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Rural Advancement Foundation International -USA

October 3, 2019

National Organic Standards Board  
USDA – AMS  
1400 Independence Ave, SW  
Washington, DC 20250

**RE: AMS-NOP-19-0038**

## **NOC Comments to the National Organic Standards Board**

**FALL 2019**

October 23-25, 2019

Pittsburgh, PA

National Organic Standards Board:

The National Organic Coalition (NOC) is a national alliance of organizations working to provide a "Washington voice" for farmers, ranchers, environmentalists, consumers and industry members involved in organic agriculture. NOC seeks to advance organic food and agriculture and ensure a united voice for organic integrity, which means strong, enforceable, and continuously improved standards to maximize the multiple health, environmental, and economic benefits that organic agriculture provides. The coalition works to assure that policies are fair, equitable, and encourage diversity of participation and access.

Below we provide comments on a wide range of topics for consideration by the Board.



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## State of the USDA National Organic Program

The National Organic Coalition (NOC) recognizes that there are several positive developments in the past year that have the potential to strengthen the integrity of the USDA National Organic Program (NOP) and to grow organic food systems in communities across the United States. Through the annual appropriations process, the NOP has received significant boosts in funding for two consecutive fiscal years, and we anticipate an additional increase in Fiscal Year 2020. In Fiscal Year 2017, the annual budget for the NOP stood at \$9 million. Increases in Fiscal Years 2018 and 2019 boosted that funding level to \$12 million and then \$14 million, with language directing USDA to allocate those increased funds to address organic import fraud and other enforcement issues. Congress has yet to pass final fiscal year 2020 spending legislation, but NOC has requested an additional \$4 million annually for NOP. The House version of the legislation that passed in June of this year included this increase, and the Senate Committee-passed version includes a \$1 million annual increase for NOP. The two versions of the bill must be reconciled into a final bill and signed by the President before we know the final Fiscal Year 2020 funding level for the NOP.

These spending increases have translated into boosts in hiring for the NOP. In the spring of 2019, the NOP announced and then subsequently hired two livestock compliance specialists, an international specialist, and 3 auditors. This hiring was in response, partly, to the finding from the 2018 American National Standards Institute (ANSI) Peer Review Panel Report that the NOP had insufficient auditors to “provide regular assessments, prevent potential fraud, and minimize risk in a timely manner” for the 81 certifiers and 54 foreign satellite offices that the NOP oversees.<sup>1</sup> On September 11, 2019, NOP announced that they have plans to grow their team from 42 to 59 employees, with additional D.C. and field-based positions including new auditors, accreditation managers, and compliance and enforcement specialists.<sup>2</sup> These are positive developments given that the NOP’s capacity to oversee the growing organic industry has long lagged behind growth in the marketplace.

Through the 2018 Farm Bill, the NOP has been granted new resources and authorities to address organic import fraud. For example, the Farm Bill authorized the creation of a new Organic Interagency Working Group between USDA and Customs and Border Protection (CBP) to tackle organic import fraud, and that working group held its first meeting in June 2019. Additionally, a one-time authorization of \$5 million for systems modernization was allocated to the NOP in the 2018 Farm Bill. The NOP will use this funding to work with CBP to establish a new

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<sup>1</sup> <https://www.ams.usda.gov/sites/default/files/media/2018USDANOPPeerReviewExecutiveSummaryReport.pdf>

<sup>2</sup> [https://content.govdelivery.com/attachments/USDAAMS/2019/09/10/file\\_attachments/1282983/2019-NOP-Recruiting%20-%20Edits.pdf](https://content.govdelivery.com/attachments/USDAAMS/2019/09/10/file_attachments/1282983/2019-NOP-Recruiting%20-%20Edits.pdf)



electronic tracking system for organic import certificates and to strengthen the Organic Integrity Database, especially the reporting of organic acreage data. Finally, the 2018 Farm Bill requires NOP to complete rulemaking to limit exclusions from certification for handlers and importers of organic products, which NOC and the organic community have strongly urged in order to improve supply chain traceability. The NOP is expected to issue a proposed rule that includes this and many other mechanisms to strengthen oversight and enforcement, domestically and internationally, in the fall of 2019.

The 2018 Farm Bill contains other significant wins for organic, including:

- A historic boost in funding for cutting edge research to help organic farmers become more productive, efficient, profitable, and better positioned to address disease, pest, and climate challenges. The farm bill increases the **Organic Agriculture Research and Extension Initiative (OREI)** to “baseline” status (\$50 million annually) by Fiscal Year 2023, which will help ensure the continuation of this program beyond the life of the current Farm Bill.
- Funding and authority for the **organic certification cost-share program**, which partially offsets annual certification fees and is especially critical for small and mid-size operations that may not otherwise participate in the organic program;
- The bill provides \$5 million in funding for **organic data collection efforts**. This data is vital to policymakers, researchers, and industry participants alike to maintain stable markets, create risk management tools, track production trends, and curb fraud in the organic sector.

NOC produced [a Farm Bill score card](#), which rates and provides additional details on key organic priorities.

NOC was pleased to see the memo from the NOP, published June 3, explaining to certifiers the rules they must follow to determine eligibility and compliance for container systems that receive organic crop certification. In its memo, NOP uses the term “container system” to include container, hydroponic, and other plant pot-based systems (with or without soil as a growing media).

NOC appreciates the clear statement from the NOP that these systems must undergo a three-year transition period. We understand that up to this point, some certifiers have been certifying container systems without requiring a three-year transition from the last application of a prohibited substance, so this clarification was urgently needed to ensure the integrity of the organic program.

NOC was also pleased that the NOP announced in the fall of 2018 at the NOC Pre-NOSB meeting that they would resume publishing NOSB subcommittee notes, after discontinuing their publication in January of 2018. These notes are critical because they provide stakeholders with equal access to NOSB deliberations and facilitate collaboration between public stakeholders and the Board.

We are appreciative of the earlier publication of the proposals and discussion documents for the Pittsburgh NOSB meeting. Having these materials farther in advance is very helpful to NOC and other stakeholder groups in order to give meaningful comments on the issues before the Board.

We appreciate leadership from Deputy Administrator Jenny Tucker in communicating and engaging with the organic community. Her participation in the NOC Pre-NOSB meetings in October 2018 in St. Paul and in April



2019 in Seattle was valuable and demonstrated the NOP's commitment to communicating with a broad range of organic stakeholders about the issues that are top of mind for the organic community. The NOP's continued ability to engage with stakeholder groups will help facilitate problem solving, collaboration, and mutual trust. The integrity of the organic seal is heavily dependent on the strength of the public process that undergirds the seal, as well as strong partnerships between the USDA, NOSB, farming organizations, retailers, certifiers, consumer interests, conservation groups, and industry participants.

The NOP continues to report an increase in certified organic operations year to year, with a 4.4% increase from 2017 to 2018.<sup>3</sup> This growth is a testament to the opportunity organic provides to farmers and handlers, as well as consumer interest in food that is produced without pesticides and in ways that protect human health and the environment. At a time when farmers and communities are facing increased weather instability, farmers using practices required by the National Organic Program are being looked to as a critical and voluntary solution for adapting to and mitigating the growing climate crisis. Organic integrity is more important now than ever; the continued growth and success of the organic program will be built on maintaining consumer and farmer trust.

Despite the progress we have achieved collectively over the past year, NOC remains deeply concerned about the future of the organic program.

Combatting organic import fraud and addressing fairness in the organic dairy sector through Origin of Livestock rulemaking remain top priorities for NOC and across diverse organic stakeholder groups. NOC appreciates the NOSB's action to move these issues forward, and we urge the NOSB to keep these issues at the fore, continue their efforts to assess the NOP's progress in these areas, and make recommendations on additional measures that are needed. We have commented on these two issues in more depth later in this document. In addition to these two top priority issues, NOC would like to highlight four additional issues that we believe warrant sustained attention and action on the part of the NOSB and other organic stakeholder groups in the coming months.

### **1. Protecting transparency, accountability, and public process**

The NOSB should insist that they have access to the full results from the peer review audits conducted annually by American National Standards Institute (ANSI). The Board should pay careful attention to peer review findings as one way to assess the health of the NOP's accreditation program and to identify areas of future work so they can make recommendations to the NOP about ways to address systemic shortcomings in the NOP's accreditation program.

Similarly, public stakeholders must also have access to the results of these annual evaluations. Despite repeated requests from NOC, the NOP has failed to make public the full results from the 2018 and 2017 ANSI peer review panel reports. The results from the 2016 panel report, which had been shared in full previously, are no longer posted on the USDA website.

NOC addresses this issue in more depth in our detailed comments on the peer review audits on page 7.

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<sup>3</sup> USDA AMS NOP Update, Spring 2019 NOSB Meeting, April 2019, [https://www.ams.usda.gov/sites/default/files/media/NOP\\_NOSB\\_Spring2019\\_Update.pdf](https://www.ams.usda.gov/sites/default/files/media/NOP_NOSB_Spring2019_Update.pdf)



USDA has limited the NOSB workplan to issues that are already priorities of NOP. In its February 27, 2014, memo, NOP states that in order for an item to be added to the NOSB work plan it “must be a priority for the USDA/NOP.”<sup>4</sup> However, OFPA gives the NOSB the duty “to assist in the development of standards for substances to be used in organic production and to advise the Secretary on any other aspects of the implementation of this chapter.”<sup>5</sup> This duty to advise transcends NOP priorities. Indeed, as stated in 47 U.S.C. § 6518(a), NOSB should help to establish NOP priorities. Clearly, OFPA intends that the NOSB play a large role in setting priorities of the National Organic Program.

USDA/NOP restrict the scope of NOSB action to those within the authority of the NOP/AMS, contrary to the broader scope required by OFPA. Again, OFPA requires the NOSB “to assist in the development of standards for substances to be used in organic production and to advise the Secretary on any other aspects of the implementation of this chapter.”<sup>6</sup> Implementation of OFPA extends beyond the arbitrary limits of the NOP. For example, organic production is severely affected by unrestrained genetic drift from genetically engineered crops. NOP has no authority to take action affecting producers of genetically engineered crops or the allowance of the use of genetically engineered seed. The USDA does have such authority. Therefore, recommendations to the Secretary concerning actions that affect the production, sale, and use of genetically engineered seed fall within the purview of the NOSB.

USDA/NOP actions change organic policy making from one driven by the public process to one controlled by USDA, which can choose to dismiss critical issues. For example, NOP continues to arbitrarily remove agenda items and has required that USDA/NOP priorities drive the public process. The NOSB was designed to maximize public input from a community with strong and diverse views about the meaning of “organic.” That input and the 2/3 “decisive vote” requirement ensure that NOSB proposals can only pass when they garner broad and diverse support from different stakeholder groups.

USDA has exerted undue and inappropriate influence on the recommendations of the NOSB, by prohibiting the board from advancing recommendations that were inconvenient in some way for the agency. Again, we urge the Board to reject the undue and inappropriate influence of the USDA that denies the NOSB and the public their due roles in setting organic policy.

In the interest of protecting transparency, accountability, and the public process, NOC requests that the NOP provide more transparency regarding NOSB work agenda items that have been removed from the work agenda without explanation. In addition, the NOSB should request that the NOP provide an update on all previous recommendations made and a rationale for lack of NOP action on those recommendations.

NOC also requests that notes from NOSB executive committee and subcommittee calls be made available to public stakeholders in a timely way. We appreciate that the executive committee and subcommittee call notes are again being published, but waiting up to six months to publish these provides little benefit to public stakeholders who wish to engage in the process in real time.

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<sup>4</sup> <https://www.ams.usda.gov/sites/default/files/media/NOSB%20Memo%20Training%20Summary.pdf>, p 3.

<sup>5</sup> 7 U.S.C. § 6518(a).

<sup>6</sup> 7 U.S.C. § 6518(a).



## **2. Prohibitions against gene editing and genetic engineering in organic**

Consumers continue to choose organic products for a number of reasons, and one of these reasons is that genetic engineering and its resulting products are excluded from organic production systems. Gene editing is a form of genetic engineering that the National Organic Standards Board has determined is clearly excluded in organic by definition. Any future effort to allow products of genetic engineering into certified organic products will likely be met with the full force of public resistance that the USDA witnessed in 1997, when the organic rules were first written and the initial draft proposal allowed genetic engineering and other now excluded methods. The newer genetic engineering techniques are still not needed in organic, and are not wanted by most organic stakeholders, including consumers, retailers, processors, and farmers. The NOSB has already reviewed (with numerous opportunities for public comment) gene editing methods and techniques and recommended that they remain excluded methods.

More importantly, with enough careful investment, public plant breeders and seed companies can continue to deliver organic farmers the seed they need with essential production characteristics, including disease- and drought-tolerance and high yield, as Under Secretary Ibach referenced in his July 2019 comments in response to a question during a House Agriculture Committee hearing. Gene editing is not the panacea that many media reports and industry members make it out to be, and new evidence shows that the technology is not nearly as precise or predictable as previously claimed. In fact, this underscores one of the reasons that organic is a system that embraces the precautionary principle with regard to genetic engineering in food, because of the unintended consequences of the technology. For many organic consumers, one attraction of organic is that it is one place in our food system where they can be assured that this high level of precaution is built into the governing statute and regulations.

What is left out of this conversation is that classical, field-based plant breeding is the most powerful and cost-effective breeding tool available to us for adapting our crop genetics to ever changing climates and production and market needs. We should put more funding toward methods that advance organic agriculture, are allowed in organic production per the standards, and meet the expectations of organic consumers.

We encourage the NOSB to continue to vocally oppose the inclusion of all forms of gene editing in organic. We support the NOSB recommendation on excluded methods from the fall of 2016. We would like to see this recommendation formally adopted by the NOP and implemented through guidance. In addition, we would like to see the NOP clearly articulate on the record that gene editing is not allowed in organic based on the current organic regulations.

## **3. Allowance of hydroponic production and lack of consistency for hydroponic and container operations weakens organic**

There is a lack of consistency from one certifier to the next regarding which practices are allowed in organic for hydroponic and container systems. The issues of inconsistent certification with respect to the 3-year transition period that necessitated the NOP's June 3, 2019, clarification memo are only a few of many concerns in this area. These inconsistencies weaken the organic label and reflect poorly on the industry.

Additional clarifications regarding hydroponic and container systems should be codified through rulemaking, based on recommendations from the NOSB, and vetted through the public comment process, to ensure consistency and integrity in the organic program and compliance with OFPA.





Hydroponic systems and many container systems are inconsistent with both the foundational principles of organic farming and the certification requirements of the National Organic Program as set forth in OFPA, especially with regard to soil fertility. Fostering soil fertility through the specified means is not optional, and any allowed practices that cannot meet this mandatory requirement are inconsistent with OFPA. The continued allowance of hydroponic systems is also in opposition to the 2010 NOSB consensus recommendation and the separate OFPA mandate that development of the organic program be done in consultation with the NOSB.<sup>7</sup> The NOP's policy on hydroponic and container systems should be guided by NOSB recommendations.

#### **4. There needs to be a system for reviewing and identifying inert ingredients that are allowed in organic production**

There continues to be an unconscionable delay in implementing existing NOSB recommendations for replacing the obsolete references to EPA List 3 and List 4 "inert" ingredients on the National List with listings of actual approved non-active ingredients in pesticide products. The board voted unanimously in 2012 to begin a review process of "inert" ingredients, identified the "inerts" requiring review, and established a measured process of review over 5 years. "Inert" ingredients frequently compose as much as 99% of pesticide products, and due to NOSB scrutiny of active ingredients, they may be the most hazardous ingredients in pesticide products used in organic production. In these comments, we suggest a process for moving forward.

The NOSB should not delay in evaluating nonylphenol ethoxylates (NPEs).

We urge the NOSB to insist that NOP move forward quickly with implementation of the NOSB recommendations on "inert" ingredients, beginning with the MOU between USDA and EPA that establishes the responsibilities of NOP, EPA, and the NOSB. This process is laid out in detail in the Beyond Pesticides report "Inert" Ingredients in Organic Production.<sup>8</sup>

NOC urges the NOSB to look for opportunities to advance and protect the integrity of the organic program in these four key areas.

## Compliance, Accreditation, Certification Subcommittee (CACS)

### CACS Work Agenda

NOC encourages the CACS to pursue the Work Agenda topic of inconsistencies between certifiers, as expressed in the July 16, 2019, Executive Subcommittee notes.

### Peer Review

NOC urges the NOSB to call on the USDA National Organic Program to make public the results of the 2018 peer review audit, which contains information about the NOP's oversight and accreditation process for certifiers. The

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<sup>7</sup> 7 U.S.C. § 6503(c) (OFPA §6503 (c) ("In developing the program under subsection (a), and the National List under section 6517 of this title, the Secretary shall consult with the National Organic Standards Board established under section 6518 of this title."))

<sup>8</sup> <https://www.beyondpesticides.org/assets/media/documents/Inert%20Ingredients%20in%20Organic%20Production.FULLreport.final.pdf>



NOSB has a responsibility to review these findings in full in assessing the health of the NOP's accreditation program. NOC recommends that the CACS request and review the full panel report results on an annual basis.

**The peer review process under the Organic Foods Production Act (OFPA), National Organic Program (NOP) procedures, and the Federal Advisory Committee Act (FACA) requires disclosure of the full peer review report.**

As a part of the NOP's "commitment to continuous improvement," and its obligations under OFPA and its implementing regulations,<sup>9</sup> NOP established a new peer review process in 2016. While peer reviews had been conducted prior to that by third party review organizations, it was the finding of a 2010 Office of Inspector General audit that these third-party reviews were inadequate and did not satisfy the requirements as set for by OFPA and its regulations.<sup>10</sup>

According to OFPA regulations, the "Administrator shall establish a peer review panel pursuant to the Federal Advisory Committee Act (FACA)(5 U.S.C. App. 2 et seq.)"<sup>11</sup> and that panel "shall annually evaluate the [NOP's] adherence to the accreditation of certification/registration bodies and the [NOP's] accreditation decisions."<sup>12</sup>

As part of its revised peer review procedures, NOP released a detailed document in 2016, outlining the new procedural requirements for the peer review process.<sup>13</sup>

Within those procedural requirements, explicit instructions are provided concerning the development, review, and release of the annual report produced by the peer review panel. In particular, the NOP's procedures state under sections 3.12 and 3.13:

12. Presentation. The peer review panel report, along with any NOP response, will be presented at the next NOSB public meeting.

13. Publication. After the public meeting, the NOP will post a copy of the peer review panel report and the NOP response, on the NOP Web site. A USDA Organic Insider notice will announce the availability of the report.

NOP procedures also reiterate the requirement that "all final peer review panel reports will be posted on the NOP website. . . ."<sup>14</sup> under section four, which address the NOP's obligations concerning records retention.

Because OFPA's regulations establish the peer review panel as a federal advisory committee, these public disclosure provisions are rooted in the mandated transparency requirements established under FACA.<sup>15</sup>

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<sup>9</sup> See 7 U.S.C. §6516 and 7 C.F.R. §205.509.

<sup>10</sup> OIG Report

<sup>11</sup> 7 CFR § 205.509.

<sup>12</sup> 7 CFR § 205.509.

<sup>13</sup> U.S. Dept. of Ag., National Organic Program, Procedure: Peer Review of National Organic Program (NOP) Accreditation, May 12, 2016, at 4 <https://www.ams.usda.gov/sites/default/files/media/NOP%201031%20Peer%20Review%20Process%20v2.pdf>

<sup>14</sup> Id.

<sup>15</sup> 5 U.S.C. App. 2 §8(2) and §10(b)-(c).



Since implementing its peer review procedures in 2016, NOP has yet to adhere to its internal procedures. In 2016, the peer review panel report was initially released in full to the public, but is no longer available in full on the USDA website. For 2017 and 2018, only executive summaries of the ANSI reports were released.

NOC has repeatedly requested that the NOP release the 2018 peer review panel report in full, and we urge the NOSB to join us in requesting that the results of this and future reports be made accessible to the NOSB and public stakeholders.

According to the executive summary for the 2018 peer review audit:

- The NOP does not have a sufficient number of auditors to oversee its accreditation functions.
- Certifier satellite offices are not audited frequently enough.
- Procedures for residue sampling are not clearly understood or followed by international certifiers and satellite offices.
- NOP has insufficient personnel to handle complaints and enforcement actions.

These are just a few of the serious problems identified by the peer review audit, but a complete understanding of the scope of the problem and the adequacy of the NOP's response is not possible without access to the full report.

NOC requests the NOSB to actively engage in reviewing the NOP's response to the problems identified through annual peer review audits, as well as identifying areas of risk that warrant further investigation through future peer review audits. A current area of risk is the proliferation of certified hydroponic and container production operations. NOC calls on the NOSB to request that a future peer review audit examine the accreditation process for certifying agencies that certify operations in the absence of clear standards, including hydroponic and container operations.

For the peer review audit process to be effective, the peer review entity must have the ability to track the NOP's corrective actions and compliance with issues that have arisen in previous peer review audits. The NOP's compliance with recommendations from the 2016, 2017, and 2018<sup>16</sup> peer review audits should be considered as a part of the 2019 peer review audit. The peer review panel membership should be determined by an outside entity, which might include members of the NOSB, and it should have the authority to request any files and look at any certifiers that it judges to be appropriate.

#### Integrity of the Supply Chain/Oversight improvements to deter fraud

NOC appreciates the thoroughness on the part of the NOSB and NOP in gathering feedback from organic stakeholders on fraud. The NOP has received direction from both the 2017 Office of Inspector General report,<sup>17</sup>

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<sup>16</sup> Peer review audits are posted online to the USDA website here:

<https://www.ams.usda.gov/reports/2016-peer-review-ams-national-organic-program>

<sup>17</sup> "National Organic Program International Trade Arrangements and Agreements," Retrieved from

<https://www.usda.gov/oig/webdocs/01601-0001-21.pdf>.



as well as from Congress in the 2018 Farm Bill.<sup>18</sup> Organic stakeholders have weighed in on multiple occasions in multiple ways. While there is much data and feedback to be collected, now is the time for action.

NOC looks forward to the proposed rulemaking from the NOP as a positive step forward to address integrity of the supply chain and oversight improvements to deter fraud. As indicated by the long list of proposed actions from the Certification, Accreditation, and Compliance Subcommittee (CACS), there are many aspects to the fraud problem. Just as the fraud problem is complex, so too is the required strategy to prevent it. Regulations must be clear, so that they can be enforced. NOP must have the will to enforce, whether the violator is large or small, foreign or domestic. The NOSB and NOP must craft a multi-faceted strategy if it is to prevent organic fraud and ensure continued public trust in the USDA organic label.

NOC appreciates all of the work that is being done towards enforcement rulemaking by both the NOSB and the NOP, as well as the many ways that input has been sought from organic stakeholders. At the same time, we contend that there are additional areas of fraud that need to be addressed.

### **Import Fraud**

The NOSB should continue its work on import fraud to ensure that the USDA is taking the necessary actions to reduce imports of fraudulent grains and in other areas where there is a risk of fraud in the organic supply chain. A sustained focus on this issue from the NOSB and the organic community is essential to address this multidimensional challenge.

The 2018 Farm Bill included multiple provisions relevant to the issue of import fraud. It authorized \$5 million in one-time mandatory funding for a new import tracking system and improvements to the organic integrity database. It also provided for the creation of a new organic imports interagency working group between the USDA's Agricultural Marketing Services (AMS), which houses the National Organic Program, the USDA's Animal and Plant Health Inspection Service (APHIS), and Customs and Border Protection (CBP).

In addition, new regulations are expected this fall and are urgently needed to ensure full supply chain traceability, to require electronic import certificates for all imports, and to expand reporting of organic acreage data to aid in pinpointing fraudulent activity.

### **Organic Imports Interagency Working Group**

The NOSB should closely track progress made through the interagency working group. NOC asks that the following issues be addressed through this working group:

- The Interagency Working Group should discuss how to obtain additional harmonized tariff codes through the US International Trade Commission. These codes determine which organic products are tracked by USDA's Foreign Agriculture Service via the Global Agricultural Trade System (GATS). Currently, the U.S. government only tracks the value and quantity of a limited number of organic imports product categories based on the limited number of codes in the harmonized tariff schedule. More complete data on organic imports is essential in order to flag areas of risk.

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<sup>18</sup> 2018 Farm Bill, Sec. 10104, Organic Certification, beginning p. 410, Retrieved from <https://www.congress.gov/115/bills/hr2/BILLS-115hr2enr.pdf>.



- The working group should determine how to update Customs and Border Protection’s automated import/export tracking system, the Automated Commercial Environment (ACE), to build organic-specific fields and questions (or “message sets”) into the system. This would provide USDA and the organic sector with more standardized and detailed information about organic imports.
- The working group should examine the limitations of the NOP’s authority over uncertified entities engaging in fraudulent activity, as well as for operations that have surrendered their certificates. Additional measures may need to be taken beyond the provisions in the 2018 Farm Bill or Strengthening Organic Enforcement (SOE) proposed rule to address challenges related to uncertified operations that are committing fraud. It is very difficult for the NOP to take enforcement actions or collect civil penalties for these operations, particularly from foreign operations. In addition, the civil penalties levied by NOP may not be large enough to serve as a deterrent.
- The working group should consider ways to use insurance information to flag potentially fraudulent activity. Imported grain that is insured as a conventional product and then sold as organic is suspect.
- The working group should examine USDA’s strategies to prevent imports fumigated with prohibited substances from being sold, labeled, or represented as organic. A 2017 USDA Office of Inspector General (OIG) report on organic imports determined that “controls over organic products fumigated at U.S. ports of entry were inadequate,” continuing, “Imported agricultural products, whether organic or conventional, are sometimes fumigated at U.S. ports of entry to prevent prohibited pests from entering the United States. AMS has not established and implemented controls at U.S. ports of entry to identify, track, and ensure that treated organic products are not sold, labeled, or represented as organic. As a result, U.S. consumers of organic products have reduced assurance that foreign agricultural products maintain their organic integrity from farm to table.”<sup>19</sup> While the OIG’s report relates to imports, we are also concerned about the possibility of fumigation in an uncertified facility, such as a warehouse, that may penetrate packages, as discussed more fully in NOC’s comments in Fall 2017 on Exempt/Uncertified Handlers/Brokers.
- The working group should assess whether new legislation is needed to improve the ability to track organic imports. For example, can CBP currently require bills of lading for incoming shipments to include more detailed information about the contents of the shipment to give the ports of entry information that would be useful in the inspection process, or would additional legislative authority be needed to implement such a requirement?
- Lastly, the working group should discuss ways that the Memorandum of Understanding (MOU) between AMS, APHIS, and CBP should be updated to more fully address the handling of organic imports at U.S. ports of entry, including many of the issues mentioned above.

The CACS should ask for regular updates from the NOP regarding the progress made through the Organic Imports Interagency Working Group, as well as an account of the measures that AMS is taking to ensure that imports fumigated with prohibited substances are not sold as organic.

### **2019 Enforcement Rulemaking**

We anticipate that the Strengthening Organic Enforcement (SOE) proposed rule will be published this fall with a

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<sup>19</sup> USDA Office of Inspector General, 2017. National Organic Program –International Trade Arrangements and Agreements. Audit 01601-0001-21.



60-day comment period. Organic stakeholder groups should comment on the proposed rule to advocate for the inclusion of key provisions:

- The Farm Bill provided USDA with the authority to require import certificates for all imports. The SOE proposed rule should require that all imported organic products carry an electronic import certificate, to help prevent fraudulent labeling of conventional product as organic.
- The SOE should close loopholes in supply chain traceability by requiring additional handlers and brokers to become certified, as required by the 2018 Farm Bill.
- The SOE should require more frequent unannounced inspections for operations and regions where increased risk has been identified, both domestically as well as internationally.
- The SOE should strengthen the training requirements and qualifications for inspectors and require robust mass balance and trace back audits for regions and supply chains that have been flagged for increased risk of fraud.
- The SOE should make product and acreage reporting mandatory for certifiers. A sound and sensible approach should be used to ensure that for certifiers working with small, diversified producers, data can be captured in a reasonable way. AMS must establish meaningful crop categories, ideally ones that are harmonized with the NASS codes used in the 2014 and 2015 Organic Certifiers Surveys that NASS conducted. Accredited Certifying Agents (ACAs) should be required to report aggregated production area certified by crop and location at least on an annual basis to the Organic Integrity Database (OID), and required to update the OID within 72 hours when an operation surrenders its certificate, or its certificate is suspended or revoked.
- The SOE should implement NOSB recommendations on grower groups to better ensure these recommendations can be enforced.
- The SOE should require that information about operations is communicated across certifiers so operations are not able to switch certifiers in an effort to evade detection of fraudulent activity.

#### **Additional Actions Needed from NOP**

- The NOP should subject certifiers' foreign satellite offices to greater scrutiny. The executive summary from the 2018 American National Standards Institute (ANSI) Peer Review Panel Report determined that "satellite offices of certifiers, especially international locations, are not audited on a frequent enough basis to reduce risk and prevent potential fraud." In the May 30, 2019, NOP response to Peer Review, NOP Corrective Action #3, it is noted, "NOP has developed a new quarterly risk assessment approach; this tool will be used as an input to evolve towards a risk-informed approach to audit scheduling by late 2019, so certifier satellite offices with increased risk will be a higher priority for assessment." The NOSB should assess whether the NOP's quarterly risk assessment tool is sufficient to address this issue, with regular NOP reports provided at NOSB meetings on how this tool is being used.
- The NOP should conduct more frequent audits, both unannounced and regular audits, in specific geographic areas where risk has been identified, such as Eastern European countries, or Texas/California as recommended in the executive summary from the 2018 American National Standards Institute (ANSI) Peer Review Panel Report.



- NOP should strengthen communication procedures with the European Union, Canada, and other governments with whom we have organic equivalency arrangements to flag fraudulent activity.
- The NOP should adopt criteria for risk-based accreditation oversight based on the NOSB recommendation on this topic from October 2018. For example, the NOP should give additional scrutiny to a certifier whose accreditation has been revoked by a nation with which the U.S. has an organic equivalency arrangement and should work closely with other accreditation bodies operating in the region where fraud has been found. The NOSB should ask the NOP to explain in regular updates how the NOP's accreditation and enforcement activities reflect this risk-based approach.
- The NOP should implement a policy to conduct an automatic investigation whenever there is a significant surge in imports for a specific product to determine if fraudulent activity is contributing to that increase.
- The NOP should identify other industries/products that have a longer history of dealing with fraud and learn from the measures they took and their outcomes. The NOSB should ask the NOP to share these findings with the NOSB and the public.

NOP should continue to work to leverage the resources of other USDA departments and other federal agencies to include them in the effort to deter fraud in organic supply chains.

#### **Peer Review Audits**

The NOSB should insist that they have access to the full results from the peer review audits conducted annually by American National Standards Institute (ANSI). The NOSB should identify any lapses in the NOP's accreditation and oversight of certifiers based on the results of this annual audit and make recommendations to the NOP on an ongoing basis regarding the ways in which the NOP accreditation process could be strengthened.

#### **Poultry**

- USDA should put into effect the Organic Livestock and Poultry Practices rule.

Unequal enforcement of federal organic standards has been an ongoing problem in the organic poultry and egg sector. To address this problem, USDA published a long overdue regulation to require all organic poultry and egg operations to provide meaningful outdoor access for chickens in compliance with the law. The Organic Livestock and Poultry Practices rule has been withdrawn by the NOP, which sends the wrong message to consumers and a market that is reliant on public trust in the certified organic label. Most certified operations already meet the standards in the withdrawn rule, but the rule would have helped to create more consistency in meeting the needs of organic farmers and consumers alike.

#### **Dairy**

- Implement Origin of Livestock Rulemaking – With broad support from the organic community and a fall 2018 unanimous resolution from the NOSB,<sup>20</sup> now is the time to close the loophole that would clarify requirements for the transition of dairy cows into organic and ensure consistent enforcement of the standards.

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<sup>20</sup> National Organic Standards Board Fall 2018 transcript, p. 1308, Retrieved from <https://www.ams.usda.gov/sites/default/files/media/TranscriptsOct2018NOSBMeeting.pdf>.



- Provide full transparency and follow-up on the Dairy Compliance Project. It is imperative that bad actors in the dairy sector and their certifying agents are brought into compliance or are excluded from the program.
- Implement Organic Livestock & Poultry Practices rulemaking for greater consistency in organic livestock standards and a level playing field.

#### Origin of livestock rules must be clarified.

Another enforcement issue that must be addressed relates to the transition of dairy cows into organic. OFPA requires organic milk and dairy products labeled as organic to come from dairy cows continuously managed as organic from the last third of gestation. However, in recognition of the short supply of organic dairy breeder stock in 1990 when the law was passed, an allowance was included for a one-time conversion of conventional dairy cows to organic as long as they are managed organically. Unfortunately, with two interpretations of this provision, it has turned into a loophole that has allowed some large dairy operations to circumvent the last third of gestation requirement all together, and to bring conventionally managed animals into their operations on a continuous basis. In 2015, USDA proposed, but did not finalize, an Origin of Livestock rule to clarify that section of the law and ensure consistent enforcement of the standards.

NOC advocated for the inclusion of language in the Fiscal Year 2020 agriculture spending legislation to require that USDA finalize the Origin of Livestock rule within 180 days of enactment of that legislation. We were pleased to see this provision included in both the House and Senate ag spending bills. But this legislation has not yet been enacted and it may take a month or more for it to be signed into law. On October 1, the U.S. Department of Agriculture (USDA) Agricultural Marketing Service (AMS) reopened the comment period on the April 28, 2015, proposed rule to amend the origin of livestock requirements for dairy animals under the USDA organic regulations for a 60-day comment period. We are urging that the USDA move swiftly to finalize this rule after the 60-day comment period closes and to require that all operations raise their animals organically from the last third of gestation outside of the provision that allows for a one-time transition of a whole herd into organic production.

#### Dairy pasture rule enforcement is required.

In 2010, after an open and transparent public rulemaking process, USDA put into place a detailed set of rules to ensure that all certified organic dairy farmers were giving their animals meaningful access to pasture. Similar to the current poultry situation, most dairy farmers were already meeting that standard, but a few very large dairy operations were using a loophole in the regulations to skirt those requirements. However, in some cases, dairy enforcement is still falling short, and some large operations continue to deny their animals meaningful access to pasture or do not comply with other parts of the organic regulations that pertain to the management and care of organic dairy livestock.

#### **Hydroponics**

- The NOSB should urge the NOP to halt the continued certification of hydroponic systems until the NOSB has fully reviewed these systems and made recommendations to the NOP about the compatibility of hydroponic systems with the requirements of OFPA and its implementing regulations. If it is deemed that certain hydroponic systems are appropriate for organic, certification of such systems should not be permitted unless and until NOP rules are promulgated to set standards.





Contrary to a 2010 recommendation by the NOSB, NOP has been allowing hydroponic operations to be certified as organic, without clear standards, resulting in inconsistency and frustration between organic producers. Without clarity, standards are unable to be enforced consistently across certifiers, creating confusion in the organic marketplace and undermining the organic label. The need for clear standards was most recently demonstrated when it came to light that some certifiers have been certifying container systems without requiring a three-year transition from the last application of prohibited substances.

NOC appreciates the memo dated June 3, 2019, explaining to certifiers the rules they must follow to determine eligibility and compliance for container systems that receive organic crop certification. In this memo, NOP uses the term “container system” to include container, hydroponic, and other plant pot-based systems (with or without soil as a growing media).

From its very beginnings, the organic sector has been driven by an alliance of farmers, consumers, and members of industry who defined the organic standards as a holistic approach to protecting health and the environment, with a deep conviction that food production could operate in sync with nature and be mindful of its interrelationship with the natural world – protecting and enhancing the quality of air, water, land, and food.

These standards, integral to organic, certainly do not preclude the adoption of other methods outside of the organic label that have value to consumers and the environment. Adherence to the principles of organic, however, cannot be compromised if we are to sustain the organic market in the future.

#### Energy systems infrastructure on organic farms

NOC is grateful to the board for requesting that the NOP add energy systems infrastructure on organic farms to the work agenda. As per the July 16, 2019, Executive Committee notes,

*The work agenda request is still under review by AMS and NOP does not have a timeline for approval. The lead indicated that this project was initially very broad, and through extensive collaboration between stakeholders, NOP, and NOSB, it was narrowed down to something concrete and discreet, focusing on how infrastructure can affect organic certification.*

NOC strongly encourages the NOP to follow the lead of the board. Instruction is needed to ensure consistent application of the standards in these challenging and unique situations.

As part of our upcoming Pre-NOSB meeting on October 22, 2019, a panel of organic farmers, inspectors, and certifiers with first-hand experiences with energy infrastructure on organic farms will speak to these issues. It is our hope that this information will begin informing the NOSB in partnership with NOP to prioritize the addition of this issue to the NOSB work agenda.

Potential positive outcomes of this topic being added to the work agenda could include:

- A discussion document to help unpack the issue;
- An assessment of the utility and applicability of Organic Agriculture Impact Mitigation planning for producers; and



- Proposed guidance or instruction for certifiers regarding how to work with farmers faced with this infrastructure so that certification can be maintained.

Thank you, again, to the NOSB for requesting to add this item to the NOSB work agenda. We support your efforts and urge the NOP to support the discussion of this important topic.

## CROPS SUBCOMMITTEE (CS)

### Climate Change, Soil Health, & Highly Soluble Nutrients

"Feed the Soil, Not the Plant" is the mantra of organic farming. The early definitions of organic farming reflect this. For example, the definition and subsequent discussion of organic farming in Rodale's Encyclopedia of Organic Gardening says that "organic gardening is a system where fertile soil is maintained by applying nature's own law of replenishing it..." The long discussion of organic farming, organic matter and organic methods here, and in all the other masterful publications about organic farming of the mid twentieth century, go into detail about how the system is centered on providing food for the microorganisms and all the other critters in the soil. It is their decomposition of this food (organic matter) that leaves the mineral nutrients plants need to grow. This idea was simplified into the slogan "feed the soil, not the plant."

It turns out, these same practices around soil health that are so central to organic farming, such as cover cropping, crop rotations, applications of manures and compost, and prohibitions against synthetic fertilizers and most synthetic pesticides, are also practices that have tremendous potential when it comes to reducing greenhouse gas emissions and mitigating climate change by sequestering carbon in the soil.

Research has shown that if the standard practices used by organic farmers to maintain and improve soils were implemented globally, it would increase soil organic carbon pools by an estimated 2 billion tons per year – the equivalent of 12% of the total annual GHG emissions worldwide.<sup>21</sup>

### **ORGANIC REGULATIONS**

The National Organic Program (NOP) was not the first organic regulation. Organic regulations began in the 1970s by private, usually nonprofit, organizations. These guidelines were all very similar and were based on the IFOAM Basic Standards, which were created to be adapted to various geographic and cultural circumstances. A highly participatory process was used to write and regularly update the Basic Standards. Organic farmers, researchers, conscious eaters, and traders from all over the world discussed and voted on these standards every three years at IFOAM Work Congresses.

The most interesting thing seen when comparing these production guidelines for organic farming was not the similarity in what they prohibited, but rather the similarity in what they required. Most of these, in one way or another, required feeding the soil instead of feeding the plant. These early guidelines to organic production

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<sup>21</sup> Schonbeck, M. et al. (2018) *Soil Health and Organic Farming, Organic Practices for Climate Mitigation, Adaptation, and Carbon Sequestration*, Organic Farming Research Foundation, p. 42. <https://ofrf.org/soil-health-and-organic-farming-ecological-approach>



allowed some materials to be used as soil amendment that provided direct sources of crop nutrition, but the heart of the soil management that was required by these guidelines was that slow release sources of minerals and organic matter had to be added to the soil through crop rotation with green manures, livestock manures, compost, etc. In essence, conservation and recycling of soil fertility is the mainstay of organic farming.

For this reason, soil health and climate change mitigation practices were codified in the Organic Foods Production Act (OFPA) of 1990 and subsequently explicitly written into the organic regulations.

OFPA embodies a vision of ecosystem complexity as a basis for organic certification that is contrary to using “bags of nutrients” to feed crops. OFPA §6513(b) required that organic operations establish a plan designed to “foster soil fertility, primarily through the management of the organic content of the soil through proper tillage, crop rotation, and manuring.”

The NOP followed OFPA and the original certifiers’ insistence on soil management when they wrote the organic regulations. Key provisions included in the organic regulations include:

- 7 CFR § 205.105 prohibits the use of synthetic substances, including synthetic fertilizers. Nitrous oxide emissions from soils comprise 50.4% of all domestic agricultural emissions.<sup>22</sup> The chemical is a long-lived GHG and ozone depleter, with 310 times the global warming potential of carbon dioxide.<sup>23</sup> Prohibiting synthetic fertilizers in organic production decreases a significant agricultural source of N<sub>2</sub>O emissions.
- 7 CFR § 205.203 requires that producers implement tillage and cultivation practices that maintain or improve soil health and that producers manage soil health using crop rotations, cover crops, and plant and animal manures. Producers are also required to “maintain or improve” soil organic matter. This section of the regulations leaves no room for exceptions. Sections 205.203 (a), (b), and (c) say that the producer must improve the soil, must manage crop nutrients and soil fertility through rotations, cover crops and application of plant and animal materials, and that the producer must manage plant and animal materials to maintain or improve soil organic matter. In other words, the organic regulations require that the organic production system be based on “feeding the soil, not the plant.”

7 CFR § 205.205 requires farmers to implement crop rotations to improve soils, prevent erosion, and to manage nutrient levels and pests.

Compliance with these provisions is verified through annual inspections and review by a third-party certification agency.

### **SUBSTANCES OF HIGH SOLUBILITY ARE ALLOWED, BUT REGULATED**

Substances of high solubility, i.e., those materials that provide nutrients directly to the plant because they quickly are taken up into the plant from the soil solution, have always been allowed. However, these materials are counter to foundational organic principles, so they have always been regulated. The early certification

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<sup>22</sup> Environmental Protection Agency (EPA). (2018) *Sources of Greenhouse Gas Emissions*. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

<sup>23</sup>Schonbeck, M. et al. (2018) *Soil Health and Organic Farming, Organic Practices for Climate Mitigation, Adaptation, and Carbon Sequestration*, Organic Farming Research Foundation, p. 2. <https://ofrr.org/soil-health-and-organic-farming-ecological-approach>



agencies allowed them but limited their use. OFPA leaves a place for them, but still requires that soil management be the heart of organic production. Additionally, the USDA National Organic Program did a good job in crafting organic regulations that allow substances of high solubility, but limit their use to essentially “rescue treatments” of a soil that otherwise is managed by methods consistent with organic principles. The NOP wisely put such materials into 7 CFR § 205.602 - Nonsynthetic substances prohibited for use in Organic Crop Production or the “prohibited naturals” section of the National List:

- 1) Calcium chloride is limited to treating a physiological disorder;
- 2) Potassium chloride must be used in a manner that minimizes chloride accumulation in the soil; and
- 3) Sodium nitrate is restricted to no more than 20% of the crop's total nitrogen requirement.

#### THE ORGANIC REGULATIONS LIMIT SUBSTANCES OF HIGH SOLUBILITY

There is a preamble to the publication of the NOP Final Rule on December 21, 2000. In the preamble, the NOP discusses how they decided to agree with the NOSB recommendation and to put specific regulation of substances of high solubility into the annotations for each of these materials where they appear on the National List of Allowed and Prohibited Substances.

The NOP goes on to say, "Based on the recommendation of the NOSB, the final rule would prohibit use of these materials [substances of high solubility], unless the NOSB developed recommendations on conditions for their use and the Secretary added them to the National List."

At the time, the discussion was about mined substances of high solubility, but that is because there were not any concentrated, highly soluble plant nutrient materials other than mined sources available at that time. New materials of high solubility that are now used similarly miss the aim of organic production systems, and should be regulated in the same way mined sources are. These highly soluble materials, most of which are non-synthetic, do not appear on the National List and are used in both soil-based production, as well as in some hydroponic and container systems.

In other words, concentrated, highly soluble sources of plant nutrients should not be prohibited altogether. Instead, they should be regulated by being added to 7 CFR § 205.602 so as to not allow organic producers to stray from the foundational principle of organic production, i.e. “feed the soil, not the plant.” One way to do this would be to add these substances to the list of prohibited naturals with annotations that limit their use to no more than 20% of the crop's total nutritional need. In order to simplify the work of certifiers we suggest that nitrogen fertilizers be used as an indicator. For example, the following could be added to 205.602, "Highly soluble sources of nitrogen – unless use is restricted to no more than 20% of the crop's total annual nitrogen requirement."

#### CONCLUSION

There is a growing interest in addressing climate change by focusing on agricultural practices that have the ability to help farmers reduce greenhouse gas emissions, sequester carbon in the soil, and adapt to increasingly erratic and extreme weather conditions. Organic practices have the potential to address climate change on all three of these fronts. In the spirit of continuous improvement, the organic community must take further steps to ensure that organic continues to rest on the foundation of “feed the soil, not the plant.” Giving further



scrutiny to the use of highly soluble nutrients in organic would help to ensure that soil-building and carbon sequestration processes on organic farms are the heart of organic production and that this foundation is not short-circuited through the use of fast-acting highly soluble nutrients.

To this end, NOC recommends the NOSB add an item to its work agenda which focuses on identifying and strengthening organic practices for climate mitigation, adaptation, and carbon sequestration. Included in this agenda item should be an evaluation of highly soluble nutrients and container production practices through this lens. Such an effort would serve to bolster clarity and consistency of enforcement across certifiers, hold producers to foundational principles of organic production, and strengthen organic producers' position in the climate discussions and initiatives across the country.

## Petitions

### Fatty Alcohol (C6, C8, C10, C12 Naturally Derived) – Proposal

NOC appreciates the subcommittee's thorough review and taking the time to consider all aspects of the petition. At this time, our only addition for consideration is that through a certifier member organization, we have received feedback that there are certified organic tobacco producers who do not express a need for this material.

### Potassium hypochlorite – Proposal

This petition once again demonstrates that the NOSB would benefit from assessing cleaning and sanitation materials used in organic crop, livestock, and handling to inform decision-making when a new material is petitioned or a material is reviewed at sunset.

The NOSB could refer to the cleaning and sanitation materials review to judge whether other materials currently on the National List meet the same need, or if there is a special characteristic to the material under review that justifies its placement or renewal to the NL. This assessment may help identify areas where there are gaps in necessary sanitizers or disinfectants which aid organic crops, livestock, and/or handling operations in the promotion of food safety.

As per the NOSB published materials, there are currently materials on the National List that are alternatives to the petitioned substance that already meet the needs of the petitioner. "Sodium and calcium hypochlorite can be used for the same purposes as the petitioned material."<sup>24</sup> While we appreciate that the petitioned material "has the distinct benefit over NaOCl because it does not contain sodium and potassium is a plant nutrient," this further justifies an assessment of cleaners and sanitizers that would aid the NOSB in identifying materials under review that possess a special characteristic that justifies its placement on the NL. While this statement argues an advantage over sodium hypochlorite, it does not negate the availability of calcium hypochlorite. In addition, potassium is a macronutrient and should not be supplied by synthetic inputs.

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<sup>24</sup> <https://www.ams.usda.gov/sites/default/files/media/AllNOSBproposalPacket.pdf>, p. 76.



NOC urges the NOSB to continue to pursue an assessment of cleaning and sanitization materials used in organic crop, handling, and livestock.

#### Paper Pots – Discussion Document

NOC encourages the NOSB, when crafting a proposal on paper pots, to include an annotation that limits the allowed components of paper pots. Future innovations, including those that involve changes to the paper's content, can be petitioned.

In light of the questions put forth in the current discussion document, we would like to make clear that it is important that the fibers in the paper pots be naturally based, and that the bulk of the pot is a natural material. We need a tight annotation that takes into consideration all of the components of the paper pots and reviews them according to the criteria in the Organic Foods Production Act (OFPA), rather than in comparison to recycled newspaper and other paper.

For this reason, we encourage the NOSB to review the paper pots petition independent of other paper-based production aids, and to base the annotation on the review of paper pots according to the criteria in the OFPA. The NOSB should not consider whether or not an annotation will allow currently available commercial paper-based production aids, as this would be putting the cart before the horse. NOC fully supports an additional, separate review of paper and paper-based production aids, including virgin paper.

#### Sunset

##### Hydrogen Peroxide – 205.601(a)(i)

NOC supports relisting hydrogen peroxide to the National List.

##### Pheromones – 205.601(f)

In the spring of 2011, the CS and NOSB struggled with an annotation describing a group of pheromones that they felt comfortable approving as a class. Lacking a technical review at the time, the board ended up approving the simple listing. Although EPA standards are not the same as the standards of OFPA, the EPA conditions for pheromone products that are exempt from regulation under FIFRA come close to describing products that could be allowed in organic production without further examination, and **we support the following listing, which we believe captures the sense of the conditions for exempting pheromone products from regulation:**

**§205.601(f) As insect management. Pheromones, provided that they are identical to or substantially similar to natural pheromones as defined in 40 CFR 152.25(b), in passive dispensers, with only allowed materials, and with only approved inert ingredients.**

##### Ferric phosphate – 205.601(h)

NOC would need to see independent and peer review studies of the efficacy for the use of sulfur as a molluscicide before serious consideration is given to the removal of ferric phosphate from the NL.



#### Magnesium sulfate – 205.601(j)

Magnesium sulfate is a rarely used material that will provide an available form of magnesium to crops. It is rarely used because in most situations where the soil pH is being adjusted with limestone if magnesium is needed as well then dolomitic limestone (dolomite) is used and it provides enough magnesium as well as raising the pH. In addition, when supplying a soil amendment for potassium, if magnesium is needed then sul-po-mag would be used. Magnesium sulfate is used only as a rescue treatment where the soil pH and potassium levels are already optimum, but magnesium is still needed for optimum crop production.

Dolomite is not an alternative to magnesium sulfate. It is a magnesium rich soil amendment used in a different situation than magnesium sulfate.

NOC will support relisting of magnesium sulfate with current annotation.

#### Hydrogen chloride – 205.601(n)

Organic cotton growers in the U.S. currently do not have a lot of choice about how their seed is prepared for planting. U.S. organic cotton production is small and concentrated in west Texas. Cotton growers are limited to using the technology available in that area. There is, however, on-going research into the development of mechanical delinting mechanisms that would eliminate the need for hydrogen chloride. The NOSB should support these alternatives by making alternatives to hydrogen chloride a research priority. This is the kind of “minor” use that deserves special support. It appears to us that there are alternative technologies ripe for development, and that very little is needed to move them into the stage of being able to meet the demand of organic cotton growers. The NOSB should also recommend that USDA support the infrastructure needed to deliver mechanically delinted seed to organic cotton growers.

#### Ash from manure burning – 205.602(a)

NOC supports relisting ash from manure burning at 205.602(a) without reservation.

#### Sodium fluoaluminate 205.602(f)

NOC supports relisting sodium fluoaluminate at 205.602(f) without reservation.

## Handling Subcommittee (HS)

### Other

#### §205.606

Now that any agricultural material can be produced organically, additions to §205.606 should be rare, and materials should be removed from the list whenever possible in order to encourage processors to source organic



forms. We encourage the Handling Subcommittee to further consider that a greater burden to clearly define the barriers preventing the organic production of the petitioned substance must be imposed on the petitioner before the NOSB and organic stakeholders can make an informed decision regarding listing or relisting.

#### Clarify products of fermentation

NOC was pleased to see the Handling Subcommittee request for the work agenda request of fermentation products noted in the May 13, 2019, Executive Committee notes.<sup>25</sup> Our Spring 2019 comments are again included here as a reference for several of our other comments.

Fermentation is a biological process in which sugars are metabolized to acids, gases, and/or alcohol. Depending on the fermenting organism and the food source, other byproducts may be produced. Fermentation processes used for agricultural inputs and food processing are both in need of clarification, but the issues surrounding them are different. Here we address fermentation with respect to food processing.

Fermentation processes produce foods or food ingredients in several ways:

- 1. Foods and ingredients that are organisms grown by fermentation—that is, the biomass produced by the fermentation process.** These include nutritional yeast and baking yeast. Yeast may be certified organic when produced in compliance with an approved organic systems plan.<sup>26</sup> Marroquin International petitioned to have yeast reclassified as agricultural and listed on §205.606. It made the argument that yeast, like mushrooms, should be considered livestock under OFPA. “Microorganisms” are listed on §205.605(a).
- 2. Food processing changes raw agricultural ingredients into new products defined by the products of fermentation.** These include wine, beer, vinegar, lactic acid, pickles, yogurt, and miso.
- 3. Production of food additives through fermentation of specific strains of microorganisms.** These include nucleotides, various vitamins, etc. that are isolated from the products of fermentation. They may be either **primary metabolites**—substances produced by the fermenting organism that are essential to its growth, such as nucleotides, nucleic acids, amino acids, proteins, carbohydrates, lipids, etc.—or **secondary metabolites**—which have no obvious role in the metabolism of the cultured organisms, such as antibiotics and other drugs.

There are products of fermentation permitted in organic food in all of these categories. A number of them are up for sunset review. Those up for sunset in 2019 are marked with \*. Materials on §205.605(a) that are products of fermentation include:

1. Food organisms: yeast\*.
2. Fermented foods do not need to be listed, but yeast\*, microorganisms\*, and dairy cultures\*, which are the agents that ferment the food, are listed.

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<sup>25</sup> <https://www.ams.usda.gov/sites/default/files/media/ESNotes2019July.pdf>

<sup>26</sup> NOP, Certification of Organic Yeast. NOP 5014 issued March 2, 2010.





3. Metabolites: L-lactic acid\*, citric acid\*, L-malic acid, gellan gum, glucono delta-lactone, and enzymes\*. Materials on §205.605(b) that are products of fermentation include metabolites: glycerin, xanthan gum, various vitamins that may be produced by fermentation (B2, B12, C, D2, E, K2, biotin, and some combinations)\*.

Finally, there are metabolites of fermentation listed on §205.606: fructooligosaccharides (FOS), Inulin – oligosaccharide enriched (IOE), and whey protein concentrate.

#### **Classification: agricultural vs. nonagricultural**

The fact that products of fermentation are included on three different lists for processing is a sign that the classification of products of fermentation needs to be clarified. In particular, the Handling Subcommittee (HS) stated, “Glycerin, produced organically by fermentation is an agricultural product as defined in 7 CFR 205.2, since it is a processed product produced from an agricultural commodity, e.g. cornstarch.”<sup>27</sup> This is also consistent with the NOP classification decision tree, which preserves the nonagricultural classification through fermentation. However, it is not consistent with the definition of a “nonagricultural substance” in the regulations.

The regulations define “agricultural products” (following the OFPA definition) and “nonagricultural” (without a definition in OFPA) in §205.2:

*Agricultural Products.* Any agricultural commodity or product, whether raw or processed, including any commodity or product derived from livestock that is marketed in the United States for human or livestock consumption.

*Nonagricultural substance.* A substance that is not a product of agriculture, such as a mineral or a bacterial culture that is used as an ingredient in an agricultural product. For the purposes of this part, a nonagricultural ingredient also includes any substance, such as gums, citric acid, or pectin, that is extracted from, isolated from, or a fraction of an agricultural product **so that the identity of the agricultural product is unrecognizable in the extract, isolate, or fraction.** [Emphasis added.]

Perhaps some of the inconsistency in the classification of materials as agricultural or nonagricultural could be resolved by asking, “What makes a product of fermentation agricultural?” If the product of fermentation is agricultural, then it can be certified organic, and we need to define acceptable practices in organic fermentation processes.

NOP policy on organic yeast allows yeast to be a certified organic nonagricultural ingredient. Following that approach would allow other organic substances on 205.605(a). It is tempting to view yeast and other products of fermentation as agricultural. Issues surrounding the classification and listing of food additives produced by fermentation or extracted from fermentation products would be easier to resolve if fermentation processes were regarded as agricultural production systems. It may be argued that defining what organic production means in the context of vat fermentation is no more difficult than defining organic aquaculture.

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<sup>27</sup> NOSB Handling Subcommittee proposal for glycerin, October 14, 2014.



However, the NOSB has been clear that soil-less systems are not organic.<sup>28</sup> Organic agriculture is premised on a belief that the foundation of healthy plants and animals is healthy soil. This, indeed, is a problem in defining organic aquaculture.

Thus, the materials classification guidance, which treats fermentation as a processing method that does not change the classification of the substrate from agricultural to non- agricultural only works if both the substrate and the product of fermentation meet the definition of agricultural, and not nonagricultural substances. Thus pickles, wine, and cheese are all agricultural, but substances whose relationship to the substrate is unrecognizable – such as glycerin, as a product of fermenting cornstarch—are nonagricultural. Fructooligosaccharides (FOS), a product of fermenting glucose, and inulin enriched with oligosaccharides (which contains FOS) are also inappropriately listed on §205.606 because they are nonagricultural.

#### **Classification: Synthetic vs. Nonsynthetic**

The classification of some “nonsynthetic” substances needs to be revisited. For example, citric acid and L-lactic acid were originally added to the National List based on TAP reviews that gave a simplified version of their production using fermentation. Commercial production of these acids, however, involves synthetic chemical reactions that were not considered in the original classification decision.

#### **Other issues**

A number of products of fermentation that are on the National List may be made using genetically engineered organisms or genetically engineered substrate. Both of these issues should be addressed by annotation or in a general policy.

In some cases, fermentation may create undesirable byproducts. The TAP review for glucono delta-lactone, for example, recommended annotating to ensure that it is not produced by a strain that produces a toxin. (This was not included in the listing.)

**Therefore, in addition to the material-specific comments below, we support the request that the development of criteria for evaluating products of fermentation processes be added to the NOSB work plan.**

## Sunset

### Ancillary substances

NOC applauds the Handling Subcommittee’s continued efforts to keep a list of ancillary substances associated with materials in anticipation of the NOP’s moving forward with the 2016 NOSB recommendation, included below. In addition, we have heard from certifiers that they greatly appreciate the work the NOSB has been doing to aid in review of materials. NOC appreciates the transparency this practice allows, and encourages the NOSB to continue to pursue the goals of the Spring 2016 NOSB unanimous recommendation, included here:

**Statement of the Recommendation:** The NOSB recommends a review process for ancillary substances, supported by the definition, criteria for compliance, and procedure as outlined.

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<sup>28</sup> NOSB recommendation, Production Standards for Terrestrial Plants in Containers and Enclosures (Greenhouses), April 29, 2010.



**Rationale Supporting Recommendation:** The ancillary substances policy passed by the NOSB in 2014 did not completely address procedures needed by the Board in order to review ancillary substances, nor did the policy provide adequate guidance to ACAs. Therefore, this recommendation creates a clear set of steps that the NOSB will use to review ancillary substances, and provides optional template items that ACAs may use in determining compliance. The Board’s intention is to establish sound and sensible processes for review of substances, while maintaining transparency.

The NOSB will seek guidance from the NOP about adding these procedures to the NOSB policy and procedures manual as well as the NOP Program Handbook.

### Celery powder 205.606

OFPA prohibits the addition of synthetic ingredients to organic foods, unless it appears on the National List, and specifically states that a “handling operation shall not ... add any nitrates or nitrites” to organic foods, in part due to the potential health effects raised by use of nitrates and nitrites. One important use of nitrates and nitrites in food is to cure meat.

Yet despite OFPA’s prohibition on the use of nitrates and nitrites, celery powder currently appears on the National List and is used to cure meat labeled “organic” (it has been on the National List since 2007). Non-organic celery has very high levels of nitrates compared to organic celery, due in large part to the high levels of synthetic nitrate fertilizers used in conventional agriculture, since celery is very efficient at taking up nitrates. After non-organic celery is dried, it can be added to a bacterial culture, which helps transform the nitrate into nitrite, which is the main synthetic compound used to cure meat. Since the bacterial culture is a form of fermentation, it is allowed in organic, even if it had undergone a chemical change. When this cultured celery powder is used to cure meats, USDA regulations state that such meats must be labeled “uncured” when the meat’s standard of identity includes curing, and is allowed to be labeled “uncured” for other types of processed meats. This is due to current USDA regulations, which only recognize synthetic nitrates and nitrites as curing agents, and therefore do not consider meats cured with celery powder as “cured.” This is highly misleading to consumers, who may think that processed meats labeled as “uncured” or “no nitrates and nitrites added” are healthier options than processed meats labeled as cured.

Testing done by Consumer Reports and published in the October 2019 issue of Consumer Reports show that there are no differences in the average levels of nitrates and nitrites in processed meat products cured with synthetic nitrates or nitrites compared to those cured with “natural” sources like celery powder (many of which were organic).<sup>29</sup> Since the “uncured” or “no nitrates and nitrites added” labels are misleading to consumers, CR and Center for Science in the Public Interest have petitioned USDA to change its labeling regulations for cured meats;<sup>30</sup> NOC supports this request. Specifically, they are asking the agency to stop requiring, and instead prohibit, the statements “Uncured” and “No Nitrate or Nitrite Added” on meats processed using non-synthetic sources of nitrate and nitrite, such as celery powder. Instead, they are calling on the agency to require a front-

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<sup>29</sup> Calvo, P. 2019. Danger at the Deli. *Consumer Reports*, October 2019. At: [consumerreports.org/deli-meats/danger-at-the-deli-cold-cuts-increased-risk-cancer-heart-disease/](https://consumerreports.org/deli-meats/danger-at-the-deli-cold-cuts-increased-risk-cancer-heart-disease/)

<sup>30</sup> CSPI/CR Petition to Require Accurate and Non-Misleading Labeling on Meat Processed with Non-Synthetic Nitrates and Nitrites. [https://cspinet.org/sites/default/files/attachment/2019%20Petition%20No%20Nitrates%20Added%20CSPI%20CU\\_COMPLETE.pdf](https://cspinet.org/sites/default/files/attachment/2019%20Petition%20No%20Nitrates%20Added%20CSPI%20CU_COMPLETE.pdf).



of-package declaration (“nitrates or nitrites added”) and clear ingredient labeling whenever nitrates or nitrites are used in meats, regardless of the source.

In 2015, the International Agency for Research on Cancer (IARC) classified processed meat as carcinogenic to humans, based on sufficient evidence that consumption of processed meat causes colorectal cancer. Indeed, the experts concluded that each 50 grams of meat eaten daily increases the risk of colorectal cancer by 18%.<sup>31</sup> One potential mechanism for the cancer is that the nitrates and nitrites used to cure meat can produce N-nitroso compounds. N-nitroso compounds are a class of compounds, many of which are carcinogens,<sup>32</sup> that are formed in the digestive tract after consumption of red and processed (cured) meats. A feeding study with human volunteers has shown that heme, not protein or inorganic iron, mediates the formation of N-nitroso compounds in the human gut. Furthermore, it appears that the heme in processed meat in nitrosylated (due to the presence of nitrites) and nitrosylated heme may be even more toxic than normal heme.<sup>33</sup> Heme is found in meat products, but is only found in plants in trace amounts. Thus, although some may point out nitrates and nitrites can be found in many plant foods, they do not contain significant levels of heme, so the transformation of nitrites into N-nitroso compounds in the gut will be significantly lower in the absence of heme from red meat.

Given the health problems associated with cured meats and the role that added nitrates and nitrites may play in those health problems, we do not think that nonorganic celery powder should be allowed to be used in organic production. If celery powder is to be used, since there do not appear to be any other real alternatives to synthetic nitrates and nitrites for use in curing meats, then only organic celery powder should be allowed. In sum, we urge NOSB to remove celery powder from §205.606 of the National list.

#### Fish oil 205.606

NOC wholeheartedly supports the substantive comments from our member organization, Beyond Pesticides (BP), specifically in relation to the presence of persistent contaminants and toxic substances. We urge you to consult their detailed comments regarding this issue.

In addition to concerns regarding contamination, NOC does not support the relisting of Fish Oil due to concerns related to environmental impacts and ecological sustainability. According to the Handling Subcommittee published materials:

*While many different species are used for fishmeal and fish oil, small pelagics are most commonly used due to their high oil content. Peruvian anchoveta, Japanese anchovy, and Atlantic herring are the most common pelagic species harvested for fishmeal and fish oil, with primary stocks in the Southeast Pacific, Northwest Pacific, and Northeast and Northwest Atlantic, respectively. In 2010, all of these were either fully exploited or depleted. (Food and Agriculture Organization of the United Nations Fisheries and Aquaculture Department. (2010) The State of the World Fisheries and Aquaculture. pp. 35. Available at: <http://www.fao.org/docrep/013/i1820e/i1820e.pdf> )*

<sup>31</sup> IARC. 2015. IARC Monographs evaluate consumption of red meat and processed meat. Press Release No. 240.

At: [https://www.iarc.fr/wp-content/uploads/2018/07/pr240\\_E.pdf](https://www.iarc.fr/wp-content/uploads/2018/07/pr240_E.pdf)

<sup>32</sup> Cross AJ, Pollock JRA and SA Bingham. 2003. Haem, not protein or inorganic iron, is responsible for endogenous intestinal N-nitrosation arising from red meat. *Cancer Research* 63:2358-60.

<sup>33</sup> Bastide NM, Pierre FHF and DE Corpet. 2011. Heme iron from meat and risk of colorectal cancer: a meta-analysis and a review of the mechanisms involved. *Cancer Prevention Research* 4(2):177-84. Doi: 10.1158/1940-6207.CAPR-10-0113.



Currently, most fish oil for human consumption comes from marine pelagic oil fish, including mackerel, salmon, anchovy, sprat, pilchard, and herring, but the sought-after omega-3 oils are also found in deep sea fish and predators such as cod, swordfish, spearfish, marlin, and tuna. Many people have expressed concerns over the depletion of populations of top-level predators, but extensive harvesting of marine fauna at lower trophic levels is also likely to have substantial impacts on the food supplies of predators.<sup>34</sup> Production of fish oil today often violates the fundamental tenets of organic food production to “promote ecological balance and conserve biodiversity.” NOC questions how the review of fish oil as a handling material relates to the larger questions and decisions to be made regarding Marine Materials.

**The NOSB must consider whether organic consumers are adequately protected from contaminants in fish oil by the current listing. In addition, the NOSB must consider whether the allowance of fish oil from wild fish has a negative impact on fish populations. As the NOSB considers criteria for the use of marine plants in organic crop production, it should also examine the use of marine plant and animal products as ingredients in organic foods and how to apply the wildcrafting standard in §205.207(b) “A wild crop must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop.”**

**NOC is strongly committed to the conservation of biodiversity, and until sustainable practices can be defined to conform to organic standards in compliance with OFPA, we oppose the relisting of fish oil.**

#### Gelatin 205.606

NOC requests clarification regarding the barriers preventing the production of organic gelatin and all materials listed on 606 when up for sunset review. Without that information, it is impossible to make an informed decision regarding relisting.

#### Orange pulp, dried 205.606

NOC strongly supports the subcommittee’s discussion and subsequent vote to remove orange pulp, dried, from the NL.

#### Seaweed, Pacific kombu 205.606

#### Seaweed, Wakame (*Undaria pinnatifida*) 205.606

NOC requests that the two seaweed materials be reviewed within the broader context of Marine Materials. As part of the review, please consider the addition of an annotation related to harvest restrictions and risk-based testing for toxic materials, using a decision tree to identify harvesting areas where testing would need to be performed.

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<sup>34</sup> Brunner, E. J., Jones, P. J., Friel, S., & Bartley, M. ,2009. Fish, human health and marine ecosystem health: policies in collision. *International journal of epidemiology*, 38(1), 93-100. <http://ije.oxfordjournals.org/content/38/1/93.full.pdf+html>.



#### Alginic acid 205.605(a)

NOC holds that Alginic acid, like Seaweed and Fish oil, be reviewed within the broader context of Marine Materials. As part of the review, please consider the addition of an annotation related to harvest restrictions and risk-based testing for toxic materials, using a decision tree to identify harvesting areas where testing would need to be performed.

#### Calcium chloride 205.605(a)

We consider the level of impurities—up to 6%—to be high for a food grade material. The presence of calcium bromide, which is not on the National List, is troublesome. We recommend that the HS investigate this more closely and propose an appropriate annotation.

#### Citric acid 205.605(a)

##### Lactic acid 205.605(a)

The classification of some “nonsynthetic” substances needs to be revisited. Citric acid and L-lactic acid were originally added to the National List based on TAP reviews that gave a simplified version of their production using fermentation. Commercial production of these acids, however, involves synthetic chemical reactions that were not considered in the original classification decision.

Citric acid should be classified as synthetic unless it is possible to define nonsynthetic citric acid by annotation. If it is possible to define nonsynthetic citric acid, then it should be annotated on §205.605(a). Otherwise, it should be removed from §205.605(a) and considered for listing on §205.605(b).

L-lactic acid should be reclassified as synthetic and considered for listing on §205.605(b). L-lactic acid is also present in some foods by virtue of *in situ* fermentation, and this is not synthetic. The microorganisms responsible for the fermentation are on the National List.

#### Dairy cultures 205.605(a)

Dairy cultures, in addition to being a subclass of microorganisms, are also products of fermentation. A general consideration of products of fermentation would clarify the appropriate listing of dairy cultures.

We refer you to our full comment on “clarify products of fermentation.”

#### L-Malic acid 205.605(a)

NOC opposes the relisting of L-malic acid to 205.605(b).

NOC is pleased to see that the classification as nonsynthetic is being revisited, but listing on 205.605(b) should not be automatic. L-malic acid should be removed from 205.605(a) and then be considered for 205.605(b). The



new TR identifies three major processes of producing L-malic acid by fermentation. Although two of these processes involve microbial fermentation of nonsynthetic substrates, the third – most commonly used – is a two-step process that starts with a synthetic substrate. A fourth method of producing L-malic acid is entirely synthetic. Since the listing on 205.605(a) does not specify a production method, L-malic acid must be assumed to be synthetic, and hence it should be removed from 205.605(a) and petitioned for 205.605(b). Alternatively, it could be annotated on 205.605(a) to require nonsynthetic fermentation methods. A general consideration of products of fermentation would inform the annotation.

We refer you to our full comment on “clarify products of fermentation.”

#### Microorganisms 205.605(a)

A clear definition of the term microorganisms is needed. The definition is critical for microorganisms in use currently, and can be used to determine whether additional organisms, such as unicellular algae, should be considered microorganisms.

We refer you to our full comment on “clarify products of fermentation.”

#### Nutrient vitamins and minerals 205.605(b)

The current annotation for “nutrient vitamins and minerals,” which references 21 CFR 104.20, is currently used by some food manufacturers to justify adding synthetic and non-organic ingredients to organic foods when they do not appear on the National List, as long as they can be considered a “nutrient.”

This includes several additives that have been reviewed by the NOSB and rejected for use in organics.

NOC opposes the relisting of “nutrient vitamins and minerals” with the current annotation, for the following reasons:

- We do not think that categorical listings on the National List are appropriate. The National List is for individual substances, not groups of substances, and this should apply to “nutrient vitamins and minerals” as well.
- We do not think that referencing FDA regulations in an annotation in the organic standards is appropriate. The NOSB and USDA should review and approve individual substances as outlined in OFPA and the organic standards. Annotations that reference FDA regulations give that authority to another agency whose standards differ from OFPA standards.

Synthetic or non-organic additives used for nutrient supplementation or fortification should be limited to those that are essential. This does not mean those that are considered “essential nutrients,” but rather those that are essential to making an organic product because fortification or supplementation is required by law.

**NOSB should remove “nutrient vitamins and minerals” from the National List and continue the process of individual substance review. As noted in the subcommittee’s published materials, “in 2011 through 2013 many other nutrients were petitioned. Some were recommended to be listed by the NOSB while others were**



**not. No rulemaking in this area has occurred.”<sup>35</sup> Only a handful of nutrients that are essential to organic handling would still need to be reviewed.**

## Livestock Subcommittee (LS)

### Petition

#### Fenbendazole use in poultry – Discussion Document

NOC opposes the use of fenbendazole in poultry as proposed – to expand the use of fenbendazole to poultry by adding an annotation to 7 CFR §205.603(a)(23)(i) to include laying hens and replacement chickens intended to become laying hens with no withholding period and no defined perimeters for use. The NOSB cannot rely on the 2015 TR covering parasiticides used in mammalian livestock to support a decision to allow the use of fenbendazole in poultry.

While NOC recognizes that fenbendazole is already permitted under restrictive conditions for other livestock species, it is permitted with a withholding period, as appropriate, for each class of animal, based upon residue present in the organic product – whether it be wool or milk. Residues of fenbendazole will be present in eggs, and this requires a withholding period, as consumers of organic products expect that there will be no chemical residue in organic foods. We refer you to the more in-depth comments from Beyond Pesticides regarding residues in eggs and the metabolism of fenbendazole in poultry.

Currently, operations using parasiticides must meet standards listed at §205.238. In the spring of 2018, the NOSB unanimously recommended clarifying “emergency” for use of synthetic parasiticides in organic livestock production. As the expanded use of parasiticides in organic production is being considered, it is imperative that the spring 2018 recommendation passed by unanimous vote be added to the rule, as follows:

Add this definition to 205.2

Emergency treatment to allow synthetic parasiticide use in livestock: A livestock emergency is an urgent, non-routine situation in which the organic system plan’s preventive measures and veterinary biologics are proven, by laboratory analysis or visual inspection, to be inadequate to prevent life-threatening illness or to alleviate pain and suffering. In such cases, a producer must administer the emergency treatment (§205.238(c)(7)). Organic certification will be retained, provided that such treatments are allowed under § 205.603 and the organic system plan is changed to prevent a similar livestock emergency in individual animals or the whole herd/flock in future years as required under §205.238(a).

Add to § 205.238 (b)

(4) Organic breeding, dairy and fiber bearing animals when meeting the following conditions:

(i) Organic livestock has been managed according to 238(b) and 238(c)(2), 238(c)(4), and 603(a)(23) and only in the event of an emergency where management strategies have been proven insufficient to prevent or control

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<sup>35</sup> <https://www.ams.usda.gov/sites/default/files/media/AllNOSBproposalPacket.pdf>, p. 38.





parasites within the accepted threshold for specific parasites, age and species of the animal. These management strategies include but are not limited to, forage height and plant diversity to maintain parasite levels below treatment thresholds and monitoring with documentation of parasites through use of methods such as fecal monitoring and FAMACHA (FAffa Malan Chart—used for tracking anemia in goats and sheep).

(ii) The organic system plan is changed to prevent a similar livestock emergency in individual animals or the whole herd/flock in future years.

## Proposal

### Use of Excluded Methods Vaccines in Organic Livestock Production

NOC is against the use of GMOs in all areas of organic production, and we want to limit the use of GMO vaccines. The current status quo is not achieving that goal. We need to be able to identify which vaccines have been genetically modified, and the non-GMO vaccine must be used when available.

The first step in reaching this goal is to take steps to develop a comprehensive classification system for all available vaccines. As a start, the USDA publication Veterinary Biological Products—Licensees and Permittees, contains a list of veterinary biological products (including vaccines), that is current as of July 1, 2019.<sup>36</sup> This list of all approved and available vaccines can be used to determine how many vaccines of a given type may be available. As noted by the Subcommittee, any vaccine label that contains the terms “subunit,” “vector,” “chimera,” “nucleic acid vaccine,” “naked DNA vaccine,” “RNA vaccine,” “genetic vaccine,” or whose product code contains “D” or “R” as the fifth digit would indicate a vaccine produced by excluded methods. This document can be used to at least see whether there are different versions of a specific vaccine available.

Looking at the current version of Veterinary Biological Products-Licensees and Permittees, there are 56 vaccines that are produced using excluded methods. Of those 56 vaccines, there are 35 different vaccine types (such as avian influenza vaccine, avian influenza-Marek’s disease vaccine, Salmonella Dublin vaccine, or swine influenza vaccine, etc.). Of those 35 GMO vaccine types, some 18 vaccine types also have non-GMO versions, while 17 did not have non-GMO versions.

NOP should develop a list of which veterinary vaccines have not been produced using excluded methods, using the USDA publication as a starting point, to be updated whenever the USDA publication is updated. This list can then be published and made available to certifiers and producers, making it easier for those that need vaccines to find those produced without using excluded method techniques.

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<sup>36</sup> [https://www.aphis.usda.gov/animal\\_health/vet\\_biologics/publications/CurrentProdCodeBook.pdf](https://www.aphis.usda.gov/animal_health/vet_biologics/publications/CurrentProdCodeBook.pdf)



## Sunset

(Parasiticide) Fenbendazole 205.603(a)

(Parasiticide) Moxidectin 205.603(a)

Both moxidectin and fenbendazole are needed as they are used alternately over time. Used in this fashion will help to reduce the probability of parasites developing resistance to the materials. Even with good pasture management and nutritional status, weather and other environmental factors can cause the animals to become infected with parasites.

NOC supports the relisting of both fenbendazole and moxidectin, and feels strongly that now that there is a greatly reduced withholding time for these materials, it is imperative that the Spring 2018 NOSB recommendation passed by unanimous vote be added to the rule, as follows:

### **Spring 2018 NOSB Vote: unanimous decision**

#### **Motion to add the following at §205.2 Definitions**

Emergency treatment to allow synthetic parasiticide use in livestock: A livestock emergency is an urgent, non-routine situation in which the organic system plan's preventive measures and veterinary biologics are proven, by laboratory analysis or visual inspection, to be inadequate to prevent life-threatening illness or to alleviate pain and suffering. In such cases, a producer must administer the emergency treatment (§205.238(c)(7)). Organic certification will be retained, provided that such treatments are allowed under § 205.603 and the organic system plan is changed to prevent a similar livestock emergency in individual animals or the whole herd/flock in future years as required under §205.238(a).

Add to §205.238 (b)

(4) Organic breeding, dairy and fiber bearing animals when meeting the following conditions:

(i) Organic livestock has been managed according to 238(b) and 238(c)(2), 238(c)(4), and 603(a)(23) and only in the event of an emergency where management strategies have been proven insufficient to prevent or control parasites within the accepted threshold for specific parasites, age and species of the animal. These management strategies include but are not limited to, forage height and plant diversity to maintain parasite levels below treatment thresholds and monitoring with documentation of parasites through use of methods such as fecal monitoring and FAMACHA (FAffa Malan Chart—used for tracking anemia in goats and sheep).

(ii) The organic system plan is changed to prevent a similar livestock emergency in individual animals or the whole herd/flock in future years.

Atropine 205.603(a)

NOC supports the relisting of atropine due to its essentiality as an antidote for organophosphate poisoning and usefulness as an antispasmodic. The TR describes it as a benign treatment without a holistic or natural



alternative. The withdrawal periods of 56 days and 12 days are twice the listed FARAD Withdrawal Interval (WDI).

#### Hydrogen peroxide 205.603(a)

Hydrogen peroxide is relatively nontoxic in low concentrations, though it is a powerful oxidizer and may damage soil biota. Repeated exposure to vapor is harmful. It breaks down quickly to oxygen and water, and therefore does not have a residual effect.

NOC supports relisting of hydrogen peroxide as a safer alternative to chlorine-based and other toxic sanitizers.

#### Iodine 205.603(a)(14) & 205.603(b)(2)

NOC agrees with comments that iodine is important as a teat dip. It is important for animal health, as well as for milk quality, and may be generally preferred over other available products due to its germicidal activity.

The dairy industry as a whole began to address iodine with no NPEs several years ago as a way to address exports, as most other countries do not allow NPEs. In preparing our comments, NOC reached out to both NODPA and WODPA, who both support an annotation change. In reaching out to several certifiers, we heard back that NPEs could be prohibited in iodine teat dips, as many of their clients have moved away from NPE-containing teat dips with success in order to meet the demands/requirements of their market. Currently, most processors are already requiring iodophors without NPEs. It's time for the organic standards to catch up with what industry already requires.

NOC supports Beyond Pesticide's recommendation for an annotation change for iodine. Although the option for the NOSB to add annotations at sunset was unilaterally removed by the NOP, we believe this is an example of where it is important to add an annotation to prohibit the use of nonylphenol ethoxylates (NPE) forms of iodophors in organic production; NPEs are suspected endocrine disruptors and proven aquatic toxins.

The iodine listings should not permit iodophors containing alkylphenols or alkylphenol ethoxylates. (APs and APEs are the general classes that include NPs and NPEs.) They should be annotated "without alkylphenols or alkylphenol ethoxylates."

We encourage the subcommittee to add this annotation change to the work agenda.

#### Magnesium sulfate 205.603(a)

NOC supports relisting of magnesium sulfate. Magnesium sulfate is essential for organic livestock production. It is used when grass tetany and organophosphate poisoning occur. Both are acute situations and an effective immediate treatment is necessary.



#### Peracetic acid 205.603(a)

Peracetic acid is a stronger oxidizer than chlorine dioxide and sodium hypochlorite, but weaker than ozone. It is less persistent and has lower residual activity than chlorine-based disinfectants, and its degradation products are less hazardous. It does not harm aquatic life or form carcinogenic and mutagenic compounds in breaking down like chlorine.

NOC supports the relisting of peracetic acid and maintains it is necessary for organic livestock production. It is useful as a replacement for chlorine compounds with a wider range of usefulness and innocuous degradation products.

#### Xylazine 205.603(a)

NOC supports the relisting of xylazine. Tolazoline and xylazine are always used together, and therefore should be reviewed and considered for sunset together.

Xylazine should be relisted for the rare cases in which they are needed, such as surgery and humane dehorning. Dehorning is done on all dairy animals that are not genetically polled. While more polled genetics are becoming available in most breeds, and many farmers are moving in that direction, it is not feasible for all herds depending on what the needs for genetic improvements may be. There are other natural alternatives that exist that can be used in minor circumstances but are not as effective for pain relief or humane treatment.

The NOSB should examine the allowance of off-label uses of veterinary medicines and the question of how organic integrity can be protected in light of a system (FDA's) that does not require testing to enter the marketplace. We point to the more detailed comments of Beyond Pesticides in this area.

#### Methionine 205.603(d)

From the very beginning, the NOSB has stressed the importance of phasing out the use of synthetic methionine in organic poultry production. This was accomplished for years with expiration dates and step-down allowed rates. At the Spring 2015 meeting, the NOSB also voted unanimously to adopt the following resolution, which was understood to keep the methionine issue on the LS work agenda:

**The National Organic Standards Board is committed to the phase-out of synthetic methionine for organic poultry production, and encourages aggressive industry and independent research on natural alternative sources of methionine, breeding poultry that perform well on less methionine, and management practices for improved poultry animal welfare.**

The NOSB must address the need for synthetic methionine in the context of an organic system of production. In its examination of the role of synthetic methionine in an organic poultry production system, the following questions must be addressed:

1. How do methionine requirements vary with species and with breeds within species?
2. How much methionine is provided by pasture under optimum conditions?
3. Can poultry pasture be improved to provide more sources of methionine (e.g., more insects)?



4. Can natural sources of methionine be combined to provide methionine that is missing from pasture?
5. Are there particular conditions —e.g., seasons or temperature ranges— under which poultry pasture cannot be sufficiently improved and natural sources of methionine are inadequate to produce specific breeds/species?

These questions are pertinent to the question of whether organic systems require synthetic methionine; that is, whether it is “necessary to the production or handling of the agricultural product because of the unavailability of wholly natural substitute products.” If poultry producers can choose breeds, pasture systems, and natural sources of methionine that can provide for the needs of the birds, then there is no need for synthetic methionine. If an organic management system can provide for the needs of the birds without adding synthetic methionine when temperatures are suitable for the birds to be on pasture, then an annotation can limit the use to those situations when pasture is not possible. Thus, questions surrounding the use of synthetic methionine are tightly linked to other issues of animal welfare that USDA has refused to address in regulations.

NOC is pleased to see this topic remains on the annual list of research priorities for organic food and agriculture. Further, we would suggest that the questions surrounding the use of synthetic methionine are linked to other issues of animal welfare that the USDA has refused to address in regulations.

#### Trace minerals 205.603(d)

Organic production should not be dependent on synthetic nutrients. While we realize that the variability in forage and feeds may occasionally lead to a need for supplementation, the existing annotation is not restrictive enough to prevent reliance on synthetic materials. Therefore, we recommend adding the annotation, “when forage and available natural feeds are poor quality.”

#### Vitamins 205.603(d)

Synthetic inputs may be needed to respond to unusual conditions or fine tune the system, but in organic production, they cannot be routine. The blanket listing of all synthetic vitamins is not justified. The 1995 NOSB recommendation on vitamins saw a limited use of synthetic vitamins, to be reviewed within two years. Livestock producers were “to decrease or eliminate use of feed additives when possible.”

NOC supports a listing for vitamins that is limited to vitamins A, C, and D because the need for synthetic forms of others is not supported by the 2015 Technical Review of Vitamins for Livestock.<sup>37</sup> The listing should read:

#### 205.603(d) As feed additives

(3) Vitamins A, C, and D, used for enrichment or fortification when forage is not available and available natural feeds are of poor quality.

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<sup>37</sup> 2015 Technical Review of Vitamins for Livestock, lines 1142-1201.



## Materials Subcommittee (MS)

Assessing cleaning and sanitation materials used in organic crops, livestock, and handling

We are disappointed that the Materials Subcommittee (MS) seems to have dropped the agenda item dealing with the review of cleaning and sanitation materials. We are reminded every time the NOSB receives a petition for a new sanitizer of the value of a tool to aid the NOSB in determining which materials should be added to the National List.

It is our understanding that the NOP has not put the Technical Review (TR) topic out for bid due to the topic being viewed as too unwieldy or broad. This is precisely why we need to get started with such a technical review. Indeed, if the NOSB and organic stakeholders never worked on unwieldy or broad topics, the topics of fraud, marine materials, genetic integrity transparency of seed grown on organic land, and many others would have never moved forward. NOC urges the NOSB and NOP to support the need for a TR, even if it is not all-encompassing at this time.

The NOSB could use the information in the TR to begin to assess, when evaluating petitions for sanitizers, whether other materials currently on the National List meet the same need, or if there is a special characteristic to the material under review that justifies its placement or renewal to the NL. This assessment may help identify areas where there are gaps in necessary sanitizers or disinfectants which aid organic crops, livestock, and/or handling operations in the promotion of food safety.

## Proposals

### Excluded Methods

Excluded Method Determinations: Induced mutagenesis and embryo transfer in livestock

New genetic manipulation techniques are being introduced at an increasingly rapid pace. Organic stakeholders and accredited certifiers must have clarity on which genetic techniques and methods are allowed and which are prohibited under the organic regulations. The NOP must provide that clarity.

In 2011 and 2012, a number of confusing issues came before the NOSB and the NOP. This sparked a reexamination of the excluded methods definition, years of sustained work on the part of the NOSB, and open dialogue within the organic community. An NOSB discussion document on excluded methods was put forward in 2013, which generated significant public comment. A second NOSB discussion document posted in September 2014 and in April 2015 analyzed the comments received and proposed options for the NOSB review and evaluation of new GE technologies and methods. The NOSB also acknowledged that this issue would require continuous work on their part to evaluate and provide recommendations to the NOP about new technologies as they emerge.

Throughout this entire process of dialogue and debate, the organic community and NOSB has been clear in their opposition to genetic engineering in organic agriculture and the need to provide a transparent process and certainty to the organic community - including certifiers, operations, and consumers - about what is excluded, what is allowed, and why.



This is a complicated area, and the NOSB and NOP must be a place where the organic community can go to find answers and direction. We cannot have inconsistency between certifiers in what they allow when considering genetic modification techniques. The framework put in place by the NOSB in the fall of 2016 should be formally adopted by the NOP and codified as a guidance document. The NOSB process of defining and clarifying what should be excluded as a method uses and builds on the current excluded methods definition in the organic regulations to encompass new technologies that have emerged since this definition was adopted in 1995 due to rapid advances in recombinant DNA biotechnology.

Since 2016, the NOSB has clarified that the following methods are excluded in organic: Targeted genetic modification, gene silencing, accelerated plant breeding techniques, synthetic biology, cloned animals and offspring, plastid transformation, cisgenesis, intragenesis, agro-infiltration, and transposons developed via use of in vitro nucleic acid techniques. **The NOP should codify the prohibition in organic for these ten methods by publishing a guidance document for the NOP handbook to ensure clarity for all stakeholder groups.**

All of the NOSB recommendations on excluded methods since the fall of 2016 have been unanimous, which reflects that organic community's united stance that genetic engineering should be prohibited in organic. Genetic engineering is a threat to the integrity of the organic label. Both organic producers and consumers reject the inclusion of genetic engineering in organic production.

The NOSB has also passed unanimous recommendations that marker assisted selection, transduction, and embryo rescue in plants should be allowed in organic. **The NOP should codify that these methods are allowed in organic by publishing a guidance document for the NOP handbook to ensure clarity for all stakeholder groups.**

The NOSB is still receiving public comment and evaluating the status of protoplast fusion, cell fusion within plant family, tilling, double haploid technology, induced mutagenesis, embryo transfer in animals, and transposons produced from chemicals, ultraviolet radiation, or other synthetic activities.

Below, we comment in more detail on the NOSB's proposal for the Fall 2019 meeting that induced mutagenesis developed via use of in vitro nucleic acid techniques be listed as excluded and that embryo transfer in animals be listed as allowed. In sum, we urge NOSB to add "induced mutagenesis-developed via use of in vitro nucleic acid techniques" to the table of excluded methods and to support future work by keeping induced mutagenesis developed through exposure to UV light, chemicals, and irradiation on the "To Be Determined" list for future discussion and review. We also urge the NOSB to add embryo transfer, or embryo rescue, in animals, where there is no use of hormones in either the recipient or donor animals, to the table of "not excluded" methods.

Continued work to determine the status for these 'to be determined' technologies and other GE technologies that emerge in the coming years is essential and must move forward efficiently, but carefully, with input from scientists, plant breeders, and other organic stakeholder groups. In particular, failure to continue work in this area will negatively impact organic plant breeders and the organic seed industry, who need certainty to advance plant breeding efforts that meet the needs of organic operations.

NOC urges the NOSB to continue to have a transparent process to evaluate GE technologies and to ensure that excluded methods are kept out of organic production.



### **Induced Mutagenesis**

As in the case of transposons, we distinguish mutagenesis arising from environmental stress, such as heat, drought, cold, or radiation, from directed mutagenesis from gene editing or other in-vitro DNA/RNA manipulation. Mutation arising from environmental stress is a whole-organism response to stress, and is a natural part of evolution. Directed mutagenesis via gene editing and other in-vitro methods ignore pleiotropic effects. All forms of directed mutagenesis should be considered excluded methods.

NOC supports the present proposal from the Materials/GMO Subcommittee to add “induced mutagenesis-developed via use of in vitro nucleic acid techniques” to the table of excluded methods. Such forms of induced mutagenesis clearly constitute an excluded method since in vitro nucleic acid techniques are part of the definition of “modern biotechnology” or genetic engineering that is contained in the guidance on Excluded Methods Terminology that NOSB adopted at the fall 2016 meeting. We also support future work by keeping induced mutagenesis developed through exposure to UV light, chemicals, and irradiation on the “To Be Determined” list for future discussion and review.

### **Embryo Transfer in Livestock**

The Subcommittee has recommended that embryo transfer, or embryo rescue, in animals, where there is no use of hormones in recipient animals, is added to the table of “not excluded” methods. We can support this proposal with one change—we do not think that hormones should be allowed to be used on the donor animals.

Hormones, especially gonadotropins (Gn), are used to induce superovulation in donor animals, followed by artificial insemination of the donor animal, recovery of embryos from the donor, isolation and storage of embryos, and transfer into recipient animals (with or without hormones to synchronize estrus). We do not think that hormones should be used on donor or recipient animals due to the potential health impact on offspring. Recent studies have shown that gonadotropin use for superovulation can have epigenetic effects and alter gene expression. A study published in 2011 looking at mice found that “elevated Gn does cause detrimental and harmful effects on oocytes. ... high Gn dosages induced spindle and chromosomal abnormalities.”<sup>38</sup> A study published in 2014 found that “[b]ovine embryos produced by superovulation may have a different gene expression profile compared with those produced by natural ovulation”<sup>39</sup> although the health implications of these changes on the resulting offspring are not known. For precautionary reasons, we think that hormones should not be used for superovulation on the donor animals, due to potential health impacts on the offspring.

We are also concerned that the largest US embryo transfer company—TransOva,<sup>40</sup> which bought Viagen in 2013,<sup>41</sup> the only cattle cloning company in the US, raises a risk that embryos derived from cloning animals might be transferred as a part of the embryo transfer process. The NOSB has declared animal cloning to be an excluded method.<sup>42</sup> Companies involved in cloning should not be allowed to participate in organic production.

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<sup>38</sup> Pg. 1503 in Liu, S et al. 2011. Effect of gonadotropins on dynamic events and global deoxyribonucleic acid methylation during in vitro maturation of oocytes: an animal model. *Fertility and Sterility* 95:1503-6

<sup>39</sup> Pg. 8-4 in Urrego R, Rodriguez-Osorio N and H Niemann. 2014. Epigenetic disorders and altered gene expression after use of Assisted Reproductive Technologies in domestic cattle. *Epigenetics* 9(6):803-15.

<sup>40</sup> See [www.transova.com](http://www.transova.com)

<sup>41</sup> [www.transova.com/cloning](http://www.transova.com/cloning); see also: <https://hoards.com/article-8321-trans-ova-genetics-joins-forces-with-viagen.html>

<sup>42</sup> NOSB voted in 2007 that cloning is an excluded method.

<https://www.ams.usda.gov/sites/default/files/media/NOP%20Final%20Rec%20on%20Cloning.pdf>





We urge the NOSB to add embryo transfer, or embryo rescue, in animals, where there is no use of hormones in either the recipient or donor animals, to the table of “not excluded” methods.

#### Genetic Integrity Transparency of Seed Grown on Organic Land

NOC would like to express our gratitude to the Materials Subcommittee for their commitment to this complex issue. Additional work should start with bringing together a panel of seed growers, seed handlers, and grain producers to ensure future work is grounded in the realities of all affected stakeholders. The information gleaned would inform future proposals, an NOP task force, and/or a pilot project with seed suppliers.

The need to collect more data has been an overarching theme since this work began over six years ago, and one that the USDA has failed to address in spite of repeated requests from the NOSB and the organic community to do so.

GMO contamination prevention practices are important throughout the supply chain; starting with seed makes sense. In order to continue to move the dial on this important issue, data collection and reporting is vital. NOC supports the NOSB’s continued efforts to establish an NOP funded task force:

*The NOSB continues to request that the NOP fund a task force that would collect information on the genetic integrity of seed planted on organic land so the organic community - from farmers to consumers - would have statistical information detailing GE contamination issues. This task force would be empowered to collect data for multiple years, since growing conditions and crop production issues change from year to year, and in order to collect useful information, numerous years and regions must be tracked. We know there are issues with some crops in some regions, but there has not been a comprehensive review of data to provide a clear picture of the problems. Without this information, the organic community cannot develop solutions.*

#### NOSB Research Priorities 2019

##### **The Way in Which Research Is Conducted**

The way research is conducted is just as important as the research itself. To the extent possible, organic research should be done in partnership with organic producers on working farms. This will help ground the research in the realities faced by organic producers in the field. Further, researchers should take care to disseminate the interim and end-of-study findings of research with organic producers, in brief, accessible technical publications, and in paper and digital formats, to maximize farmers’ access to this information.

##### **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, alternatives treatments, and pasture species.
3. Organic livestock breeding for animals adapted to outdoor life and living vegetation.



NOC would like to express general support for the NOSB's proposed livestock research priorities, and offers comments on #1, as follows.

### **1. Evaluation of methionine**

Substantial research has already been conducted investigating isolated strategies for raising chickens organically and humanely without synthetic amino acid supplementation. **Systems based research on eliminating DL-Methionine in organic poultry feeds should investigate the impacts of natural methionine feed sources, breed, and high-welfare management strategies simultaneously.** Further, given the recent petition of fenbendazole for use in poultry systems, holistic management research should take into consideration the methods used for parasite management and mitigation in organic poultry systems. If we don't spend time investigating natural methionine sources and parasite management in a systems-based approach, creative ways of including synthetic methionine in poultry diets, and requests for further synthetics to be included on the national list, will continue to proliferate.

### **Crops**

1. Examination of decomposition rates, the effects of residues on soil biology, and the factors that affect the breakdown of biodegradable biobased 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.

NOC would like to express general support for the NOSB's proposed crops research priorities, and offers comments on #1 & #3, as follows.

### **1. Biodegradable Bio-based Mulch Film**

We are glad to see the continued research priority surrounding biodegradable bio-based mulch films, and support the research priority generally. However, we think the questions put forth could be further expanded and clarified by:



- Separating the primary overarching question “Are there metabolites of these mulches that do not fully decompose?” from the first bullet point, into its own bullet point, and possibly expanding to also ask the simple question “Do any of these mulches fully decompose?”.
- In the third bullet point, it is asked if degrading fragments may pose a problem to terrestrial and aquatic wildlife. This may present an oversimplification of a complicated question, which would be well served with more precise language, such as “What are the environmental fates of micro- and nano-plastic fragments resulting from biodegradable mulch film degradation, and what hazards do they present to organisms that they interact with on the way to that fate?”

### **3. Organic No-Till**

Again, we generally support this research priority, but feel that its scope may need to be broadened, or otherwise redirected to better reflect trends in organic no-till practices. As written, the research priority describes terminated cover crop organic no-till, presumably through a roller-crimper approach. In the past few years there has been a large increase in numbers of farms that are utilizing polyethylene sheets (silage tarps) to prepare land for no-till planting. This approach often involves termination of a cover crop, as with the roller-crimper systems, but seemingly as often, or more frequently, is utilized to prepare fallow ground (for stale seed bedding, termination of crop residue and subsequent incorporation via soil fauna) or in conjunction with large applications of compost or other sources of organic matter.

In light of the increasing adoption of the aforementioned organic no-till practices, some of the research priority as currently written will still apply, but potentially obtain different research questions and answers than with a roller-crimper system, and some research questions will be generated completely anew, as much of the crop residue and soil dynamics taking place underneath these “no-till tarps” is still effectively a “black box.”

Additionally, the fourth bullet point would benefit from expansion to a question regarding potential “pest problems” deriving from these systems, instead of “specific insect problems,” as mollusks such as slugs and snails are frequently a pest of concern in these systems.

### **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.

NOC would like to express general support for the NOSB’s proposed handling and processing research priorities, and offers comment on #3, as follows.

### **3. BPA**

BPA poses serious hazards and NOC supports its elimination from organic food packaging. At the same time, since known alternatives to BPA may also present similar problems, the NOSB should approach the issue of food packaging in a comprehensive way. Research on alternatives would help inform NOSB discussion on organic packaging moving forward.



In addition, as noted in our full comments for hydrogen chloride, we feel that a research priority to address the alternatives to hydrogen chloride in delinting of cotton should be added. Please see our full comment on hydrogen chloride sunset review for details.

#### **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 in order to quantify the current state of the 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.

NOC would like to express general support for the NOSB's proposed coexistence with GE and organic crops research priorities, and offers an addition, as follows.

#### **Genetic Integrity Transparency of Seed**

Given the lack of forward movement of the former Genetic Integrity Transparency of Seed Grown on organic land proposal, which would have begun gathering data through a pilot corn project, we urge a research project to begin understanding the breadth and depth of this important issue and the impacts it has on organic farmers, seed companies, and producers. It is our hope that such research could eventually be used to help identify thresholds that could be used for policy making.

#### **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.

NOC would like to express general support for the NOSB's proposed general research priorities, and feels that these requests could be made stronger by the additions suggested below.

#### **Interdisciplinary research to examine lack of access to organic foods as an environmental justice issue.**

Interdisciplinary research is needed to examine lack of access to organic foods as an environmental justice issue. The ability to participate in the organic marketplace and have freedom of choice and access to these products should be available to all regardless of socioeconomic status and yet, if that is not the reality, communities lacking access are at increased risk of exposure to the potentially toxic substances prohibited in organic production systems. Public perceptions are often that organic is an option only available to those who can afford it. The industry would benefit from a deeper understanding of organic food offerings in diverse communities across the country as well as any barriers to ensuring access to organic foods. This data will inform policy as well as information for the retail community.



### **Barriers to participation in organic certification for farmers of color**

The latest Census of Agriculture report details the lack of participation in farming by communities of color. For example, while the black/African American population is above 13%, fewer than 2% of all farms in the U.S. are owned by blacks/African Americans. The percent of farms with organic sales owned by blacks/African Americans is even lower.<sup>43</sup> There is a need for research into the barriers to participation in organic certification for farmers of color as well as technical assistance or other policy solutions to overcome those barriers.

### Discussion Document

#### Marine materials in organic crop production

NOC thanks the Materials Subcommittee for keeping the spring 2019 discussion document for marine materials open for comments through fall 2019 to allow deeper engagement in this issue. The protection of marine ecosystems is urgently important, and since marine plants are crucial to those ecosystems, it is important for all of us, as organic producers, consumers, certifiers, and regulators, to find a way to move this process forward. We thank the Materials Subcommittee for their efforts so far.

The subcommittee included several questions in the discussion document presented. We focus on only numbers 1, 2, and 8 here.

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.

Currently, our thoughts are that marine algae and their products on the National List should be annotated with the wildcrafting standard language, which is supplemented in a way that specifies concerns that must be addressed.

The wildcrafting standards at §205.207 require:

- (a) A wild crop that is intended to be sold, labeled, or represented as organic must be harvested from a designated area that has had no prohibited substance, as set forth in §205.105, applied to it for a period of 3 years immediately preceding the harvest of the wild crop.
- (b) A wild crop must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop.

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<sup>43</sup> 2012 Census of Agriculture: Characteristics of All Farms and Farms with Organic Sales, September 2014, United States Department of Agriculture, National Agricultural Statistical Service, pg.5.  
[https://www.nass.usda.gov/Publications/AgCensus/2012/Online\\_Resources/Special\\_Organics\\_Tabulation/organicta b.pdf](https://www.nass.usda.gov/Publications/AgCensus/2012/Online_Resources/Special_Organics_Tabulation/organicta b.pdf)



Requiring that marine materials be organically produced, as proposed by the MS, would also apply the wildcrafting requirements in most cases. We stress the necessity of the language, “must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment” because “sustainable harvest” is not sufficient to protect the ecosystem. Because of the many roles that marine algae play in the ecosystem, standards should not be based on the level of disturbance that can sustain a harvest (recovery of biomass), but on recovery of ecosystem function and structure. We point to the more detailed comment of Dr. Robin Hadlock Seeley regarding the rockweed industry as supporting documentation.

We look forward to the expert panel discussion at the upcoming NOSB meeting as an opportunity to more fully explore opportunities to address this issue.

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.

It would appear that most of the standards included in the appendix say something about sustainable harvest practices, but little about ecological sustainability, which we would describe as “a capacity of ecosystems to maintain their essential functions and processes, and maintain their biodiversity in full measure over the long-term.”<sup>44</sup> This would be an area that would need to be developed more fully.

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?

NOC points to the detailed comments submitted by Dr. Hadlock Seeley for further discussion on this matter. We feel strongly that there is a need to develop scientifically based and sound standards and regulations for harvesting seaweed that are used in manufacturing organic inputs.

The NOSB should consider the different types of seaweeds and different characteristics of each when it comes to both community biodiversity and marine algae species characteristics. Further, a better understanding of the different locations where harvesting takes place, as well as wild harvest versus cultivation of seaweed, needs to be better understood for informed decision-making.

Thank you for your consideration of these comments.

On behalf of National Organic Coalition Members:

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<sup>44</sup> <http://www.businessdictionary.com/definition/ecological-sustainability.html>



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