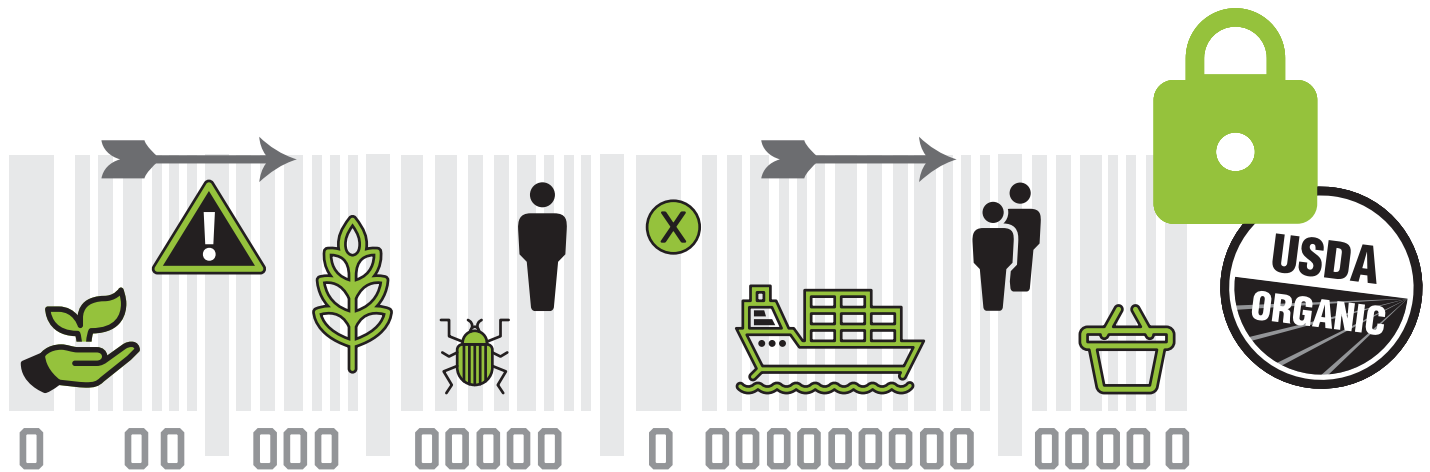


NATIONAL ORGANIC STANDARDS BOARD

SPRING 2019 MEETING

April 24–26 | Seattle, WA



INSIDE:

- Organic Fraud Prevention Solutions
- NOSB: The Cornerstone of Continuous Improvement
- The Restricted Organic Toolbox
- Get To Know Your National List
- National List Criteria: Inside the Review Process
- Summary of NOSB Agenda Items
- Organic Trade Association Positions

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WEDNESDAY • APRIL 24	THURSDAY • APRIL 25	FRIDAY • APRIL 26
8:30 a.m.: Call to Order	8:30 a.m.: Call to Order	8:30 a.m.: Call to Order
<ul style="list-style-type: none"> • Welcome/Introductions • Secretary's report • NOSB Report • USDA/AMS/NOP update • NASS 2019 Organic Survey • Celery Powder panel 	<ul style="list-style-type: none"> • Public comments continued 	<ul style="list-style-type: none"> • Handling Subcommittee • Biodegradable mulch film: update on research
12:15 p.m.: Lunch Break	12:15 p.m.: Lunch Break	12:05 p.m.: Lunch Break
<ul style="list-style-type: none"> • Methionine update • Public comments 	<ul style="list-style-type: none"> • Materials Subcommittee • Certification Accreditation and Compliance Subcommittee • Livestock Subcommittee 	<ul style="list-style-type: none"> • Crops Subcommittee • Deferred proposals/Final Votes • Work agendas/Materials Update • Other business/Closing remarks
5:45 p.m.: Recess	5:30 p.m.: Recess	5:00 p.m.: Adjourn

There will be two 15-minute breaks (mid-morning & mid-afternoon) and a 90-minute lunch break mid-day. Breaks, recess and adjournment times may vary based on completion of business.

Face-to-Face Meeting Format

- The Designated Federal Officer calls the meeting to order and adjourns the meeting. The NOSB Chair presides over the meeting.
- USDA and National Organic Program (NOP) provide NOSB with updates, and an overview of petitioned substances, sunset materials, and technical reports.
- The Board hears public comments.
- NOSB members present Subcommittee proposals, reports and discussion documents, and discuss public comment prior to voting on proposals. Final votes may be deferred to the last day of the meeting if more deliberation is needed.
- Agenda items may be withdrawn or votes postponed at the discretion of the Board.

Look for USDA's detailed NOSB Meeting Agenda that is available at the sign-in table outside the entrance of the meeting room. If you have questions, please contact the Advisory Committee Specialist Michelle Arsenault at Michelle.Arsenault@ams.usda.gov.

ORGANIC FRAUD PREVENTION SOLUTIONS: ENSURING GLOBAL ORGANIC SUPPLY CHAIN INTEGRITY



Food fraud, or the act of defrauding buyers of food or ingredients for economic gain, has plagued the food industry throughout history. Although it is not known conclusively how widespread food fraud is in the United States or worldwide, it is now estimated to be a \$50 billion industry for the total food market — about the same size as the entire 2017 U.S. organic market. Although the act of adulterating food for economic gain dates back to at least the Middle Ages, its presence in the global organic supply chain is more recent, and poses a significant threat to the integrity of the organic brand.

Simply put, fraud cannot be tolerated in the organic system, inside or outside of the United States. Anytime there is fraud anywhere in the organic system, it takes value out of the organic chain, and hurts organic farmers wherever they farm. The oversight of foreign and domestic organic suppliers and the enforcement of organic standards must be rigorous and robust. The integrity of the organic certification process and the commitment to compliance and enforcement are the lifeblood of the organic industry and ensure a level playing field for U.S. organic farmers.

To adequately address the situation, several approaches are needed. The Organic Trade Association's position is that everyone has a role in preventing organic fraud, and both the private and the public sector must engage on several fronts. The Organic Trade Association applauds the actions taken to date by USDA's National Organic Program and other agencies to help prevent the occurrence of organic fraud — such efforts must continue and more must be done. We also commend the National Organic Standards Board (NOSB) for its outreach to organic stakeholders to help inform NOP on the list of actions that will build a better compliance and enforcement system. The ongoing work of USDA's NOP to strengthen the enforcement of the organic standards and to deepen the rigor of oversight across the supply chain is critical as is the need for industry and certifiers to take heightened measures of vigilance when unusual trends or anomalies organic trade are suspected. A risk-based approach to detecting fraud is a fundamental component to any kind of effective fraud prevention program.

BUILDING AN ORGANIC FRAUD PREVENTION PROGRAM

For the past two years, the Organic Trade Association has prioritized significant time and resources into organic fraud prevention solutions that will help mitigate and prevent the occurrence inside and outside of the United States. Our work to address organic fraud is taking place on several fronts ranging from our legislative efforts and priorities for the 2018 Farm Bill, to our work with NOSB and our member task force to shape a major piece of NOP enforcement rulemaking slated for fall 2019, to our major private-sector initiative that has evolved into an industry-wide fraud prevention program that launched on March 5, 2019. The new program is based on the Organic Trade Association's Organic Fraud Prevention Guide that provides businesses engaged in organic trade with a risk-based process for developing and implementing an organic fraud prevention plan. It also provides detailed information on what to do when you suspect or detect fraud, and the process for filing a complete and effective complaint to USDA's National Organic Program.

Before diving into the details of the organic fraud prevention program, let's take a look at the steps the Organic Trade Association and its members took to get here.

TASK FORCE AND BEST PRACTICES GUIDE

In May 2017, the Organic Trade Association convened a Global Organic Supply Chain Integrity (GOSCI) Task Force of 48-member companies to develop a best-practices guide to preventing fraud specifically for the organic industry. In an effort to both acknowledge and utilize the extensive fraud prevention strategies already developed by Michigan State Food Fraud Think Tank and the Global Food Safety Initiative (GFSI), the task force adopted a model that highlights the motivation behind fraud (i.e. the root cause) to better understand the detection and prevention activities that need to be developed based on a company's susceptibility or exposure to food fraud risk. The GFSI model is a smart and practical approach because it was built to be a starting point consistent with other quality management practices such as HACCP (Hazard Analysis and Critical Control Points), lending itself to a fraud prevention program that can be adopted into existing internal quality management systems. While the traditional HACCP-type food safety approach is applied at manufacturing steps, food fraud vulnerabilities are company-wide, and must be applied cross-functionally and within the overall organization. The name of the game is to think like a criminal!

The Organic Fraud Prevention Guide developed by the task force is aimed at buyer responsibility and the assessment of factors that create vulnerabilities in an organic supply chain. Accordingly, the Guide provides businesses engaged in the organic trade with a systematic risk-based approach for identifying appropriate fraud mitigation measures, and developing and operationalizing a written Organic Fraud Prevention Plan. It also includes information on what to do when you suspect or detect fraud, along with resources and helpful tools for identifying and deterring fraud.

ORGANIC FRAUD PREVENTION PILOT PROGRAM

Following the creation of the Guide, the trade association launched a pilot program. The pilot was an intensive-focused exercise running from June – September 2018 in which 13 OTA member companies "test drove" in their specific businesses the fraud prevention strategies described in the Guide. Participants concentrated on one product or ingredient, and developed fraud mitigation measures based on the results of a vulnerability assessment that identifies weak points in a supply chain that increase exposure to fraud. Pilot participants informed the final version of the Guide, and helped set the stage for implementing a corresponding program. Collaborating partners in the project included USDA-NOP, the Accredited Certifiers Association (ACA) and NSF International.

ORGANIC FRAUD PREVENTION SOLUTIONS

With a tested and completed fraud prevention guide in hand, the Organic Trade Association has developed an organic fraud prevention program in which organic businesses may voluntarily enroll. The name of the program is *Organic Fraud Prevention Solutions*. The **mission** of the program is to assure the authenticity of organic products by mitigating the occurrence of organic fraud. The **goal** is to establish a framework and formal process for businesses to create continuously improving internal programs for achieving organic integrity throughout their associated supply chains. The program requires training, registration and the development of an organic fraud prevention plan, followed by confirmation by an accredited certifier and public acknowledgment of enrollment on the Organic Trade Association's find.organic business directory.

But wait, isn't enforcement USDA's job?

The National Organic Program is, in fact, responsible for oversight and enforcement of the organic regulations. Organic Fraud Prevention Solutions **is not**, however, a certification or verification program nor is it a product label. Instead, the program serves as a business-to-business marketing advantage designed to improve internal quality assurance programs. It is also designed to complement and reinforce USDA's organic standards and the work of the accredited certifying agencies.

It is critical that organic businesses have robust systems and measures in place that adequately support the promise of providing organic products that people can trust. Organic Fraud Prevention Solutions, as adopted by businesses engaged in organic trade, will become the industry standard reference for excellence and achieving integrity across complex organic global supply chains. Organic companies that want to prevent organic fraud in their supply chain and be publicly recognized for having implemented an Organic Fraud Prevention Plan, now have an opportunity to voluntarily pre-enroll in the program. The Organic Trade Association is excited to work with certified organic companies across the United States and help build a stronger system. Leadership and commitment from organic businesses will drive adoption of the program. The more companies that join, the stronger the organic supply chain will become.

To learn more about the program, download our Frequently Asked Questions or contact Gwendolyn Wyard, Vice President of Regulatory and Technical Affairs.

The Organic Trade Association has developed the **Organic Fraud Prevention Solutions** private-sector program to help protect your business, and grow consumer confidence in organic.



Organic Fraud Prevention Solutions improves your internal quality assurance programs.

- ✓ It helps **prevent organic fraud** in your supply chain
- ✓ It provides a **business-to-business marketing advantage**

The program provides step-by-step training and resources.

- ✓ Identify **weaknesses** and gaps
- ✓ Design internal **mitigation** measures
- ✓ Implement **monitoring** and verification tools
- ✓ Update your **Organic System Plan**

The program complements and reinforces the U.S. Department of Agriculture's Organic standards and the work of the accredited certifying agencies.

- ✓ It is a quality assurance program, **not a certification** or verification program

Organic Fraud Prevention Solutions is designed and tested by the organic sector. It minimizes vulnerabilities for organic farmers, handlers, traders, processors, distributors and retailers.

Organic Fraud Prevention Solutions is open for enrollment*

- ✓ Be **publicly recognized** as an Organic Fraud Prevention Solutions enrollee
- ✓ Receive the comprehensive Organic Fraud Prevention **Best Practices Guide**
- ✓ Secure your **training slot** (free to Organic Trade Association members)
- ✓ Receive **business-critical updates** on program developments and fraud news

An Organic Trade Association Resource

**Pre-enrollment is available for Organic Trade Association members. All program participants must be certified organic or listed by a USDA recognized Material Review Organization.*

Learn More: OTA.com/OrganicFraudPrevention



THE CORNERSTONE OF CONTINUOUS IMPROVEMENT

From its start, NOSB has been the cornerstone of continuous improvement and public input for U.S. organic standards. As we engage in this meeting and give voice to the process, it is important to take a moment to reflect on the genesis of NOSB and the importance of protecting and strengthening this foundational institution going forward.

As the growing awareness of ecological, health and welfare consequences of conventional farming systems became increasingly apparent from the 1960s through the 1980s, so did the demand for organic food and the need for organic standards. By the late 1980s, there was a patchwork of inconsistent or nonexistent state and private organic standards alongside inadequate enforcement programs. These caused a great deal of consumer confusion and threatened the meaning and value of the organic label. As a result, a coalition of organic farmers, consumers, animal welfare and environmental organizations recognized the need for establishing one common federal standard to ensure consistency, build consumer trust, and allow the sector to flourish. This diverse group of stakeholders united and persuaded Congress to pass the Organic Foods Production Act (OFPA) in the 1990 Farm Bill.

The passage of OFPA provided the foundation for uniform national organic standards for the production and handling of foods labeled as “organic.” The Act authorized a new USDA National Organic Program (NOP) to set national standards for the production, handling, and processing of organically grown agricultural products and to oversee the certification of organic operations. The Act also established the National Organic Standards Board (NOSB) to ensure an open, balanced and transparent process for setting and revising organic standards.

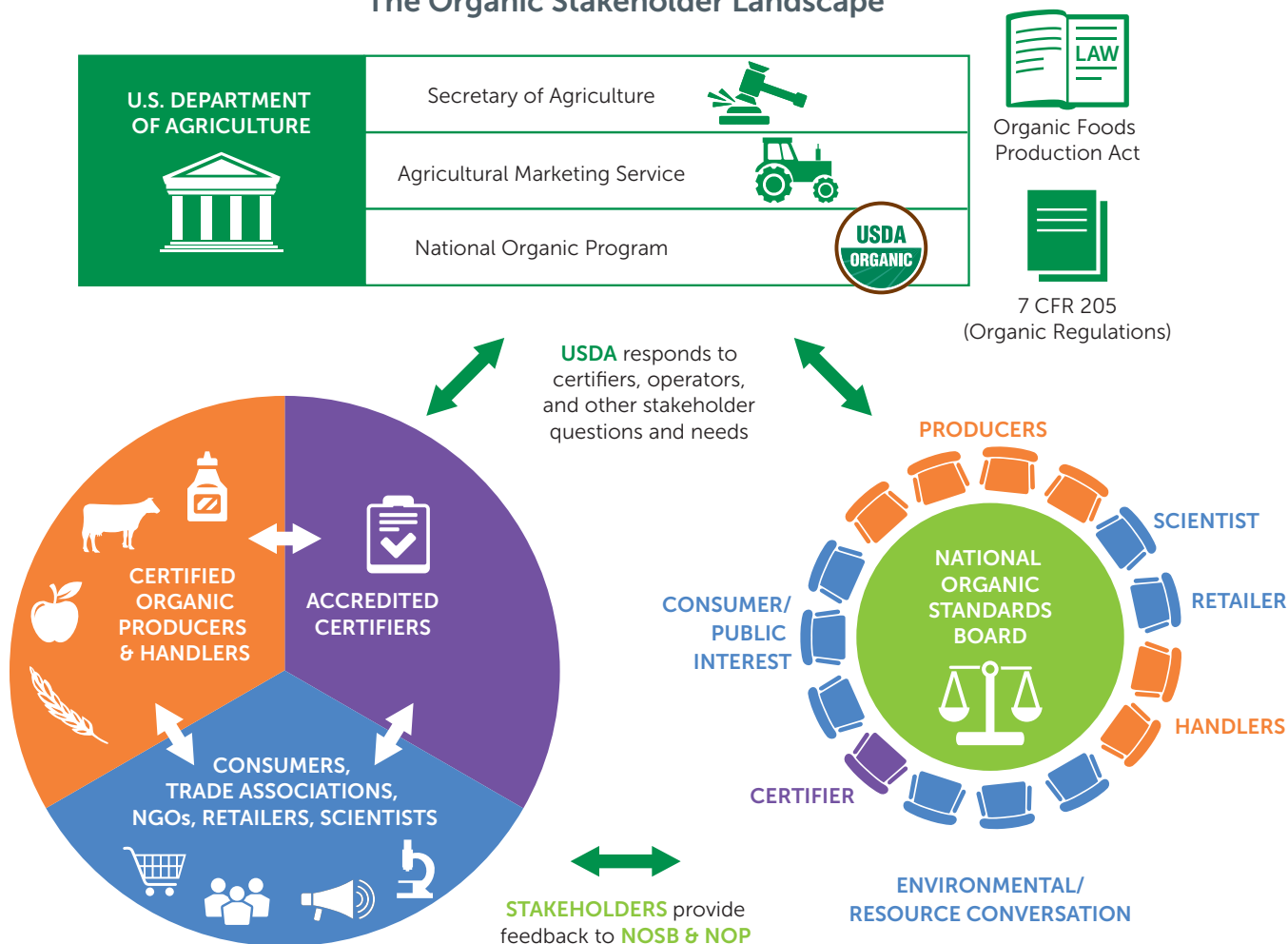
NOSB’S BALANCING ACT

NOSB plays a critical role in the organic rulemaking process because it advises USDA on which production inputs should be allowed or prohibited in organic farming and processing. NOSB also makes recommendations on a wide variety of other standards issues, such as organic pet food standards, aquaculture standards, animal welfare standards, and organic inspector qualifications.

The composition of NOSB, as detailed in OFPA, was carefully designed to ensure balanced stakeholder input into the rulemaking process. At the time the law was under development, there was debate that the Board should be industry-dominated to ensure continuation of the kind of high-quality standards associated with organic farming, which make sense from a production viewpoint. Others argued that industry representation on the Board would be inappropriate and create conflict of interest problems. As a result, Congress structured the Board so that farmers and handlers involved in organic production receive six representatives, equal to the consumer and environmental organizations, which together would receive six representatives. A single retail, certifier and scientist designation raised the membership to fifteen.

This 15-member volunteer citizen advisory board is designed to represent the diversity of the organic community across the United States to help ensure that all perspectives are considered before final recommendations are presented to the Secretary of Agriculture. The number and ratio of seats were allocated intentionally so that sectors must achieve consensus to pass a recommendation, ensuring balance of interest, with none predominating. And, in order for any motion to carry, a two-thirds vote is required to prevent any one interest from controlling the Board. It is this construct that helped give the organic label the credibility that it has today as well as the platform for its exponential growth.

The Organic Stakeholder Landscape



KEY



The Organic Foods Production Act passed in 1990. It takes an act of Congress to change the law.



7 CFR 205 are the organic standards that describe the requirements that must be verified before a product can be labeled as USDA organic.



U.S. Department of Agriculture (USDA) is responsible for administering federal regulations related to farming, agriculture, forestry and food.



The Secretary of Agriculture appoints and consults with NOSB in the formation of organic standards, policy and guidance.



USDA Agricultural Marketing Service (AMS) administers and enforces NOP's regulatory framework.



USDA (AMS) National Organic Program (NOP) establishes and enforces organic standards, oversees certifiers and supports transitioning and current organic producers and handlers.



National Organic Standards Board (NOSB) is a 15-member board of volunteer citizens that assists in the on-going development of the organic standards.



Accredited Certifiers are third party organizations that certify organic operations to protect the integrity of the USDA organic seal.



Certified Organic Producers and Handlers are farmers, ranchers, processors, retailers, traders, distributors and others that are able to sell, label and represent products as organic.



Consumers, trade associations, NGOs, retailers, scientists and other stakeholders with an interest in organic agriculture and products provide feedback to USDA and NOSB.

KEEPING NOSB STRONG

NOSB meets twice a year in a public forum to discuss and vote on subcommittee proposals related to the National List or other organic standards issues. NOSB first publishes proposals with a request for public comments. Prior to the meeting, NOSB members review literally thousands of pages of comments. During NOSB meetings, the full Board listens to oral public comments, discusses the proposals, and then votes on whether to pass the subcommittee proposals. NOSB subsequently submits its final recommendations to USDA.

The NOSB stakeholder feedback process allows substantial and diverse input from organic stakeholders continually to improve the organic standards. The process is challenging, it can be messy and it certainly can be difficult to watch. Is there room for improvement? Of course. Most anyone who has attended an NOSB meeting could point to areas to improve the process. The Organic Trade Association, for one, would like to see a less politicized and more respectful environment for public discourse at NOSB, and we would like to see Board members receive more regulatory and technical support from USDA on material analysis and proposal writing. Displeasure with the Board's controversial discussions on various topics or on the challenging decisions they make, however, should not be interpreted as a failure on the part of NOSB, but instead its members' diligence in addressing many viewpoints on multiple topics given the limited time and resources that the Board is provided.

Just like a healthy ecosystem, the strength in the organic sector always has been and always will be in its diversity. There is much at stake for organic in the 2018 Farm Bill, and the organic community's greatest weakness is the threat of division. Now more than ever, we need to stand together for policies and protections that strengthen the integrity of the USDA Organic seal, boost investment in organic research and support expansion of organic acres. With respect to NOSB, we must secure critical funding to make sure the Board receives the resources necessary to do its job so it can conduct the scientific analyses required under OFPA and write solid proposals which USDA can move through the system. OTA strongly believes that all of the opportunities to evolve the NOSB and the organic standards can happen within the public-private partnership, but we must stay united and live up to this unique structure we built. NOSB was designed to develop consensus, not pick winners and losers.

NOSB, while not a perfect system, is a solid one that has proven its worth and served the organic sector well for almost three decades. It is a process that is far more inclusive and transparent than turning over standards decisions to lawmakers and USDA staff and leaders. The public expects the process of establishing and revising USDA organic standards to be fully transparent with full opportunity for public participation, as envisioned by the procedures established in OFPA. In reality, there is no place in our food system that is more transparent than in organic production, and the role of the NOSB is central to that transparency.

WHO ARE THE CURRENT NOSB MEMBERS?

Farmers/Growers: Steve Ela (CO), Ashley Swaffar (AR), Jesse Buie (MS), Emily Oakley (OK)

Handlers/Processors: Tom Chapman (CA)

Retailer: Lisa de Lima (MD)

Scientist: Dave Mortensen (NH)

Consumer /Public Interest: Sue Baird (MO), Dan Seitz (MA), A-dae Romero-Briones (HI)

Environmentalists/Resource Conservationists: Asa Bradman (CA), Harriet Behar (WI), Rick Greenwood (CA)

Accredited Certifying Agent: Scott Rice (OR)

Every household needs a good toolbox and a well-stocked first aid kit to deal with unexpected challenges that can't be handled in the usual way. And so it is with organic agriculture.

Many consumers believe that absolutely no synthetic substances are used in organic production. For the most part, they are correct and this is the basic tenet of the organic law. But there are a few limited exceptions to this rule, and the National List is designed to handle these exceptions. The National List can be thought of as the "restricted tool box" for organic farmers and handlers. Like the toolboxes or first aid kits in our cupboards to deal with critical situations when all else fails, the organic toolbox is to be used only under very special circumstances.

The organic farmer's toolbox contains materials that have been traditionally used in organic production. By law, they are necessary tools that are widely recognized as safe and for which there are no natural alternatives. This toolbox is much smaller than the "full-toolbox" used in conventional farming.

Organic farmers have restricted access to 27 synthetic active pest control products while over 900 are registered for use in conventional farming.

How do the synthetic pest control products allowed in organic farming compare to the pesticides allowed in conventional farming?

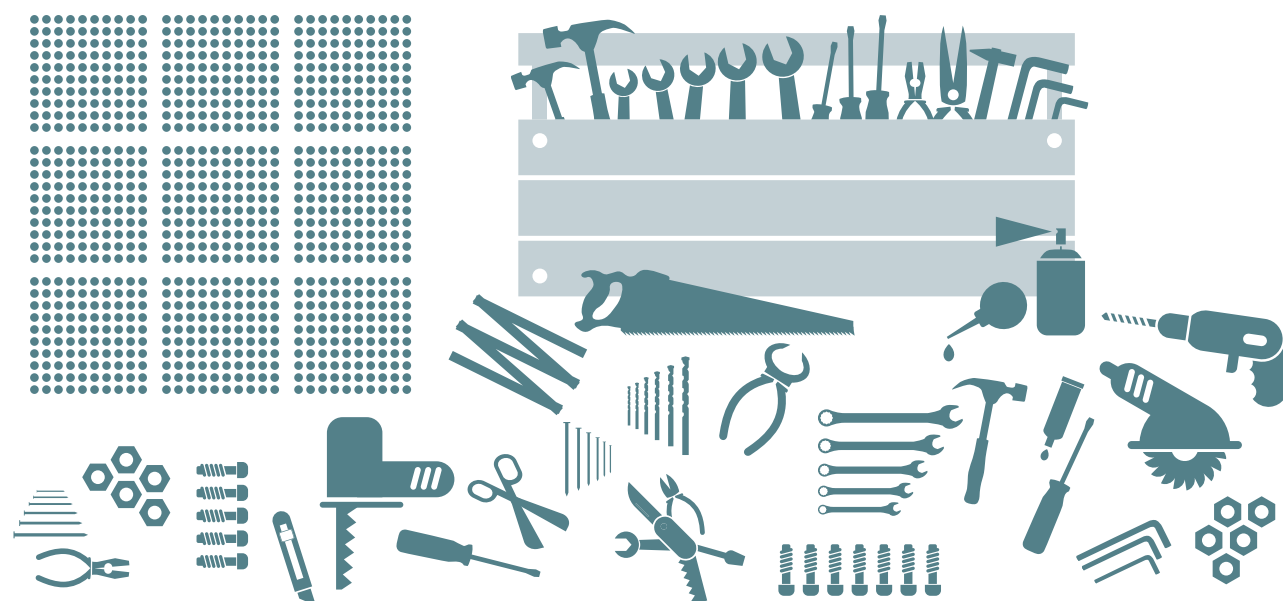
27 synthetic active pest control products allowed in organic crop production

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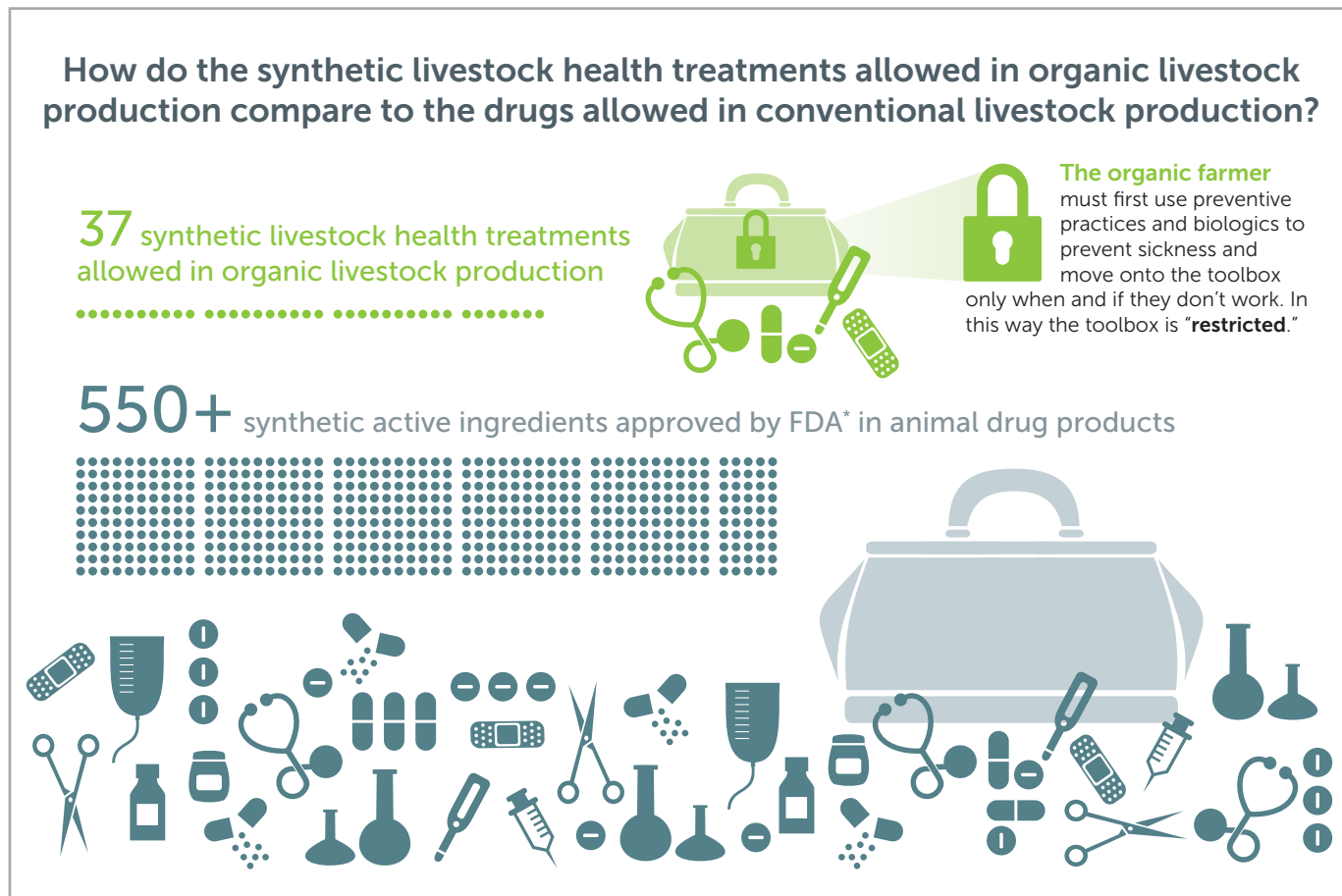
The organic farmer must first use mechanical, cultural, biological and natural materials and move onto the toolbox only when and if they don't work. In this way the toolbox is "restricted."

900+ synthetic active pesticide products registered for use in conventional farming by EPA*



*Ware, George W and Whitacre, David M. The Pesticide Book 6th Edition. 2004

Organic ranchers have restricted access to 37 synthetic livestock health treatments, while over 550 synthetic active ingredients are approved in conventional animal drug products.



*FDA Approved Animal Drug Products (Green Book)

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Before organic farmers can use any of these substances, however, they must develop a pest and disease management plan that describes how they will first prevent and manage pests without the use of National List inputs.

The restricted toolbox can only be opened when mechanical, cultural, and biological controls are insufficient to control pests, weeds and disease. This is foundational to organic farming.

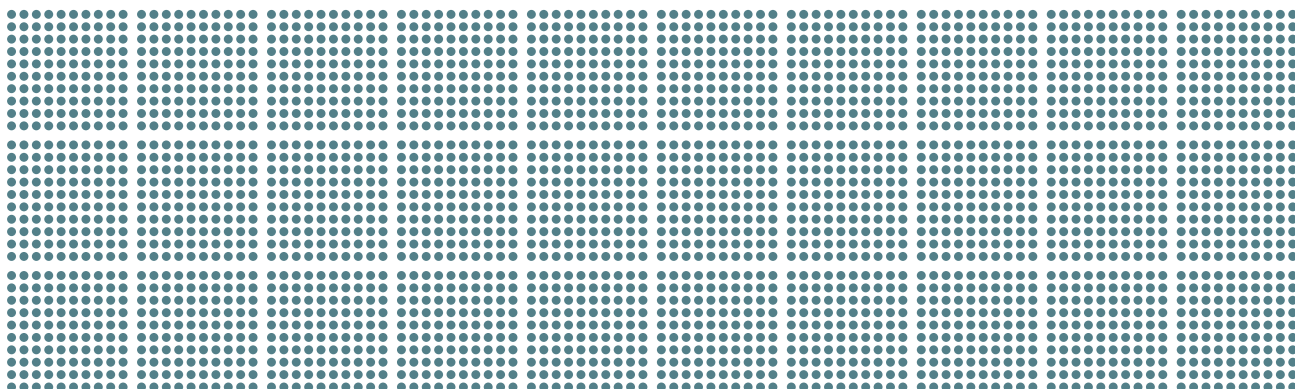
The National List is also designed to cover the up to 5% non-organic minor ingredients allowed in organic food processing. These ingredients are essential in organic food processing but difficult or impossible to obtain in organic form, either because the supply is very limited or the ingredient is a non-agricultural, like baking soda, and cannot be certified organic. A total of 67 non-agricultural minor ingredients are allowed in an organic processor's "pantry," while the conventional food processor's pantry is bulging with more than 3,000 total allowed substances.

How do the materials allowed in organic processed foods
compare to the materials allowed in all other food?

67 non-agricultural minor ingredients allowed in organic processing



3000+ substances comprise Everything Added to Food in the United States (EAFUS)



Compared to the 67 non-agricultural minor ingredients allowed in organic processing, more than 3,000 total substances comprise an inventory often referred to as Everything Added to Food in the United States (EAFUS), and this is only a partial list of all food ingredients that may be lawfully added to conventional food.

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The restricted toolbox used in organic production and handling represents the best and least-toxic technology our food system has developed.

NOSB regularly reviews the tools in the organic toolbox to assure they still meet the organic criteria set forth in the law. Under the rigorous Sunset process, NOSB and organic stakeholders review the contents of the toolbox every five years to make sure that organic's allowed tools continue to be safe for humans, safe for the environment, and necessary because of the lack of natural or organic alternatives. There is no other regulation like this in the world.

Now more than ever, organic agricultural practices are needed on more acres to address significant environmental challenges for our planet. Now more than ever, the supply of organic ingredients, particularly grains and animal feed, is falling behind consumer demand. We face the dual challenges of encouraging more farmers to convert to organic and making our food production more sustainable. NOSB's challenge is to protect the integrity of organic, while at the same time providing producers and handlers with enough flexibility to allow them to comply with organic standards and to also expand organic acreage.

Like the toolboxes and first aid kits of households that are prepared for unexpected emergencies should they arise, the organic toolbox provides the tools to safely meet the challenges of today's organic world.

And if you buy organic, you'll never have to.

The USDA Organic logo, featuring the words "USDA" and "ORGANIC" in a stylized font within a circular border.

It was 1997 and the National Organic Program (NOP) as we now know it was still evolving. On December 16 of that year, the first proposed rules to establish national organic standards were published by the NOP, erupting a roar of public discourse. The Department of Agriculture, which had just begun overseeing the National Organic Program, was swamped with over 275,000 public comments on the proposal, and the public interest in organic has only intensified since.

Today's strict and comprehensive network of federal requirements and regulations that monitor and check the organic industry, from the farm gate to the dinner plate, was born out of a public outcry that started rumbling in the 1970s for a healthier and safer agricultural system that would not endanger the environment or pose risks to human health. That public sentiment culminated in the Organic Foods Production Act in the 1990 Farm Bill, which ultimately created the current rules for the entire system of certified organic agriculture in the United States.

A historical review of the National List



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Organic production systems encourage a healthy environment with as few inputs as possible. Organic agriculture is governed by the basic rule of allowing natural substances and not allowing synthetic materials. But in the real world, sufficient quantities of an input essential to organic production and processing — and not harmful to humans or the environment — are not always available in an organic form, so exceptions to this rule have been made. These exceptions make up the “National List of Allowed and Prohibited Substances,” or simply the “National List.”

The National List identifies the synthetic substances that may be used in organic crop and livestock production, and prohibits the use of certain natural toxic substances in organic production. The list also identifies synthetic materials such as carbon dioxide, non-synthetic non-agricultural substances such as yeast, and non-organic agricultural substances such as Turkish bay leaves that may be used in organic handling and processing.

LEARNING FROM OTHERS AND COMPILING A LIST THAT WORKS

It took five years for the National Organic Standards Board (NOSB), a group of fifteen public volunteers appointed by the Secretary of Agriculture who represent various sectors of the organic industry, to complete a massive review of the inputs in use by organic producers and processors, and of state, private, and foreign organic certification programs to help craft the final organic regulations.

It was from this extensive research and engagement with everyone in the organic chain, and following thousands of comments to federal regulators, that the National List was compiled, reworked and reworked again, and then officially established on Dec. 21, 2000. The list mirrored most of the standards that organic producers and handlers were already abiding by through the various certification programs of the time, and was formulated to be flexible enough to accommodate the wide range of operations and products grown and raised in every region of the United States.

What are some of the allowable substances on the National List? For crop producers, the list includes things like newspapers for mulch and sticky traps for insect control. For livestock producers, it includes vaccines, an important part of the health regimen of an organic animal for which antibiotics are prohibited, and chlorine for disinfecting equipment. For organic processors, the list includes ingredients essential to processed products that can't be produced organically, like baking soda, and certain vitamins and minerals and non-toxic sanitizers.

Of course, not all the allowed items on the National List are non-controversial. But all of the substances on the list are required to fulfill three critical criteria as specified by the Organic Foods Production Act: 1) Not be harmful to human health or the environment; 2) Be necessary to production because of unavailability of natural or organic alternatives, and 3) Be consistent with organic principles.

A NO-GROWTH TREND IN SYNTHETICS

The first several years of the implementation of the list were a period of fine-tuning, adjustment and just plain learning. Some materials essential to safe organic production had been overlooked and were added, like ozone gas for cleaning irrigation systems and animal enzymes for organic cheese production — both put on the list in 2003.

In 2007, the number of non-organic agricultural ingredients allowed in organic processed products was dramatically tightened. Processed products with the organic label must contain 95 percent certified organic ingredients. Before 2007, the agricultural ingredients that could be used in the remaining 5 percent category were not spelled out; ANY non-organic agricultural ingredient could be used if it was not available in organic form. In 2007, 38 specific substances were defined and added to the National List of non-organic ingredients allowed in a processed organic product. So with the addition of 38 materials to the National List, what had been an unlimited number of non-organic agricultural ingredients allowed in organic processed foods was reduced to a closed list of just several handfuls.

For a decade since 2008, an even greater shift away from synthetics occurred, with just six synthetics added to the list, and a total of 77 during that same time period removed, denied from the list, or further restricted.

Allowed synthetics 2008–2018: What is the trend?**No-Growth**

with a strong preference for the use and development of nonsynthetic and organic alternatives.

6

synthetics have been added



Examples of synthetics added include a sanitizer used in processing facilities that is allowed only for secondary and indirect food contact surface sanitizing, a cheese wax used for organic mushroom production, a mite control product for honeybees for organic honey production.

77

have been removed, denied, or further restricted.



Removals:	17
Petitioned and denied:	59
Further restricted:	1

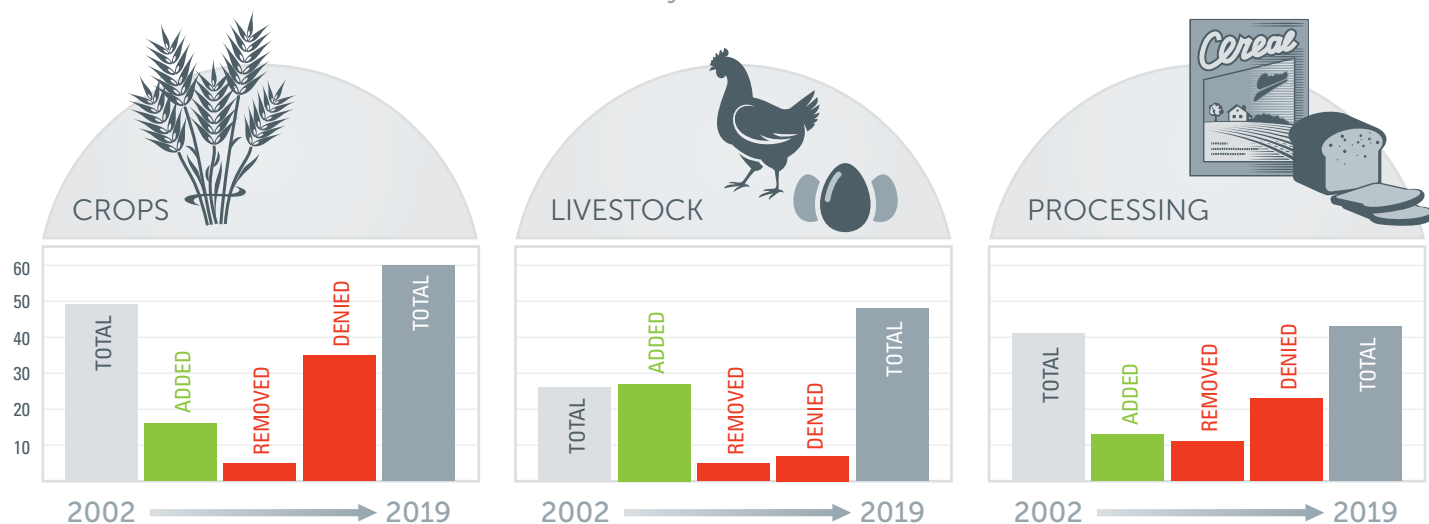
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The synthetics added include a sanitizer in processing facilities used only for secondary and indirect food contact, a cheese wax used for organic mushroom production, a mite control product for organic honey production, and biodegradable mulch. Substances no longer allowed in organic products or denied permission to be added include non-organic hops in organic beer, bleached lecithin, unmodified rice starch, antibiotics for pears and apples, and dozens of synthetic substances and other materials. Additional restrictions recently added include a requirement to use organic yeast in certified products for human consumption and a requirement to use organic colors.

The no-growth trend in synthetics from 2008-2018 shows a strong preference for the use and development of non-synthetic and organic alternatives.

A real-life example of a determined individual working within the NOSB system to replace an allowed synthetic material on the National List with a certified organic substitute occurred in 2013. The head of the company, which makes rice-based ingredients that food manufacturers use as alternatives to synthetic ingredients, submitted a petition in 2010 to remove silicon dioxide from the National List since his company had developed a rice-based certified organic alternative to the synthetic. In 2013, the NOSB amended the use of silicon dioxide and weighed in favor of organic rice hulls when available.

National List Scorecard: Synthetics Added, Removed or Denied



	Synthetics on the National List in 2002	Synthetics Added	Synthetics Removed	Synthetics Petitioned and Denied*	Synthetics on the National List in 2019
CROPS	49	16	5	35	60
LIVESTOCK	26	27	5	7	48
PROCESSING	41	13	11	23	43

* Requested for addition to the National List but denied

Organic Trade Association | www.OTA.com

ENABLING ORGANIC TO GROW AND PRESERVING THE SYSTEM'S INTEGRITY

The system was more arduous and took longer than expected, but it worked. It was proof that the National List has the foresight to include synthetic ingredients when there are no organic or natural alternatives, and thereby enabling the organic industry to evolve and grow, but more importantly, the system provides a method to retire a synthetic substance and implement the organic alternative when it becomes available.

And in the particular case of the maker of the rice-based organic alternative, it was a win-win deal for the company, with sales growing by over 150 percent!

The National List represents a process that is rigorous, fair and one that works. It reflects realistic organic practices, while taking into account current obstacles to ideal production. It encourages public scrutiny, comment and engagement.

Organic food sales in the United States have jumped from slightly more than \$18.1 billion in 2007 to nearly \$50 billion in 2018. According to USDA's National Agricultural Statistics Service's 2016 Certified Organic Survey, the number of certified organic farms in the country totaled 14,217 farms in 2016 compared to 3,000 tops in the mid-1990s. Today, the total number of certified organic operations exceeds 26,000 nationwide.

More certified organic farmers, more organic products, more organic processors and handlers, an organic farm-to-table supply chain that is growing every day, but still adhering to a tight set of stringent guidelines—that's what the National List has made possible.

ORGANIC TRADE ASSOCIATION PETITIONS TO REDUCE SYNTHETICS AND STRENGTHEN ORGANIC REQUIREMENTS

Acting on extensive feedback and input from its members, the Organic Trade Association has filed petitions to amend the National List of Allowed and Prohibited Substances in organic production and processing.

➤ **Removing the exemption for synthetic lignin sulfonate in post-harvest handling of organic pears**

At the time of the petition (2014), there were two substances on the National List that can be used as floating agents in the handling of organic pears: lignin sulfonate and sodium silicate. As the pear industry modernized its equipment, the use of floating agents declined. The trade association contacted certified organic pear packers and found that those still using a floating agent are using sodium silicate exclusively. Thus, lignin sulfonate fails to meet the criteria that it is essential for organic production, and we petitioned that it be removed as an allowable post-harvest floating agent. In fall 2017, NOSB recommended to remove listing, and the NOP final rule to amend the National List was published on July 6, 2017.

➤ **Strengthening the requirement for organic flavors in processed products**

Natural flavors are allowed in certified organic processed foods in the 5 percent non-organic portion, provided they are produced without synthetic solvents, synthetic carriers and artificial preservatives. They must also be made without the use of genetic engineering and irradiation. Natural flavors have been included on the National List since it was first implemented in 2002. Since that time, however, many organic flavors have been developed and are being successfully used by many companies. The number of organic flavors in the marketplace has become substantial, so we petitioned (2014) to revise the current listing of natural flavors to require the use of organic flavors when they are commercially available in the necessary quality, quantity or form. In fall 2015, NOSB voted unanimously in favor of the petition, and NOP final rule to amend the National List was published December 27, 2018. The new requirement becomes effective on December 27, 2019.

➤ **Protecting the continued production and availability of NOP certified encapsulated dietary supplements**

On January 31, 2018, we submitted a petition on behalf of our National List Innovation Working Group to add pullulan to the National List as an allowed non-agricultural, non-synthetic ingredient used in tablets and capsules for dietary supplements made with organic ingredients. The need for this petition is due to a recent interpretation change to classify pullulan as “non-agricultural” instead of “agricultural.” Under the previous interpretation, pullulan was allowed in the non-organic portion of dietary supplement labeled “made with” organic ingredients, which significantly contributed to the growth of NOP certified supplements. Under the new interpretation, pullulan would be required in certified organic form unless it is added to 205.605(a) as an allowed non-agricultural minor ingredient. Unfortunately, there are no other NOP compliant vegetarian options available for producing NOP certified vegetarian encapsulated supplements, and organic pullulan is currently not commercially available for use in the United States. Thus, if pullulan is not added to the National List, the production of NOP certified encapsulated vegetarian supplements will not be possible. The purpose of the Organic Trade Association’s petition is to protect the continued production and availability of USDA-NOP certified encapsulated dietary supplements, and to support the commercial development of certified organic pullulan. NOSB will consider this petition at the spring 2019 meeting.

THE ORGANIC TOOLBOX IS SUPPORTED BY A THREE-LEGGED STOOL

A primary function and responsibility of the National Organic Standards Board (NOSB) is to determine the suitability of the inputs that may be used in organic farming and handling. NOSB was in fact designed by the Organic Food Production Act (OFPA) to advise the U.S. Department of Agriculture (USDA) as to which inputs should be allowed. The organic law and regulations specify the evaluation criteria NOSB must use when it makes its recommendation to USDA.

The evaluation criteria and review process used by NOSB when voting on the suitability of inputs can be likened to a three-legged stool. The National List, which we often refer to as the “Restricted Organic Toolbox,” is supported by three legs, each one representing criteria to be met for an input to be added or removed. If any one of the three legs is missing, the stool falls over and the action on the input fails.

The organic law (OFPA) and the organic regulations include a number of factors NOSB must consider when deciding on the suitability of an input. If one takes a look at the sum of all parts, the conditions that must be met fall into three main clearly stipulated criteria: 1) the input is necessary or essential because of the unavailability of natural or organic alternatives; 2) the input is not harmful to human health or the environment; and 3) the input is suitable with organic farming and handling. These three criteria comprise the three legs of the stool. Let’s take a closer look.

ALTERNATIVES

Perhaps the simplest of the three main criteria is researching whether there are natural or organic alternatives. The organic law clearly states the National List may allow the use of an input in organic farming or handling if it is “necessary to the production or handling of the agricultural product because of the unavailability of wholly natural substitute products.” The law also states NOSB shall consider alternatives in terms of practices or other available materials. The organic regulations at § 205.600(b) also bring in additional but similar criteria for synthetic processing aids and adjuvants, allowing their use only when there are no organic substitutes and when they are essential for handling or processing.

While this leg of the stool is arguably the most simple of the three, NOSB and organic stakeholders have long struggled with this criteria because of the terms “necessary,” “essential,” and “availability.” How much of something is needed to consider it available in the volume needed? What if a natural alternative is available but the quality is not sufficient? What if the alternative works in one region of the country but not another? What if there is an alternative but it’s important to have more than one option? Determining whether there are natural or organic alternatives continues to be more challenging than one might think, and for this particular criteria, NOSB relies heavily on the feedback from organic stakeholders, especially the organic farmers and handlers growing and making organic food, and using the inputs and practices in question.

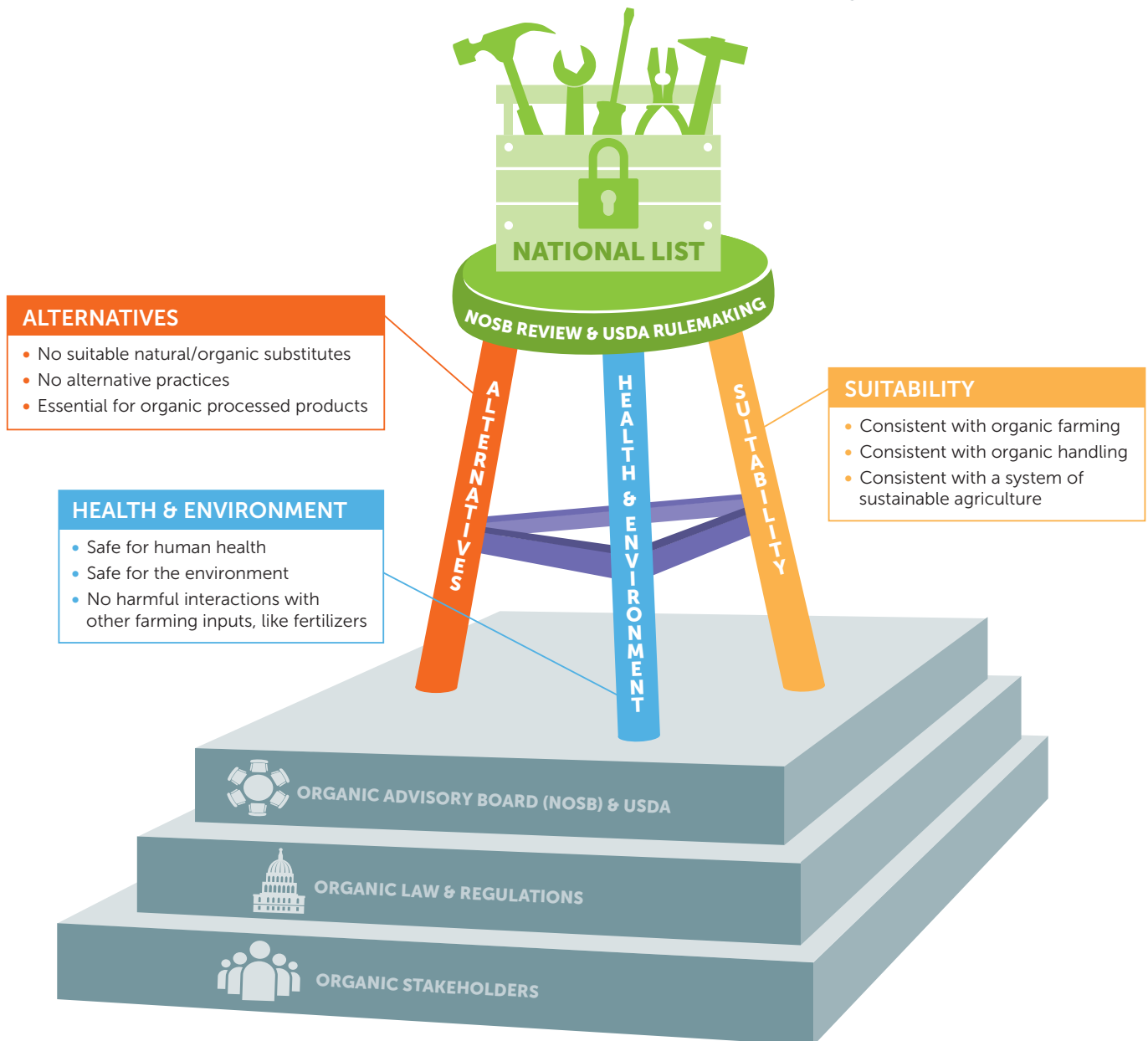
HUMAN HEALTH AND THE ENVIRONMENT

The restricted organic toolbox used in organic farming and handling represents the best and least toxic technology our food system has developed. That is exactly how we want to keep it. This principle is bound by the organic law, which states specifically that inputs that otherwise would be prohibited can be added to the National List only if their use is not harmful to human health or the environment. The law also requires the final decision made by USDA to be done so in consultation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency.

To help NOSB advise USDA on this complex topic, the organic law provides NOSB with evaluation criteria to consider in order to explore the toxicity of the input during manufacture, use and disposal, and the

BALANCING THE THREE-LEGGED STOOL

How “National List” Criteria Support the Restricted Organic Toolbox



Synthetic Processing Aids & Adjuvants Have Additional Criteria...

- Use and disposal don't harm the environment
- Recognized as safe by the Food and Drug Administration
- Primarily not a preservative or used to recreate qualities lost during processing

REFERENCES

- Organic Foods Production Act (OFPA)
 - National List Criteria (OFPA 6517)
 - National Organic Standards Board (NOSB) Evaluation Criteria (OFPA 6518)
- USDA Organic Regulations
 - Processing Aids and Adjuvants Criteria (7 CFR 205.600(b))

potential interactions the input may have with other inputs or within the farming ecosystem. The organic regulations bring in additional but similar criteria for synthetic processing aids and adjuvants that consider the impact their use has on the environment and the safety status under the Food and Drug Administration (FDA).

Evaluating whether an input may be harmful to human health and the environment is no easy task. Members of the Board represent several areas of the organic sector and hold advanced degrees in different scientific disciplines, but they may lack the expertise or time to adequately address the needs of a petition. It is for this reason NOSB may request the assistance of a third party to evaluate a material. This comes to NOSB in the form of a Technical Review that is made available to NOSB and the public. In addition to the Technical Review, NOSB looks to the scientific experts in the community to provide meaningful input.

SUITABILITY WITH ORGANIC FARMING AND HANDLING

In addition to alternatives, human health and the environment, NOSB must determine the suitability of an input with organic practices. This is arguably the most nebulous of the three criteria, prompting NOSB to pass a guidance recommendation in spring of 2004 that includes a series of questions to assist the Board in its evaluation process. This guidance is now incorporated into NOSB's Policy and Procedures Manual, and plays a central role in NOSB's review process.

The questions in the guidance are largely tied to the definition of "organic production" codified in the organic regulations emphasizing practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Questions are also asked about the influence the input may have on animal welfare, the consistency the input has with items already on the National List and with international standards, and whether the input satisfies the expectations of organic consumers regarding the authenticity and integrity of organic products.

The third leg of the stool can be viewed as the "equalizing" leg of the stool, helping NOSB balance its evaluation of alternatives, human health and the environment. For example, if the information provided on human health raises some concerns, but the science is insufficient, or alternatives are available but they do not work in all regions of the country or in all types of products, NOSB will evaluate how suitable the input is overall with the foundations of organic production and handling. One leg of the stool may not fail the criteria altogether but it might be shorter than another leg, creating concern ... and a tilted stool. The suitability criteria help NOSB adjust and balance the stool. Similarly, the input may pull up short in the suitability department, causing the stool to topple. Either way, NOSB's final recommendation must deliver a balanced three-legged stool that firmly supports the restricted organic toolbox.

THE THREE-LEGGED STOOL STANDS ON A SOLID YET DYNAMIC FOUNDATION

The three-legged stool holding up the National List stands on a firm foundation made up of organic stakeholders, the organic law, the organic regulations, NOSB and USDA's National Organic Program. The organic law was created in response to the needs of organic stakeholders, and the law in turn created NOSB and the USDA organic regulations. Today, the entire process we use to shape the National List continues to be powered and driven by stakeholders throughout the supply chain and the organic community. The National List criteria are tough, the process is rigorous, the discussion and decisions are thoughtful and transparent, and everyone is welcome.

THE SUNSET PROCESS

Once a material has been added to the National List, NOSB must re-review the material every five years to confirm that the material continues to meet the National List criteria. This re-review process is known as the “Sunset Review” process. Through this process, NOSB can remove inputs from the National List based on any new information regarding adverse impact on human health or the environment, or the availability of a natural or organic alternative. After NOSB completes its Sunset Review and provides a recommendation, USDA either renews or removes the input to complete the Sunset Review process. The Sunset Review process must be completed prior to the material’s Sunset Date, which is the five years from its initial listing or most recent renewal on the National List. Therefore, NOSB reviews these materials well in advance to ensure there is time to complete the entire Sunset Review process prior to the material’s Sunset Date.

SUNSET REORGANIZATION

NOSB has adopted a reorganization process that will result in a more evenly distributed Sunset Review workload over the five-year Sunset Review cycle. The process is the result of an NOSB recommendation unanimously passed at the fall 2016 NOSB meeting. As explained in the NOSB recommendation, National List inputs that are reviewed early under the reorganization plan should be allowed to sunset on their original timeline.

TWO-STAGE PUBLIC COMMENT PROCESS

There are two public comment opportunities that inform the Sunset Review process. The first opportunity occurs at the spring meeting when NOSB accepts public comments on material undergoing Sunset Review that year. NOSB uses the information collected through the first round of public comment periods to inform the subcommittee proposals that are presented for a second public comment at the fall meeting. The full Board takes the feedback from both comment periods into consideration along with its own research, and votes at the fall meeting on whether to renew their allowance on the National List for another five years.

ORGANIC TRADE ASSOCIATION’S ONLINE SURVEY SYSTEM

To help facilitate a thorough comment and review process, OTA creates electronic surveys for each sunset material under review. The surveys are available to every NOP certificate holder, and include 7-10 questions addressing the necessity (crop and livestock) or essentiality (handling) of each material. The names of the companies submitting the information are confidential (not disclosed to OTA). To ensure wide distribution of the surveys beyond OTA membership, OTA works with Accredited Certifying Agencies and the Organic Materials Review Institute (OMRI) to distribute the survey links to all of their clients as well as to targeted clients they know are using the inputs under review. OTA also works through its Farmers Advisory Council to help assist in distribution to NOP certified farmers. OTA hopes these efforts and the feedback gathered from certified farmers and handlers will help to inform NOSB in its review process as it relates to the necessity or essentiality of the National List inputs undergoing their five-year Sunset Review.

NOSB VOTING PROCEDURES

NOSB MOTIONS AND VOTES

As specified in the Organic Foods Production Act (OFPA), two-thirds of the votes cast at an NOSB meeting at which a quorum is present shall be decisive of any motion [§2119(i)].

Based on a 2013 NOP clarification of the NOSB sunset voting procedure, the full NOSB must vote on a motion to remove a substance from the National List (instead of voting on a motion to renew the substance). This procedure ensures that changes to the National List are based on a decisive vote of the Board. For sunset materials, this means that two-thirds of NOSB members must vote in favor of removing a material for USDA to have the authority to amend the National List. As there are 15 NOSB members, 10 votes in favor are needed to pass any recommendation to remove a material from the National List.

Materials can only be renewed or removed from the National List during the sunset process. Any other changes, clarifications, or restrictions to listed materials must be conducted through the petition process, and be recommended by the subcommittee through a proposal that is separate from the Sunset Review process.

WHY DO THE SUNSET SUBCOMMITTEE PROPOSALS INCLUDE A “MOTION TO REMOVE?”

Even if a subcommittee intends to renew a sunset material, the subcommittee will still put forward a “motion to remove.” The purpose is to introduce the topic for consideration while the vote from the entire Board determines the final recommendation. Even if the Subcommittee “motion to remove” fails to receive a simple majority, the motion will still be put forward to the full Board for review. The “motion to remove” is then considered and voted on by the full Board, and needs a decisive vote (two-thirds majority) to recommend removal.

EXAMPLE VOTING PROCESS FOR A “MOTION TO REMOVE”

Subcommittee Vote (simple majority is needed to pass a motion)

- Yes = in favor to delist No = in favor to renew
- If majority vote yes, the recommendation to the full Board is to remove the material
- If majority vote no, the recommendation to the full Board is to renew the material
- Subcommittee proposal is forwarded to the full Board for a vote regardless of whether the motion failed/passed

Full Board Vote (2/3 majority (10 of 15)) is needed to remove a material)

- The full Board votes on the subcommittee’s motion to remove
- Yes = in favor to remove No = in favor to renew
- 2/3 of the 15 member board would need to vote YES to remove the material
 - Example: 10 yes, 5 no would mean that the motion passes, and the final recommendation would be to remove the material
 - Example: 8 no, 7 yes would mean the motion fails, and the material would remain on the National List.

ORGANIC WEEK IN WASHINGTON, D.C.



AN ORGANIC TRADE ASSOCIATION EVENT

May 20–23, 2019

Join us for a collaborative event about the future of organic. Why? Because it's time to double-down on big ideas and better solutions and we can't do it without you.

MEMBER DAY: Meetings, Updates + Working Sessions

ADVOCACY DAY: Hill Visits + Congressional Reception

CONFERENCE DAY: Bold Ideas + Critical Conversations

Plus a moonlight monument tour, a fun run around the Capitol, a community service project at D.C. Central Kitchen, an organic research convening, an Organic PAC party, and so much more.

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LEVERAGING OUR SUCCESS

As the sector evolves and grows, so does its contribution to more sustainable approaches in food production. Organic is a leader in finding ways to effectively manage agricultural systems by integrating cultural practices such as crop rotation, biological practices like introducing beneficial insects and increasing microorganisms in the soil, and mechanical practices such as tractor cultivation and hand weeding. Organic is also a leader in developing natural and organic farm inputs and food ingredients.

For the organic sector, innovation is a necessity. The strict requirements of organic regulations and the very limited toolbox producers and handlers have to work with make creativity and innovation absolutely essential to succeed. Our success, in turn, depends on biological farming practices and healthier soils that help mitigate climate change, and on a label consumers trust and are increasingly seeking out. This has practitioners from all sides looking over the fence to see what they can learn.

The challenge we face is keeping up with demand, not only on the production side, but also on the research and extension side. Over the years, despite the growing demand for organic, investment in organic research has lagged dramatically behind the funds devoted to research for conventional agriculture. Organic's growing success in developing effective alternatives, however, has put today's organic sector in an advantageous position. Organic has the opportunity now to further leverage our contributions to creating better farming practices and a healthier environment, and to build support for specific research that will benefit the entire agricultural sector.

LESSONS LEARNED

The National List process requires organic farmers and processors to be innovative, tenacious, and to embrace new ideas and blaze new trails. The process requires organic stakeholders to be proactive and on constant watch to discover or develop organic or natural alternatives to replace the synthetic materials now allowed in organic food production. But the path to developing natural and organic alternatives is not easy, it is not cheap, and it doesn't happen overnight.

The recipe for successfully developing National List alternatives includes a tremendous public-private effort to foster the adoption of new techniques and inputs and develop new supply chains. In 2015, the Organic Trade Association formed the National List Innovation Working Group consisting of members interested in investing in applied research to identify alternatives to materials currently on the National List including organic, natural, or more compatible synthetics. The group realized that in order to proactively remove materials from the National List, it would take time, money, involvement and collaboration with public and private research institutions and extension personnel. The experience to-date of the group combined with other lessons learned from National List inputs, such as antibiotics for tree fruit, methionine for poultry and celery powder for cured meat, have created an extremely helpful model that can be used to help develop organic and allowed natural alternatives.

A MODEL FOR DEVELOPING ORGANIC AND NATURAL ALTERNATIVES

The process for developing natural and organic farm inputs and food ingredients can be viewed as a four-phase intensive participatory process: 1) Design; 2) Research; 3) Commercialization and 4) Market Launch. The process on the short end normally takes at least six years. On the upper end, it can take 15 years or more. At a minimum, it takes more than five years.

Design: The design of a project sets the stage for success or failure. During this process, the situation and need are identified, a working group with all of the essential partners including industry, universities, government, institutions and consumers is formed, and the project concept, goal and objectives are developed. A key activity at this stage is something known as “asset and resource mapping,” an activity often undertaken in food systems planning, where the complexities of the supply chain are accounted for and the available resources are mapped by region. This creates a visualization of what is available and what is still needed in product and partner supply. The design of a project can take from six months to a year.

Research: The research phase is the greatest hurdle in the process, and it will not advance without adequate support and funding. For the organic sector, the funding options are limited but, thankfully, some funds are available through USDA, private foundations, industry donations and other private efforts. Simply securing the funding typically takes a couple years or more. A good starting point can be a planning grant through the Organic Research and Extension Initiative (OREI) under USDA’s National Institute of Food and Agriculture. A \$50,000 planning grant provides the dollars often needed to complete the asset and resource mapping process that will provide the information and data needed to submit a grant for a full \$2 million OREI grant.

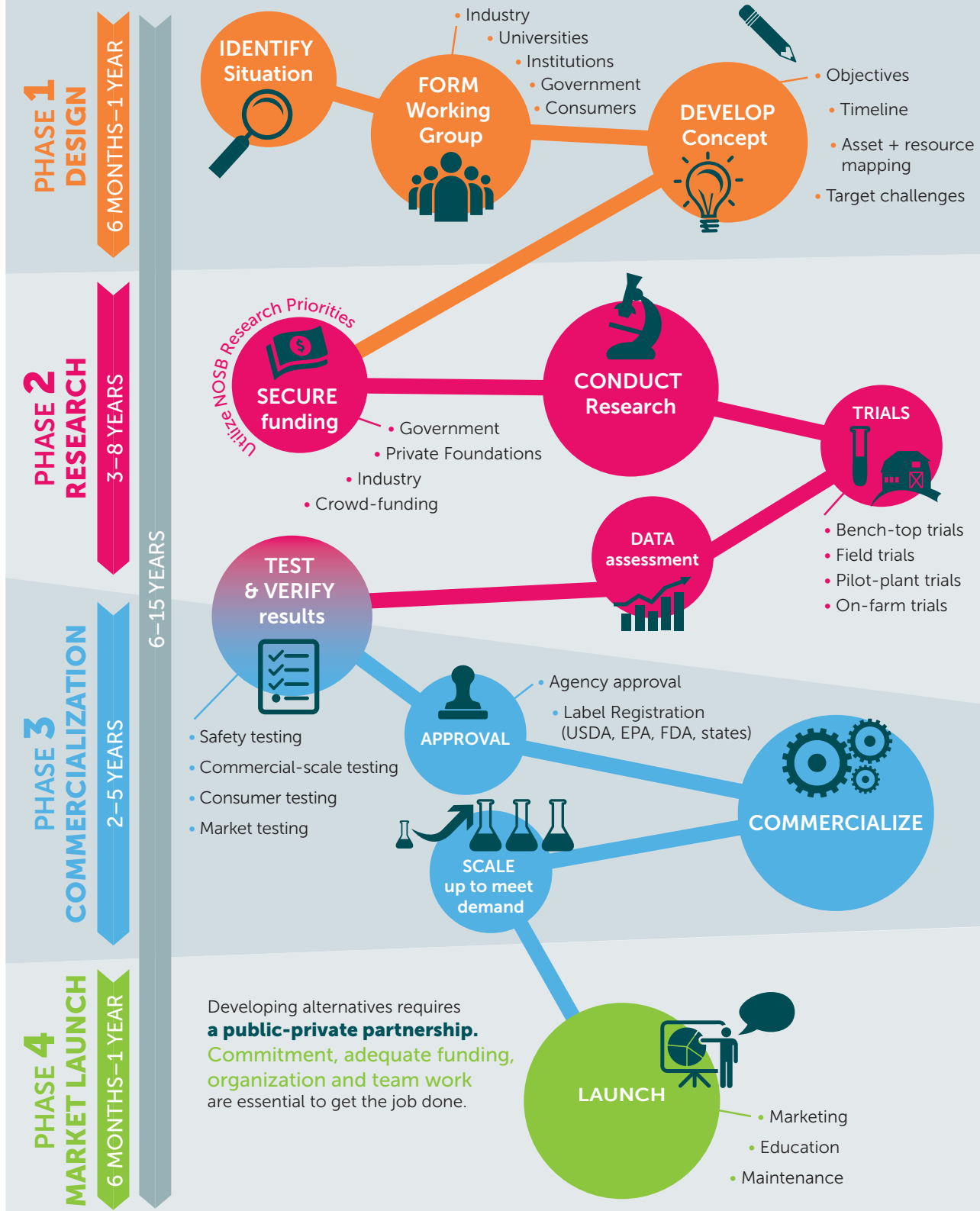
The research phase takes an additional two to five years at least to carry out bench-top trials, field trials, and/or pilot-plant trials as well as conduct data collection and assessment. Research trials then need to be scaled up to on-farm or commercial-scale testing. Results must be tested and verified, and if found to be successful at the research level, the commercialization process may start.

Commercialization: The time it takes to commercialize a farm input or new ingredient is often underestimated. There are significant time and resources that must be spent on additional commercial scale validation, followed by consumer, market and safety testing. Materials on the National List cannot be replaced overnight. New farm inputs or food ingredients must also undergo agency approval and label registration that can take two to three years. Agency support of organic interests is critical at this point. The organic sector can weigh in during this time, emphasizing the importance of prioritizing agency approval, and help to shorten these approval timelines. Once the testing and agency approval are granted, the product must be scaled up to meet market demand. This will ultimately determine the commercial availability of an ingredient or product.

Market Launch: Lastly, there is a necessary a period of education and experience for growers and handlers to refine their use of a new material in the diverse settings and environments encountered in commercial settings. As in the case of organic tree fruit growers adopting new materials and practices to prevent fire blight, a significant amount of education and outreach was necessary to convince producers to adopt these alternatives when faced with this devastating plant disease. Growers and handlers have to be confident the alternatives will work. Also, consumers must be willing to accept the new food ingredient in their organic products. The consumer commitment to organic is based on trust that the organic product is the best choice, and that trust has to hold true for any new organic ingredient or product.

The process of moving from concept of an alternative ingredient or input, and then to proving its efficacy and integrating or implementing its use into an organic production or handling system represent a multi-year effort that rarely occurs in a timeline shorter than five years.

A model for developing ORGANIC AND NATURAL INPUTS for use in organic food and farming



COMMUNICATING WITH POLICYMAKERS: A CALL TO ACTION

Successfully developing alternatives to the National List requires time and significant funding. To strengthen the organic sector's ability to defend and solicit funds for research that benefits organic production and handling, organic needs to have a voice at the table, and be represented on USDA and other applicable federal research boards and committees.

The organic sector can work with USDA and other federal agencies to ensure fair representation on appropriate research boards by identifying and bringing forth qualified nominees for those boards. Our goal is that all USDA appointed research boards include at least one member representing the interests of organic.

The organic sector has specific and unique research needs regarding production and organic regulatory compliance, and federal agencies need to respond to those needs with the appropriate policies. Government agencies (particularly USDA) need to include organic production as a component of its studies comparing the effects of different agricultural production systems when appropriate (e.g., investigation of climate change adaptation practices). Organic production models provide alternative solutions to current agricultural challenges. We encourage USDA to increase its efforts to develop diversity in research and alternatives for all producers and handlers.

Great strides have been made in the organic sector, but the work is not done. Organic stakeholders have to continue advocating, working, pressing and staying engaged in the process to enable organic to reach its full potential. The Organic Trade Association encourages everyone in the organic sector to help make sure the U.S. Department of Agriculture fulfills its leader's directive. In this regard, we urge NOSB to draft a letter to USDA requesting mandatory organic representation on USDA research boards and committees.



THE 2019 ORGANIC CONFLUENCES SUMMIT

will focus on how organic can adapt to our changing climate and be a force for climate change mitigation.

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EXCLUDED METHODS (PROPOSAL AND DISCUSSION)

BACKGROUND

NOSB is presenting two items at this meeting related to excluded methods: one Proposal and one Discussion Document. These items represent a continuation of work by NOSB over the past few years. On November 18, 2016, NOSB passed a recommendation on Excluded Methods Terminology that provided a new framework of definitions for determining a genetic manipulation as an excluded method, and requested that NOP incorporate the information into a guidance document. This recommendation provided improved definitions and attempts to address the increased diversity in types of genetic manipulations performed on seed, livestock and other inputs used in agriculture. It is understood that genetic engineering is a rapidly expanding field in science at this time, and that NOSB and NOP will need to continually review new technologies to determine if they would or would not be acceptable in organic agriculture. Also in November 2016, NOSB presented a discussion document with a running list of new technologies under review to determine if they are within the definition of excluded methods and thus prohibited. Several of the technologies in the document are identified as “to be determined,” with the understanding that NOSB will continue to resolve these issues at future meetings. One of these “to be determined” methods was resolved at the fall 2018 meeting when NOSB passed a recommendation that “embryo rescue in plants” is not an excluded method.

NOSB SUBCOMMITTEE SUMMARY — EXCLUDED METHODS DETERMINATIONS (PROPOSAL)

The subcommittee proposed the following updates to the status of transposons, currently listed as “to be determined” in the November 2016 discussion document described above:

- Transposons developed via use of in vitro nucleic acid techniques are an excluded method.
- Transposons developed through environmental stress, such as heat drought, or cold, are not an excluded method.

The subcommittee also proposes to add two definitions to the excluded methods terminology chart:

- Cisgenesis—The gene modification of a recipient plant with a natural gene from a crossable-sexually compatible-plant. The introduced gene includes its introns and is flanked by its native promoter and terminator in the normal-sense orientation.
- Intragenesis—The full or partial coding of DNA sequences of genes originating from the sexually compatible gene pool of the recipient plant, and arranged in sense or antisense orientation. In addition, the promoter, spacer and terminator may originate from a sexually compatible gene pool of the recipient plant.

SUBCOMMITTEE VOTE: Motion to approve this proposal - Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

We support updating the proposal's terminology chart with the proposed definitions for cisgenesis and intragenesis.

In regard to transposons, we did not have enough time to thoroughly research the topic and conduct member outreach. Generally speaking, we understand transposons that are activated or directed through in vitro techniques to fit the definition of "excluded methods," whereas activation of transposons under natural stress conditions (e.g., drought or heat) would not. The latter are activities that are naturally occurring, and activate naturally occurring transposons. We do not believe they should be listed in the table of methods.

The Organic Trade Association continues to be supportive of moving recommendations forward to NOP that will not only improve the practices used to keep GMOs out of organic seed, feed and crops, but will also clarify the standards and terminology used for making clear and consistent compliance determinations.

NOSB SUBCOMMITTEE SUMMARY: EXCLUDED METHODS – INDUCED MUTAGENESIS AND EMBRYO TRANSFER IN LIVESTOCK (DISCUSSION)

The subcommittee invites discussion on two technologies that are currently "to be determined" in the November 2016 discussion document described above: 1) Induced or directed mutagenesis; 2) Embryo transfer in livestock

Discussion Questions on Induced or Directed Mutagenesis

1. Using the NOSB recommendation on the criteria to determine a technology as genetic engineering (listed above), please provide information on which technologies that result in induced mutagenesis could be considered an excluded method under organic production and why? These would include induced mutagenesis caused by irradiation, x-rays, heat, UV light, and a variety of chemicals.
2. Using the NOSB recommendation on the criteria to determine a technology as genetic engineering, please provide information on which technologies that result in induced mutagenesis could be considered not an excluded method under organic production and why? These would include induced mutagenesis caused by irradiation, x-rays, heat UV light, and a variety of chemicals.
3. Should the random or targeted aspects of induced mutagenesis be considered when determining if a technology should be excluded?
4. How do epigenetic implications affect the determination of whether the method is to be excluded? Are there some types of epigenetic methods that could be allowed or not allowed?
5. Would there be any effects on currently accepted varieties, cultivars, or breeds if induced mutagenesis was determined to be excluded? Be specific.
6. Are there types of induced mutagenesis that are highly beneficial to organic production or highly problematic?

Discussion Questions on Embryo Transfer in Livestock

1. Should the use of hormones to stimulate egg production be allowed in donor animals?
2. Should the use of hormones to synchronize estrus in animals who will receive the embryo be allowed?
3. Are there concerns for the health of the adult animal or their offspring after the use or repeated use of these hormones?
4. Could the approval of this technology have any unintended consequences, such as the narrowing of the gene pool, due to widespread use of embryos from a narrow pool of egg and sperm donors in organic production?
5. Is embryo transfer a necessary method for organic livestock production?

SUBCOMMITTEE VOTE: Motion to accept this discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this discussion document.

MARINE MATERIALS IN ORGANIC CROP PRODUCTION (DISCUSSION)

BACKGROUND

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

NOSB SUBCOMMITTEE SUMMARY

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

- §205.601 (j) As plant or soil amendments. (1) Aquatic plant extracts (other than hydrolyzed) – Extraction process is limited to the use of potassium hydroxide or sodium hydroxide; solvent amount use is limited to that amount necessary for extraction. **Marine algae ingredients must be certified organic.**
- §205.602 Non-synthetic substances prohibited for use in organic crop production. **Marine algae — unless certified organic.**

The discussion document summarizes and attempts to address the concerns raised at the last meeting about this approach, specifically regarding the authority of NOSB to require organic inputs, and the effectiveness of organic certification to meet sustainability goals. The document also summarizes a number of alternative approaches that were suggested in the last meeting. Those approaches include: limiting or prohibiting harvest of certain marine algae; exploring other existing third-party standards for sustainable harvesting; or adding annotations to material listings on National List to require sustainable harvesting. Each of these approaches is met with its own set of questions and concerns that are outlined in the document. The discussion document also puts forth additional discussion questions for stakeholder feedback. NOSB plans to utilize public comment to develop a proposal at the fall 2019 meeting.

Discussion Questions:

1. If you are not in support of requiring organic certification, what approach do you support? Please describe the method for defining, measuring, and most importantly, enforcing, that the harvest would not be destructive to the environment under an alternative approach.
2. Some existing wild harvest marine algae standards from other certifiers and third-party entities are listed in the Appendix. Please comment on strengths in these standards that could be adapted for NOP guidance. Please identify areas of weakness or areas that are not covered.
3. What existing certification or private standards to support marine algae harvest sustainability have not been included in this document or the Appendix that can help inform the NOSB's understanding of the current work being done?
4. How many crop input products approved for use in organic production currently contain certified organic marine algae ingredients?
5. Are there any crop input products utilizing or developing farmed marine algae?
6. Are there enough certifiers able to offer certification services to meet the needs of the crop fertilizer markets if organic certification were required? If organic certification were required of marine algae ingredients, what would be an appropriate phase-in time to allow markets to meet the demand?
7. The NOSB hopes to convene an expert panel at the fall 2019 Board meeting to include a marine algae harvester for crop inputs, scientist, conservationist, and certifier, among others. What are some questions that could be posed to help identify the issues and solutions?

SUBCOMMITTEE VOTE: Motion to accept this discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association continues to support the efforts of NOSB and the organic sector to move towards the allowance of only aquatic plants produced and harvested in a sustainable manner.

At this point, we are not able to take a position of support on any of the suggested approaches. In the limited time available for this comment period, we were not able to conduct sufficient outreach to our membership, and we cannot responsibly take a position on this important issue without the full engagement of our members.

There does not appear to be agreement among public commenters that organic certification is the appropriate tool to address the environmental impact of marine materials used as crop inputs. Thus, there is a need to better understand these concerns in order to build consensus around the appropriate solution.

To fully analyze this information and engage our membership in exploring the discussion questions, we respectfully request that NOSB keep this discussion document open for comment through to the fall 2019 meeting. The Organic Trade Association is committed to developing a member task force on this issue, and requests that NOSB keep this discussion document open for comment through to the fall meeting, when we can be better prepared with feedback on the subcommittee's discussion questions and be in a better position to engage with the Expert Panel.

GENETIC INTEGRITY TRANSPARENCY OF SEED GROWN ON ORGANIC LAND (DISCUSSION)

BACKGROUND

Since 2012, NOSB has issued several discussion documents on the topic of “seed purity” (i.e., keeping seed stock used for organic production free from contamination by GMOs via a seed purity standard). Public commenters have expressed strong support for exploring the feasibility of a seed purity standard recognizing the importance of reducing inadvertent introduction of GMOs into crops through seeds. At the same time, there is concern that setting a standard without the proper infrastructure may penalize farmers for trespass of genetic contamination that is the fault of others. It could also ultimately narrow the availability of needed crops traits. Six years of discussion and public comment led to a conclusion that public data on seed contamination is needed to inform an effective and fair seed purity standard if one is to be established. In order to move the process forward and find a solution to a complex problem, a proposal was presented at the fall 2018 meeting that included a 17-part protocol requiring a system of sampling, testing and transparency of findings of GE contamination on all field corn seed planted on organic land. The proposal was intended to be a starting point, to learn how to best provide information to producers so they may choose levels of seed purity they are comfortable with, and to collect data and track contamination risks to inform seed purity standard. However a significant amount of public comment opposed the proposal for a variety of reasons, so the NOSB withdrew the proposal and is continuing work towards a more feasible solution for addressing the issue of GMO contamination of seeds used to produce organic crops.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee asserts that knowing the purity of the seed farmers plant is critical for allowing farmers to make informed decisions when choosing seed and to meet marketplace demands for which testing protocols are becoming more robust. The subcommittee plans to present a proposal for vote at the fall 2019 meeting; such a proposal will not include tolerance levels that could prohibit the planting of seed that exceeds any specific tolerance. To inform the development of such a proposal, the subcommittee is presenting the following questions for public comment at this meeting.

Discussion Questions:

1. Would the testing and knowledge of GE contamination of seed grown on organic land lead to less available corn seed varieties that contain traits or regional adaptability sought by organic farmers?
 - a. Please describe if there is a risk that non-organic seed suppliers would not sell seed to organic farmers if the seed supplier is aware the seed could be tested for GE contamination.
 - b. Please describe if there is a risk that an organic farmer would choose to leave organic production or have a significant loss due to their choice to not plant corn seed if they were knowledgeable of the level of purity from GE contamination. Note, the level of purity from GE contamination is not proposed to affect the certified organic status of the seed or crop.
 - c. If there are any other negative consequences that might come from the testing and knowledge of GE contamination presence in seed planted on organic land, please be specific on what these might be.

2. Can organic seed growers and their certifiers provide information on how many entities are testing seed for the presence of GE contamination? If they are not testing, what are the reasons?
3. Can non-organic seed growers and/or farmers and their certifiers provide information on how many entities are testing seed for the presence of GE contamination? If they are not testing, what are the reasons?
4. Should there be a sentence added to a proposal addressing a possible future legal impediment to testing seed for GE traits? Would requiring documentation from the seed seller to the certifier stating that it is illegal for the farmer to test that seed corn, hence exempting that farmer from testing the seed, be a solution?
5. Can you provide feedback on how to gather the “level of purity from GE contamination” information from the certification agencies, and which entity should receive and summarize that information for the public?

SUBCOMMITTEE VOTE: Motion to accept this discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association did not have enough time to adequately survey members and collect feedback on the questions being asked. We have drafted comments that best reflect the current thinking of our membership, but additional time is needed. The short comment period continues to be a disservice to the entire NOSB process and the organic sector. We urge NOSB and members of the organic community to unite and voice this concern to USDA.

The current discussion document is confusing, and the end-goal (proposal) is not clear. The current approach is running a parallel track of trying to understand the problem while at the same time prescribing the solution. Posting seed purity information in a public database that is uncoupled from a seed purity standard could hurt the organic sector rather than help it. The Organic Trade Association recommends a much more measured approach that will allow NOSB to evaluate testing data, evaluate the problem, and then decide what kind of testing and reporting protocols are needed, if any. We continue to recommend that data collection be administered and carried out by USDA or a similar entity through a task force effort.

The use of genetic engineering in organic production and handling is prohibited under the USDA organic regulations. Contact between organic products and prohibited substances is also prohibited, and certified operations must have approved contamination prevention measures described in the Organic System Plan. Testing is one of the most definite and effective tools the organic sector can use to evaluate whether an organic operation has adequate measures in place to prevent contact with GMOs. The Organic Trade Association encourages NOSB to focus on a recommendation to NOP requesting guidance on GMO testing for certifying agencies and industry.

ASSESSING CLEANING AND SANITATION MATERIALS USED IN CROP, LIVESTOCK AND HANDLING (DISCUSSION)

BACKGROUND

Substances for cleaning, sanitation, and disinfection are listed on the National List across the crop, livestock, and handling scopes, and are reviewed by NOSB when these substances are petitioned and/or are undergoing Sunset Review. NOSB is interested in conducting a comprehensive review of all such materials across all scope to ensure consistency of review, and to identify materials needed to fill potential gaps in crop production, livestock health, and food safety.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee has requested the development of a technical report that will provide reference and information that NOSB will use to develop a framework and questions for reviewing cleaners, sanitation, and disinfectants in all areas of crop/livestock production and during food handling, as well as other areas of technical information to support NOSB's evaluation of these materials. The discussion document summarizes the goals of the technical report, and identifies a list of 16 evaluation criteria that could be incorporated into this framework of sanitizer review, such as evaluating the materials corrosive nature, the presence of harmful odors, and whether the product is broad spectrum. The document also include a list of 18 categories of active ingredients under which petitioned or sunset materials could be grouped in order to identify overlaps or gaps in allowed materials.

Discussion Questions:

1. Should the "evaluation criteria" list (see meeting materials) be modified, consolidated, or shortened; are there additional items needed?
2. Should the "materials classified by their active ingredients" list (see meeting materials) be modified, consolidated, or shortened; are there additional items needed?
3. Do you have additional suggestions for the development of this framework?

SUBCOMMITTEE VOTE: Motion to accept this discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

We support the Subcommittee's intended outcomes for this work agenda item: to enable consistent reviews of these materials and to provide a comprehensive toolbox of food safety options for organic producers.

We have questions about how a new "system" or "framework" for reviewing sanitizers fits in to the larger existing context and process for NOSB to evaluate substances under OFPA and NOP requirements.

We ask that NOSB withdraw its request for the Technical Review because the scope of work is unclear and stakeholders have not yet had an opportunity to weigh in on this new concept of sanitizer review.

Grouping sanitizers by active ingredient and/or function could be a helpful exercise in assessing whether alternatives are available, and will support the Subcommittee's stated goal to "identify materials needed to fill potential gaps in organic crop production, livestock health, and food safety."

OVERSIGHT IMPROVEMENTS TO DETER FRAUD (DISCUSSION)

BACKGROUND

Over the past several meetings, NOSB has been active in developing recommendations related to improving the oversight control procedures used by NOP, certifiers, and certified operations to verify organic integrity of imported organic products. The discussion document presented at this meeting is a continuation of this work.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee's discussion document summarizes the public input received to date on topics areas related to oversight improvements to deter fraud. Specifically, they have identified 12 topic areas (rough summary provided below) and present three discussion questions. The subcommittee is asking for feedback on these priority areas, and where to best focus funds and enforcement activity for organic fraud prevention.

Topic areas (*not in order of priority; see meeting materials for full details*):

- Stop sale authority
- Collaboration and transparency when investigating fraud
- Closing the loophole on excluded operations
- Education to handlers on organic certification requirements
- Increase focus on the SYSTEM in the Organic System Plan
- Connecting the dots between product, certificate and associated documents
- Reporting organic acreage
- Transaction and import certificates
- Alert system
- Residue testing for high risk products and database
- Determining areas of risk
- Improving NOP oversight

Discussion Questions:

1. Are there additional activities missing from the list above that would result in better oversight and enforcement of the organic regulations?
2. Are there specific items above that are impractical or difficult to implement and why?
3. Please provide your thoughts on how these items should be prioritized E.g. by importance? By ease of implementation?

SUBCOMMITTEE VOTE: Motion to accept the discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 1 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has identified 15 critical action areas (summarized below) and ranked them according to the level of impact we believe each will have in increasing organic integrity. In addition to the 15 critical actions prioritized below, we included the enforcement and oversight legislative text from the 2018 Farm Bill and the conference report language. The 2018 Farm Bill gives USDA's National Organic Program new authorities to carry out compliance and enforcement actions in the U.S. and abroad. We urge NOSB and NOP to focus time and energy on figuring out ways to best maximize those authorities. There are new avenues and tools now available that did not exist when NOSB started its response to NOP's 2017 memo.

Summary of the Organic Trade Association's top priorities:

- 1. Excluded Operations:** Limit the types of operations that may be excluded from certification. Specifically, require certification of each producer, handler and handling operation in the supply chain that is producing or handling products sold, labeled, or represented as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s))." Exclusion from certification should be very restricted and may be granted only for transporters, storage facilities and retail food establishments that meet the conditions and regulatory compliance requirements.
- 2. Organic Integrity Database:** 1) Require Accredited Certifying Agents (ACAs) to report aggregate production area certified by crop and location at least on an annual basis to the Organic Integrity Database (OID). Currently there are no means to accurately calculate organic acreage and/or yield estimates on a country-by-country basis; and 2) require ACAs to update the OID within 72 hours when an operation surrenders its certification, or its certification is suspended or revoked.
- 3. Complaint & Alert System:** 1) Create a risk assessment process for prioritizing complaints; 2) improve the timing and communication around NOP's complaint system; and 3) develop a public alert system that identifies products or regions where heightened vigilance is needed.
- 4. Organic Identification:** 1) Require all documentation associated with NOP certified product to include identification of organic status; and 2) require all non-retail containers and packaging to include identification of the product as organic.
- 5. Testing:** 1) Update NOP's Guidance on Residue Testing (NOP 2610, 2611, 2613) to gain better consistency and bring testing methodology up to speed with industry standards and testing technology; and 2) increase required use of testing for imports and other high-risk products and/or regions.
- 6. Grower Groups:** Formally respond to the National Organic Standards Board (NOSB) Recommendations on Grower Groups, and conduct rulemaking to ensure consistent oversight and enforcement of group operations.
- 7. Inspector and Certifier Oversight (including Satellite Offices):** 1) Increase oversight of certifiers, including satellite offices domestically as well as in foreign countries, which should be required to be audited on an annual basis; 2) Develop more robust auditing of ACAs with increased attention on whether a certifier's process and qualifications are sufficient to verify compliance and detect fraud.

8. **Equivalency and Recognition Arrangements:** 1) Terms and conditions of equivalency arrangements: Prioritize competency of oversight and data transparency followed by differences in regulations and materials; 2) Communication: Improve communications with the enforcement authorities of trading partners, certification bodies in regions and countries covered by equivalency arrangements and recognition agreements, and other institutions that protect organic integrity; and 3) Follow-up: On recognition agreements, ensure that the governmental authorities, in fact, are implementing the NOP rule including associated guidance and policy.
9. **Inspectors (Qualifications, Training and Field Evaluations):** 1) Improve qualifications and training of inspectors and ACAs to monitor, detect and address fraud; and 2) Establish minimum requirements for qualifications and initial and continuing training.
10. **Import Certificates:** 1) Implement a system that collects a greater amount of data, including tracing the original product to its origin; and 2) Improve online access to electronic import certificate system.
11. **Updates to Non-compliances and Appeals Process:** Expedite the NOP appeals process such that that appeals are reviewed and responded to in a timelier manner.
12. **Unannounced Inspections:** Require certifying agents to conduct unannounced inspections on at least 5% of certified clients. Additional unannounced inspections should be conducted as needed in response to complaints and investigations. The cost of unannounced inspections should be factored into the certifier's fee structure. Additionally, require certifiers to report to NOP annually on their programs, success rate and compliance with the minimum requirement.
13. **10-Digit HT Codes:** Prioritize increasing the number of 10-digit statistical breaks for organic products in the harmonized tariff schedule and require the use of the 10-digit code when it exists. Use of an organic 10-digit statistical breakout for imported organic product (if one exists) ensures accurate accounting of products entering the United States. This information is critical to understanding what products are entering the U.S. and from which countries. It is the only U.S. government produced, year-round, public data set available on the topic. Without increased number of codes and their compulsory use by industry, there is no reliable/consistent baseline for understanding volumes, prices, and origins of imported organic products. The non-use of the code should not disqualify the product as organic. However, this could prompt a mandatory test.
14. **Federated Organic Certificates:** Consider a narrower and more easily implementable solution that will help deter fraudulent certificates. Until the Organic INTEGRITY Database is reliably providing accurate and current information for certified operations, federated organic certifications should not be mandatory.
15. **Fumigation Notifications:** Continue to increase coordination and access to available data cross border documentation systems administered across other agencies including U.S. Customs and Border Patrol Automated Commercial Environment (ACE), and Phytosanitary certificates. This includes notifying NOP when imported agricultural products are treated with NOP-prohibited substances at U.S. ports of entry. Notifications must include the crop/product, name of the associated company, the substance used, and information must be made available to ACAs.

OXALIC ACID – PETITION (PROPOSAL)

BACKGROUND

Oxalic acid dihydrate has been petitioned by Rare Hawaiian Honey Company for use as a treatment to control varroa mites, an invasive pest, in organic beehives. The petition addresses three EPA-approved application methods: by solution to package bees, by solution to beehives, and by vapor treatment to beehives. The substance can be used in rotation with, or instead of, formic acid (an already allowed substance).

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted 5-1 in favor of the petition for oxalic acid used for varroa mite control in organic beehives. The adverse impacts on the environment and human health were determined to be minimal. Protective equipment is required to prevent direct contact with human skin. The concern for varroa mite resistance is low. Alternative materials are allowed, such as formic acid, sucrose octanoate esters, and natural substances, as well as alternative physical methods to control varroa mites. The subcommittee determined that the petitioned material can be used in rotation with these other allowed materials for effective control of honeybee pests, and that it is important to protect these important pollinators.

SUBCOMMITTEE VOTE: Motion to add oxalic acid dihydrate to §205.603(b) "as topical treatment, external parasiticide or local anesthetic as applicable" with the annotation "For use as a pesticide solely for apiculture."- Yes: 5 No: 1 Abstain: 0 Absent: 0 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

USE OF EXCLUDED METHODS VACCINES IN ORGANIC LIVESTOCK PRODUCTION (DISCUSSION)

BACKGROUND

Vaccines are permitted as a preventive health care material in organic livestock production. Uncertainty has existed about whether vaccines made from excluded methods (i.e. genetic engineering) are permitted, which has caused inconsistencies between certifiers in what vaccines are allowed to be used in organic livestock production. Although §205.105(e) requires excluded method vaccines to be reviewed and placed on the National List before use, and there is a categorical listing for vaccines on the National List, there are not individual vaccine listings nor a specific references to those from excluded methods. This topic was discussed in depth by NOSB from 2009-2014, culminating in a unanimous recommendation from NOSB in fall 2014 that presented findings on manufacturing and availability of vaccines made with excluded methods, and requested that NOP review the information and provide guidance to the industry on these materials. NOP has not been able to act on this recommendation because of the following challenges: “having an updated definition of excluded methods that determines if new technologies were to be excluded methods for organic, having a clear understanding if there were non-excluded method vaccine equivalents to excluded method derived vaccines and how to provide for use of excluded method vaccines if there was an emergency when only an excluded method vaccine could address the problem in a timely way.” NOSB’s more recent work on excluded methods terminology will support the renewed focus of the Livestock Subcommittee’s work on vaccines.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee’s discussion document present three regulatory solutions to clarifying the allowance of excluded methods vaccines, and asks the public to provide feedback on these options:

- Option 1: Follow the requirements of §205.105 (e) and start reviewing known excluded method vaccines for individual placement on the National List. (Under this option, individual vaccines made from excluded methods will need to be reviewed and placed on the National List before use.)
- Option 2: Approve all vaccines produced through excluded methods as a “class” of vaccines and place this class of vaccines on §205.603(a)(4). (Under this option, vaccines would not need to be individually reviewed by NOSB and vaccines made from excluded methods would be allowed without further restriction.)
- Option 3: Change §205.105 (e) to read as follows: (e) Excluded methods, except for vaccines: Provided, That there are no commercially available vaccines that are not produced through excluded methods to prevent that specific animal disease or health problem. (Under this option, (Under this option, vaccines would not need to be individually reviewed by NOSB, but certifiers will need to review to determine if the vaccines is made from excluded methods and whether the commercial availability restriction would apply.)

The subcommittee also requests public comments on the following questions:

- What type of documentation would be used to prove non-commercial availability of vaccines produced without excluded methods?
- When reviewing vaccines under commercial availability, are there special issues that should be considered?

SUBCOMMITTEE VOTE: Motion to accept the discussion document -

Yes: 5 No: 0 Abstain: 0 Absent: 1 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association is committed and actively engaged in fighting the proliferation of GMOs to protect organic agriculture and trade, and preserve farmer and consumer choice. We do not in any way support the use of excluded methods in the production of organic seeds, crops, ingredients or other production methods. However, we do acknowledge that the regulations currently provide for one narrow exception to the prohibition on excluded methods—GMO vaccines—provided they are approved in accordance with § 205.600(a).

We support NOSB's work towards a recommendation for vaccines that stands against the proliferation of GMOs in organic, while being practical in accepting the fact that some necessary vaccines are only available using excluded method technology.

We acknowledge and appreciate the tremendous amount of work that NOSB has put forth on this issue.

There are positive aspects to all of the regulatory solutions. However, within the limited comment period, OTA was not able to conduct a complete and thorough evaluation of the options or fully engage our membership to the extent needed to endorse any one specific option.

2021 SUNSET REVIEWS (DISCUSSION)

BACKGROUND

This year (2019), NOSB will vote on whether to continue the allowance of several of the fertilizers, pest control products, livestock treatments, processing aids, and ingredients currently included on the National List of Allowed and Prohibited Substances to determine whether the substances should continue to be listed or should be removed from the list. These National List inputs will be reviewed and voted on by NOSB based on their Sunset timeline (5-year renewal date cycle), and may not be renewed if new information indicates these substances are incompatible with organic production, are not necessary, or are harmful to human health or the environment. The specific inputs included in this sunset cycle are listed below.

At the spring 2019 meeting, NOSB is accepting public comments on these inputs and has presented discussion questions for some of the topics. NOSB will use the information collected through the public comment period to inform the subcommittee proposals that are presented for a second public comment at the fall 2019 meeting. The full Board will vote at the fall 2019 meeting on whether to renew their allowance on the National List for another five years.

NOSB SUBCOMMITTEE SUMMARY & ORGANIC TRADE ASSOCIATION'S POSITION

The list below includes a description of material, questions raised by the NOSB Livestock Subcommittee, and a summary of the Organic Trade Association Sunset Survey responses for the material.

Atropine — Allowed as a medical treatment. Used as an antidote to organophosphate insecticide poisoning. §205.603(a)(4)

- **NOSB Subcommittee Questions:** 1. For what veterinary medical purposes, if any, is this substance currently being used in organic production? 2. How widely used and essential is this substance by organic producers? 3. Are there alternative substances, whether natural or synthetic, considered preferable for use in organic production? If so, what are these substances?
- **OTA Survey Results:** No responses were received.

Hydrogen Peroxide — Allowed as a disinfectant, sanitizer, and medical treatment. Used as a cleaning agent on contact surfaces, such as equipment, calf pails, bottles, and utensils. Also used to clean wounds and as a teat dip. §205.603(a)(15)

- **NOSB Subcommittee Questions:** Is this synthetic material a necessary input in organic livestock production?
- **OTA Survey Results:** No responses were received.

Iodine — Allowed as a disinfectant, sanitizer, and medical treatment, and as a topical treatment and external parasiticide. Used as a teat dip. §205.603(a)(16); §205.603(b)(3)

- **NOSB Subcommittee Questions:** 1. Can iodophor forms of iodine be produced using fewer toxic surfactants than nonphenol polyethylene glycol ether (NPE) and similar NPEs? If so, what might be substituted? 2. If the use of NPE surfactants was prohibited in teat dips for use in organic livestock production, how would this impact the organic industry? 3. Are there equally effective alternatives to iodophor based teat dips for commercial use in organic livestock production?
- **OTA Survey Results:** No responses were received.

Magnesium sulfate — Allowed as a medical treatment. Used to treat lactation tetany or grass tetany in ruminants. In swine, used to treat malignant hypothermia. Also used to treat inflammation and abscesses in livestock by soaking affected area in magnesium sulfate solution. §205.603(a)(19)

- **NOSB Subcommittee Questions:** Is this material essential for organic livestock production?
- **OTA Survey Results:** No responses were received.

Fenbendazole — Allowed as a parasiticide for emergency treatment of dairy and breeder stock and for fiber bearing animals. §205.603(a)(23)(i)

- **NOSB Subcommittee Questions:** Do livestock producers still have a necessity for the usage of fenbendazole for emergency treatment of parasites when good pasture management techniques are being used?
- **OTA Survey Results:** No responses were received.

Moxidectin — Allowed as a parasiticide for emergency treatment of dairy and breeder stock and for fiber bearing animals. §205.603(a)(23)(ii)

- **NOSB Subcommittee Questions:** Do livestock producers still have a necessity for moxidectin for emergency treatment of parasites when good pasture management techniques are being used?
- **OTA Survey Results:** No responses were received.

Peracetic acid — Allowed for sanitizing facility and processing equipment. §205.603(a)(25)

- **NOSB Subcommittee Questions:** Is peracetic acid still necessary for organic livestock production?
- **OTA Survey Results:** No responses were received.

Xylazine — Allowed as a medical treatment. Used as a sedative, analgesic, and muscle relaxant. §205.603(a)(30)

- **NOSB Subcommittee Questions:** 1. For what veterinary medical purposes, if any, is this substance currently being used in organic production? 2. How widely used and essential is this substance by organic producers? 3. Are there alternative substances, whether natural or synthetic, that are considered preferable for use in organic production? If so, what are these substances?
- **OTA Survey Results:** No responses were received.

Methionine — An essential amino acid allowed as a feed additive for poultry. §205.603(d)(1)

- **NOSB Subcommittee Questions:** 1. What types of ingredients have been tested in feed ration trials with the goal of developing acceptable sources of natural methionine, and what were the results? 2. Are there new options being trialed to find natural and/or organic agricultural sources of methionine that meet the needs of organic poultry? 3. Has there been any research to determine if pastured poultry that has access to growing vegetation, have less of a need for synthetic methionine than poultry that does not have access to living plants, bugs and biologically active soils?
- **OTA Survey Results:** Necessary

Trace minerals — Allowed as feed additives to satisfy livestock nutritional need. §205.603(d)(2)

- **NOSB Subcommittee Questions:** 1. Are trace minerals still essential to the production of organic livestock? 2. Can trace minerals be produced from agricultural sources that have been produced through excluded methods? 3. Are there ancillary substances used in the production of trace minerals?
- **OTA Survey Results:** No responses were received.

Vitamins — Allowed as feed additives to satisfy livestock nutritional need. §205.603(d)(3)

- **NOSB Subcommittee Questions:** 1. What documentation is required by the certifiers and material review organizations to verify that vitamins that have been produced without genetic modification? 2. Since production methods, such as rotational grazing or reducing the numbers of grazing animals, have been shown to reduce the demand for vitamin supplements, should there be less need for supplying ruminant livestock feeds with synthetic vitamins?
- **OTA Survey Results:** No responses were received.

SILVER DIHYDROGEN CITRATE – PETITION (PROPOSAL)

BACKGROUND

Silver dihydrogen citrate (SDC) was petitioned by Pure Bioscience Inc. for use as an antimicrobial processing aid for poultry carcasses and fruits and vegetables (excluding citrus and grapes for winemaking), and as a disinfectant/sanitizer for food contact surfaces and food processing equipment. SDC is produced electrolytically, through the immersion of silver electrodes in an aqueous solution of citric acid. Its mode of action as an antimicrobial is attributed to the silver ions that are effective against a broad range of microorganisms by damaging the cells and causing microbial death. At the last meeting (fall 2018), NOSB considered a proposal to allow the petitioned use of the material, with an additional restriction to limit the particle size to greater than 300 nm. However, the proposal did not garner enough support to pass, and NOSB ultimately voted to send the issue back to subcommittee for further work on several key areas of concerns: the use of nanotechnology; the use of an antimicrobial in food applications that is also used in medical applications; the toxicity and environmental impact of silver in rinse water; and the necessity of this material and availability of alternatives.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted to reject the petition for silver dihydrogen citrate. After further evaluation, the subcommittee was not able to resolve concerns around the potential environmental impact (particularly regarding the fate of silver-containing effluent in facilities without on-site water treatment system), and its compatibility with organic production (particularly regarding compliance with previous NOSB recommendations on nanomaterials). The subcommittee was also not able to resolve conflicting information about the use of Sodium Lauryl Sulfate in this product, its functionality with the petitioned material, and whether it would need to be petitioned separately for inclusion the National List.

SUBCOMMITTEE VOTE: *Motion to add silver dihydrogen citrate at §205.605(b) -*
Yes: 0 No: 6 Abstain: 0 Absent: 2 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

PULLULAN – PETITION (PROPOSAL)

BACKGROUND

The Organic Trade Association is the petitioner of this material. The purpose of the petition is two-fold: 1) to protect the continued production and availability of USDA-NOP certified dietary supplements; and 2) to support the commercial development of certified organic pullulan. The need for this petition is to respond to recent Guidance from the National Organic Program. Since the early 2000s, accredited certifying agents have classified pullulan as an “agricultural ingredient” and allowed its use in encapsulated dietary supplements certified to “made with organic...” labeling category. This allowance has significantly contributed to the growth of NOP certified supplements. In late 2016, NOP released a guidance document on Classification of Materials. This document assists NOSB, certifiers, and the organic industry in making Agricultural vs. Non-agricultural determinations. Given the information contained in the NOP guidance document, certifiers are now in general agreement that pullulan should be classified as “non-agricultural.” Unfortunately, there are no other NOP compliant vegetarian options available for producing NOP certified vegetarian encapsulated supplements. Organic pullulan is currently not commercially available for use in the United States. The only other option is an animal-based gelatin capsule. As a non-agricultural substance, if pullulan is not added to the National List, the production of NOP certified encapsulated vegetarian supplements will not be possible.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee has classified pullulan as “non-agricultural” based on its derivation from a microorganism rather than from a crop or livestock product. The subcommittee concluded that the adverse impacts of the substance on the environmental and human health are low, and that there are no vegetarian options available as compliant alternatives to the substance when used in encapsulated dietary supplements. For these reasons, the subcommittee voted in favor of the petition to add Pullulan to the National List at §205.605(a) as an allowed non-agricultural, non-synthetic ingredient used in tablets and capsules for dietary supplements labeled “made with organic”.

***SUBCOMMITTEE VOTE: Motion to add pullulan as petitioned, at §205.605(a) -
Yes: 6 No: 0 Abstain: 0 Absent: 1 Recuse: 0***

ORGANIC TRADE ASSOCIATION’S POSITION

The Organic Trade Association strongly supports the Handling Subcommittee’s proposal to add pullulan to the National List at 205.605(a). We support the subcommittee’s recommendation. We urge the full Board to pass the recommendation at the spring 2019 meeting in order to bring pullulan under the strict review of NOSB and the National List Sunset process, and allow for the on-going availability of USDA-NOP certified vegetarian encapsulated dietary supplements labeled “made with organic (specified ingredients or food group(s)).”

Adding pullulan to the National List is a timely and important action that will:

- Quickly address a new interpretation made by several accredited certifying agents in response to NOP's Classification of Materials Guidance (NOP 5033);
- Prevent widespread disruption and economically significant damage to the organic supplements sector and its associated organic supply chain;
- Bring the allowance of non-organic pullulan under strict review of NOSB and the National List Sunset process;
- Support the commercial development of certified organic pullulan that is highly sought by the supplement sector.

IMPORTANT CLARIFICATION: Our petition intentionally limits the petitioned allowance of non-organic pullulan to dietary supplements certified to the "made with" category. Any encapsulated dietary supplement sold or labeled as "certified organic (95% +)" will still need to use certified organic pullulan. Although organic pullulan-based capsules are not commercially available in North America, development is underway and they should be available in the future. The end goal is the development and use of organic pullulan. The organic supplement sector is highly motivated to use organic pullulan because it is the only way these products can qualify for the USDA Organic seal.

COLLAGEN GEL – PETITION (PROPOSAL)

BACKGROUND

Collagen gel casings are being petitioned by Devro Inc. Collagen gels are derived from the corium layer of skins from cows, pigs, chickens and/or turkeys, and are used in sausage production using a co-extrusion system. In these co-extrusion systems, collagen gel enrobes the sausage meat like a casing as the meat is extruded, and holds the form of the meat product. The collagen gel is considered an ingredient in the finished product. Cellulose powder, derived from plant sources, is an ancillary substance in collagen gel.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted in favor of the petition to allow non-organic collagen gel (when organic forms are not commercially available) as sausage casings in co-extrusion systems. Adverse impacts to the environment and human health were determined to be low, and alternative allowed substances are not currently available in organic form and/or are not functional for the co-extrusion system (such as casings from processed intestines). Listing the substance on §205.606 with a requirement to search for organic forms will encourage future availability of organic collagen gel source materials.

***SUBCOMMITTEE VOTE: Motion to add collagen gel as petitioned at §205.606 -
Yes: 6 No: 0 Abstain: 0 Absent: 1 Recuse: 0***

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

2021 SUNSET REVIEWS (DISCUSSION)

BACKGROUND

This year (2019), NOSB will vote on whether to continue the allowance of several of the fertilizers, pest control products, livestock treatments, processing aids, and ingredients currently included on the National List of Allowed and Prohibited Substances to determine whether the substances should continue to be listed or should be removed from the list. These National List inputs will be reviewed and voted on by NOSB based on their Sunset timeline (5-year renewal date cycle), and may not be renewed if new information indicates these substances are incompatible with organic production, are not essential, or are harmful to human health or the environment. The specific inputs included in this sunset cycle are listed below.

At the spring 2019 meeting, NOSB is accepting public comments on these inputs and has presented discussion questions for some of the topics. NOSB will use the information collected through the public comment period to inform the subcommittee proposals that are presented for a second public comment at the fall 2019 meeting. The full Board will vote at the fall 2019 meeting on whether to renew their allowance on the National List for another five years.

NOSB SUBCOMMITTEE SUMMARY & ORGANIC TRADE ASSOCIATION'S POSITION

The list below includes a description of material, questions raised by the NOSB Handling Subcommittee and a summary of the Organic Trade Association Sunset Survey responses for the material.

Citric Acid — Allowed as an ingredient or processing aid. Used as an acidulant, pH control agent, flavoring, sequestrant, dispersant in flavor or color additives, antioxidant, firming agent, raising agent, emulsifying salt, and as a stabilizer. §205.605(a)

- **NOSB Subcommittee Questions:** Are there any commercially available sources of citric acid derived from organically grown crops?
- **OTA Survey Results:** **Essential**

Lactic acid — Allowed as an ingredient or processing aid. Used as an acidulant, pH regulator, and preservative. §205.605(a)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Essential**

Calcium chloride — Allowed as an ingredient or processing aid. Used as a firming agent for sliced apples and other fruits and in certain cheeses to aid coagulation of the milk (turns liquid into thick gel for cutting into curds). §205.605(a)

- **NOSB Subcommittee Questions:** Is this material currently in use by the organic food processing industry and in what applications?
- **OTA Survey Results:** **Essential**

Dairy cultures — Allowed as an ingredient or processing aid. Used to make yogurt, cheese, cultured sour cream and other fermented milk products. §205.605(a)

- **NOSB Subcommittee Questions:** 1. Are there any additional ancillary substances not listed in the chart (see meeting materials)? 2. Is the dairy culture listing redundant and should it be combined with the microorganism listing?
- **OTA Survey Results:** **Essential**

Enzymes — Allowed as an ingredient or processing aid. Used to carry out naturally occurring biological processes that are useful in the processing of food products or ingredients. Also used to reduce the length of time required for aging foods such as cheese, clarify or stabilize food products, and control the content of alcohol and sugar in certain foods. §205.605(a)

- **NOSB Subcommittee Questions:** Are there any additional ancillary substances to list for enzymes (see meeting materials)?
- **OTA Survey Results:** **Essential**

L-Malic acid — Allowed as an ingredient or processing aid. Used as a pH adjuster, flavor enhances and food acidulant. §205.605(a)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Essential**

Magnesium sulfate — Allowed as an ingredient or processing aid. Used as a mineral supplement, leavening agent and pH control agent. §205.605(a)

- **NOSB Subcommittee Questions:** Is this material still essential to organic production?
- **OTA Survey Results:** No responses were received.

Microorganisms — Allowed as an ingredient or processing aid. Used as starter cultures for the benefit of the metabolites produced during fermentation. Commonly used in dairy products, baked goods, and fermented food and beverages. §205.605(a)

- **NOSB Subcommittee Questions:** Are there any additional ancillary substances not listed in the chart (see meeting materials)?
- **OTA Survey Results:** **Essential**

Perlite — Allowed as a filter aid in food processing. §205.605(a)

- **NOSB Subcommittee Questions:** Is this material still essential to organic production?
- **OTA Survey Results:** **Essential**

Potassium iodide — Allowed as an ingredient or processing aid. Used as a nutrient in table salt and in dietary supplements. Also used as a sanitizing agent for food processing equipment. §205.605(a)

- **NOSB Subcommittee Questions:** 1. Is potassium iodide utilized as a sanitizing agent for food processing equipment? If so, in what applications? 2. If potassium iodide is used for nutritional supplementation only — is this substance redundant to the current Nutrient Vitamin and Mineral listing? If so, should this separate listing be removed? 3. Are certifiers limiting the use of potassium iodide to non-synthetic forms even with the 205.605(b) synthetic allowance for Nutrient Vitamin and Mineral listing?
- **OTA Survey Results:** **Essential**

Yeast — Allowed as an ingredient or processing aid. Organic forms of yeast must be used when commercially available. Used for flavoring, as a protein source (nutritional yeast), and various fermentation applications such as bread, wine and beer. §205.605(a)

- **NOSB Subcommittee Questions:** 1. Are there still types or forms of organic yeast that are not available in sufficient quality or quantity for production of organic products? Specifically, have organic forms of torula yeast, nutritional yeast for livestock feed, gluten-free yeast, fresh yeast, and some types of wine yeast become available since the last Sunset Review in 2015? 2. Have there been changes in ancillary materials added to yeast compounds since the 2014 TR?
- **OTA Survey Results:** **Essential**

Alginate acid — Allowed as an ingredient or processing aid. Used as a stabilizer in many products such as beverages, cheese and dressings. Also used as a defoaming agent. §205.605(b)

- **NOSB Subcommittee Questions:** Is there a way to assess whether or not current brown seaweed harvesting practices are sustainable or damaging to local ecosystems?
- **OTA Survey Results:** No responses were received.

Activated charcoal — Allowed as a filtering aid. §205.605(b)

- **NOSB Subcommittee Questions:** Is this material still essential to organic production?
- **OTA Survey Results:** **Essential**

Ascorbic acid — Allowed as an ingredient or processing aid. Used as a dietary supplement, nutrient, flavor ingredient, curing and pickling agent, antioxidant, and a wide variety of other food processing uses. §205.605(b)

- **NOSB Subcommittee Questions:** Is the modern industrial manufacturing process which utilizes additional bio-oxidation an excluded method?
- **OTA Survey Results:** **Essential**

Calcium citrate — Allowed as an ingredient or processing aid. Used to provide calcium in nutritive supplements, and as a pH adjuster and chelator. §205.605(b)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Essential**

Ferrous sulfate — Allowed for iron enrichment or fortification of foods when required by regulation or recommended. Used for iron enrichment or fortification of flour and baby food. §205.605(b)

- **NOSB Subcommittee Questions:** If applications are for nutritional supplementation only – is this substance redundant to the current Nutrient Vitamin and Mineral listing? If yes, should this item be removed?
- **OTA Survey Results:** **Essential**

Hydrogen peroxide — Allowed as an ingredient or processing aid. Used as a disinfectant and bleaching agent, and for sanitizing of aseptic packaging. §205.605(b)

- **NOSB Subcommittee Questions:** Is this material still essential for production and handling of organic products?
- **OTA Survey Results:** **Essential**

Nutrient vitamins and minerals — Allowed for fortification of organic foods in accordance with FDA requirements. §205.605(b)

- **NOSB Subcommittee Questions:** 1. Is the current listing meeting the needs of the organic community, certifiers and industry? If not, how should it be revised? 2. How are certifiers currently dealing with non-synthetic nutrient vitamins and minerals? 3. It is speculated that the 2012 rulemaking was stopped due to the impact this change would have on the currently established organic infant formula market which has both established manufacturers and consumers. How should NOSB move this topic forward in light of this issue? 4. Given that added vitamins and minerals need to be listed on ingredient panels, are consumers enabled enough to make educated purchasing decisions on fortified foods? If not, please explain.
- **OTA Survey Results:** **Essential**
- **OTA Responses to Subcommittee Questions:** Overall, we encourage NOSB and other organic stakeholders to take this Sunset Review opportunity to support the renewal of nutrient vitamins and minerals, as listed, and to urge NOP to continue with its rulemaking process and publish an annotation that is transparent, certifiable and enforceable.
 - The Organic Trade Association believes that we need an annotation that includes CFR references that connect to a clear list of specific vitamins and minerals that are essential. We also believe that revisiting the annotation at the NOSB level is a duplicative effort. USDA's resources are best spent on completing its rulemaking. This includes addressing the nutrients that were petitioned and reviewed by NOSB from 2011 - 2013.
 - The Organic Trade Association does not believe that a listing for synthetic vitamins and minerals precludes the use of non-synthetic vitamins or minerals when they are available and compliant with the regulations. OTA continues to favor and advocate for the use of natural and organic alternatives over the use of synthetic.

Peracetic acid — Allowed for use in wash and/or rinse water according to FDA limitations. Used as a sanitizers on food contact surfaces. §205.605(b) § Discussion Questions:

- **NOSB Subcommittee Questions:** Is this material still essential for production and handling of organic products?
- **OTA Survey Results:** **Essential**

Potassium citrate — Allowed as an ingredient or processing aid. Used as a chelating agent, buffering agent, nutrient supplement, and pH adjuster. §205.605(b)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Essential**

Potassium phosphate — Allowed as an ingredient or processing aid only in products labeled “made with organic (specific ingredients or food group(s)).” Used as a pH control in milk products, as a microbial nutrient (yeast food), and as a source of mineral potassium and/or phosphorus. §205.605(b)

- **NOSB Subcommittee Questions:** 1. Does industry still find the listing for potassium phosphate necessary? In what applications is this substance currently being used in products marketed as “made with organic”? 2. If applications are for nutritional supplementation only, is this substance redundant to the current Nutrient Vitamin and Mineral listing? If yes, should this listing be removed?
- **OTA Survey Results:** No responses were received.

Sodium acid pyrophosphate — Allowed as a leavening agent. §205.605(b)

- **NOSB Subcommittee Questions:** Is this material still essential for production and handling of organic products?
- **OTA Survey Results:** **Essential**

Sodium citrate — Allowed as an ingredient or processing aid. Used as an emulsifier in ice cream, cheese, and evaporated milk. Used as a buffer to control acidity and retain carbonation in beverages. §205.605(b)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Essential**

Tocopherols — Allowed as an ingredient or processing aid. Must be derived from vegetable oil when rosemary extracts are not a suitable alternative. Used as an antioxidant. §205.605(b)

- **NOSB Subcommittee Questions:** 1. Are there any additional ancillary substances not listed in the chart that should be considered (see meeting materials)? 2. Since the last sunset review, are new sources of non-synthetic tocopherols available that fulfill the needs of organic food processing?
- **OTA Survey Results:** **Essential**

Celery powder — Allowed as an ingredient or processing aid when organic forms are not commercially available. Used in a variety of processed meat products to provide “cured” meat attributes without using prohibited nitrites. §205.606(c)

- **NOSB Subcommittee Questions:** 1. Is non-organic celery powder still essential for the production of processed meats? 2. Compared with growing celery for vegetable production, is increased use of synthetic nitrogen fertilizers required to produce source plants with enough nitrate for celery powder production? 3. Since 2015, what progress has been made on the production of organic celery for powder production? 4. Are there strategies to produce organic celery powder that is standardized to consistently meet safety and other requirements of the meat processing industry? 5. If not enough organic celery is being produced to support the meat industry, why not? 6. Are there commercially available agriculturally produced alternatives to celery powder? What is your experience with them? Are they organic? Does their use vary by application? Are they more effective in one application compared to another? 7. What is the latest information on the human health risks of nitrate and nitrites present in processed meats from either synthetic or plant-based sources?
- **OTA Survey Results: Essential**
- **OTA Responses to Subcommittee Questions:** The Organic Trade Association supports the continued listing of celery powder on the National List due to the fact that it is an essential ingredient used in processed organic meat products, and an organic alternative is not commercially available. Summary responses are below (See OTA’s Written Comments for Full Text)
 - 1. Yes. Celery powder continues to be the only natural source of nitrate allowed as a curing agent in processed certified organic meat.
 - 2. The Organic Trade Association does not have this data. Regardless of the answer, we believe that the organic sector should be working toward developing an organic alternative that is consistent with organic principles. Our focus is on finding a solution that works in an organic production system, rather than gathering information on current conventional practices.
 - 3. In the fall of 2015, the Organic Trade Association in collaboration with The Organic Center (TOC) convened the “National List Innovation Working Group” consisting of members interested in investing in applied research to identify alternatives to materials currently on the National List including organic, natural, or more compatible synthetics. The first project (initiated by the Celery Powder Working Subgroup) was to find an organic alternative to non-organic celery powder. See the SPOTLIGHT in this NOSB Resource Booklet for more details on the accomplishments of this subgroup.
 - 4. Yes, innovative strategies are underway. However, more research is needed in order to adequately answer this question.
 - 5. There are other vegetables and minerals that contain natural nitrates including beets, Swiss chard, spinach and sea salt. Although each has its benefits and challenges, none is an identical equivalent to natural celery powder in quality, form and function.
 - 6. To the best of our knowledge, the source of the nitrate/nitrite (synthetic vs. plant-based) does not make a difference. We defer to the expert panel to answer this question completely.

Fish oil — Allowed as an ingredient or processing aid when organic forms are not commercially available. Must be stabilized with organic ingredients or only with ingredients on the National List. Used to increase the content of omega-3 fatty acids in a variety of food products. §205.606(e)

- **NOSB Subcommittee Questions:** 1. Is there a mandatory standard for fish oil purity with limits on contaminants, dioxins and PCBs for example? How is purity assessed? 2. How is industry controlling for the risk of contaminants such as heavy metals and PCBs? 3. Is the Voluntary Standard from the Council of Responsible Nutrition (CRN) for contaminant limits still in effect? 4. How can the annotation be modified to control for the noted conservation concerns?
- **OTA Survey Results:** **Essential**

Gelatin — Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a clarification or fining agent in teas and wine, as a stabilizer and thickener, and in capsules. §205.606(g)

- **NOSB Subcommittee Questions:** 1. Are there organic sources of collagen that preclude the listing of gelatin as a non-organically produced agricultural product allowed as ingredients in or on processed products labeled as 'organic'? 2. Are there any ancillary ingredients typically found in commercially available gelatin?
- **OTA Survey Results:** **Essential**

Orange pulp, dried — Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a moisture retention agent and fat substitute. §205.606(n)

- **NOSB Subcommittee Questions:** 1. Is there an organic supply of international orange pulp, dried? 2. Is there a domestic supply of organic orange pulp, dried? 3. Have manufacturers using this non-organic orange pulp in organic products tried to develop an organic orange pulp? 4. Please describe any barriers to the production of organic orange pulp? 5. Are there other organic agricultural products or materials on the National List that have the same function and could replace the non-organic orange pulp where it is currently used? 6. Are there any ancillary ingredients contained in dried organic pulp when sold commercially?
- **OTA Survey Results:** No responses were received.

Seaweed, Pacific Kombu — Allowed as an ingredient or processing aid when organic forms are not commercially available. Used as a thickening agent or as a base for broth. Provides a unique flavor profile. §205.606(q)

- **NOSB Subcommittee Questions:** 1. Are there any ancillary ingredients contained in Pacific Kombu seaweed when sold commercially? 2. Are there any organic seaweeds commercially available?
- **OTA Survey Results:** No responses were received.

Seaweed, Wakame — Allowed as an ingredient or processing aid when organic forms are not commercially available. Used in soups and salads. Provides a unique flavor profile. §205.606(u)

- **NOSB Subcommittee Questions:** 1. Are there any ancillary ingredients contained in Wakame seaweed when sold commercially? 2. Are there any organic seaweeds commercially available?
- **OTA Survey Results:** No responses were received.



SPOTLIGHT -

NATIONAL LIST INNOVATION WORKING GROUP: CELERY POWDER

BACKGROUND

Celery powder has been in use for over a decade as a “curing” agent in certain processed meat products, and was included on the National List in 2007 as an allowed minor non-organic ingredient because an organic alternative was not available. Celery powder contains natural forms of nitrate that are converted to nitrite when added to meat, which, in turn, functions as a curing agent for products such as organic ham, hot dogs and bacon. Additionally, “pre-converted” forms are used where an incubation with a nitrate-reducing bacterium produces celery powders that are high in nitrite. The use of celery powder eliminates the need for conventional purified nitrate and nitrite curing ingredients. The essential function of nitrate/nitrite in processed meats is most importantly related to food safety with antimicrobial properties versus *Clostridium botulinum* and *Listeria monocytogenes* that are very important for protection of public health. Additionally, shelf life is improved.

The original petition for celery powder foresaw no difficulty in the future production of an organic version. To date, however, a viable, functional alternative with an adequate level of nitrate grown in a manner consistent with the organic standards and organic principles has not been achieved. Several technical and production issues have proven to be barriers to producing a celery crop using organic production methods that can deliver adequate uptake of nitrates for conversion to nitrites. For example, some of the alternative varieties that achieve the necessary nitrate levels impart too strong of a flavor in the meat products and would not be acceptable to consumers. Other factors include harvest and post-harvest conditions and the time and distance between harvest and processing, and how those variables impact nitrate level retention. The organic meat market also continues to be relatively small.

The National Organic Standards Board (NOSB) renewed the listing of celery powder on the National List during the 2012 Sunset Review due to the continued lack of an organic alternative. During the 2017 Sunset Review cycle, NOSB discussed removing its allowance, stating that such action would push the organic sector to develop an organic alternative. Organic producers and handlers explained that such a decision would be premature given the lack of an organic alternative, the time and resources needed to develop an organic alternative that would meet the functional requirements of a curing agent, and the commercial demand. Prematurely removing celery powder from the National List would make the production of organic bacon and other cured organic meats impossible, and this, in turn, would have a devastating impact on an already struggling organic livestock sector and its associated supply chain.

FORMING A WORKING GROUP TO DEVELOP AN ORGANIC ALTERNATIVE

In the fall of 2015, the Organic Trade Association in collaboration with The Organic Center (TOC) convened the “National List Innovation Working Group” consisting of members interested in investing in applied research to identify alternatives to materials currently on the National List including organic, natural, or more compatible synthetics. The Working Group topics and participants vary, based on the needs and projects identified by the organic sector. Participants are investors in the development of alternatives, or by invitation of investors working in collaboration with public and private research institutions and extension personnel.

Developing an ORGANIC ALTERNATIVE TO CELERY POWDER

AN ORGANIC TRADE ASSOCIATION WORKING GROUP PROGRESS UPDATE



The first project (initiated by the Celery Powder Working Subgroup) was to find an organic alternative to non-organic celery powder. To begin to address the issues, the Working Group focused the first six months on establishing research partners, identifying funding opportunities, and working in collaboration with the University of Wisconsin on the submission of a proposal for an Organic Research and Extension Initiative (OREI) planning grant. The planning grant proposal, submitted in early March 2016 and awarded later that year, helped to develop the roadmap of integrated research and extension activities needed to adequately address and overcome production challenges. An additional proposal to Farmers Advocating for Organics (FAFO) was also awarded.

The money from the OREI planning grant was used to identify the needed partners, crops, data and research questions that, in turn, informed the full \$2 million OREI grant that was applied for on January 19, 2017, and again in 2018. It was also used to fund the national stakeholder meeting held at the EcoFarm conference in, Asilomar, CA, in 2017. The FAFO grant money funded initial varietal testing in organic celery crops and broader testing of production-scale organic celery harvested in fall 2016. Unfortunately, while both OREI funding proposals were rated highly, both were not accepted, slowing research progress down in 2018.

The Organic Center, in partnership with the University of Wisconsin, plans to submit an OREI proposal one last time. We will also be looking to other funding avenues and calling on industry to further invest in the development of an organic alternative to natural celery powder.

GOING FORWARD: A MODEL THAT BENEFITS ALL OF AGRICULTURE

Despite the setback in funding, the efforts continue, not only for celery powder but for solutions that could potentially benefit all of agriculture. The working group research project sets out to identify potential varieties of organic crops that would meet the chemical specification needed for curing, while being easily incorporated into current crop rotation systems. It will also identify potential management protocols that need to be developed to achieve target nitrate levels in the curing crop to produce the required shelf life, prevent bacteria in the cured meat, and produce the desired flavor, color and texture in food. The project also aims to identify crops that could act as an incentive for expanding organic acreage, given the economic opportunity to partner with contractors that produce curing agents for organic processed meat products. Additionally, the project is investigating potential challenges and pitfalls associated with the production of a high nitrate crop, such as environmental concerns for run-off and excess nutrient leaching.

Identifying solutions for the organic processed meat industry's need for a curing powder is extremely complex, and the timeline to develop an effective organic alternative does not happen overnight. It requires a very deliberate and well-researched road forward, it takes a multiregional, multi-stakeholder coordinated effort, it requires substantial funding, and it relies on consumer demand. Although the lack of funding has put the project behind schedule, we believe significant progress is being made, and that the commitment and organization of the Celery Powder Working Group and our research partners have presented a solid model on how to best carry out the process for developing alternatives to a National List material.

See Page 28 for A MODEL FOR DEVELOPING ALTERNATIVES.

ALLYL ISOTHIOCYANATE — PETITION (PROPOSAL)

BACKGROUND

Allyl isothiocyanate (AITC) has been petitioned by Isagro USA Inc. for use as a pre-plant fumigant. AITC is a volatile organic compound made by either solvent extraction from natural plant sources (such as mustard seed) or synthetic chemical procedures. It is a broad-spectrum soil fumigant used for the control of certain soil-borne diseases and pathogenic nematodes. This is the second petition that has been submitted by the petitioner for this material. The first petition was considered by the Crops Subcommittee in fall 2014. At that time, the subcommittee voted to prohibit the material due to concerns about its essentiality and compatibility with organic principles. That petition was withdrawn before it was considered by the full Board. The second petition, which is currently under review, further asserts that AITC offers organic growers the only effective management tool for soil-borne diseases and pathogenic nematodes at levels that are commercially relevant, and supports the phytosanitary certification process for organic fruit and vegetable nursery stock production. The petition was considered by the Board at the last meeting (fall 2018) but was sent back to the Crops Subcommittee for additional work. Several issues were raised as concerns because of the Technical Report for this material, and the petitioner provided responses to those concerns through a petition addendum. The Crops Subcommittee requested more time to understand the petitioner's responses and compare them with the technical information provided in the report.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted to reject the petition for AITC to be used as a soil fumigant. Due to the substance's broad-spectrum effects, the subcommittee determined that the material is not compatible with a system of sustainable agriculture. The broad-spectrum antimicrobial functionality is also cited to have adverse impacts to the environment such as beneficial soil microorganisms. The subcommittee also cited that AITC is not essential for organic crop production. Alternative natural substances are available such as biopesticides, and cultural practices such as crop rotation or use of mustard plant cover crops can enhance crop health without the need for AITC.

***SUBCOMMITTEE VOTE: Motion to add allyl isothiocyanate (AITC) at §205.601 -
Yes: 0 No: 7 Abstain: 0 Absent: 1 Recuse: 0***

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

AMMONIUM CITRATE – PETITION (PROPOSAL)

BACKGROUND

Ammonium citrate and ammonium glycinate have each been petitioned by Alpha Chelates for use in organic crop production. Ammonium citrate and ammonium glycinate are intended for use as chelating agents with inorganic metal micronutrients copper, iron, manganese, or zinc for high pH soils. Chelated micronutrients (“chelates”) are used to supply micronutrients not readily available to plants in deficient soils. Ammonium citrate and ammonium glycinate are not being petitioned to be applied to crops alone, but to serve as chelating agents in the formation of chelates.

These are the second petitions for each of these materials submitted by the petitioner. The first petitions (including several addendums) were considered by NOSB in fall 2016 at which time the Board voted unanimously not to allow these materials because of the availability of alternatives and the lack of information to justify their necessity. The new petitions were submitted on the premise that “the technology concerning chelating agents and micronutrient chelates has been significantly misunderstood by [the] NOSB”. A Technical Report was solicited in response to the new petitions in order to sort out the deceptively complex chemistry of chelated micronutrients, and to clarify the definitions around chelates and chelating agents.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted to reject the petition for synthetic ammonium citrate to be used as a chelating agent. The subcommittee cites the availability of alternative substances such as natural chelating agents that are excreted by plants and microorganisms or produced from decomposition of organic matter. Synthetic substances are already allowed on the National List that may be used in place of ammonium citrate, such as acids (to change soil pH and increase the water solubility of micronutrients) and lignosulfonates (which can form chelates with cationic micronutrients). The subcommittee also suggested that ammonium citrate may not be compatible with a system of sustainable agriculture because of its design for enhancing uptake of micronutrients, a process which naturally occurs in the soil.

***SUBCOMMITTEE VOTE: Motion to add ammonium citrate as petitioned at §205.601 -
Yes: 0 No: 7 Abstain: 0 Absent: 1 Recuse: 0***

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

AMMONIUM GLYCINATE – PETITION (PROPOSAL)

BACKGROUND

Same as Ammonium Citrate (see above)

NOSB SUBCOMMITTEE SUMMARY

Same as Ammonium Citrate (see above)

***SUBCOMMITTEE VOTE: Motion to add ammonium glycinate as petitioned at §205.601 -
Yes: 0 No: 7 Abstain: 0 Absent: 1 Recuse: 0***

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

CALCIUM ACETATE — PETITION (PROPOSAL)

BACKGROUND

Calcium acetate has been petitioned by Full Measure Industries LLC for use as a soil amendment, plant micronutrient, soil pH adjuster, and sunscald protectant. Synthetic calcium acetate is made from finely ground limestone or other natural calcium sources treated with acetic acid. The final product is applied as an aqueous mixture with calcium carbonate. Calcium acetate is more water soluble and more readily available to the plant than over natural forms of calcium (e.g. limestone). When used for sunscald protection, aqueous calcium acetate mixture is sprayed on top black plastic to lower soil temperatures or as a coating on greenhouses to lower inside temperatures.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee voted to reject the petition for synthetic calcium acetate to be used in organic crop production. The subcommittee determined that this material is not essential because of the availability of alternative allowed substances and management practices. These include already approved alternative substances for improving bioavailability of calcium sources in the soil, such as calcium chloride, chelated calcium products or compost, or to adjust soil pH, such as sodium carbonate or potassium bicarbonate. Shade cloth, overhead sprinklers, or clay-based sprays are alternative sunscald protectants. The subcommittee concluded that without compelling evidence that the currently available alternatives are not effective, this material is not essential to organic production.

SUBCOMMITTEE VOTE: Motion to add calcium acetate at §205.601 -
Yes: 0 No: 6 Abstain: 1 Absent: 1 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association has not taken a position on this proposal.

STRENGTHENING THE ORGANIC SEED GUIDANCE (PROPOSAL)

BACKGROUND

The current regulations require the use of organic seed and planting stock unless organic forms are not commercially available. The organic sector has been exploring ways to keep seeds used in organic production from being inadvertently contaminated with GMO content. One key way, as suggested by the Organic Trade Association and several other organic stakeholders, is to strengthen the organic seed use provisions in the rule and the related NOP Guidance 5029 for the use of organic seed. NOSB started soliciting public comment in 2016 on ways the organic seed guidance could and should be strengthened to achieve full compliance with the statements in the federal rule in §205.204(a). At the fall 2018 meeting, NOSB passed a recommendation to add the following language to §205.204, “Improvement in searching, sourcing and use of organic seed must be demonstrated every year with the goal of using only organic seed and planting stock.” NOSB also presented amendments to NOP Guidance 5029 at the fall 2018 meeting sent back to the subcommittee for further work in several areas.

NOSB SUBCOMMITTEE SUMMARY

The subcommittee proposed several improvements to the practices listed within the current NOP Guidance on Seeds, Annual Seedlings, and Planting Stock (NOP Guidance 5029) in an effort to address the concerns raised from public comments at the last meeting. Several changes that were presented at the last meeting that received negative public comment were removed from the current version of the proposal (such as the references to GMO contamination of seed, and burdensome recordkeeping requirements).

Notable proposed changes in the current proposal include (see meeting materials for full text):

- Add a statement to reiterate that non-organic seeds and planting stock must be documented as being produced without use of excluded methods.
- Includes more clarification for producer methods of trailing or searching for an “equivalent” organic variety or cultivar, such as conducting on-farm variety trials of organic seed/planting stock, or using catalog or website seed descriptions.
- Clarifies that vegetative crops (as with planting stock) from non-organic planting stock sources can be sold as organic only after 12 months of organic management.
- Adds a list of options for certifiers and operators to judge if seed searches were done in an effective manner, and provides the option to require more activities if the certifier feels the quality of the search could be improved.
- Adds a new section to address situations where seed or planting stock is sourced or mandated by the buyer of a contracted organic crops. In these cases, the producer must obtain sourcing information and documentation from the contracted buyer.
- Encourages certifiers to ask for corrective actions for producers that aren’t making sufficient progress towards greater use of organic seeds and planting stock, and provides some examples of scenarios that could result in a noncompliance.
- Encourages certifiers to review operator’s prevention measures for avoiding GMO contamination for seeds from at-risk crops grown by the operator.

SUBCOMMITTEE VOTE: Motion to accept the changes to the National Organic Program Guidance 5029 as described in the proposal - Yes: 6 No: 0 Abstain: 0 Absent: 2 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association is committed to the development of the organic seed and planting stock industry, and we are delighted that NOSB passed a recommendation at the fall 2018 meeting to amend the organic regulations at § 205.204 to require demonstrable improvement of organic seed usage over time. We also agree that NOP's existing Organic Seed, Annual Seedlings and Planting Stock Guidance (NOP 5029) needs to be revised to support this rule change and reflect the current state of the organic seed industry.

The Organic Trade Association largely supports the subcommittee's proposal, and we encourage the full Board to pass it at this meeting.

PAPER PLANT POTS AND OTHER CROP PRODUCTION AIDS – PETITION (DISCUSSION)

BACKGROUND

Paper planting pots have been petitioned by Small Farm Works for inclusion on the National List. Paper pots and other growing containers are used as a vessel for growing transplants intended to be planted directly in the ground. Nitten paper chain systems, which are the subject of the petition, are used to facilitate transplanting closely spaced crops such as onions, salad greens, herbs, and others crops. In addition to paper, the products are formulated with several adhesives. Newspapers and other recycled papers are already allowed as synthetic substances for use as mulch and as a compost feedstock. Certifiers have historically extended the allowance for paper to its use in transplant pots, even though paper isn't specifically on the National List for this use. This petition was submitted for NOSB to specifically address the use of paper as a production aid for transplants intended to be planted into soil. At the last meeting (fall 2018), NOSB presented a discussion document to solicit public comments on the necessity and environmental impact of the material and the availability of alternatives. NOSB is specifically concerned about the use of synthetic fibers in paper-based planting aids, and has requested a technical report to evaluate the types of synthetic fibers and the biodegradability of the synthetic fibers used in these types of products.

NOSB SUBCOMMITTEE SUMMARY

NOSB has expanded the scope of its review to include a variety of paper-based production aids including pots, seed tape, collars, and hot caps. The discussion document highlights NOSB's main concern about these materials, which is the use of synthetic fibers. While the NOSB awaits results of a technical report on this information, the following discussion questions are presented for stakeholder feedback.

Discussion Questions:

1. Are there other paper-based production aids that are not mentioned in this discussion document beyond mulch, compost feedstock, pots, seed tape, hot caps, or collars?
2. What synthetic fibers are used in paper-based crop production aids, what is the percentage of synthetic fiber in the paper-based product, and how long, if at all, does it take for the synthetic fiber to completely biodegrade?
3. Are the synthetic fibers used in paper as a crop production aid, also used in newspaper or recycled paper that is currently allowed on the National List?

SUBCOMMITTEE VOTE: Motion to accept the discussion document -
Yes: 6 No: 0 Abstain: 0 Absent: 2 Recuse: 0

ORGANIC TRADE ASSOCIATION'S POSITION

The Organic Trade Association continues to support the allowance of paper to be planted in the soil when used as a planting aid because paper is already allowed for equivalent uses (e.g., as mulch).

We support the decision by NOSB to expand the scope of review to be inclusive of generic products that are paper-based and used as planting or seeding aids.

2021 SUNSET REVIEWS (DISCUSSION)

BACKGROUND

This year (2019), NOSB will vote on whether to continue the allowance of several of the fertilizers, pest control products, livestock treatments, processing aids, and ingredients currently included on the National List of Allowed and Prohibited Substances to determine whether the substances should continue to be listed or should be removed from the list. These National List inputs will be reviewed and voted on by NOSB based on their Sunset timeline (5-year renewal date cycle), and may not be renewed if new information indicates these substances are incompatible with organic production, are not necessary, or are harmful to human health or the environment. The specific inputs included in this sunset cycle are listed below.

At the spring 2019 meeting, NOSB is accepting public comments on these inputs and has presented discussion questions for some of the topics. NOSB will use the information collected through the public comment period to inform the subcommittee proposals that are presented for a second public comment at the fall 2019 meeting. The full Board will vote at the fall 2019 meeting on whether to renew their allowance on the National List for another five years.

NOSB SUBCOMMITTEE SUMMARY & ORGANIC TRADE ASSOCIATION'S POSITION

The list below includes a description of material, questions raised by the NOSB Crops Subcommittee, and a summary of the Organic Trade Association Sunset Survey responses for the material.

Hydrogen peroxide — Allowed as an algicide, disinfectant, and sanitizer, including irrigation system cleaning systems. Also allowed for plant disease control. §205.601(a)(4); §205.601(i)(5)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** **Necessary**

Ammonium soaps — Allowed for use as a large animal repellent (e.g., deer), provided that there is no contact with soil or edible portion of crops. §205.601(d)

- **NOSB Subcommittee Questions:** None.
- **OTA Survey Results:** No responses were received.

Horticultural oils (Narrow range oils) — Allowed as an insecticide and for plant disease control. Used as dormant, suffocating, and summer oils. §205.601(e)(7); §205.601(i)(7)

- **NOSB Subcommittee Questions:** Are non-petroleum-based oils available and could they be substituted for petroleum-based oils?
- **OTA Survey Results:** **Necessary**

Pheromones — Allowed as insect management to confuse pests and prevent infestations. §205.601(f)

- **NOSB Subcommittee Questions:** 1. Have any health or environmental effects from pheromones been noted since the writing of the 2012 technical report? 2. Are there any formulations of pheromones that might cause concern in organic agricultural applications? 3. Are there any pheromones synthesized with excluded methods?
- **OTA Survey Results:** No responses were received.

Ferric phosphate — Allowed as slug or snail bait. §205.601(h)

- **NOSB Subcommittee Questions:** 1. What new findings have been reported since 2009 that would inform our understanding of the influence of ferric phosphate alone and ferric phosphate in combination with commonly used chelating agents on the soil micro and macro fauna with particular attention to earthworm populations? 2. To what extent is ferric phosphate used for slug and snail management in organic production? 3. How are the products formulated that are detailed in (2) above? 4. Since the July 26, 2012 technical review, have additional studies been conducted documenting the effects of fieldworker exposure to ferric phosphate bait handling including inhalation of dust resulting from field applications?
- **OTA Survey Results:** No responses were received.

Potassium bicarbonate — Allowed for plant disease control. §205.601(i)(9)

- **NOSB Subcommittee Questions:** 1. Have you used any of the many alternative materials or methods on your farm, and did they provide the desired result for disease control? 2. Is potassium bicarbonate still needed in your organic farming operation? If so, why?
- **OTA Survey Results:** No responses were received.

Magnesium sulfate — Allowed as a plant or soil amendment with a documented soil deficiency. §205.601(j)(6)

- **NOSB Subcommittee Questions:** 1. Is non-synthetic magnesium sulfate available in sufficient form and quantity? 2. The 2011 TR references non-synthetic dolomite as an alternative material and lists several OMRI-approved products containing it. It also states that it is not as effective as magnesium sulfate. Please describe any experience with non-synthetic dolomite products and their efficacy.
- **OTA Survey Results:** No responses were received.

Hydrogen chloride — Allowed for delinting cotton seed for planting. §205.601(n)

- **NOSB Subcommittee Questions:** 1. Is hydrogen chloride still used to delint seed in preparation for planting on organic farms? 2. Are hydrogen chloride cotton seed delinting methods still necessary for seed preparation and planting on organic cotton farms? 3. Are alternative methods that don't require synthetic acids being used and are they commercially available?
- **OTA Survey Results:** **Necessary**

Ash from manure burning — PROHIBITED in crop production. §205.602(a)

- **NOSB Subcommittee Questions:** Does ash from manure burning supply nutrients or other benefits that cannot be obtained from any other material?
- **OTA Survey Results:** No responses were received.

Sodium fluoaluminate — PROHIBITED in crop production. §205.602(g)

- **NOSB Subcommittee Questions:** Are there any reasons why the long-standing prohibition on using sodium fluoaluminate in organic production should be reconsidered by the NOSB?
- **OTA Survey Results:** No responses were received.



SPOTLIGHT

2019 NOSB OUTLOOK FOR ORGANIC PRODUCE

PRODUCE OUTLOOK

The spring 2019 NOSB Meeting Agenda contains many items that are relevant to the organic produce sector. These items are not just limited to the Crop Subcommittee! Use this list to identify all of the topics across all NOSB Subcommittees that are important to the production and handling of organic produce. Details on each item are provided within this NOSB Resource Booklet.



SUBCOMMITTEE	AGENDA ITEM	OUTLOOK
Crops	Strengthening organic seed use —Proposed amendments to NOP Guidance 5029.	NOSB will vote on the proposal at the April 2019 meeting.
Handling	Silver Dihydrogen Citrate —Petitioned for use as an antimicrobial processing aid for poultry carcasses and fruits and vegetables (excluding citrus and grapes for winemaking) and as a disinfectant/sanitizer for food contact surfaces and food processing equipment.	NOSB will vote on the proposal at the April 2019 meeting.
Crops	Allyl Isothiocyanate —Petitioned for use as a pre-plant soil fumigant to control certain soil-borne diseases and pathogenic nematodes.	NOSB will vote on the proposal at the April 2019 meeting.
Crops	Ammonium Citrate & Ammonium Glycinate —Petitioned for use as chelating agents with inorganic metal micronutrients in high pH soils.	NOSB will vote on the proposal at the April 2019 meeting.
Crops	Calcium Acetate —Petitioned for use as soil amendment, plant micronutrient, soil pH adjuster and sunscald protectant.	NOSB will vote on the proposal at the April 2019 meeting.
Crops	Paper Plant Pots and other production aids —Discussion document regarding a petition to use paper pots as transplanting aids intended to be planted directly into the ground.	NOSB will accept public comments at the April 2019 meeting. NOSB plans to present a proposal for vote at the October 2019 meeting.
Materials	Marine materials used as crop inputs —Discussion document about addressing environmental impact of harvesting seaweeds and other marine plants/algae for use as fertilizers and soil conditioners.	NOSB will accept public comments at the April 2019 meeting. NOSB plans to present a proposal for vote at the October 2019 meeting.



SUBCOMMITTEE	AGENDA ITEM	
Materials	Assessing Cleaning and Sanitation Materials used in Crops, Livestock and Handling-- Discussion document about a system for ensuring consistent reviews and to identify materials needed to fill potential gaps in crop production, livestock health, and food safety.	NOSB will accept public comments on these substances at the April 2019 meeting.
Materials	Genetic Integrity transparency of seed-- Discussion document related to a potential future proposal for transparency of GE contamination of field corn seed.	NOSB will accept public comments on these substances at the April 2019 meeting.
CAC	Oversight to deter fraud-- Discussion document related to improving the oversight control procedures used by NOP, certifiers and certified operations to verify organic integrity of imported organic products.	NOSB will accept public comments on these substances at the April 2019 meeting.
Crops	Horticultural oils (2021 Sunset Reviews)	<p>For all 2021 Sunset Reviews, NOSB will accept public comments on these substances at the April 2019 meeting.</p> <p>NOSB will vote on these substances at the October 2019 meeting.</p>
Crops	Pheromones (2021 Sunset Reviews)	
Crops	Ammonium soaps (2021 Sunset Reviews)	
Crops	Ferric phosphate (2021 Sunset Reviews)	
Crops	Potassium bicarbonate (2021 Sunset Reviews)	
Crops	Magnesium sulfate (2021 Sunset Reviews)	
Crops	Ash from manure burning (2021 Sunset Reviews)	
Crops	Sodium fluoaluminate (2021 Sunset Reviews)	
Handling; Crops	Hydrogen peroxide (2021 Sunset Reviews)	
Handling	Citric acid (2021 Sunset Reviews)	
Handling	Lactic acid (2021 Sunset Reviews)	
Handling	Peracetic acid (2021 Sunset Reviews)	



TELL US YOUR BIG IDEA TO GRO ORGANIC!

Weigh-in at OTA.com by April 30 to help us shape the governance for a long-term, coordinated, voluntary organic research, promotion, and education structure.

DYK:

GRO Organic is shorthand for Generate Results and Opportunity for Organic!

WE ARE READY TO GRO

GRO ORGANIC RESEARCH

GRO ORGANIC PROMOTION

GRO ORGANIC EDUCATION

Learning

what customers are hearing and how it affects their behavior

Launching

a national campaign to reduce consumer confusion about organic

Connecting

technical specialists with transitioning and existing organic farmers in every state

Researching

how organic is part of the solution to soil health and climate change

BY THE NUMBERS

69

stakeholders
invested,
and counting

\$1.4

Million
invested in
Year 1
programs

\$1½

Million
invested in
research
+ extension

\$1

Million
committed to
promotion

**Ready to count
yourself among
these leaders?
Invest now and
let's learn as we
GRO together!**

WHO ARE THE ORGANIC TRADE ASSOCIATION'S MEMBERS?

One of the Organic Trade Association's (OTA's) strongest assets as an organization is the diversity and breadth of its membership.

Unlike many trade associations, OTA is uniquely structured to include the full value chain for the organic industry, ensuring that all segments, from farm to marketplace, have a strong voice within the organization. In this way, it is possible to work together to catalyze solutions, form coalitions and collaborate, whether it be on issues before Congress and government agencies, or to strategize on strengthening the organic message and movement to the public.

OTA represents its members to government on sector needs, market development and promotion, and strong organic standards and regulations. Members also receive the latest information and quick answers on organic regulations and standards in the U.S. and around the world.

OTA's membership continues to grow, spurred by interest at all levels of the supply chain in the booming organic sector, and the need and desire to be a part of a network of engaged organic stakeholders. OTA now represents more than 9,500 businesses through direct membership and formal agreements with organic farmer-governed organizations that make up OTA's Farmers Advisory Council (FAC). These businesses cover every state in the union, from small organic producers to major growers, from local family-run organic operations to nationwide companies. All of OTA's direct members and FAC organizations are listed on [OTA.com](https://ota.com).

The Organic Trade Association's Board of Directors is democratically elected by the association's Trade members. Each Trade member company, regardless of size, has one vote. One of the Board seats is designated to a Farmer Board member.

HOW ARE POLICIES SET?

OTA Member Forums offer informal, ongoing conversation on issues of common interest, and help members network with peers, share their expertise, and discuss common challenges.

OTA Sector Councils offer a more formal avenue to build community among groups of members and to provide ongoing opportunities for networking, leadership development, and education. While Sector Councils do not act as policy-setting groups, they communicate sector issues, ideas, and concerns to OTA staff and Board.

OTA Task Forces, meanwhile, are time-bound, task-oriented, and outcome-focused groups charged with accomplishing a definite objective. Task forces can be convened by the Board, staff or members in order to recommend a course of action or accomplish a specific goal. Task forces provide transparent and inclusive opportunities for issue resolution and policy-setting, and are open to the membership at-large.

WHAT IS OTA'S COMMENT PROCESS?

The Organic Trade Association submits comments on behalf of its membership. Our positions and policies are primarily shaped through our task forces. In all cases, OTA's regulatory and legislative staff carry out an extensive process of membership engagement to capture how current issues and activities such as proposed rules or NOSB recommendations will impact certified farmers and handlers. Prior to submission of final comments, draft comments are distributed to membership at least a week in advance. Members have an opportunity to weigh in and shape any changes that may be needed prior to final submission. For a meaningful comment process under OTA's governance structure, a comment period needs at least 30 days.

Join the Fun! *Organic Reception*



Join National Organic Standards Board members and organic stakeholders from around the country for a networking reception.

The evening will honor the work of recently retired
WSU tree fruit researcher David Granatstein.

April 25, 2019 | 6pm to 8pm | Renaissance Hotel, Seattle

Presented by Tilth Alliance and WSDA Organic Program



ORGANIC TRADE ASSOCIATION HEADQUARTERS

444 N. Capitol St. NW, Suite 445A, Washington, DC 20001
(202) 403-8520 • OTA.com • info@ota.com • [@OrganicTrade](https://twitter.com/OrganicTrade)

ORGANIC TRADE ASSOCIATION LOCATIONS

Washington, DC • Brattleboro, VT • Santa Cruz, CA • Corvallis, OR

CONTACT THE ORGANIC TRADE ASSOCIATION

LAURA BATCHA

CEO / Executive Director
(202) 403-8512 • lbatcha@ota.com

JOHANNA MIRENDA

Farm Policy Director
(202) 812-7704 • jmirenda@ota.com

GWENDOLYN WYARD

Vice President, Regulatory and Technical Affairs
(503) 798-3294 • gwyard@ota.com

MAGGIE MCNEIL

Director of Media Relations
(202) 403-8514 • mmcneil@ota.com