contamination test results from their seed and planting stock providers. The proposal does not set tolerance levels that could prohibit planting of seed that exceeds any specific tolerance.

To aid producers in their goal of low-to-no detection of GE contamination of their organic crops (seed and planting stock) that have GE equivalents in the marketplace, certifiers should provide the following information to their organic farmers:

- A. Producers who are growing crops from seed or planting stock that could be subject to Genetic Engineering contamination of that seed or planting stock can contact their suppliers to obtain GE contamination test results.
 - B. The vast majority of seed and planting stock suppliers whose crops have GE equivalent varieties that could cause contamination are already doing GE contamination testing and are supplying information, at the request of the buyer of their seed or planting stock, of any GE contamination and the levels present.
 - C. Certifiers may choose to obtain this information at the organic inspection. If presence of GE contamination is found on the finished crop by the certifier in their testing program or by a buyer of the finished crop, this seed GE contamination information will be useful in determining the cause of the GE contamination.
 - D. Certifiers can inform farmers who wish to test seed they grew or test seed or planting stock they purchased, that they are legally allowed to test for GE contamination. A wide variety of laboratories around the U.S. and the world supply this testing service. This information could be provided to the organic certifier as well.
- **SUBCOMMITTEE VOTE:** Motion to accept the “Genetic Integrity Transparency of Seed Grown on Organic Land Instructions to Certifiers” Proposal.
PASSED (Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0)

NOSB Research Priorities 2019 – Proposal

- **BACKGROUND:** Since adopting its Research Priorities Framework in 2012, NOSB has presented an annual list of research priorities for organic food and agriculture. The priorities are proposed by NOSB’s Livestock, Crops, Handling, and Materials/GMO Subcommittees.
- **SUBCOMMITTEE PROPOSAL:** NOSB encourages integrated, whole farm research in to the following areas:

Livestock

1. Evaluation of methionine in the context of a system approach in organic poultry production.
2. Prevention and management of parasites, examining breeds, geographical differences, alternative treatments, and pasture species.
3. Organic livestock breeding for animals adapted to outdoor life and living vegetation.

Crops

1. Examination of decomposition rates, the effects of residues on soil biology, and the factors that affect the breakdown of biodegradable bio-based mulch film.
2. Conduct whole farm ecosystem service assessments to determine the economic, social, and environmental impact of farming systems choices.
3. Organic no-till practices for diverse climates, crops, and soil types.
4. Develop cover cropping practices that come closer to meeting the annual fertility demands of commonly grown organic crops.
5. Development of systems-based plant disease management strategies are needed to address existing and emerging plant disease threats.
6. The demand for organic nursery stock far exceeds the supply. Research is needed to identify the barriers to expanding this market, then develop and assess organic methods for meeting the growing demand for organically grown nursery stock.
7. Strategies for the prevention, management, and control of invasive insects.
8. Factors impacting organic crop nutrition, and organic/conventional nutrition comparisons.
9. Side-by-side trials of organic synthetic materials, natural materials, and cultural methods, with a request for collaboration with the IR4 project.

Food Handling and Processing

1. Comparison of alternatives to chlorine materials in processing: impact mitigation, best management practices, and potential for chlorine absorption by produce.
2. Production of celery for celery powder yielding nitrates sufficient for cured meat applications, and investigation of agriculturally derived alternatives.
3. Suitable alternatives to BPA (Bisphenol-A) for linings of cans used for various products.

Coexistence with GE and Organic Crops

1. Outcome of genetically engineered (GMO/GE) material in organic compost.
2. Evaluation of public germplasm collections of at-risk crops for the presence of GE traits, and ways to mitigate small amounts of unwanted genetic material in breeding lines.
3. Develop then implement methods of assessing the genetic integrity of crops at risk to quantify the current state of organic and conventionally produced non-GMO seed.
4. Techniques for preventing adventitious presence of GE material in organic crops, and evaluation of the effectiveness of current prevention strategies.
5. Testing for fraud by developing and implementing new technologies and practices.

General

1. Examination of the factors influencing access to organically produced foods.
 2. Production and yield barriers to transitioning to organic production to help growers successfully complete the transition.
- **SUBCOMMITTEE VOTE:** Motion to adopt the proposal on 2019 NOSB Research Priorities.
PASSED (Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0)

Marine materials in organic crop production – Discussion Document

- **BACKGROUND:** Marine vegetation such as seaweeds are commonly used in the manufacture of crop production inputs such as fertilizers and soil conditioners. These marine materials are largely harvested from wild native ecosystems. During the 2015 Sunset Review of the §205.601(j) listing of aquatic plant extracts, concerns were raised about the increase in global harvesting of seaweeds and the accelerated potential for destruction of marine ecosystems. To more fully examine marine materials in organic production, a Technical Report was obtained in 2016. A discussion document was posted for the fall 2016 NOSB meeting that posed questions about the naming conventions of marine plant/algae on the National List, the need to specify uses or harvesting guidelines of certain species, and whether further NOP guidance is needed. In spring 2017, NOSB proposed a motion to limit the §205.601(j) listing of aquatic plant extracts to only brown seaweeds. Public comments revealed that aquatic plant input products also use green and red algae, so the proposal was sent back to subcommittee to re-examine its approach to the issue. Another discussion document was posted for the fall 2018 meeting that explored a potential requirement for marine plants to be certified organic when used in crop inputs, and it initiated a robust response from public commenters. Although there was unanimous support throughout the comments that the issue of sustainability in marine plant harvesting should be addressed, there was not consensus that organic certification was necessarily the right solution based on the information available at the time. NOSB continues to seek an effective and realistic means of addressing this complicated issue of ensuring that marine algae harvesting maintains or improves the environment.
- **SUBCOMMITTEE DISCUSSION DOCUMENT:** The discussion document on Marine Materials in Organic Crop Production was presented at the April 2019 NOSB meeting, and is being posted a second time for additional comment. It is identical to the April 2019 version with the exception of the addition of question #8.

The discussion document presents the approach of requiring organic certification of marine algae ingredients in crop inputs (proposed language changes are underlined):

- §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 use is limited to that amount necessary for extraction. Marine algae ingredients must be certified organic.
- §205.602 Non-synthetic substances prohibited for use in organic crop production. (i) Marine algae -- unless certified organic.

The discussion document summarizes and attempts to address the concerns raised at the last meeting about this approach, specifically regarding the authority of NOSB to require organic inputs, and the effectiveness of organic certification to meet sustainability goals. The document also summarizes a number of alternative approaches suggested in the last meeting. Those approaches include: limiting or prohibiting harvest of certain marine algae; exploring other existing third-party standards for sustainable harvesting; or adding annotations to material listings on the National List to require sustainable harvesting. Each of these approaches is met with its own set of questions and concerns outlined in the document. The discussion document also puts forth additional discussion questions for

stakeholder feedback. NOSB plans to utilize public comment to develop a proposal at the fall 2019 meeting.

Discussion Questions:

1. If you are not in support of requiring organic certification, what approach do you support? Please describe the method for defining, measuring, and most importantly, enforcing, that the harvest would not be destructive to the environment under an alternative approach.
 2. Some existing wild harvest marine algae standards from other certifiers and third-party entities are listed in the Appendix. Please comment on strengths in these standards that could be adapted for NOP guidance. Please identify areas of weakness or areas that are not covered.
 3. What existing certification or private standards to support marine algae harvest sustainability have not been included in this document or the Appendix that can help inform NOSB’s understanding of the current work being done?
 4. How many crop input products approved for use in organic production currently contain certified organic marine algae ingredients?
 5. Are there any crop input products utilizing or developing farmed marine algae?
 6. Are there enough certifiers able to offer certification services to meet the needs of the crop fertilizer markets if organic certification were required? If organic certification were required of marine algae ingredients, what would be an appropriate phase-in time to allow markets to meet the demand?
 7. NOSB hopes to convene an expert panel at the fall 2019 board meeting to include a marine algae harvester for crop inputs, scientist, conservationist, and certifier, among others. What are some questions that could be posed to help identify the issues and solutions?
 8. What are the standards for evaluating environmental harm? For example, what measures of community biodiversity and marine algae species characteristics (density, maximum height, girth, area) could be collected pre- and post-harvest? How soon must these variables return to baseline to avoid environmental harm?
- **SUBCOMMITTEE VOTE:** Motion to accept the discussion document.
DISCUSSION ONLY (Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0)

POLICY DEVELOPMENT SUBCOMMITTEE

Updates to the policy and procedures manual – Discussion Document

- **BACKGROUND:** The Policy and Procedures Manual (PPM) was established to assist NOSB in the implementation of its duties under the Organic Foods Production Act and to establish operating procedures and policies for NOSB.
- **SUBCOMMITTEE PROPOSAL:** The subcommittee proposes the following changes:

Section/Page	Change
III. D Page 8	Added to the NOSB Secretary’s duties: To monitor and notify Subcommittee Chairs periodically of public comments posted in the open docket between the period when the meeting notice is posted in the <i>Federal Register</i> and when the proposals are posted (pg 8).
IV. F. 1 Page 20	Clarified language about when the new NOSB Chair takes office to match the language that is in VIII. F.
IV. G. 2 Page 22	Another type of discussion document: Petition material discussion document
IV. H. Page 23	Clarified the steps in the material review process for a new petition

IV. H. Page 24 Steps 2 & 3	Added clarifying language about how a Subcommittee determines sufficiency of a petition
IV. H. Pages 25 - 26, Steps 4 & 7	Added a process for a Subcommittee to develop a discussion document based on a petition
VIII. E. Page 34	Added an additional bullet point under the section about the policy for public communication between NOSB meetings for posting discussion documents and proposals between public meetings for review and public comment

- **SUBCOMMITTEE VOTE:** Motion to accept the changes to the Policy & Procedures Manual (PPM). **PASSED** (Yes: 5 No: 0 Abstain: 0 Absent: 1 Recuse: 0)

LIVESTOCK SUBCOMMITTEE

Use of excluded methods vaccines in organic livestock production – Proposal

- **BACKGROUND:** Vaccines are permitted as a preventive health care material in organic livestock production. Uncertainty has existed about the status of vaccines made from excluded methods (i.e. genetic engineering) that are permitted, which has caused inconsistencies between certifiers in what vaccines are allowed to be used in organic livestock production. Although §205.105(e) requires excluded method vaccines to be reviewed and placed on the National List before use and there is a categorical listing for vaccines on the National List, there are not individual vaccine listings nor a specific references to those from excluded methods. This topic was discussed in depth by NOSB from 2009-2014, culminating in a unanimous recommendation from NOSB in fall 2014 that presented findings on manufacturing and availability of vaccines made with excluded methods, and requested that NOP review the information and provide guidance to the industry on these materials. NOP has not been able to act on this recommendation because of the following challenges: “having an updated definition of excluded methods that determines if new technologies were to be excluded methods for organic, having a clear understanding if there were non-excluded method vaccine equivalents to excluded method derived vaccines and how to provide for use of excluded method vaccines if there was an emergency when only an excluded method vaccine could address the problem in a timely way.” NOSB’s more recent work on excluded methods terminology will support the renewed focus of the Livestock Subcommittee’s work on vaccines. At the spring 2019 meeting, NOSB presented a discussion document with three options to clarifying the allowance of excluded methods vaccines in the regulations: 1) Follow the requirements of §205.105 (e) and start reviewing known excluded method vaccines for individual placement on the National List; 2) Allow all vaccines “as a class” without any review or consideration if they were produced through excluded methods; 3) Allow vaccines from excluded methods, but only if a vaccine is not “commercially available” that had not been produced from excluded methods to effectively treat that health issue. Most public commenters supported option 3. At the fall 2019 meeting, NOSB presents a proposal to implement that option.
- **SUBCOMMITTEE PROPOSAL:** The subcommittee proposes to amend NOP regulations so that vaccines from excluded methods may be used when an equivalent vaccine not produced through excluded methods is not commercially available. This proposal implements the most popular of the three options presented for discussion at the meeting last spring. The subcommittee’s proposal includes information about how to determine commercial availability of a vaccine not produced through excluded method terminology.
- **SUBCOMMITTEE VOTE:** Motion to change the USDA organic regulations at §205.105 (e). Addition to the current rule noted in bold.

(e) Excluded methods, except for vaccines: Provided, That **vaccines produced through excluded methods may be used when an equivalent vaccine not produced through excluded methods is not commercially available.**

PASSED (Yes: 5 No: 0 Abstain: 0 Absent: 1 Recuse: 0)

Fenbendazole (Petition) – Discussion Document

- **BACKGROUND:** Fenbendazole is a parasiticide that has been petitioned for use in laying hens and replacement chickens intended to become laying hens. Birds that receive outdoor access and have contact with soil are more likely to come in contact with internal parasites. In poultry production, the substance is administered orally via drinking water and is effective in controlling internal parasites such as *A. galli* and *H. gallinarum*. If permitted in organic production, fenbendazole would only be allowed for emergency treatment when preventive management practices do not prevent infestation. Fenbendazole is currently allowed in organic production for emergency treatment for dairy and breeder stock and fiber-bearing animals under the restrictions at §205.603(a)(23).
- **SUBCOMMITTEE PROPOSAL:** The subcommittee is considering this petition and poses the questions listed below to the public for comment. The subcommittee does not intend to specify a withdrawal time for use on poultry because the FDA data shows that total residues of fenbendazole in eggs of treated chickens at zero-day withdrawal are well below the safe concentration of 2.4 ppm for residues in eggs.

Discussion Questions:

1. Is this material needed by organic poultry producers? If so, why?
 2. Do currently allowed alternatives work to control internal parasites? And at what level of effectiveness?
 3. What are some of the “emergency” events that would trigger use of this product? And how would producers determine those events?
 4. Is there a concern with the 2.4 ppm residue of fenbendazole in eggs? Please submit information that supports this concern, or lack of concern.
- **SUBCOMMITTEE VOTE:** Motion to accept the discussion document.
DISCUSSION ONLY (Yes: 6 No: 0 Abstain: 0 Absent: 1 Recuse: 0)

2021 SUNSET MATERIALS

- **BACKGROUND:** This fall, the NOSB will vote on whether to continue the allowance of several of the fertilizers, pest control products, livestock treatments, processing aids, and ingredients currently included on the National List of Allowed and Prohibited Substances to determine whether the substances should continue to be listed or should be removed from the list.
- **CROP INPUTS**
 - **Hydrogen peroxide** – Allowed as an algicide, disinfectant, and sanitizer, including irrigation system cleaning systems. Also allowed for plant disease control. §205.601(a)(4); §205.601(i)(5)
 - Subcommittee Discussion: Environmentally benign. Effective for disease control and as a cleaning agent. Essential tool for fire blight control.
 - Subcommittee Vote: Motion to remove from §205.601(a)
RELIST (Yes: 0 No: 8 Abstain: 0 Absent: 0 Recuse: 0)

effective alternatives are not yet available.

- Subcommittee Vote: Motion to remove from §205.601(n)
RELIST (Yes: 0 No: 7 Abstain: 0 Absent: 1 Recuse: 0)
- **Ash from manure burning** – PROHIBITED in crop production. *§205.602(a)*
 - Subcommittee Discussion: Preference for manure to retain its full carbon and nutrient content when used as a fertility input on organic land.
 - Subcommittee Vote: Motion to remove from §205.602
RELIST (Yes: 0 No: 8 Abstain: 0 Absent: 0 Recuse: 0)
- **Sodium fluoaluminate** – PROHIBITED in crop production. *§205.602(g)*
 - Subcommittee Discussion: Toxicity associated with fluoride pollution.
 - Subcommittee Vote: Motion to remove from §205.602
RELIST (Yes: 0 No: 8 Abstain: 0 Absent: 0 Recuse: 0)
- **LIVESTOCK INPUTS**
 - **Atropine** – Allowed as a medical treatment. Used as an antidote to organophosphate insecticide poisoning. *§205.603(a)(4)*
 - Subcommittee Discussion: No effective alternatives. No opposition to relisting.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
 - **Hydrogen Peroxide** – Allowed as a disinfectant, sanitizer, and medical treatment. Used as a cleaning agent on contact surfaces, such as equipment, calf pails, bottles, and utensils. Also used to clean wounds and as a teat dip. *§205.603(a)(15)*
 - Subcommittee Discussion: Important sanitation tool. Recommended for relisting.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
 - **Iodine** – Allowed as a disinfectant, sanitizer, and medical treatment, and as a topical treatment and external parasiticide. Used as a teat dip. *§205.603(a)(16); §205.603(b)(3)*
 - Subcommittee Discussion: Widely used and important tool for livestock operators.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 1 Recuse: 0)
 - Subcommittee Vote: Motion to remove from §205.603(b)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 1 Recuse: 0)
 - **Magnesium sulfate** – Allowed as a medical treatment. Used to treat lactation tetany or grass tetany in ruminants. In swine, used to treat malignant hypothermia. Also used to treat inflammation and abscesses in livestock by soaking affected area in magnesium sulfate solution. *§205.603(a)(19)*
 - Subcommittee Discussion: Important tool for livestock production. Satisfies OFPA.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 1 Recuse: 0)
 - **Fenbendazole** – Allowed as a parasiticide for emergency treatment of dairy and breeder stock and for fiber bearing animals. *§205.603(a)(23)(i)*
 - Subcommittee Discussion: Recommended for relisting. Essential for treatment of disease in animals.
 - Subcommittee Vote: Motion to remove from §205.603(a)

RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)

- **Moxidectin** – Allowed as a parasiticide for emergency treatment of dairy and breeder stock and for fiber bearing animals. *§205.603(a)(23)(ii)*
 - Subcommittee Discussion: Recommended for relisting. Essential for treatment of disease in animals.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **Peracetic acid** – Allowed for sanitizing facility and processing equipment. *§205.603(a)(25)*
 - Subcommittee Discussion: Recommended for relisting. Few effective alternatives.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **Xylazine** – Allowed as a medical treatment. Used as a sedative, analgesic, and muscle relaxant. *§205.603(a)(30)*
 - Subcommittee Discussion: No natural alternatives.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **Methionine** – An essential amino acid allowed as a feed additive for poultry. *§205.603(d)(1)*
 - Subcommittee Discussion: Continues to be essential. Supportive of continued efforts to identify and develop natural alternatives.
 - Subcommittee Vote: Motion to remove from §205.603(d)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **Trace minerals** – Allowed as feed additives to satisfy livestock nutritional need. *§205.603(d)(2)*
 - Subcommittee Discussion: Essential to livestock health and welfare.
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 1 Recuse: 0)
- **Vitamins** – Allowed as feed additives to satisfy livestock nutritional need. *§205.603(d)(3)*
 - Subcommittee Discussion: Recommended for relisting. Are there sufficient year-round supplies of forages and livestock feedstocks available to naturally supply the B vitamins into the livestock rations, or should B vitamins be removed from §205.603?
 - Subcommittee Vote: Motion to remove from §205.603(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **PROCESSING AND HANDLING INPUTS**
 - **Citric acid** – Allowed as an ingredient or processing aid. Used as an acidulant, pH control agent, flavoring, sequestrant, dispersant in flavor or color additives, antioxidant, firming agent, raising agent, emulsifying salt, and as a stabilizer. *§205.605(a)*
 - Subcommittee Discussion: Long history of safe use. Are there any commercially available sources of citric acid derived from organically grown crops?
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
 - **Lactic acid** – Allowed as an ingredient or processing aid. Used as an acidulant, pH regulator, and preservative. *§205.605(a)*
 - Subcommittee Discussion: Widely used and important tool. No indication of harm.

- Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Calcium chloride** – Allowed as an ingredient or processing aid. Used as a firming agent for sliced apples and other fruits and in certain cheeses to aid coagulation of the milk (turns liquid into thick gel for cutting into curds). §205.605(a)
 - Subcommittee Discussion: No new information to warrant removal.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
- **Dairy cultures** – Allowed as an ingredient or processing aid. Used to make yogurt, cheese, cultured sour cream and other fermented milk products. §205.605(a)
 - Subcommittee Discussion: Widespread support for continued allowance. However the subcommittee believes that the listing of dairy cultures is redundant and is covered by the existing listing of “microorganisms” on the National List. Subcommittee proposes removing dairy cultures and does not expect there to be any negative impact since dairy cultures would continue to be allowed under the microorganisms listing.
 - Subcommittee Vote: Motion to remove from §205.605(a)
REMOVE (Yes: 5 No: 0 Abstain: 0 Absent: 2 Recuse: 0)
- **Enzymes** – Allowed as an ingredient or processing aid. Used to carry out naturally occurring biological processes that are useful in the processing of food products or ingredients. Also used to reduce the length of time required for aging foods such as cheese, clarify or stabilize food products, and control the content of alcohol and sugar in certain foods. §205.605(a)
 - Subcommittee Discussion: No environmental or human health concerns. No opposition.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 7 Abstain: 0 Absent: 0 Recuse: 0)
- **L-Malic acid** – Allowed as an ingredient or processing aid. Used as a pH adjuster, flavor enhances and food acidulant. §205.605(a)
 - Subcommittee Discussion: Supportive of continued allowance. Based on new information, substance is improperly classified as non-synthetic. Will address the reclassification as synthetic and placement on 205.605(b) in a separate proposal at a future meeting. Forms actually classified as non-synthetic are not available.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Magnesium sulfate** – Allowed as an ingredient or processing aid. Used as a mineral supplement, leavening agent and pH control agent. §205.605(a)
 - Subcommittee Discussion: The Subcommittee is still seeking comment on the specific use and essentiality of this material.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Microorganisms** – Allowed as an ingredient or processing aid. Used as starter cultures for the benefit of the metabolites produced during fermentation. Commonly used in dairy products, baked goods, and fermented food and beverages. §205.605(a)
 - Subcommittee Discussion: Essential to production of many foods. Several comments about the definition of microorganisms and critical need to determine which materials are considered under the listing of microorganisms.

- Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 7 Abstain: 0 Absent: 0 Recuse: 0)
- **Perlite** – Allowed as a filter aid in food processing. §205.605(a)
 - Subcommittee Discussion: Supported for relisting.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Potassium iodide** – Allowed as an ingredient or processing aid. Used as a nutrient in table salt and in dietary supplements. Also used as a sanitizing agent for food processing equipment. §205.605(a)
 - Subcommittee Discussion: No new information to warrant removal.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
- **Yeast** – Allowed as an ingredient or processing aid. Organic forms of yeast must be used when commercially available. Used for flavoring, as a protein source (nutritional yeast), and various fermentation applications such as bread, wine and beer. §205.605(a)
 - Subcommittee Discussion: Commonly used. Organic forms not always available.
 - Subcommittee Vote: Motion to remove from §205.605(a)
RELIST (Yes: 0 No: 7 Abstain: 0 Absent: 0 Recuse: 0)
- **Activated charcoal** – Allowed as a filtering aid. §205.605(b)
 - Subcommittee Discussion: Minimal impact to human and environmental health.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Alginic acid** – Allowed as an ingredient or processing aid. Used as a stabilizer in many products such as beverages, cheese and dressings. Also used as a defoaming agent. §205.605(b)
 - Subcommittee Discussion: No indication that material is in use. No comments received from manufacturers or certifiers that the material is used or needed. Not essential.
 - Subcommittee Questions:
 1. Is alginic acid essential for handling operations? If so, why?
 2. The 2015 TR cites possible hydrocolloids alternatives including agar agar, carrageenan, gellan gum and xanthan gum. Please comment on whether or not these alternatives have been used successfully in place of alginic acid.
 - Subcommittee Vote: Motion to remove from §205.605(b)
REMOVE (Yes: 5 No: 0 Abstain: 0 Absent: 2 Recuse: 0)
- **Ascorbic acid** – Allowed as an ingredient or processing aid. Used as a dietary supplement, nutrient, flavor ingredient, curing and pickling agent, antioxidant, and a wide variety of other food processing uses. §205.605(b)
 - Subcommittee Discussion: Widespread presence and importance in food production. Alternatives have significant limitations.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Calcium citrate** – Allowed as an ingredient or processing aid. Used to provide calcium in nutritive supplements, and as a pH adjuster and chelator. §205.605(b)
 - Subcommittee Discussion: No natural sources or alternatives. No new information in

- terms of harm to environmental or human health.
- Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
 - **Ferrous sulfate** – Allowed for iron enrichment or fortification of foods when required by regulation or recommended. Used for iron enrichment or fortification of flour and baby food. §205.605(b)
 - Subcommittee Discussion: No new information to warrant removal.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
 - **Hydrogen peroxide** – Allowed as an ingredient or processing aid. Used as a disinfectant and bleaching agent, and for sanitizing of aseptic packaging. §205.605(b)
 - Subcommittee Discussion: Strong support for relisting. No new information in terms of harm to environmental or human health.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 4 Abstain: 0 Absent: 3 Recuse: 0)
 - **Nutrient vitamins and minerals** – Allowed for fortification of organic foods in accordance with FDA requirements. §205.605(b)
 - Subcommittee Discussion: Strong support for relisting. No new information to warrant removal.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
 - **Peracetic acid** – Allowed for use in wash and/or rinse water according to FDA limitations. Used as a sanitizers on food contact surfaces. §205.605(b)
 - Subcommittee Discussion: Strong support for relisting. Essential and safe.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 4 Abstain: 0 Absent: 3 Recuse: 0)
 - **Potassium citrate** – Allowed as an ingredient or processing aid. Used as a chelating agent, buffering agent, nutrient supplement, and pH adjuster. §205.605(b)
 - Subcommittee Discussion: No non-synthetic sources or alternatives. No new information in terms of harm to environmental or human health.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 4 Abstain: 0 Absent: 3 Recuse: 0)
 - **Potassium phosphate** – Allowed as an ingredient or processing aid only in products labeled “made with organic (specific ingredients or food group(s)).” Used as a pH control in milk products, as a microbial nutrient (yeast food), and as a source of mineral potassium and/or phosphorus. §205.605(b)
 - Subcommittee Discussion: No new information to warrant removal.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
 - **Sodium acid pyrophosphate** – Allowed as a leavening agent. §205.605(b)
 - Subcommittee Discussion: Essential for production of organic foods requiring chemical leavening.
 - Subcommittee Vote: Motion to remove from §205.605(b)

RELIST (Yes: 0 No: 4 Abstain: 1 Absent: 2 Recuse: 0)

- **Sodium citrate** – Allowed as an ingredient or processing aid. Used as an emulsifier in ice cream, cheese, and evaporated milk. Used as a buffer to control acidity and retain carbonation in beverages. *§205.605(b)*
 - Subcommittee Discussion: No non-synthetic sources or alternatives. No new information in terms of harm to environmental or human health.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 4 Abstain: 3 Absent: 0 Recuse: 0)
- **Tocopherols** – Allowed as an ingredient or processing aid. Must be derived from vegetable oil when rosemary extracts are not a suitable alternative. Used as an antioxidant. *§205.605(b)*
 - Subcommittee Discussion: Considered essential for food production. Support for relisting but some concern raised in public comment about its primary use as a preservative being inconsistent with organic principles.
 - Subcommittee Vote: Motion to remove from §205.605(b)
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
- **Celery powder** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Used in a variety of processed meat products to provide “cured” meat attributes without using prohibited nitrites. *§205.606(c)*
 - Subcommittee Discussion: Essential as curing agent for organic cured meats. More research is needed to produce a viable organic alternative.
 - Subcommittee Vote: Motion to remove from §205.606
RELIST (Yes: 0 No: 6 Abstain: 0 Absent: 1 Recuse: 0)
- **Fish oil** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Must be stabilized with organic ingredients or only with ingredients on the National List. Used to increase the content of omega-3 fatty acids in a variety of food products. *§205.606(e)*
 - Subcommittee Discussion: Support for use as nutritional supplement. No new information to warrant removal. NOSB will address conservation concerns in a separate work agenda item.
 - Subcommittee Vote: Motion to remove from §205.606
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Gelatin** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a clarification or fining agent in teas and wine, as a stabilizer and thickener, and in capsules. *§205.606(g)*
 - Subcommittee Discussion: Organic forms and alternatives are not commercially available or have significant limitations. Detailed information about what the barriers are to organic gelatin development have not been specified.
 - Subcommittee Vote: Motion to remove from §205.606
RELIST (Yes: 0 No: 5 Abstain: 0 Absent: 2 Recuse: 0)
- **Orange pulp, dried** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a moisture retention agent and fat substitute. *§205.606(n)*
 - Subcommittee Discussion: No indication that material is in use. No comments received from manufacturers or certifiers that the material is used or needed. Not essential.
 - Subcommittee Vote: Motion to remove from §205.606

REMOVE (Yes: 4 No: 1 Abstain: 0 Absent: 2 Recuse: 0)

- **Seaweed, Pacific Kombu** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a thickening agent or as a base for broth. Provides a unique flavor profile. *§205.606(q)*
 - Subcommittee Discussion: No comments received from users of this material. NOSB will address conservation concerns in a separate work agenda item.
 - Subcommittee Vote: Motion to remove from §205.606
RELIST (Yes: 1 No: 6 Abstain: 0 Absent: 0 Recuse: 0)
- **Seaweed, Wakame** – Allowed as an ingredient or processing aid when organic forms are not commercially available. Used in soups and salads. Provides a unique flavor profile. *§205.606(u)*
 - Subcommittee Discussion: In use by at least one operator. NOSB will address conservation concerns in a separate work agenda item.
 - Subcommittee Vote: Motion to remove from §205.606
RELIST (Yes: 0 No: 7 Abstain: 0 Absent: 0 Recuse: 0)

Your feedback is important! If you are using any of the inputs, ingredients or processing aids listed above, or if you are aware of a commercial supply of organic or natural alternatives, your FEEDBACK is needed! Weigh in using [OTA's Sunset Survey system](#)! It is proven that the Organic Trade Association's Sunset Surveys will impact NOSB's decision. These electronic surveys can be used to submit feedback on each individual input currently under NOSB review. Each survey is CONFIDENTIAL, and contains about 10 short questions that will take an estimated five minutes to complete.

Mission and Structure of NOSB

The [National Organic Standards Board](#) was created through the Organic Foods Production Act, a sub-section of the 1990 Farm Bill. The Board is charged with the task of assisting the Secretary of Agriculture on which substances should be allowed or prohibited in organic farming and processing. This 15-person citizen advisory board brings together volunteers from around the United States. It is made up of four farmers/growers, two handlers/processors, one retailer, one scientist, three consumer/public interest advocates, three environmentalists, and one USDA accredited certifying agent.

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