



## NOSB MEETING RESOURCE BOOKLET

SPRING 2020 • APRIL 29-30 • VIRTUAL

Welcome to the spring 2020 National Organic Standards Board (NOSB) Meeting. The primary purpose of NOSB meetings is to provide an opportunity for organic stakeholders to give input on proposed NOSB recommendations and discussion items. The meetings also allow NOSB to receive updates from USDA's National Organic Program (NOP) on issues pertaining to organic agriculture. The meetings are open to the public.

In response to the COVID-19 pandemic, the spring 2020 NOSB Meeting is being held live online instead of in-person as originally scheduled. This will allow the Board to move forward with deliberations as scheduled in an open and public setting, without the need for travel.

### QUICK LINKS

- [NOSB Meeting Agenda](#) – schedule of webinar meeting times and order of events
- [NOSB Meeting Webpage](#) – official government website for the NOSB meeting; instructions for joining virtual events
- [NOSB Meeting Packet](#) – all proposals and discussion documents to be considered at the meeting
- [OTA's NOSB Meeting Resources Website](#) – helpful resources, summaries and links to OTA's full written comments
- [OTA's Twitter Feed](#) – follow along for live reporting during the meeting

### SCHEDULE OF EVENTS

<b>Public Comment Webinar Day 1: Tuesday, April 21 (Noon – 5:00 PM ET)</b> - <a href="#">Click here</a> to join webinar	
<b>Public Comment Webinar Day 2: Thursday April 23 (Noon – 5:00 PM ET)</b> - <a href="#">Click here</a> to join webinar	
<b>NOSB Public Meeting Day 1: Wednesday April 29 (11:00 AM – 4:00 PM ET)</b> - Instructions will be posted <a href="#">here</a> soon	
- 11:00 AM	Call to Order, Agenda Overview, Introductions Secretary's report NOSB report
- 11:45 AM	USDA/AMS/NOP update
- 12:30 PM	Compliance, Accreditation, & Certification Subcommittee
- 12:35 PM	Materials Subcommittee
- 1:00 PM	Lunch Break (offline)
- 2:00 PM	Crops Subcommittee
- 4:00 PM	Recess
<b>NOSB Public Meeting Day 2: Thursday April 30 (11:00 AM – 3:30PM ET)</b> - Instructions will be posted <a href="#">here</a> soon	
- 11:00 AM	Handling Subcommittee
- 1:00 PM	Lunch Break (offline)
- 2:00 PM	Livestock Subcommittee
- 3:00 PM	Work agendas/Materials update
- 3:15 PM	Other business and closing remarks
- 3:00 PM	Adjourn

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# CONTINUOUS IMPROVEMENT IN ORGANIC STANDARDS

The National Organic Standards Board (NOSB) has a long-standing legacy as the cornerstone of continuous improvement. These meetings are a valuable opportunity for public stakeholders to participate in shaping the organic standards. Although some recommendations may take years in the making, the passionate, opinionated and sometimes rowdy community of organic stakeholders manage to work together through the NOSB process to protect and strengthen the standards. When NOSB reaches consensus on an issue and passes a final recommendation, it is up to the U.S. Department of Agriculture (USDA) to implement the recommendations through formal rulemaking. Support from USDA's National Organic Program (NOP) is critical to advancing NOSB recommendations and ensuring uniform and robust standards. A healthy market for organic products requires a clear market distinction backed by a level playing field and a trusted, verified, and enforced claim.

## IMPROVING THE PUBLIC-PRIVATE PARTNERSHIP

When Congress created the National Organic Program (NOP) housed under USDA nearly 30 years ago, the industry envisioned a process by which public and private stakeholders would work together via the NOSB process to make recommendations to USDA on advancing and developing the organic standards. As the organic industry grew and matured and new innovations, agricultural production systems and technologies emerged along with rapidly changing consumer demands, the industry would be able to evolve the standards and ensure that the organic label would continuously improve.

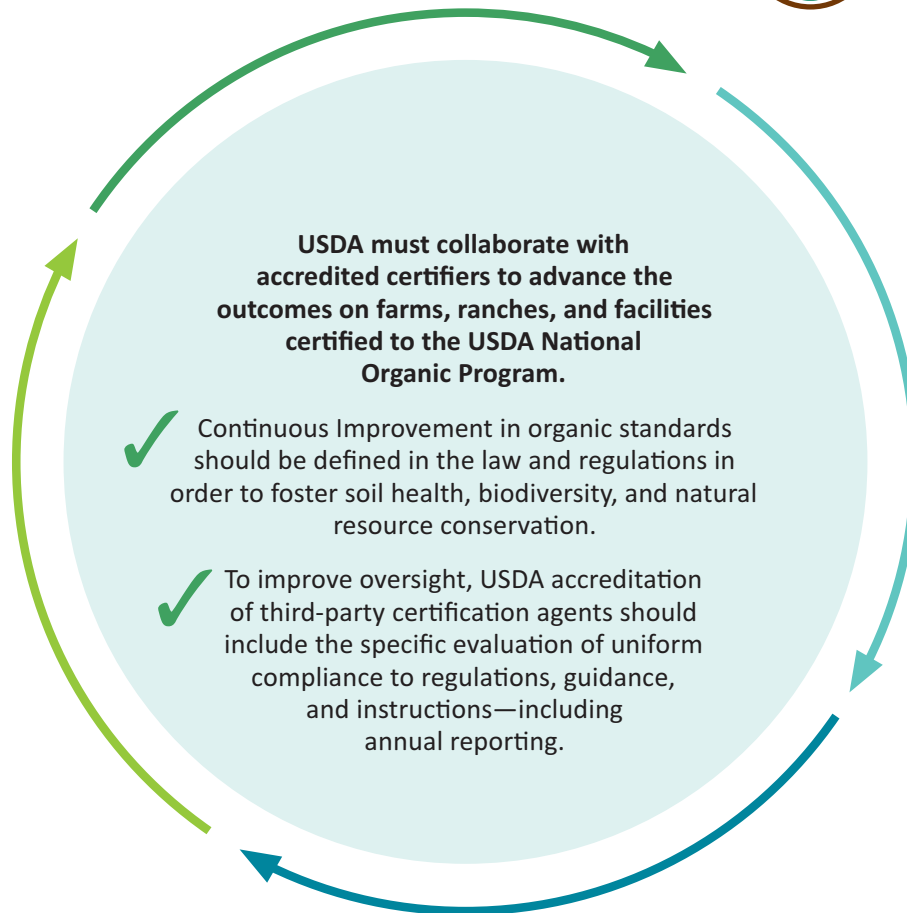
But in the past decade, the advancement and implementation of NOSB's recommendations by USDA have stalled. **In the past 10 years, the National Organic Standards Board has passed 20 final recommendations to advance the organic practice standards, yet USDA has not completed rulemaking on a single one of them.** These recommendations include animal welfare standards, strengthening organic seed usage and creating organic production standards for aquaculture, pet food, apiculture, personal care products and greenhouses. The failure of government to keep pace with consumers and the industry is harming and fragmenting the market. Inconsistent standards are becoming the status quo. Advancing organic standards is essential to a healthy market and credibility of the USDA Organic seal. The future of organic depends on fixing this partnership and getting USDA to work better for the organic community.

## ACCOUNTABILITY IN VOLUNTARY ORGANIC STANDARDS

The cumbersome and time-consuming federal rulemaking process is not built for a voluntary regulatory program like organic. A new framework must be set for advancing organic standards in a way that is different than mandatory regulations, and relies on NOSB's recommendations as representations of industry consensus and priority.

The Organic Trade Association is working with Congress on legislation to add **transparency and accountability** to the federal regulatory process for organic, and to require USDA to act in a timely and transparent manner when the industry comes together to make recommendations to advance the organic standards. For instance, USDA must have an **affirmative obligation** to advance NOSB recommendations to the Unified Regulatory Agenda for rulemaking within a published timeline for action. Removal from the Unified Agenda must require public and congressional notification with the rationale as to why the agency is not moving forward on widely supported recommendations. The **cost benefit analysis** for voluntary organic standards should also be redefined to account for the costs when standards are inconsistent or not robust enough to meet market demand. Continuous improvement is also a responsibility of certifiers and certified operations. USDA must collaborate with accredited certifiers to improve oversight and **focus on outcomes** related to standards implementation and protecting natural resources.

## CONTINUOUS IMPROVEMENT IS A BEDROCK OF ORGANIC



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

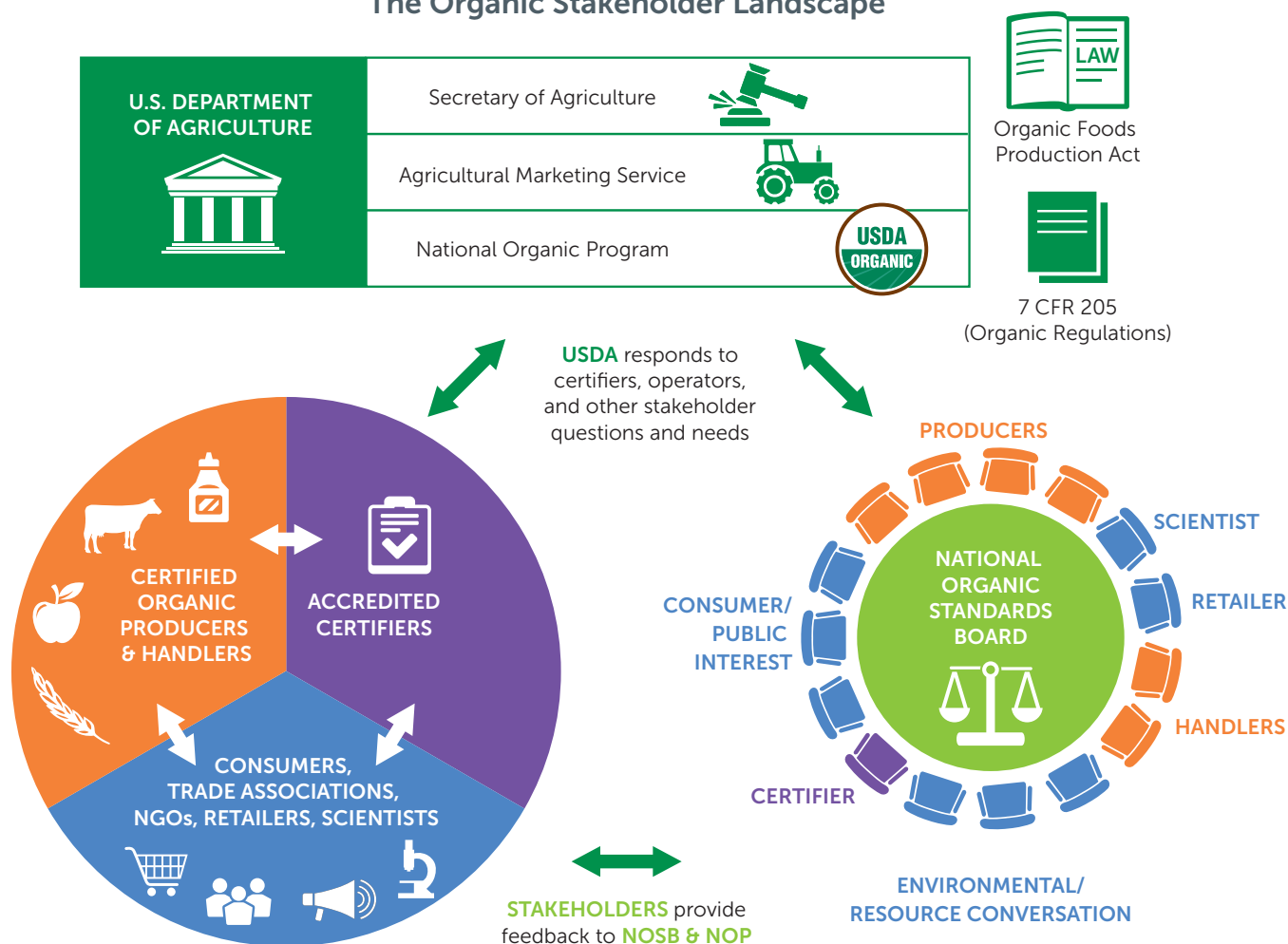
NOSB plays a critical role in the organic rulemaking process because it advises USDA on which production inputs should be allowed or prohibited in organic farming and processing. NOSB also makes recommendations on a wide variety of other standards issues, such as organic pet food standards, aquaculture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

## 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), Jesse Buie (MS), Emily Oakley (OK), Nate Powell-Palm (MT)

**Handlers/Processors:** Kim Huseman (CO), Jerry D-Amore (CA)

**Retailer:** Mindee Jeffery (MN)

**Scientist:** Dave Mortensen (NH)

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

**Environmentalists/Resource Conservationists:** Asa Bradman (CA), Rick Greenwood (CA), Wood Turner (CA)

**Accredited Certifying Agent:** Scott Rice (OR)

# THE RESTRICTED ORGANIC TOOLBOX

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?

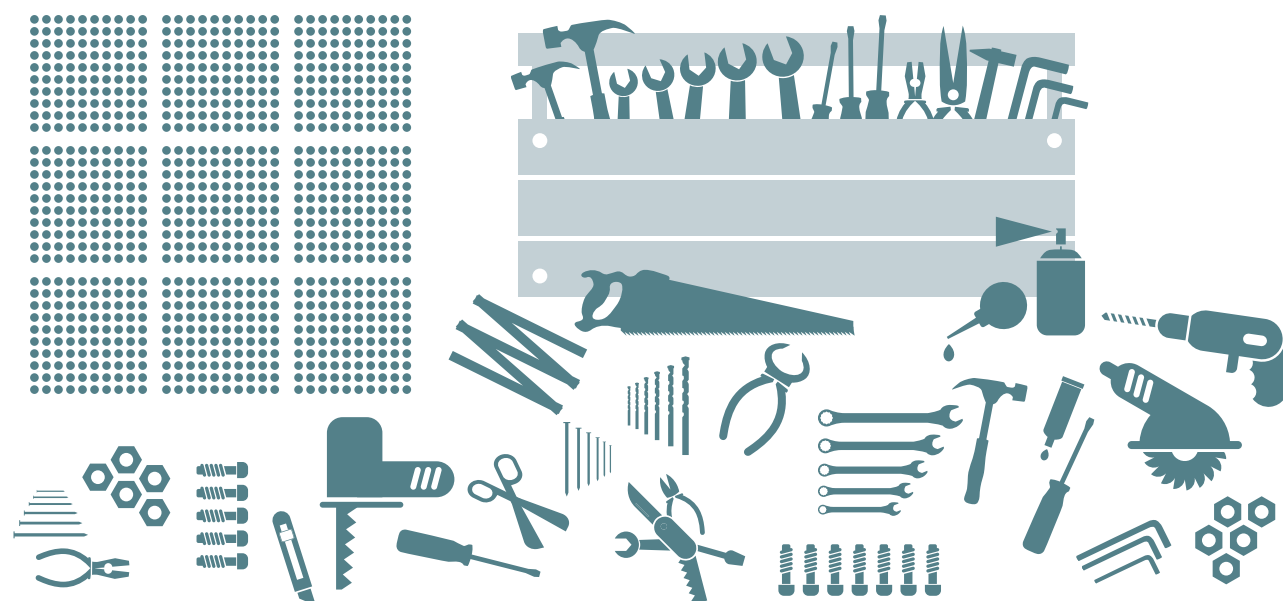
27 synthetic active pest control products allowed in organic crop production

.....



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."

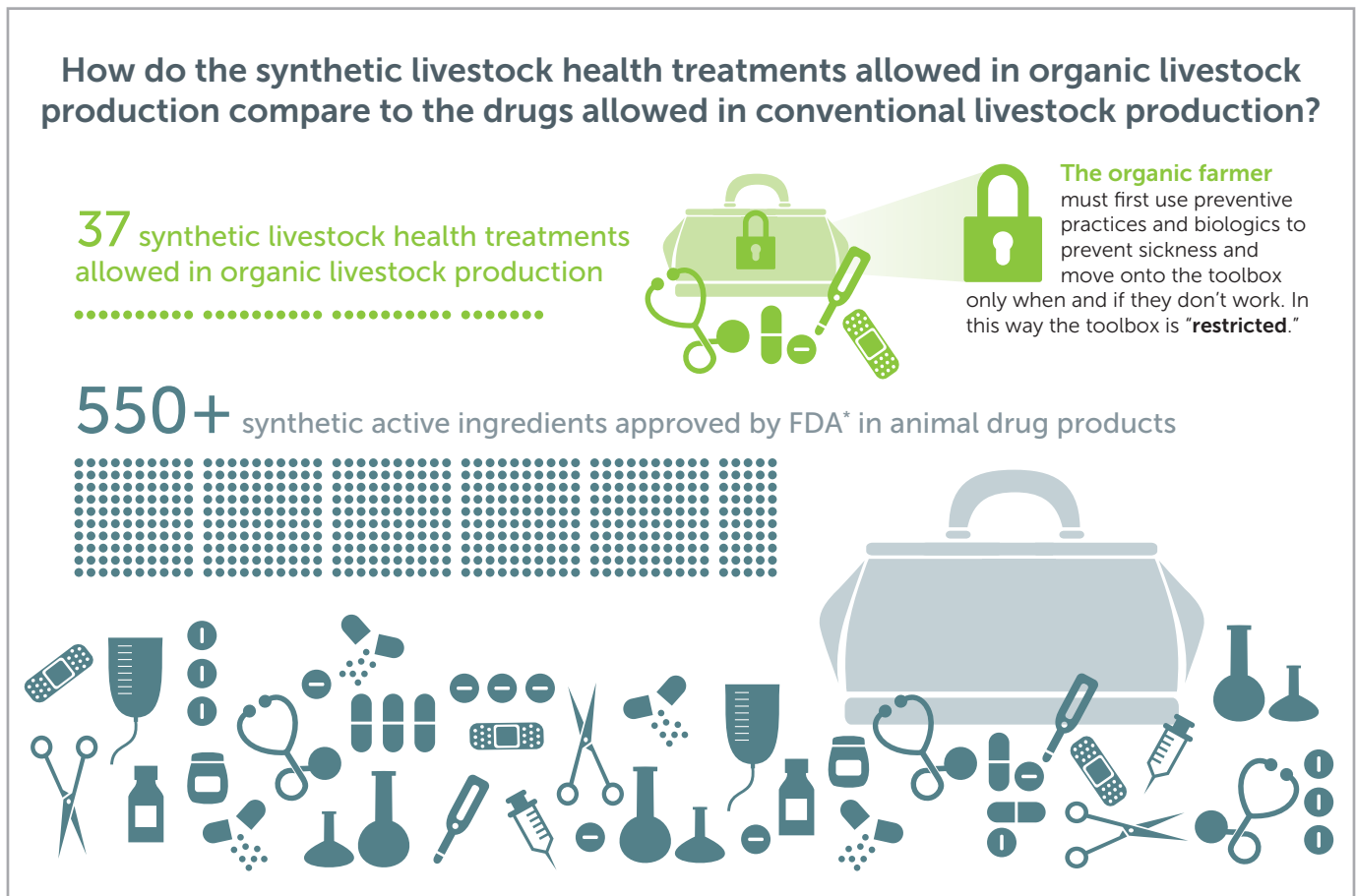
900+ synthetic active pesticide products registered for use in conventional farming by EPA\*



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

# THE RESTRICTED ORGANIC TOOLBOX

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.

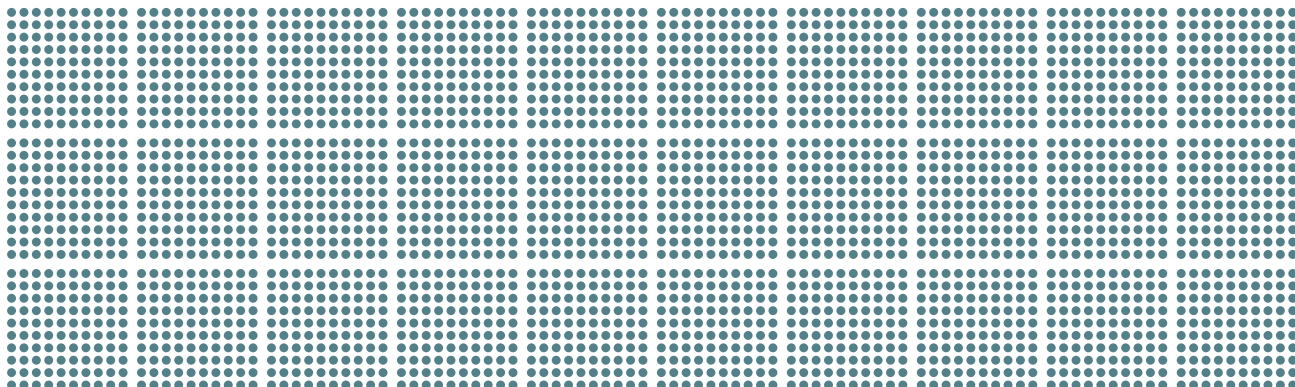
# THE RESTRICTED ORGANIC TOOLBOX

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.

# GET TO KNOW YOUR NATIONAL LIST

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.



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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.

# GET TO KNOW YOUR NATIONAL LIST

## 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.

# GET TO KNOW YOUR NATIONAL LIST

## 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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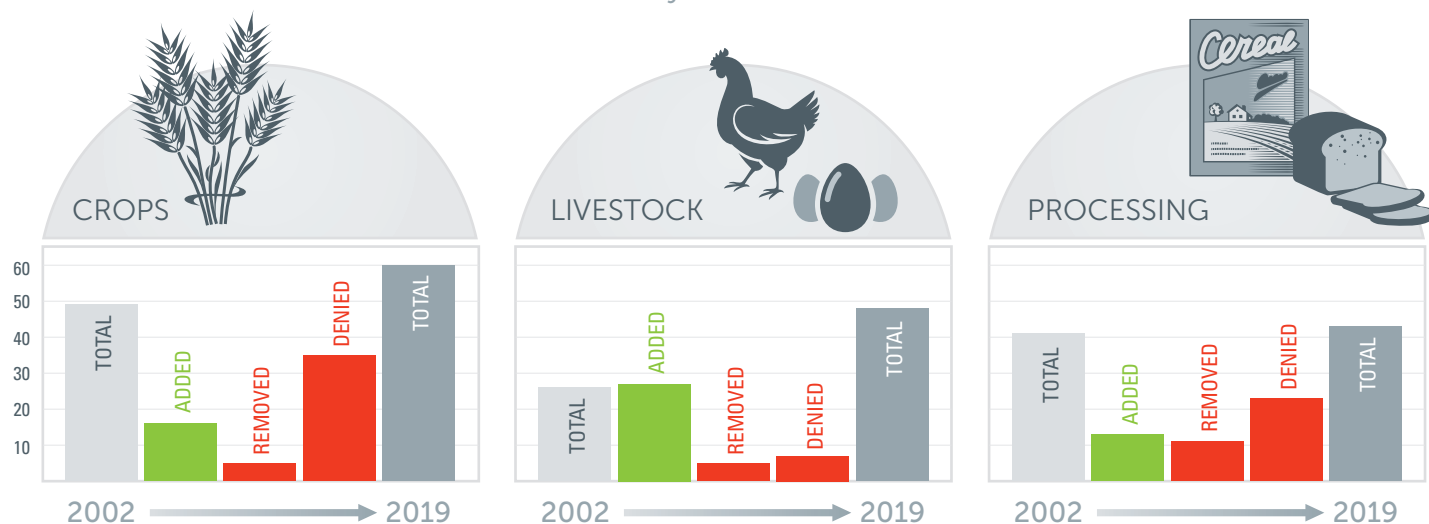
The synthetics added include a sanitizer in processing facilities used only for secondary and indirect food contact, a cheese wax used for organic mushroom production, a mite control product for organic honey production, and biodegradable mulch. Substances no longer allowed in organic products or denied 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.

# GET TO KNOW YOUR NATIONAL LIST

## 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

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## 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.

# GET TO KNOW YOUR NATIONAL LIST

## 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 unanimously passed this petition at the spring 2019 meeting. NOP will need to implement this decision through rulemaking.

## 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.

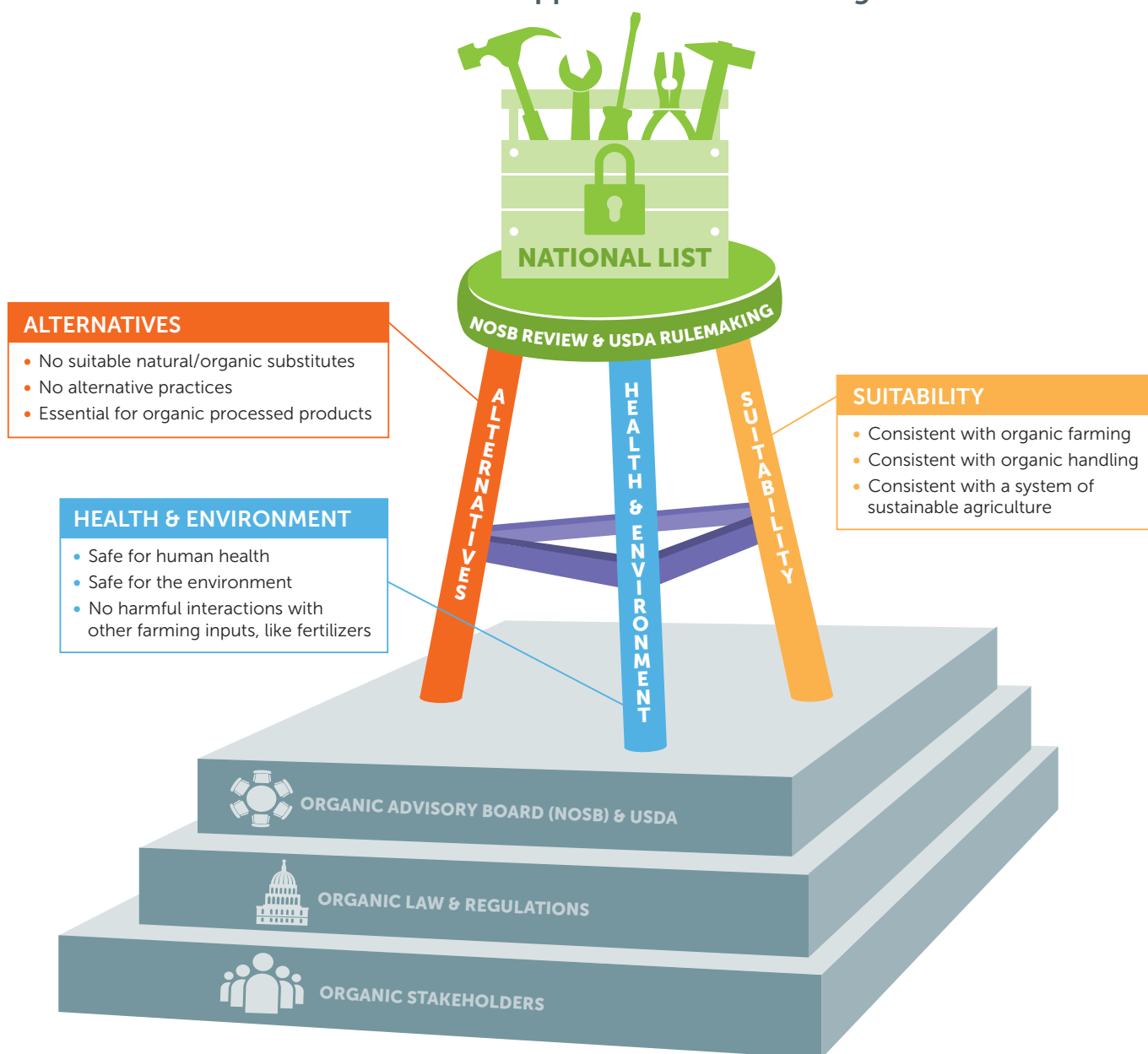
While this leg of the stool is arguably the most simple of the three, NOSB and organic stakeholders have long struggled with this criteria because of the terms “necessary,” “essential,” and “availability.” How much of something is needed to consider it available in the volume needed? What if a natural 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.

## 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.

# DEVELOPING ORGANIC AND 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.

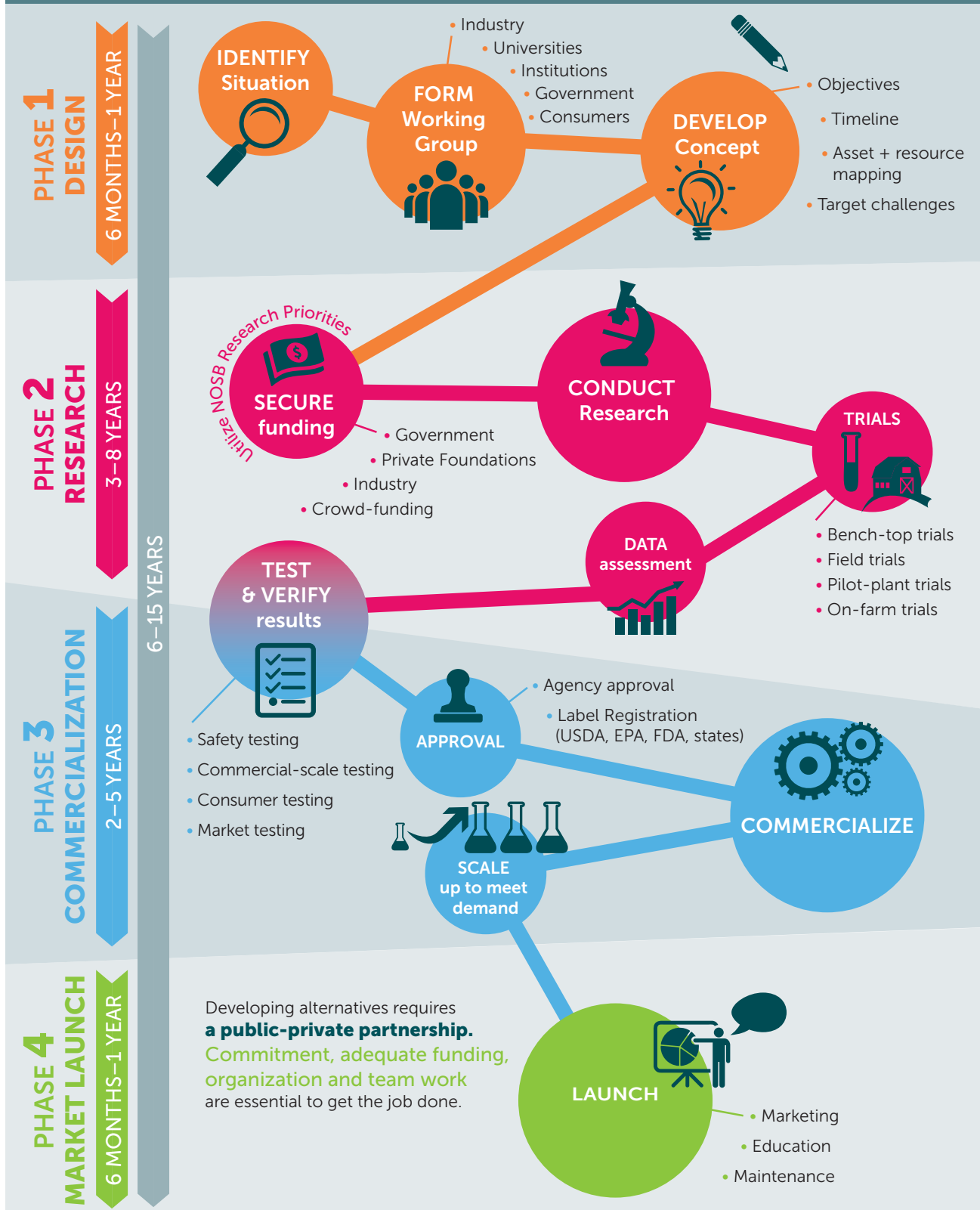
The research phase takes an additional two to five years at least to carry out bench-top trials, field trials, and/or pilot-plant trials as well as conduct data collection and assessment. Research trials then need to be scaled up to on-farm or commercial-scale testing. Results must be tested and verified,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



# DEVELOPING ORGANIC AND NATURAL ALTERNATIVES

## 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.

# SUNSET REVIEW

## 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.

## Paper-Based Crop Planting Aids (Proposal)

**BACKGROUND:** Paper planting pots were **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. NOP has authorized continued use of paper pots while NOSB completes its deliberation on this petition.

At the **fall 2018** meeting, NOSB Crops Subcommittee (CS) presented a discussion document to solicit public comments on the necessity and environmental impact of the material and the availability of alternatives. At the **spring 2019** meeting, CS presented a discussion document that expanded the scope of its review to include a variety of paper-based production aids including pots, seed tape, collars, and hot caps. Out of concern for the use of synthetic fibers in paper-based planting aids, CS requested a Technical Report to evaluate the types of synthetic fibers and the biodegradability of the synthetic fibers used in these types of products. The [Technical Report](#) clarified that synthetic fibers in paper pots and containers are also found in other paper materials currently allowed in organic production as mulches and compost feedstocks. At the **fall 2019** meeting, the CS presented a new discussion document to request comments on a proposed listing and annotation that specified limits on bio-based content, synthetic polymer content, and biodegradability. Commenters provided feedback on these items as well as considerations regarding the scope of review for other paper-based planting aids that are left to decompose in the field. In response to comments, CS has narrowed the use from a "production aid" to a "planting aid" to limit the use of this paper to that time of crop production, and to those aids that would decompose into the soil.

**NOSB PROPOSAL:** For the spring 2020 meeting, the Crops Subcommittee presents a [proposal](#) for a new definition and listing to be added to the NOP regulations allow the use of paper-based planting aids under certain conditions.

### Add to §205.2 (Terms Defined):

***Paper-based crop planting aid.*** A material that is comprised primarily of cellulose-based paper, including pots, seed tape, and collars that are placed in or on the soil and are intended to degrade into the soil. Contains no less than 85% biobased content with biobased content determined using ASTM D6866 (incorporated by reference; see §205.3).

### Add to §205.601 (National List):

***§205.601(o) Production Aids:*** Paper-based crop planting aids as defined in 205.2. Virgin or recycled paper without colored or glossy inks. If these paper-based crop planting aids are commercially available with 100% biobased fiber content, these must be used."

The proposed listing is informed by the Subcommittee's review of the petition, technical reviews, and public comment to confirm that the proposed use of paper complies with the National List criteria for not being harmful to the environment or human health, is necessary for production due to absence of natural alternatives, and is compatible with organic farming principles. The Subcommittee states this definition (no less than 85% bio-based content) meets the needs of current manufacturers of paper planting aids, while the encouraging the use of 100% bio-based content through the restrictive annotation.

**SUBCOMMITTEE MOTION:** Add to 205.2 Terms Defined: Paper-based crop planting aid. A material that is comprised primarily of cellulose-based paper, including pots, seed tape, and collars that are placed in or on the soil and are intended to degrade into the soil. Contains no less than 85% bio-based content with biobased content determined using ASTM D6866 (incorporated by reference; see §205.3). And to add to 205.601 (o) Production Aids: Paper-based crop planting aids as defined in 205.2. Virgin or recycled paper without colored or glossy inks. If these paper-based crop planting aids are commercially available with 100% bio-based fiber content, these must be used."

**SUBCOMMITTEE VOTE:** 6 Yes, 0 No, 1 Absent, 0 Abstain, 0 Recuse.

## OTA COMMENT SUMMARY: [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- OTA supports 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., mulch and compost feedstock).
- The use of paper-based planting aids is a necessary part of operations, from small to commercial scales of production, for which natural alternative products and management practices cannot achieve the equivalent level of efficiency, quality, and waste reduction.
- OTA supports the NOSB's proposed definition of paper-based crop planting aids to be inclusive of generic products that are paper-based and used as planting or seeding aids left to degrade in the soil (e.g., pots, chains, seed tape).
- We have questions about whether particular aspects of the proposed definition will be effective in achieving the NOSB's goal of allowing a range of paper-based crop planting aids (e.g., inclusivity of the 85% biobased restriction; alternatives of ASTM D6866 testing).

## Wild, Native Fish for Liquid Fish Products (Discussion Document)

**BACKGROUND:** In response to public comments expressing concerns about the environmental impact of harvesting wild, native fish for use in fertilizers, NOSB is pursuing this work agenda item to ensure that liquid fish and other fish-based fertilizer products used in organic production are not harmful to the environment. At the **spring 2018** meeting, NOSB posed several questions for public comment regarding the harvesting of fish species for use in liquid fish fertilizer products. NOSB also requested a [Technical Report](#) that was published in July 2019. The Technical Report found that wild, native fish are not harvested solely for fertilizer production.

**NOSB DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Crop Subcommittee presents a [discussion document](#) with the following questions for stakeholder feedback:

1. Given the results of the Technical Report indicating that there are no species of wild, native fish harvested exclusively for use in liquid fish fertilizer products, please provide feedback on any next steps the subcommittee should take on this issue.
2. The Technical Report outlines the wet reduction process for fish meal, oil, and solubles and states that solubles are a byproduct of meal (solid phase) and oil (liquid phase) production. Because of the multiple products derived, it did not consider fertilizers using them to be from fish harvested exclusively for fertilizer. Please comment.
3. Please provide any additional information you may have to help answer the Technical Report questions, particularly:
  - a) During the spring 2018 public meeting, the Crops Subcommittee asked if there are manufacturers using exclusively wild-caught, native fish to manufacture liquid fish fertilizers and learned that there are. Public testimony suggested that other non-synthetic fish-based fertilizers, such as fish meal, may also be derived from wild fish harvested solely for fertilizer production. Is any new information available about the impact of fish fertilizer manufacturing on the sustainability and health of wild, native fish stocks harvested solely for fertilizer production?
  - b) Do different methods, locations, and/or frequencies of harvest pose different levels of risk for wild, native stocks?
  - c) Please provide examples of non-regulatory/practice-based approaches (e.g. training, guidance) that should be considered.

## OTA COMMENT SUMMARY: [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- The Technical Report indicated that there are no species of wild, native fish harvested exclusively for use in liquid fish products, so additional actions by the Subcommittee appear to not be warranted. However, if the Subcommittee intends to continue to evaluate environmental impacts, NOSB should engage in cross-subcommittee discussions to calibrate decisions on environment impacts of marine-sourced raw materials across inputs and scopes.
- We provide [supplementary background information](#) on the NOSB's history of reviewing *16 topics* across *three subcommittees* related to the evaluation of environmental impacts of sourcing marine materials for use as inputs.

## Biodegradable Biobased Mulch Film (Discussion Document)

**BACKGROUND:** Biodegradable biobased mulch film (BBMF) is currently listed on the National List of allowed materials for crop production as a weed barrier. The listing at §205.601(b)(iii) reads, “*Biodegradable biobased mulch film as defined in §205.2. Must be produced without organisms or feedstock derived from excluded methods.*” The definition at §205.2 reads, “*A synthetic mulch film that meets the following criteria: (1) Meets the compostability specifications of one of the following standards: ASTM D6400, ASTM D6868, EN 13432, EN 14995, or ISO 17088 (all incorporated by reference; see §205.3); (2) Demonstrates at least 90% biodegradation absolute or relative to microcrystalline cellulose in less than two years, in soil, according to one of the following test methods: ISO 17556 or ASTM D5988 (both incorporated by reference; see §205.3); and (3) Must be biobased with content determined using ASTM D6866 (incorporated by reference; see §205.3).*”

The final rule to add BBMF to the National List was published September 30, 2014, in response to an NOSB Recommendation in fall 2012. Following the final rule, NOP published a Policy Memo in January 2015 to specify that BBMFs must not contain any non-biobased content. NOP rescinded the Policy Memo in October 2019, but the requirement for 100% biobased content remains in effect because it is articulated in the preamble to the final regulations adding BBMF to the National List.

The issue that NOSB is addressing at this meeting is the conflict between the NOP terms of allowance and the commercially available forms of BBMFs. Commercially available BBMFs contain around 20% biobased content, therefore there are no products on the market that meet the terms of the NOP allowance. Since this conflict arose, the topic of BBMF has returned to the NOSB work plan to seek resolution. A [Technical Report](#) was commissioned in 2016 to evaluate long-term biodegradability, and was inclusive due to limited research available on BBMF. NOSB has continued to track new research by commissioning an expert panel at the **spring 2016** NOSB Meeting. NOP also commissioned a [new report](#) from Michigan State University, which was made available in October 2019.

**NOSB DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Crop Subcommittee presents a [discussion document](#) with the following questions for stakeholder feedback:

1. Is the biodegradability of the mulch film the main issue, or should a future annotation include other issues?
2. Is there information on the toxicity or effect of all secondary metabolite residues as the product breaks down?
3. What is your opinion on mulch films that could be engineered to include macro- or micro-nutrients or pesticides that would then make the mulch film provide more benefits than just a mulch?
4. Is the risk/benefit of keeping plastic mulches out of landfills part of the Organic Food Production Act criteria NOSB should consider when reviewing this material?
5. Are there any studies that track the impact on livestock or wildlife (terrestrial, avian and aquatic) that might be attracted to consume pieces of the biodegradable plastic before it has completely degraded in two years or secondary metabolites that remain in the soil and are taken up by crops?

6. Should a future annotation try to include consideration that different soils and climates might not be able to meet the biodegradability standard set in the annotation, and how would certifiers be able to verify that the use of the material met the biodegradability standard?

**OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- OTA supports efforts being made to seek out biodegradable alternatives to plastic mulch. Current NOP regulations are not effective to meet NOSB's original goal of allowing Biodegradable Biobased Mulch Film as an alternative to plastic mulch. NOSB should continue to advance efforts to implement an effective regulatory allowance.

## Crops 2022 Sunset Review

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This year, NOSB will vote on whether to continue the allowance of several inputs 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 substances (listed below) are undergoing Sunset Review this year in advance of their expiration (sunset) date in 2022.

For the spring 2020 meeting, the Crops Subcommittee presents the [Sunset 2022 Crop Substances - Sunset Summary and Request for Comments](#). The information collected through this public comment period will inform a proposal and vote at the fall 2020 meeting on whether the substances should continue to be listed or should be removed from the list. These substances may not be renewed if new information indicates these substances are harmful to human health or the environment, not necessary or essential for production and processing, or incompatible with organic principles. Check out [OTA.com](#) for more background on the Sunset Review process.

- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

### Soap-based algicide/demossers (Sunset Review)

- Used to control algae and moss build-up on irrigation systems. §205.601(a)(7)

### Ammonium carbonate (Sunset Review)

- Used for bait in insect traps. §205.601(e)(1)
- [Additional information or questions requested by Subcommittee \(Spring 2020\):](#)
  1. To what extent is ammonium carbonate used as a bait for trapping and thereby managing fly and other insect pest populations?
  2. How effective is the practice for managing flies?
  3. To what extent is the population or behavior of beneficial insects altered by the ammonium carbonate bait?

### Insecticidal soaps (Sunset Review)

- Used for pest control. §205.601(e)(8)
- [Additional information or questions requested by Subcommittee \(Spring 2020\):](#)
  1. Is this substance still necessary for the organic farming community?

## Vitamin D3 (Sunset Review)

- Used for rodent control. §205.601(g)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is this product still needed as a rodenticide in organic crop production?
  2. Are there any non-synthetic alternatives to this material with the same functionality?
  3. Please provide information on the ancillary substances that may be part of vitamin D3 formulations.

## Aquatic plant extracts (Sunset Review)

- Used as a fertilizer and soil amendment. §205.601(j)(1)
- There have been extensive discussions with the Crops Subcommittee and the Materials Subcommittee about the environmental impact of harvesting marine materials for use in seaweed-based (kelp) fertilizer products. [See **Appendix B** for more background on Seaweed and Fish-based Inputs]
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Given the broad range of views on this topic, please describe if/or how aquatic plant extracts should be addressed during this Sunset Review.
  2. Are aquatic plant extracts still needed in organic crop production?
  3. The 2006 [Technical Report](#) states that aquatic plant extracts can be derived naturally by dehydrating seaweeds and grinding them into meal. Meal can be applied directly to the soil or diluted with water and used as a foliar spray or soil drench. Non-synthetic products also may be produced using mechanical disruption, or freezing, pulverization, and clarification of the thawed slurry. The relative efficacy of alkali-extracted versus non-alkali-extracted product has not been consistently demonstrated, perhaps partly as a result of a lack of understanding of the mechanism by which aquatic plant extracts exert any purported beneficial effect (lines 205-12). Do the non-synthetic alternatives to this material provide the same functionality?
- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA's COMMENTS\]](#)
  - Alkali-Extracted Aquatic Plant Extracts are necessary for organic crop production.
  - To evaluate environmental impacts, NOSB should engage in cross-subcommittee discussions to calibrate decisions on environmental impacts of marine-sourced raw materials across inputs and scopes.
  - We provide [supplementary background information](#) on the NOSB's history of reviewing *16 topics* across *three subcommittees* related to the evaluation of environmental impacts of sourcing marine materials for use as inputs.

## Lignin sulfonate (Sunset Review)

- Used as a chelating agent and dust suppressant. §205.601(j)(4)

## Sodium silicate (Sunset Review)

- Used as a floating agent in postharvest handling of tree fruit and fiber. §205.601(l)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there non-synthetic practices (mechanical, physical or chemical) for pear or other tree fruit handling during the packing process that would be a reasonable alternative to using sodium silicate?
  2. Is sodium silicate still used and should it remain on the National List?
  3. Is there any use of sodium silicate for organic fiber production?

## EPA List 4 Inerts of Minimal Concern (Sunset Review)

- Used as inactive ingredients or adjuvants formulated with allowed pesticide active ingredients. §205.601(m)
- In fall 2015, NOSB passed a [recommendation](#) to revise the listing of for inerts at §205.601(m) to remove the outdated reference to EPA List 4 and replace with a current reference to the EPA Safer Choice Program. This recommendation has not yet been implemented by NOP.
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Can you provide examples of product development that have been stifled by the lack of clarity on the regulation and approval of inert ingredients in organically approved pesticide formulations?
  2. Are there specific inert ingredients used in organically approved pesticide formulations that raise human health or environmental concerns?
  3. Are there any alternatives for updating this listing other than the review of each substance individually or adoption of the EPA Safer Choice Program?
  4. What would be the consequences of an NOSB recommendation to delist List 4 Inerts?
- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)
  - Inert ingredients are necessary for the manufacturing of pesticide products used by organic crop and livestock producers for pest control when preventive pest, weed, and disease management practices have failed.
  - To resolve longstanding outdated regulatory references, OTA urges NOP to prioritize the implementation of the 2015 NOSB Recommendation and modernize the system for review of inert ingredients in organic approved pesticide products. Pesticide product development and innovation is being stifled by the outdated regulatory references for inert ingredients.

## Arsenic (Sunset Review)

- Prohibited. §205.602(b)

## Strychnine (Sunset Review)

- Prohibited. §205.602(i)

## L-Malic Acid Reclassification (Discussion Document)

**BACKGROUND:** L-malic acid is currently listed on the National List at §205.605(a) as an allowed non-synthetic substance and has been approved for use in organic processing and handling since 2006. It is used as a pH adjuster, food acidulant, flavor enhancer and flavoring agent in a wide variety of beverages and food products. In response to public comments during the last Sunset Review in 2019, NOSB is evaluating whether L-malic acid has been incorrectly classified as a non-synthetic and whether the common manufacturing process is more appropriately classified as synthetic based on NOP Instruction on Classification of Materials. To inform its evaluation, NOSB commissioned a [Technical Report](#) that became available last year. The Technical Report indicates that the major commercial source of L-malic acid is manufactured through a two-step procedure involving enzymatic conversion of synthetic fumaric acid to L-malic acid by immobilized microbes.

**NOSB DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Handling Subcommittee presents a [discussion document](#) with the following questions for stakeholder feedback:

1. There still appears to be some disagreement whether the process described in this document results in a synthetic form of L-malic acid. Is the determination that the two-step process described in this document and in the 2019 Technical Report results in a synthetic form of L-malic acid accurate?
2. Would classification of L-malic acid when manufactured from synthetic fumaric acid as a synthetic substance affect the classification of other substances currently on 205.605(a)?
3. If the Subcommittee recommends an annotation that limits sources of fumaric acid used in the production of L-malic acid to non-petroleum sources, are there sufficient quantities to meet current demand in organic production?
4. How much time would be required for the industry to meet current and expected commercial demand of non-synthetic L-malic acid produced using a one-step fermentation process through biological methods such as microbial fermentation using *Aureobasidium pullulans* and *Penicillium viticola*?

**OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- The two-step production process that involves the synthesis of fumaric acid from petroleum products followed by enzymatic conversion of synthetic fumaric acid to L-malic acid renders it ***synthetic***. In contrast, the two-step process involving production of nonsynthetic fumaric acid by fermentation followed by enzymatic conversion to L-malic acid results in ***non-synthetic*** L-malic acid.
- There does not appear to be sufficient quantities of a non-synthetic L-malic acid available to meet current demand in organic production. One approach to consider is a recommendation to list L-malic acid on §205.605(b) (synthetic) with an annotation to require nonsynthetic forms when commercially available. This would maintain an allowance for the nonsynthetic form while also incentivizing its use.

## Ion Exchange Filtration (Discussion Document)

**BACKGROUND:** Ion exchange filtration is a food processing technique used to facilitate removal of impurities from a liquid using a chemical exchange process. The process uses a chemically charged solution within an ion-exchange resin or membrane to selectively remove unwanted molecules from the liquid. Based on NOP policy information in 2002, 2008, and 2010, ion exchange filtration has been allowed for use in organic processing provided that recharging materials are on the National List. Last year, the topic of ion exchange reappeared on NOP's radar as a result of a conflicting materials review decision among certifiers. NOP sent a [memo](#) to NOSB on August 27, 2019 requesting that NOSB provide recommendations related to ion exchange filtration for handling organic products to help NOP resolve the conflicting material review policies among certifiers. A new Technical Report has also been requested and is under development.

**NOSB DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Handling Subcommittee presents a [discussion document](#) seeking information about the various ways ion exchange filtration is used by organic operations, the substances used in these processes, potential alternatives to ion exchange technology, and recommendation(s) on whether it is appropriate to include these substances on the National List. The Handling Subcommittee presents the following discussion questions for stakeholder feedback:

1. What organic products are currently produced through the ion exchange process?
2. Are there other processing methods used to produce these products?
3. What materials are being used in the ion exchange process for current organic products? Please include resins, recharge materials, membranes and any other substances.
4. If you do not agree that there is chemical change to the products run through the ion exchange process, please provide rationale for this belief.

**OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- OTA supports the critical role of NOSB in this process and above all, we support transparency and consistency. Our comments include detailed technical and regulatory background information on ion exchange used in organic processing, to ensure complete information is available for NOSB consideration of whether ion exchange resins need to be on the National List.
- Ion exchange filtration has been allowed in USDA-certified organic processing since the organic regulations were first established. There is debate about whether all of the ion exchange materials (resins and recharge materials) need to be on the National List. Historically, *resins* have not needed to be on the National List, per NOP policy and their function as a food contact substance. The *recharging materials* however interact with organic product and could become part of the finished processed product. Certifiers already require the recharging materials to be on the National List. The focus is the regulatory status of the resins.
- For many organic products, there are no alternative processing methods that can achieve necessary purification to meet product specification and FDA requirements.

## Fish Oil (Discussion Document)

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**BACKGROUND:** Fish oil is currently on the National List at §205.606(e) as an agricultural substance allowed for use in organic processed foods only when the product is not commercially available in organic form. It is used as a nutritional supplement to increase the content of omega-3 fatty acids in a variety of food products. Because there are no NOP standards for organic aquaculture, non-organic forms are the only option for organic processors. During the last Sunset Review of fish oil in 2019, concerns were raised about the environmental impacts of harvesting fish directly for their oil. NOSB is exploring additional restrictions on the sourcing of fish oil to ensure its use is not harmful to the environment.

**NOSB DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Handling Subcommittee presents a [discussion document](#) that explores new restrictions on fish oil that prohibits the use of fish caught directly for the sole use of its oil, and prohibits fish oil from species and regions that are overfished or exploited. The restrictions are informed by classifications used the National Oceanic and Atmospheric Administration (NOAA) and United Nations Food and Agricultural Organization (FAO).

The Handling Subcommittee proposes the following new annotation (bold text is new):

§205.606 (e) Fish oil (Fatty acid CAS #'s: 10417-94-4, and 25167-62-8) - stabilized with organic ingredients or only with ingredients on the National List, §§205.605 and 205.606. **Sourced from fishing industry by-product only. Where within NOAA's jurisdiction, only from fish species and regions not listed on NOAA's current "Overfishing" or "Overfished" list. Where outside NOAA's jurisdiction, only from fish species and regions not listed on FAO's "Overexploited," "Depleted," or "Recovering".**

The Handling Subcommittee presents the following discussion questions for stakeholder feedback:

1. Are these requirements sufficient, insufficient or overly burdensome to mitigate environmental concerns from the overexploitation of fishing?
2. Are there conflicts between the FAO and NOAA classifications of fish stocks that would make using both lists difficult?
3. Are these requirements clear and enforceable?
4. What impacts would these requirements have on the availability of fish oil for organic products?

**OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

- As the Subcommittee continues to evaluate environmental impacts, NOSB should engage in cross-subcommittee discussions to calibrate decisions on environmental impacts of marine-sourced raw materials across inputs and scopes.
- We provide [supplementary background information](#) on the NOSB's history of reviewing *16 topics* across *three subcommittees* related to the evaluation of environmental impacts of sourcing marine materials for use as inputs.

## Handling 2022 Sunset Review

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This year, NOSB will vote on whether to continue the allowance of several inputs 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 substances (listed below) are undergoing Sunset Review this year in advance of their expiration (sunset) date in 2022.

For the spring 2020 meeting, the Handling Subcommittee presents the [Sunset 2022 Handling Substances - Sunset Summary and Request for Comments](#) on these inputs. The information collected through this public comment period will inform a proposal and vote at the fall 2020 meeting on whether the substances should continue to be listed or should be removed from the list. These substances may not be renewed if new information indicates these substances are harmful to human health or the environment, not necessary or essential for production and processing, or incompatible with organic principles. Check out [OTA.com](#) for more background on the Sunset Review process.

- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA's COMMENTS\]](#)

### **Kaolin (Sunset Review)**

- Allowed as an ingredient or processing aid. Used as an anti-caking agent and filtering agent. §205.605(a)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is this material essential to organic production?
  2. Are there possible alternative materials?

### **Sodium bicarbonate (Sunset Review)**

- Used as a leavening agent (baking soda); common ingredient in baking powder. §205.605(a)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is there any new information related to environmental concerns, human health, or use that would cause this substance to be considered for delisting?

### **Wood rosin (Sunset Review)**

- Used as a component of fruit wax, primarily for citrus. §205.605(a)
- Wood rosin is erroneously listed as “wood resin” on the National List.
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is this material essential to organic production?
  2. Are there possible alternative materials?

### **Ammonia bicarbonate (Sunset Review)**

- Used as a leavening agent. §205.605(b)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is there any new information related to environmental concerns, human health, or use that would cause this substance to be considered for delisting?
  2. Are there any other organic uses that, in the future, should be considered for listing beyond the annotation for leavening?

## **Ammonia carbonate (Sunset Review)**

- Used as a leavening agent. §205.605(b)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is there any new information related to environmental concerns, human health, or use that would cause this substance to be considered for delisting?
  2. Are there any other organic uses that, in the future, should be considered for listing beyond the annotation for leavening?

## **Calcium phosphates (Sunset Review)**

- Used as aluminum-free and reduced-sodium leavening agent, baking powder ingredient, and dough conditioner in a wide variety of baked goods. Monobasic calcium phosphate also used as firming agent in canned fruits and vegetables. Dibasic calcium phosphate also used in enriched flour, noodle products, breakfast cereals, and cheese products. Tribasic calcium phosphate also used as an anti-caking agent, buffering agent, and free-flow aid in finely powdered salt used in baking. §205.605(b)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is calcium phosphate still in use and in what applications?

## **Ozone (Sunset Review)**

- Used as an equipment and food disinfectant and in post-harvest treatment of produce to reduce/control microorganisms for food safety purposes. §205.605(b)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there any commercially available alternatives to ozone that warrant its removal from the National List?

## **Sodium hydroxide (Sunset Review)**

- Used in pretzel manufacturing as caustic bath. Used as processing aid for cocoa manufacturing and for removing bitterness from olives. Prohibited for use in lye peeling of fruits and vegetables. §205.605(b)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is this product still needed in the processing of organic products?
  2. Are there any non-synthetic alternatives to this material with the same functionality?

## **Carnauba wax (Sunset Review)**

- Used as a component of coatings for fruit, candy and nuts. Only permitted when organic forms are not commercially available. §205.606(a)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Since this material is available organically, does it need to remain on the National List?
  2. Are there barriers to obtaining organic carnauba wax in the needed form or quantity?

## Colors (Sunset Review)

- The following colors are individually listed §205.606(d) and only permitted when organic forms are not commercially available.
  - (1) Beet juice extract color—derived from *Beta vulgaris* L., except must not be produced from sugar beets.
  - (2) Beta-carotene extract color—derived from carrots (*Daucus carota* L.) or algae (*Dunaliella salina*).
  - (3) Black currant juice color—derived from *Ribes nigrum* L.
  - (4) Black/purple carrot juice color—derived from *Daucus carota* L.
  - (5) Blueberry juice color—derived from blueberries (*Vaccinium spp.*).
  - (6) Carrot juice color—derived from *Daucus carota* L.
  - (7) Cherry juice color—derived from *Prunus avium* (L.) L. or *Prunus cerasus* L.
  - (8) Chokeberry, aronia juice color—derived from *Aronia arbutifolia* (L.) Pers. or *Aronia melanocarpa* (Michx.) Elliott.
  - (9) Elderberry juice color—derived from *Sambucus nigra* L.
  - (10) Grape juice color—derived from *Vitis vinifera* L.
  - (11) Grape skin extract color—derived from *Vitis vinifera* L.
  - (12) Paprika color—derived from dried powder or vegetable oil extract of *Capsicum annuum* L.
  - (13) Pumpkin juice color—derived from *Cucurbita pepo* L. or *Cucurbita maxima* Duchesne.
  - (14) Purple sweet potato juice color—derived from *Ipomoea batatas* L. or *Solanum tuberosum* L.
  - (15) Red cabbage extract color—derived from *Brassica oleracea* L.
  - (16) Red radish extract color—derived from *Raphanus sativus* L.
  - (17) Saffron extract color—derived from *Crocus sativus* L.
  - (18) Turmeric extract color—derived from *Curcuma longa* L.
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Why types of organic products are currently using each color listed, and are powdered or liquid forms used?
  2. Going color by color, have you been able to source organic forms of each color - if not, what has been the barrier?
  3. Manufactures of colors: What colors can be readily produced organically today? For those that cannot, what are the barriers?
  4. On a color by color basis, are both powdered and liquid forms of each color available organically if both forms are needed by processors?
  5. Which colors are not available in sufficient organic quality or quantity and should be relisted?

## Glycerin (Sunset Review)

- Used as carrier, binder, humectant, and solvent for natural flavors and extracts. Only permitted when organic forms are not commercially available. §205.606(h)
- The manufacturing process of glycerin will determine if it can be classified as an agricultural substance and permitted in non-organic form under the listing at §205.606. The eligibility for glycerin to be certified organic depends on the organic certification status of the raw material and subsequent processing must be compliant with the NOP regulations and certified by an accredited certification agency.
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. What are the barriers to sourcing organic glycerin?
  2. Glycerin is often labeled as 99% pure. What is the 1%? Are ancillary substances present in glycerin? If so, what are they?

## **Inulin-oligofructose enriched (Sunset Review)**

- Used as a non-digestible carbohydrate to improve calcium bioavailability and absorption, to serve as soluble dietary fiber or a prebiotic ingredient, and to enhance the texture and consistency in a wide variety of foods. Only permitted when organic forms are not commercially available. §205.606(j)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is inulin-oligofructose, enriched still in use in certified organic products, and if so what types of products?
  2. Are alternative organic forms available?
  3. Is organic inulin + conventional FOS (already listed at §205.606) an acceptable alternative in product formulations? If not, why?

## **Kelp (Sunset Review)**

- Used as a thickener and dietary supplement. Only permitted when organic forms are not commercially available. §205.606(k)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there organic supplies of kelp available? If so, is there enough organic supply available to meet commercial demand?
  2. How is the use of organic kelp in livestock production different from uses for human consumption?
  3. Are there sufficient organic supplies of kelp available for human consumption?
  4. Is the availability of organic kelp enough to supply both livestock and human consumption demand in handling?
  5. What are the handling needs of kelp as a thickener and dietary supplement?

## **Orange shellac, unbleached (Sunset Review)**

- Used as a fruit and vegetable coating and confectionary glaze. Used as an ingredient in capsules and tablets. Only permitted when organic forms are not commercially available. §205.606(o)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Please provide any information on ancillary substances that may be part of organic shellac formulations used in organic products.
  2. Is this product still needed in the processing of organic products?
  3. What are the barriers to producing this agricultural product as organic?

## **Cornstarch, native (Sunset Review)**

- Used as thickener, formulation aid, bulking agent, dilutant, fluidifying agent, and moisture-adsorbing agent in a wide variety of foods. Only permitted when organic forms are not commercially available. §205.606(s)(1)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there adequate organic sources of all types of cornstarch for food processing and production so this material can be removed from §205.606?
  2. If not, please identify which types of cornstarch are not available organically and describe their use and the impact of removal from §205.606?
  3. If any types of essential cornstarch are not available organically, please describe barriers to producing this material and any steps to promote organically sourced product.
  4. Is there a risk of cornstarch derived from GMO corn contaminating materials used for producing organic products?

## **Sweet potato starch (Sunset Review)**

- Used for bean thread production to give organic processed foods such as soups and pot stickers the texture of authentic Asian cooking. Only permitted when organic forms are not commercially available. §205.606(s)(2)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Please provide more detail on the manufacturing steps to produce sweet potato starch.
  2. What organic products is this material being used in?
  3. Are there adequate sources of organic sweet potato starch to meet existing market demands?
  4. What are the barriers to obtaining organic sweet potato starch and how can these barriers be overcome?

## **Turkish bay leaves (Sunset Review)**

- Uses as an herb for flavor development. Only permitted when organic forms are not commercially available. §205.606(u)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. The Handling Subcommittee requests that the public provide comment regarding the current use of and commercial demand for Turkish bay leaves in organic products and provide comments on the impact that removing it from 205.606 would have on organic business and/or organic products.
  2. Has the industry made progress in its efforts to locate organic sources of whole and ground Turkish bay leaves? What specific efforts have been made and what degree of success has the industry had?
  3. Are there other ingredients with suitable flavor profiles that could be used in place of Turkish bay leaves, given adequate transition time for ingredient inventory and label depletion?
  4. In what organic products are non-organic Turkish bay leaves currently used, and what are the specific reasons for its necessity in these products?

## **Whey protein concentrate (Sunset Review)**

- Used as a protein source, fat replacer, and as a texturizer in a wide variety of dairy products, protein bars, and infant formulas. Only permitted when organic forms are not commercially available. §205.606(w)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there any forms of whey protein concentrate that are not available organically beyond what has been found in the NOP Organic Integrity Database?
  2. If yes, what are the barriers to producing that whey protein concentrate or other whey products in an organic form, since it appears there are many manufacturers of raw liquid whey from both cow and goat suppliers, and numerous manufacturers are currently certified and capable of making a variety of organic whey products?

## Fenbendazole (Discussion Document)

**BACKGROUND:** Fenbendazole is a parasiticide currently allowed in organic production for emergency treatment for dairy and breeder stock and fiber-bearing animals under the restrictions at §205.603(a)(23). A new **petition** has been submitted to expand its use in laying hens and replacement chickens intended to become laying hens. Birds that receive outdoor access and have contact with soil are more likely to come in contact with internal parasites. In poultry production, the substance is administered orally via drinking water and is effective in controlling internal parasites such as *A. galli* and *H. gallinarum*. If permitted in organic production, fenbendazole would only be allowed for emergency treatment when preventive management practices do not prevent infestation. A discussion document was presented at the **fall 2019** NOSB Meeting to solicit feedback on the necessity of the material, effectiveness of alternatives, and whether a withdrawal time is needed. NOSB has also requested a Technical Report that is currently under development.

**DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Livestock Subcommittee presents a [discussion document](#) with the following discussion questions for stakeholder feedback:

1. Is fenbendazole needed by organic poultry producers? If so, why?
2. Do currently allowed alternatives work to control internal parasites? At what level of effectiveness?
3. What would be some of the “emergency” events that would trigger use of this product? And how would producers determine those events?
4. Is there a concern with the 2.4 ppm residue of fenbendazole in eggs? Please submit information that supports this concern, or lack of concern.

**OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA’S COMMENTS\]](#)

- OTA submitted comments last fall responding to the same discussion questions presented at this meeting. We look forward to reviewing the forthcoming Technical Report.

## Livestock 2022 Sunset Review

This year, NOSB will vote on whether to continue the allowance of several inputs 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 substances (listed below) are undergoing Sunset Review this year in advance of their expiration (sunset) date in 2022.

For the spring 2020 meeting, the Livestock Subcommittee presents the [Sunset 2022 Livestock Substances - Sunset Summary and Request for Comments](#) on these inputs. The information collected through this public comment period will inform a proposal and vote at the fall 2020 meeting on whether the substances should continue to be listed or should be removed from the list. These substances may not be renewed if new information indicates these substances are harmful to human health or the environment, not necessary or essential for production and processing, or incompatible with organic principles. Check out [OTA.com](#) for more background on the Sunset Review process.

- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA’S COMMENTS\]](#)

## **Butorphanol (Sunset Review)**

- Used as a pre-operative treatment of pain before surgical procedures in livestock. §205.603(a)(5)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is butorphanol considered the preferred choice for its use at this time, or are there other options?
  2. Are there nonsynthetic materials that would serve the same purpose as butorphanol?

## **Flunixin (Sunset Review)**

- Used to treat inflammation and pyrexia. §205.603(a)(12)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Is flunixin, listed in §205.603(a), still deemed necessary for organic livestock production?
  2. Are there other non-synthetic materials that would serve the same purposes as flunixin?

## **Magnesium hydroxide (Sunset Review)**

- Used as an antacid and laxative. §205.603(a)(18)

## **Poloxalene (Sunset Review)**

- Used as an emergency bloat treatment. §205.603(a)(26)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are organic approaches to dealing with bloat (e.g., use of oils) sufficient to address this healthcare issue or is poloxalene an essential tool for organic livestock production?
  2. Is poloxalene consistent with the OFPA criteria and the organic regulations?

## **Formic Acid (Sunset Review)**

- Used to control Varroa mites in honeybee hives. §205.603(b)(3)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are there natural sources of formic acid that are commercially available to beekeepers for use in their hives?
  2. Are there other natural products that are effective in controlling varroa and tracheal mites in honeybees that would make formic acid no longer necessary in organic production?
  3. When formic acid is used in the hive as a miticide, would there be higher than the natural levels of formic acid in the propolis, royal jelly, or beeswax?

## **EPA List 4 Inerts of Minimal Concern (Sunset Review)**

- Used as inactive ingredients or adjuvants formulated with allowed pesticide active ingredients. §205.603(e)
- In fall 2015, NOSB passed a [recommendation](#) to revise the listing of for inerts at §205.601(m) to remove the outdated reference to EPA List 4 and replace with a current reference to EPA Safer Choice Program. This recommendation has not yet been implemented by NOP.

- Additional information or questions requested by Subcommittee (Spring 2020):
  1. How can the Safer Choice Program be used to evaluate inerts? How can the Board help facilitate this in moving forward?
  2. If the NOSB and NOP use the Safer Choice Program, would all inerts reviewed and approved by Safer Choice be allowed? Would only certain criteria established by Safer Choice or those criteria established by an MOU with the NOP be allowed?
  3. How should NOSB establish review criteria based on the Safer Choice Program while also ensuring it is consistent with OFPA criteria and the regulation?
  4. If Safer Choice is not the ideal path forward, or a formal relationship with EPA cannot be established, how should the Board proceed with addressing inerts?
  5. Should the Board focus on inerts of greatest toxicity? If so, how should the Board identify and prioritize these for review?
- **OTA COMMENT SUMMARY:** [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)

## **Excipients (Sunset Review)**

- Used as inactive ingredients formulated with allowed active medical treatment ingredients. Includes substances (1) Identified by FDA as Generally Recognized As Safe; (2) Approved by the FDA as a food additive; (3) Included in FDA review and approval of a New Animal Drug Application or New Drug Application; or (4) Approved by APHIS for use in veterinary biologics. §205.603(f)
- Additional information or questions requested by Subcommittee (Spring 2020):
  1. Are excipients listed in §205.603(f) still deemed necessary for organic livestock production?
  2. How are excipients currently being reviewed in livestock health products by the certifiers?
  3. Since the previous [Technical Report](#) and NOSB Subcommittee reviews, has there been any further research completed to document environmental or health issues that would justify removing excipients used in organic production?
  4. Are there any specific excipients that cause more concern to the public than others? If so, how should the review of those excipients be addressed separately?

## **Strychnine (Sunset Review)**

- Prohibited. §205.604(a)

## NOSB Research Priorities 2020 (Discussion Document)

**BACKGROUND:** Since adopting its Research Priorities Framework in 2012, NOSB has presented an annual list of research priorities for organic food and agriculture. The priorities are proposed by NOSB's Livestock, Crops, Handling, and Materials/GMO Subcommittees and are revisited and updated each year to ensure accurate reflection of existing need for new knowledge.

**DISCUSSION DOCUMENT:** For the spring 2020 meeting, the Materials Subcommittee presents a [discussion document](#) with the following research priorities for stakeholder feedback:

### Livestock

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

### Crops

1. Examination of decomposition rates, the effects of residues on soil biology, and the factors that affect the breakdown of biodegradable bio-based mulch film.
2. Conduct whole farm ecosystem service assessments to determine the economic, social, and environmental impact of farming systems choices. *(new in 2020)*
3. Organic no-till practices for diverse climates, crops, and soil types.
4. Develop cover cropping practices that come closer to meeting the annual fertility demands of commonly grown organic crops. *(new in 2020)*
5. Development of systems-based plant disease management strategies are needed to address existing and emerging plant disease threats.
6. The demand for organic nursery stock far exceeds the supply. Research is needed to identify the barriers to expanding this market, then develop and assess organic methods for meeting the growing demand for organically grown nursery stock. *(new in 2020)*
7. Strategies for the prevention, management, and control of invasive insects and weeds.
8. Factors impacting organic crop nutrition, and organic/conventional nutrition comparisons.
9. Side-by-side trials of organic synthetic materials, natural materials, and cultural methods, with a request for collaboration with the IR4 project.
10. Impartial evaluation of microbial inoculants, soil conditioners, and other amendments is needed as there is little objective evidence upon which to assess their contribution to soil health.
11. More research, extension, and education are needed to fully understand the relationship between on-farm biodiversity and pathogen presence and abundance. *(new in 2020)*
12. Elucidate practices that reduce greenhouse gas emissions and that contribute to farming systems resilience in the face of climate change. *(new in 2020)*

### Food Handling and Processing

1. Evaluation of alternatives to chlorine materials in processing: impact mitigation, best management practices, and potential for chlorine absorption by products.
2. Suitable alternatives to BPA (Bisphenol-A) for linings of cans used for various products.

### Coexistence with GE and Organic Crops

1. Outcome of genetically engineered (GMO/GE) material in organic compost.
2. Evaluation of public germplasm collections of at-risk crops for the presence of GE traits, and ways to mitigate small amounts of unwanted genetic material in breeding lines.
3. Develop then implement methods of assessing the genetic integrity of crops at risk in order to quantify the current state of the organic and conventionally produced non-GMO seed. *(new in 2020)*

# MATERIALS SUBCOMMITTEE

4. Techniques for preventing adventitious presence of GE material in organic crops, and evaluation of the effectiveness of current prevention strategies.
5. Testing for fraud by developing and implementing new technologies and practices.

## General

1. Examination of the factors influencing access to organically produced foods.
2. Production and yield barriers to transitioning to organic production to help growers successfully complete the transition.

## **OTA COMMENT SUMMARY: [\[CLICK HERE FOR FULL TEXT OF OTA'S COMMENTS\]](#)**

- Our comments were developed by The Organic Center, an independent non-profit 501(c)(3) research and education organization operating under the administrative auspices of the Organic Trade Association.
- We support the subcommittee's proposed 2020 Research Priorities and also suggest additional areas of research for prioritization: soil health; protection of organic farmers from chemical contaminants; comparisons of pesticide, antibiotic, and synthetic growth hormone residues in organic and conventional products; and alternatives to conventional celery powder for curing organic meat.