Appendix B
Beyond Pesticides

Sunset Report

Materials on the National List of Allowed and Prohibited Substances in Organic Production and Handling are subject to sunset review every five years. The meaning and implications of "sunset" in this context have been subject to different interpretations over time. These different interpretations have led to anomalies and disagreements about the meaning of current listings and need to be understood in a historical context.

Sunset and other principles

Limits on USDA authority to allow synthetics in organic

Why limits are needed—USDA vs. organic

The *Organic Foods Production Act* (OFPA) contains a number of provisions that recognize the antagonism of USDA to organic production at the time the act was passed as part of the Farm Bill in 1990. USDA had to that point failed to support organic agriculture, and there was also a concern that the agency would view "organic" as a specialty brand and would not support the principles upon which organic agriculture is based.

Foremost among these provisions are those establishing the National Organic Standards Board (NOSB) and its responsibilities and authorities. While the NOSB is organized in accordance with the *Federal Advisory Committee Act* and given responsibility for advising USDA on the development of the organic program, Congress gave the board additional authority over the allowed materials which limits the authority of the Secretary of Agriculture to add materials not recommended by the board. OFPA provides:

- In §6504 and §6517, a general rule for materials used in organic production—synthetic substances are prohibited unless specifically allowed, and nonsynthetic (natural) substances are permitted unless specifically prohibited.
- In §6517(d)(1), that these exceptions are included in the National List of approved and prohibited substances (National List), which must be based on recommendations of the NOSB.
- In §6517(d)(2), that no synthetic material may be allowed without approval of the NOSB.

There was a concern that, if left to itself, USDA would allow materials to be used that did not fit the ethos of organic production. The NOSB brings the voice of the diverse members of the organic community to "the development of standards for substances to be used in organic production and to advise the Secretary on any other aspects of the implementation" of OFPA. (This is made explicit in the Senate report accompanying the bill.)

Prehistory: pesticides

The structure of OFPA is based on the failure to adequately regulate allowed toxic materials under the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA). Organizations that had documented problems posed by pesticides observed that once registered, the presumption at

EPA was in favor of retaining the registration. Beyond Pesticides (then the National Coalition Against the Misuse of Pesticides) proposed a comprehensive reform of the pesticide law that included a five-year sunset of pesticides—requiring that a pesticide registration be cancelled unless the registrant could demonstrate anew that the pesticide met the registration standard. This meaning of "sunset" was (and is) accepted legal terminology in numerous statutes. Sunset was adopted into OFPA as a further protection against the intrusion of USDA into organic integrity.

Continuous improvement

Contrary to the then prevalent view of organic farmers as "backwards," "not commercially viable," or "unscientific," organic farmers have always been experimenters, seeking new practices consistent with organic principles—particularly those that could help eliminate dependence on the list of exceptions contained in the National List. This principle of "continuous improvement" provided another support for sunset. Inherent in the concept of continuous improvement was the desire, built into OFPA, that created incentives for investment in new practices and inputs/products that would make the allowed synthetic substance on the NL not necessary or not essential.

Meaning of sunset

The meaning of "sunset" is well-established in law. It was incorporated in and is foundational to OFPA to incentivize continuous improvement. *West's Encyclopedia of American Law* states that a sunset provision is a "statutory provision providing that a particular agency, benefit, or law will expire on a particular date, unless it is reauthorized by the legislature."[1] The concept of sunset was not new concept and has been incorporated into many state laws. Ballotpedia defines sunset as follows: "A **sunset provision**, **sunset clause**, or **sunset law** is a statute or provision of a statute establishing a date on which an agency, law, or benefit will expire without specific legislative action, usually in the form of formal reauthorization by Congress or a state legislature. Sunset provisions may be included within specific laws, while a number of states have implemented general sunset laws requiring regular review and reauthorization of government programs. "[2]

National List: NOSB vs. NOP (Organic vs. USDA)

Sunset vs. evergreen

Although NOP proposed the idea that sunset really means "evergreen"—that is, that a material stays on the National List, unless, through the petition process, it is removed, such a process has never been in use by the NOSB. The first sunset review was conducted in 2005, and it was preceded by much deliberation on the part of the NOSB.[3] In March 2005, the NOSB adopted National List Sunset Review processes and procedures as an internal working document for

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[1] *West's Encyclopedia of American Law, edition 2*. S.v. "Sunset clause." Retrieved October 18 2021 from https://legal-dictionary.thefreedictionary.com/Sunset+clause.

[2] https://ballotpedia.org/Sunset_provision.

[3] See, for example the transcript of the October 2004 meeting.

addition to the NOSB Policies and Procedures Manual.[4] This document states, "After each NOSB meeting, the NOP would begin rulemaking **on those substances that were voted for renewal**." [Emphasis added.] The 2005 recommendation does not state the form that the motion would take.

The first sunset

The first sunset occurred in 2005, following procedures adopted by the NOSB. Annotation changes were not permitted at sunset, mainly because at that time, almost all materials went through sunset review all at once, and it was judged to be too much work to evaluate new annotations at the same time. The NOSB and NOP also had a much smaller budget for reviewing materials in 2005.

The sunset voting in 2005 was grouped by subsection of the National List—for example, the NOSB voted on all materials listed under §205.601(a) in one motion. There were exceptions for those deferred because of concern about consistency with OFPA or for more information. The NOSB voted on deferred materials in 2006, spring and fall. There was no standard process about whether the motion was stated to list or delist. Colors on 605(a) occasioned a lot of discussion because they were never petitioned and never received a TAP review. Some even argued that their presence on the list was not valid, so there could not be a sunset vote. All (three) of those early motions to delist came to the board with substantial subcommittee support and passed.

There was a discussion of annotation at sunset at the Spring 2007 meeting. Former NOSB chair Jim Riddle said,

> Some comments on the Board policy manual changes that you are considering during this meeting. I do suggest that you vote separately on those changes, not as a package, and in particular ask that you set aside the one change that's being proposed to the sunset review policy, which says that there would be no changes to annotations during sunset.
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> I really think that that is contrary to language in OFPA, under the section, on the National List, 6517(b), content of list, says that the list shall contain an itemization by specific use or application of each synthetic substance permitted, or each natural substance prohibited. So, it's not just the substance, but it's also its use or itemization. That's its annotation. They both are open for review during sunset, and they need to be reviewed. It's not that you cannot act on one or the other, and I just urge you to, at the very least, table that, and seek some legal advice before you incorporate that in your policy manual.

The Fall 2008 and Fall 2010 meetings included some votes reaffirming sunset votes at the previous meeting because those votes had occurred before the public comment period closed.

[4] NOSB recommendation, March 18, 2005. National List Sunset Review Process.

Annotation at sunset

As it approached the first sunset, the NOSB discussed the question of whether the NOSB could recommend adding or changing annotations during the sunset process. The decision, noted above, not to allow changes in annotation at sunset, was ultimately incorporated into the Policy and Procedures Manual (PPM).

This was a topic that would arise repeatedly over time. As expressed by Mr. Riddle (above), the annotation is really part of the listing. In 2010, the board raised the issue as a way of resolving problems—instead taking a material off the list entirely, its uses could be restricted to those that meet the OFPA criteria of no adverse environmental and health effects, essentiality, and compatibility with organic principles and practices.

In March 2010, NOP issued a memorandum that included this:

> There is nothing in OFPA to prohibit the NOSB from making a recommendation to modify or amend an annotation during the sunset review process. However, the NOSB Policy Manual states in the sunset review procedures that amending or creating new annotations is not part of the sunset review process. The NOSB would have to amend their sunset review policy in order to recommend amending annotations during the sunset review process. No annotation can be changed without going through the rulemaking process.[5]

In response to this memo, the NOSB adopted a new policy that lays out the process of considering sunset materials and allows for adding or changing annotations.[6] However, for a change of annotation:

> The reviewing NOSB committee provides its recommendation to the full Board and the public no less than 60 days prior to the Board Meeting which would include the following:
> (i) Simple motion to remove, add, or amend a restricting or clarifying annotation (if applicable).
> (ii) Simple motion to renew the existing listing.

The reasoning was explained by Jay Feldman at the meeting:

> [T]his is intended to ensure that we don't inadvertently allow a sunset material to delist by virtue of inaction by the board. We do not want that to happen. We want a fail-safe provision, should the unlikely event occur—and we are told by NOP this is highly unlikely, because the OMB does not typically intervene on these sunset issues. But should that occur, there's a fail-safe provision in here that enables the NOSB to take

[5] NOP, 2010. Memorandum for the chairperson of the National Organic Standards Board (NOSB).
[6] NOSB, 2010. Recommendation Sunset Review Process. Adopted October 28, 2010.

> action, prior to that material being delisted. We figured out the time frame, and the final rule process would not go forward without the board opportunity to list, in the absence of an OMB decision or NOP clearance, OMB clearance, OGC clearance, or any other department or congressional review… If the clearance process required for an annotation during sunset is not able to be completed prior to the substance's expiration under the sunset process, the board has the authority to revisit the question of the sunset's removal prior to expiration.

Annotation at sunset was used successfully to add an expiration date to the listing for streptomycin in Spring 2011. The listing was changed, and subsequent efforts to remove the expiration date failed.

At the same Spring 2011 meeting, the NOSB voted to remove the annotation from the listing of sodium nitrate on §602, which would make it totally prohibited. The backup provision would have allowed NOP to relist sodium nitrate with the original annotation, but instead there ensued objections from OMB, and the NOP did nothing.

In 2012, the NOSB voted to make annotation changes to List 3 "inerts," carrageenan, and cellulose. In all three cases, NOP used the backup motion to avoid making a change to the list. All three were relisted. Clearly, the change in NOSB procedures had backfired.

Presumption of removal—2/3 vote

OFPA provides that a two thirds vote is decisive of any motion—which was designed to keep any one interest from controlling the board. However, this provision establishes an asymmetrical framework for voting, since the outcome depends on how the motion is phrased. The first sunset policy did not establish a framework for stating the motion, but sunset motions at the 2005 meeting were stated as motions to relist. Among the sunset votes deferred to 2006, all but milk replacers, bleached lecithin, and colors on §605(a) were expressed as motions to relist. Those three were voted on as motions to delist, and the vote was overwhelmingly in favor of delisting. The 2012 PPM said, "As a norm, a motion for a petitioned material or sunset review should always be presented in the affirmative," which appears to be the first time that the issue was clarified in a policy statement.

Another quirk of some of those early votes was that abstentions were counted with the majority. Thus, when streptomycin and tetracycline were up for sunset in 2006, the vote for relisting was 7 yes, 4 no, 1 abstain, and 2 absent, which would have resulted in a failure to relist under then current vote counting procedures, but since the one abstention was added to the 7 in favor of relisting, the two-thirds threshold was reached.

NOP refusal to carry out NOSB recommendations/invalid listing

At the same meeting in 2011, the NOSB voted to change the annotation of sodium nitrate on §602 by removing the language allowing use up to 20% of the crop's total nitrogen requirement. NOP did not address sodium nitrate in the same rulemaking as other sunsets,

promising later action. In spite of Jenny Tucker's statement at the Fall 2021 NOSB meeting that it was recognized by NOP at the time that based on the number of people using sodium nitrate, that it was known that it would have a significant economic impact that could prevent the listing as voted, at the Spring 2013 NOSB meeting, Miles McEvoy said, "We have a sodium nitrate proposed rule that will be out this year. That's past due, as you all know. The sodium nitrate sunsetted or expired in October of last year, and so we're behind on that particular rulemaking docket." Mr. McEvoy stated in Spring 2014 that the sodium nitrate was still "in progress." In Spring 2015, Mr. McEvoy said,

> Another topic that we get a lot of questions about is around sodium nitrate, which, if you look at 7 CFR 205.602, sodium nitrate is on the list of prohibited, nonsynthetic materials list. So, AMS has not renewed sodium nitrate on 205.602. That is one of the requirements under the sunset provision, is that the NOSB reviews and the Secretary renews substances. But, for sodium nitrate, we have not been successful at completing our renewal of sodium nitrate on the prohibited natural list. So, the listing is invalid, and it is no longer enforceable.
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> But what we say in our September 11th, 2012 notice, that any use of sodium nitrate must meet the soil fertility and crop nutrient standard and the natural resource standard. So, we are in the process of moving that September 11th, 2012 notice into the Program Handbook. We had envisioned, when we put out that notice in September of 2012, that this would be a very short period of time when this listing was invalid, but we have been unsuccessful at completing that process on sodium nitrate. So, that September of 2012 notice is kind of the current status of sodium nitrate. We do plan to address this in the future, but that is the current status of sodium nitrate.

And in Fall 2015, Mr. McEvoy acknowledged, "And we do have one outstanding substance review substance that we have not addressed and that is sodium nitrate, which is still an outstanding item that the program needs to resolve." In Spring 2016, he said, "There is an outstanding issue of sodium nitrate." In Fall 2016, Mr. McEvoy said, "[W]e do have a plan to address sodium nitrate for 2017." Then, for some time, NOP stopped talking about sodium nitrate. In Fall 2018, Paul Lewis of the program said in response to a question, "The sodium nitrate issue is a complicated issue. We've had conversation internally in the department about the issue overall, but there's really no movement on the issue at this time. That's really where we are on this issue." Then there was no more from NOP until Spring 2020, when Dr. Tucker said, "So, sodium nitrate is not currently on the regulatory agenda."

Thus, we have an "invalid listing" for sodium nitrate because NOP has not been able to act.

As mentioned above, the 2010 change in sunset policy that allowed annotations provided for a backup vote to give NOP time to make the regulatory change (and hence avoid inadvertently dropping the material from the National List completely). The first such vote added an expiration date to streptomycin, which was added to the regulations. Subsequently, NOP used

the backup motion to avoid changing the annotations to List 3 “inerts,” carrageenan, and cellulose. The Federal Register notice for the proposed rule says:[7]

> At its November 2011 and May 2012 meetings, the NOSB addressed multiple National List exemptions and a prohibition under the 2013 Sunset review. The NOSB recommended that the Secretary: (1) Renew multiple exemptions and one prohibition without change, (2) remove an exemption for one synthetic substance, tartaric acid, and (3) amend the exemptions for two synthetic substances, EPA List 3—Inerts of unknown toxicity and cellulose, and one nonsynthetic substance, carrageenan. In accordance with NOSB's published policies and procedures, it also issued a second round of recommendations to renew the existing listings for EPA List 3—Inerts of unknown toxicity, cellulose, and carrageenan without change. These second recommendations authorize the Secretary to renew these three listings “as is” considering the expiration date of November 3, 2013.
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> Because the NOSB's sole justification for restricting the allowance of carrageenan was on the basis of food safety concerns, despite the fact that FDA regulations provide for its use as a safe food additive when used in accordance with 21 CFR 172.5, 21 CFR 172.620 and 21 CFR 172.626, AMS is renewing carrageenan as codified based on the NOSB's second recommendation. Based on concern over the impact of changing the annotation for cellulose, AMS is renewing the listing for cellulose as codified based on the NOSB's second recommendation. For EPA List 3—Inerts of unknown toxicity, AMS is concerned that including an expiration date as part of its annotation during the Sunset review would complicate the NOSB's established inerts review process. Therefore, AMS is renewing the listing for EPA List 3—Inerts of unknown toxicity as codified based on the NOSB's second recommendation. In summary, this rule proposes to renew multiple listings without change and remove one listing (tartaric acid—made from malic acid).
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> Under the authority of OFPA, the National List can be amended by the Secretary based on proposed amendments developed by the NOSB. Since established, AMS has published multiple amendments to the National List beginning on October 31, 2003 (68 FR 61987). AMS published the most recent amendment to the National List on September 27, 2012 (77 FR 59287).

The final rule on these states further:[8]

> As stated in the proposed rule, the NOSB provided AMS with two recommendations for each of the following three substances—EPA List 3 Inerts, carrageenan, and cellulose. The NOSB provided the two recommendations based on the “Sunset Review Process” section of the NOSB's Policy and Procedures Manual. The first NOSB Sunset

[7] USDA, 2013. https://www.regulations.gov/document/AMS-NOP-11-0003-0029.
[8] USDA, 2013. Final rule. https://www.regulations.gov/document/AMS-NOP-11-0003-3193.

recommendation for each of these substances recommended new restrictions on their allowance in organic production or handling as follows:

a. EPA List 3 Inerts: amend the current listing and also include an expiration date of October 21, 2017, after which these substances could not be used;

b. carrageenan: (1) Indicate specific allowed forms of carrageenan by Chemical Abstracts Service (CAS) number; and (2) prohibit its use in organic infant formula; and

c. cellulose: prohibit the microcrystalline form of this substance by specifying the forms that are allowed.

The second NOSB recommendation for each substance recommended to renew the existing listings as codified. Based on our review, AMS proposed to implement the NOSB's second recommendations to renew the existing listings instead of adding new restrictions on these three substances. For this reason, over 2,400 comments requested the withdrawal of the proposed rule. The commenter's reasons for this request are described below in conjunction with AMS' response.

Numerous comments asserted that the NOSB's second recommendations to renew EPA List 3 Inerts, carrageenan and cellulose were intended for the Secretary to act upon only if an unavoidable administrative delay makes completion of rulemaking regarding the first recommendations for these substances impossible before the November 3, 2013 sunset date. These comments state that AMS' action to implement the NOSB recommendations to renew on grounds other than an administrative delay is equivalent to a violation of OFPA. Most of these same commenters also stated that the NOSB first recommendations to amend the annotations for these three substances were based on NOSB's findings of unacceptable human health and environmental effects associated with their current allowance. Many commenters also cited that these renewals would constitute an addition of a synthetic substance to the National List by AMS, which would violate 7 U.S.C. 6517(d)(2).

AMS disagrees with these positions. Carrageenan is listed as a nonsynthetic substance, and therefore its renewal could not be in violation of OFPA (7 U.S.C. 6517(d)(2)) because it is not a synthetic substance. The NOSB provided AMS with two NOSB recommendations for each of these substances—one to renew the listing and one to add new restrictions to its current use. Consistent with the provisions of OFPA, AMS has determined that the second recommendation in each case should be implemented. The proposed rule reflected AMS's independent review and explained in detail why accepting the NOSB's first recommendations to amend the annotations for EPA List 3 Inerts, carrageenan, and cellulose was not appropriate and, therefore, rulemaking action could not be implemented prior to the November 3, 2013 sunset date. Further, AMS has collected additional feedback through public comment submitted in response to the proposed rule that supports its proposal. For these reasons, AMS is implementing

the NOSB's second recommendations to renew these substances through this final rule. A summary of AMS' justification for each of the three substances is provided below.

The NOP proposal to adopt the “second recommendation” (temporary back-up) for carrageenan, cellulose, and List 3 “inerts” contradicts the clear intent of the NOSB concerning National List materials. In doing so, it violates the standards that have established a collaborative process between the NOSB and NOP, consistent with OFPA and the Federal Advisory Committee Act. NOP’s proposal is also a breach of trust with the NOSB and the public, as those on the board at that time stated. It is a violation comparable to the proposal in USDA’s original draft regulations to allow sewage sludge, genetically engineered organisms, and radiation. In addition, in making this proposal, NOP ignores OFPA standards.

In these three cases, the NOSB proposed restrictive annotations to materials being considered under Sunset. NOSB policy calls for backup motions in these cases to allow the material to be continued to be used when the bureaucracy is unable to process a change in the listing in the timeframe before the material sunsets. There was an extensive discussion at the 2010 NOSB meeting of the purpose of the backup motion and Deputy Administrator Miles McEvoy, along with other NOP staff participated in that conversation. Although the purpose of the “second motion” did not make its way into the final recommendation as printed, the record from the Madison meeting makes it very clear that the backup motion was not designed to give USDA the option of ignoring the NOSB action or choosing which motion to enforce--only to fill the time that it takes the action to be implemented.[9] In addition, there is nothing in the record from the Albuquerque NOSB meeting that indicates that the Board was giving the NOP the option of not enforcing the Board's decisions.[10]

Furthermore, in the NOP response to the NOSB meeting, NOP acknowledges the purpose of the second sunset vote. In its September 27, 2012, Memorandum to the National Organic Standards Board, the NOP states: "For each of these three substances the NOSB also recommended to renew the existing listing. The NOSB recommendations to renew the listings are provided to the NOP to allow for a continuation of the current use of a substance if it is not possible to amend the annotation during the sunset rulemaking."[11]

However, instead of honoring the NOSB decision to phaseout certain uses (e.g. carrageenan in infant formula, and microcrystalline cellulose) and establish a rigorous timeframe for reviewing List 3 “inerts,” NOP made the following statement: "AMS is accepting NOSB's second recommendations rather than the NOSB's first recommendations to add or amend restrictive annotations for the following substances under Sunset review: EPA List 3 “Inerts,” carrageenan, and cellulose."

The reasons given by the Program for adopting the “second” (that is, backup) motions, as

[9] Transcript of October 2010 NOSB meeting, October 26 pages 450-485 and October 28 pages 314-348.
[10] Transcript of May 2012 NOSB meeting, pages 152-185; 290-384; 386-422.
[11] Miles McEvoy, September 27, 2012 “Memorandum to the National Organic Standards Board.”

quoted below, are not consistent with the intent of the NOSB or PPM, as recognized by Mr. McEvoy in the memo cited above. They also raise concerns because in the organic program, the NOP/USDA should not rely on standards of safety that are contain under other statutes, such as the *Federal Food, Drug and Cosmetic Act*, as the basis for meeting the standards under OFPA. Those concerns will be addressed below.

Carrageenan

"Because the NOSB's sole justification for restricting the allowance of carrageenan was on the basis of food safety concerns, despite the fact that FDA regulations provide for its use as a safe food additive when used in accordance with 21 CFR 172.5, 21 CFR 172.620 and 21 CFR 172.626, AMS is renewing carrageenan as codified based on the NOSB's second recommendation."

Cellulose

"The NOSB. . .recommended changing the annotation to explicitly state which forms are allowed, thereby prohibiting the use of the microcrystalline form. Concurrent with Sunset Review policy, the NOSB also issued a second recommendation to renew the existing listing for cellulose. . .However, AMS needs more information from the industry to confirm that the microcrystalline form of cellulose is not currently in use in organic processed products. Therefore, through this proposed rule, AMS is proposing to address the NOSB's second recommendation to renew the exemption for cellulose as currently listed at section 205.605(b) and is seeking public comments on the NOSB's first recommendation to restrict its use in organic processed products. This approach would meet the timeframe required by the Sunset provision of OFPA and, based on the public comment, enable AMS to consider a restriction on its use for a future rulemaking."

List 3 "Inerts"

"AMS recognizes the recommendation's intent to address the complex challenges presented by the out-of-date listings in a timely manner. However, a rulemaking action to add an expiration date at this time may be problematic in the event that the timeline for inerts review takes longer than the projected four years; therefore, we are not proposing the addition of an expiration date to the exemption for EPA List 3 Inerts."

In none of the explanations quoted above, does the NOP recognize the underlying requirement that adoption of the second recommendation is only a placeholder, while recommended annotations are implemented through the regulatory process, as cited by Mr. McEvoy in his September 27, 2012 memo.

Because each backup motion effectively includes the assumed conditional, "if it is not possible to amend the annotation during rulemaking," the NOP action is an exemption not proposed by the NOSB, and therefore a violation of OFPA for the two synthetics (cellulose and List 3 inerts). In addition, this action is a breach of the trust that must be present if the NOSB and NOP are to work cooperatively to carry out the Organic Program and promote organic production. It is also a breach of trust with the public, which relies on the collaborative efforts of the NOSB and NOP to deliver food meeting consumer expectations of the organic label. Ultimately, the failure of

NOP to follow agreed upon and legal process requirements only serves to undermine the value of the USDA organic label.

New NOP sunset policy

In a Federal Register (FR) notice September 17, 2013, NOP announced a new policy governing sunset. NOP did not call it a new policy and did not issue it for public comment. The notice says "This document describes the sunset review and renewal process…" It says, "OFPA specifies that the NOSB must review all substances on the National List and that the Secretary renew substances within 5 years of their addition to or renewal on the National List. This action of NOSB review and USDA renewal is commonly referred to as the 'Sunset Process.'" Further, "The Sunset Process described in this document will be used for future Sunset reviews and renewals, unless AMS replaces or updates this document. This document replaces the process that AMS described in the first Advanced Notice of Proposed Rulemaking (ANPR) for Sunset Review published in the Federal Register on June 17, 2005 (70 FR 35177)."

The process "described" in the FR notice involved two steps, in which sunset materials are presented for public comment and discussion at the Spring meeting and decision at the Fall meeting. It states that changes to annotations cannot be proposed as part of sunset. It states, "If the Subcommittee identifies new information that it believes merits reconsideration of a use restriction for a substance (e.g., to expand its use, further restrict its use, or correct its restrictive annotation), then a member of the Subcommittee or a member of the public can file a petition to change the use of a substance through the National List Petition Process."

Most importantly,

> After NOSB discussion of each preliminary review and any proposals, the NOSB will vote on any motions to remove substances from the National List. If a Subcommittee had published a proposal to remove a substance, then a member of the NOSB can make a motion to remove that substance from the National List. As specified by OFPA, two-thirds of the votes cast at the meeting shall be decisive of any motion (7 U.S.C. 6518(i)). For motions to remove a substance, this means that two-thirds of votes cast must be in favor of removal of the substance. A motion to remove a substance that does not receive two-thirds of the votes cast fails, and the substance will remain on the National List.
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> Proposals to remove substances from the National List can only be considered by the NOSB if they were published as part of the Subcommittee's preliminary review for public comment in advance of the NOSB meeting. If the Subcommittee identifies new information at the meeting that it believes merits reconsideration of the conclusions presented in the preliminary review, that information will be considered untimely for purposes of the Sunset Review process. However, a member of the Subcommittee or a member of the public then can file a petition for removal or changes to the use of a substance through the National List Petition Process.

> After NOSB votes on any proposals to remove substances, the NOSB discusses the overall review of substances under their consideration. At the conclusion of this discussion, the NOSB Chair confirms that the NOSB review is complete. The NOSB Chair compiles the preliminary reviews from each Subcommittee and any NOSB recommendations for removals into a comprehensive NOSB Sunset Review document. The NOSB Chair accepts this document as complete and transmits this document to AMS for consideration and for public posting on the NOP Web site at *www.ams.usda.gov/nop.* This action completes the NOSB's responsibility to review substances on the National List through OFPA's sunset provision (7 U.S.C. 6517(e)).

Thus, the burden of proof has been reversed.

Since the change of sunset policy, 29 substances were relisted that would not have been relisted under the old policy (Y to delist, N to relist, A abstain, a absent):

- Fall 2014
    - Aqueous potassium silicate on 601: 6Y 9N
- Fall 2015
    - Soap-based algicides/demossers on 601: 8Y 5N 1A
    - Aquatic plant extracts on 601: 5Y 6N 3A
    - Lignin sulfate, chelating use on 601: 7Y 7N
    - Mono- and di-glycerides on 605: 6Y 8N
    - Nutrient vitamins and minerals on 605: 6Y 8N
    - Xanthan gum on 605: 5Y 8N 1A
    - Celery powder on 606: 5Y 9N
    - Blueberry juice color on 606: 5Y 5N 4A
    - Carrot juice color on 606: 4Y 7N 3A
    - Chokeberry/aronia juice color on 606: 7Y 5N 2A
    - Elderberry juice color on 606: 7Y 5N 2A
    - Grape juice color on 606: 7Y 5N 2A
    - Grape skin extract color on 606: 6Y 6N 2A
    - Paprika color on 606: 5Y 7N 2A
    - Purple potato juice color on 606: 5Y 7N 2A
    - Red radish extract color on 606: 6Y 6N 2A
    - Saffron extract color on 606: 7Y 5N 2A
    - Beet juice extract color on 606: 6Y 6N 2A
    - Kelp on 606: 9Y 5N
    - Lecithin, de-oiled on 606: 5Y 9N
    - Orange pulp, dried on 606: 5Y 7N 2A
    - Ivermectin on 603: 5Y 5N 4A[12]

[12] Voted off in a non-sunset vote in Fall 2016.

- Fall 2016
    - Beta carotene extract color on 606: 6Y 8N
- Fall 2019
    - Orange pulp, dried on 606: 7Y 5N 1A 1a
- Fall 2020
    - List 4 “inerts” on 601: 6Y 9N
    - Cornstarch, native on 606: 6Y 9N
    - List 4 “inerts” on 603: 6Y 9N
- Fall 2021
    - Carrageenan on 605: 9Y 5N

OMB/”tickets to the dance” vs. continuous improvement

NOP does not seem to support an easy process of removing substances, which may require more frequent changes to the National List, and hence regulations. NOP says this is because it has a limited number of “tickets to the dance”—opportunities to make regulatory changes. The organic community, on the other hand, is committed to the concept of continuous improvement, which requires eliminating exemptions allowed through the National List as they become unnecessary. This conflict does not seem to be resolved.

Farm bill

The 2018 Farm Bill contained a provision considered to be relevant to sunset votes. The Senate provision [Section 10104(e) National Organic Standards Board] may seem like it does not do anything (changes in law always do something, whether intended or not): “Any vote on a motion proposing to amend the national list shall be considered to be a decisive vote that requires 2/3 of the votes cast at a meeting of the Board at which a quorum is present to prevail.”

However, OPFA contains its original sunset provision that requires the board to relist substances after it cycles through the 5-year period. As structured, the sunset clause is a mechanism built into the statute and thus materials come off the list without Board action and requires a recommendation of the Board to relist or retain the sunsetted materials. The list is "amended" through other actions of the board, such as petitions or proposals to amend annotations, which under the Farm Bill language require a 2/3's vote. Since the Farm Bill language does not eliminate "sunset," the NOP procedures are out of step with a strict reading of the statutory language.

Conclusion

Sunset is foundational to the operation of the National Organic Program. The presumption that substances will be removed from the National List at sunset places the onus on those who believe that synthetic materials—that do not meet the default criteria to be allowed—should be allowed. Enforcing this presumption maintains the integrity that organic consumers expect.

Many of the materials that should have come off the list are either problematical in themselves or reflect serious problems in the program. Examples of the first are carrageenan and the colors.

Carrageenan is in a class by itself. NOP refused to codify an annotation, then refused to remove it from the list when it was voted off according to the then-current rules. Carrageenan then failed a sunset vote to remove—which would have passed under the old rules.

The colors are on §606, which means that colors—which are concentrated from their agricultural source—are allowed to be used in organic foods when produced by chemical-intensive agriculture.

"Inerts" can be seen as an example of a failure of the program to deal with an essential issue despite a great deal of energy invested by the board. Nutrient vitamins and minerals are another example of a systemic issue.

The future of organic depends on engagement by organic consumers and those who truly believe in organic integrity making voices known to the NOSB and NOP.

Appendix. Sunset Decisions 2005-2021

Votes to Relist (with a few exceptions)								
Meeting	**List**	**Substance**	**Y[13]**	**N**	**A**	**a**	**R**	**Pass?**
Fall 2005	601	(a) substances	13	0	1	0	0	Y
	601	(b) substances	14	0	0	0	0	Y
	601	(c) substances	14	0	0	0	0	Y
	601	(d) substances	14	0	0	0	0	Y
	601	(e) substances	13	0	0	1	0	Y
	601	(f) substances	13	0	0	1	0	Y
	601	(g) substances	14	0	0	0	0	Y
	601	(h) substances –none	-	-	-	-	-	-
	601	(i) substances, except for these deferred because of concern about consistency with OFPA: hydrated lime, hydrogen peroxide, streptomycin, tetracycline.	10	2	2	0	0	Y
	601	(j) substances, except for these deferred for more information: lignin sulfonate, aquatic plant extracts, humic acids.	12	0	2	0	0	Y
	601	(k) substances	12	2	0	0	0	Y
	601	(l) substances, except for these deferred for more information: lignin sulfonate, sodium silicate.	14	0	0	0	0	Y
	601	(m) substances	14	0	0	0	0	Y
	602	All but (c) (calcium chloride?)	14	0	0	0	0	Y

[13] Y yes, N no, A abstain, a absent, R recuse

	603	(a) substances, except these deferred for more information: chlorine materials, oxytocin, parasiticides.	14	0	0	0	0	Y
	603	(b) substances, except hydrated lime, deferred for more information.	14	0	0	0	0	Y
	603	(c) substances, except milk replacers, deferred for more information.	14	0	0	0	0	Y
	603	(d) substances	14	0	0	0	0	Y
	603	(e) substances	14	0	0	0	0	Y
	604	Strychnine	14	0	0	0	0	Y
	605	(a) substances, except colors and flavors, deferred for more information.	14	0	0	0	0	Y
	605	(b) substances. Defer for more information: lecithin –bleached, chlorine materials. Delist potassium tartrate. Relist all others.	14	0	0	0	0	Y
	606	All substances, except lecithin—unbleached, deferred for more information.	13	0	1	0	0	Y
Spring 2006	601	Streptomycin and tetracycline[14]	7	4	1	2	0	Y
	601	Sodium silicate[15]	10	1	1	2	0	Y
Meeting	**List**	**Substance**	**Y**	**N**	**A**	**a**	**R**	**Pass?**
Spring 2006	601	Lignin sulfonate[16]	8	2	2	2	0	Y
	601	Hydrogen peroxide	12	0	0	2	0	Y
	601	Hydrated lime	12	0	0	2	0	Y
	601	Humic acids	11	1	0	2	0	Y
	601	Horticultural oils	9	3	0	2	0	Y
	601	Chlorine materials	10	2	0	2	0	Y
	601	Aquatic plant extracts	12	0	0	2	0	Y
	603	Chlorine materials	11	1	0	2	0	Y
	603	Hydrated lime	12	0	0	2	0	Y
	603	Ivermectin[17]	6	4	2	2	0	Y
	603	Milk replacers, motion **to delist**[18]	11	1	0	2	0	Y
	603	Oxytocin[19]	8	2	2	2	0	Y
	605a	Colors, **to defer**	11	1	0	2	0	Y
	605a	Flavors	11	0	0	2	1	Y
	605b	Chlorine materials	12	0	0	2	0	Y
	605b	Bleached lecithin, **to delist**	12	0	0	2	0	Y
	606	Unbleached lecithin, to list	12	0	0	2	0	Y
Fall 2006	605a	Colors, **to delist**	12	2	0	0	0	Y

[14] Abstain counted with majority.
[15] Abstain counted with majority.
[16] Abstain counted with majority.
[17] Abstain counted with majority.
[18] As of 2010 (at least), the PPM says, "As a norm, a motion should always be presented in the affirmative."
[19] Abstain counted with majority.

	605b	Bleached lecithin, revised	11	3	0	0	0	Y
Fall 2007	601	Copper sulfate	11	3	1	0	0	Y
	601	List 3 inerts	13	0	2	0	0	Y
	601	Ozone	15	0	0	0	0	Y
	602	Calcium chloride	15	0	0	0	0	Y
	605a	Glucono delta lactone	15	0	0	0	0	Y
	605b	Cellulose	15	0	0	0	0	Y
Spring 2008	601	Reaffirm	13	0	1	1	0	Y
	605a	Reaffirm	13	0	1	1	0	Y
	605b	Reaffirm	13	0	1	1	0	Y
Fall 2009	601	Hydrogen chloride	12	0	0	3	0	Y
	605a	Egg white lysozyme	13	0	0	2	0	Y
	605a	L-malic acid	13	0	0	2	0	Y
	605a	Microorganisms	13	0	0	2	0	Y
	605b	Diethylaminoethanol	9	2	1	3	0	Y
	605b	Octadecylamine	9	2	1	3	0	Y
	605b	Peracetic acid	13	0	0	2	0	Y
	605b	SAPP	13	0	0	2	0	Y
	605b	TSPP	13	0	0	2	0	Y
	605b	Cyclohexylamine	10	2	1	2	0	Y
Spring 2010	601	21 substances	14	0	0	1	0	Y
	602	All	14	0	0	1	0	Y
	603	26 substances	14	0	0	1	0	Y
	604	Strychnine	14	0	0	1	0	Y
Meeting	**List**	**Substance**	**Y**	**N**	**A**	**a**	**R**	**Pass?**
Spring 2010	605a	15 substances	14	0	0	1	0	Y
	605b	22 substances	14	0	0	1	0	Y
	606	16 substances	13	0	0	1	1	Y
Fall 2010	601-602	Reaffirm	14	0	0	0	0	Y
	603-604	Reaffirm	14	0	0	0	0	Y
	603	9 substances	14	0	0	0	0	Y
	605-606	Reaffirm	14	0	0	0	0	Y
	605a	Flavors	14	0	0	0	0	Y
	605a	Magnesium sulfate	14	0	0	0	0	Y
	605a	Yeast	14	0	0	0	0	Y
	605b	Chlorine materials	14	0	0	0	0	Y
	605b	Ferrous sulfate	14	0	0	0	0	Y
	605b	Pectin, low methoxy	14	0	0	0	0	Y
	605b	Phosphoric acid	14	0	0	0	0	Y
	605b	Silicon dioxide	14	0	0	0	0	Y
	605b	Sodium citrate	14	0	0	0	0	Y
	605b	Sodium hydroxide	14	0	0	0	0	Y
	605b	Sodium phosphate	14	0	0	0	0	Y

	605b	Sulfur dioxide	14	0	0	0	0	Y
	605b	Glycerides	14	0	0	0	0	Y
	606	Colors	14	0	0	0	0	Y
	606	Annatto	14	0	0	0	0	Y
	606	FOS	14	0	0	0	0	Y
	606	Hops	13	1	0	0	0	Y
	606	IOE	14	0	0	0	0	Y
	606	Pectin high methoxy	13	1	0	0	0	Y
	606	Cornstarch	12	1	1	0	0	Y
	606	Whey protein powder	14	0	0	0	0	Y
Spring 2011[20]	601	Alcohols	14	0	0	0	0	Y
	601	Chlorine materials	14	0	0	0	0	Y
	601	Newspaper	14	0	0	0	0	Y
	601	Coppers, fixed	14	0	0	0	0	Y
	601	Ethylene gas	10	4	0	0	0	Y
	601	Lignin sulfonate[21]	14	0	0	0	0	Y
	601	Magnesium sulfate	13	1	0	0	0	Y
	601	Pheromones	14	0	0	0	0	Y
	601	Plastic mulch	14	0	0	0	0	Y
	601	Sodium silicate	13	0	1	0	0	Y
	601	Sulfur dioxide[22]	9	5	0	0	0	N
Meeting	**List**	**Substance**	**Y**	**N**	**A**	**a**	**R**	**Pass?**
	601	Streptomycin: change annotation: expiration date.[23]	13	1	0	0	0	Y
	601	Streptomycin: change annotation to limit to post-infection.	5	9	0	0	0	N
	601	Streptomycin: backup motion to relist	10	4	0	0	0	Y
	601	Vitamin D3	14	0	0	0	0	Y
	602	Sodium nitrate: remove annotation[24]	10	2	0	0	2	Y
	602	Sodium nitrate: backup motion to relist	10	0	2	0	2	Y
	605a	Enzymes	13	1	0	0	0	Y
	605a	Potassium iodide	14	0	0	0	0	Y
	605b	Potassium iodide[25]	0	14	0	0	0	Y
	605b	Nutrient vitamins and minerals	13	0	1	0	0	Y
	605b	Tocopherols	14	0	0	0	0	Y
Fall 2011	601	Copper sulfate	14	0	0	0	0	Y
	601	Ozone	13	1	0	0	0	Y
	601	Peracetic acid	13	1	0	0	0	Y
	601	Calcium chloride	14	0	0	0	0	Y

[20] Start annotation at sunset.
[21] Identical votes for both listings.
[22] Reverse result under NOP sunset policy.
[23] This annotation at sunset paved the way for the removal of streptomycin from the National List.
[24] This annotation at sunset means that sodium nitrate should not be used in organic production. However, the NOP has never put this into regulation.
[25] Change of classification recorded as two votes.

	605	Animal enzymes	14	0	0	0	0	Y
	605a	Tartaric acid	14	0	0	0	0	Y
	605b	Tartaric acid[26]	0	14	0	0	0	Y
Spring 2012	601	List 3 inerts: Resolution	15	0	0	0	0	Y
	601	List 3 inerts: Annotation change[27]	15	0	0	0	0	Y
	601	List 3 inerts: Definition	15	0	0	0	0	Y
	601	List 3 inerts: Backup relisting	15	0	0	0	0	Y
	605a	Carrageenan: Annotation change[28]	10	5	0	0	0	Y
	605a	Carrageenan: Backup relisting	11	4	0	0	0	y
	605a	Glucono delta lactone	14	1	0	0	0	Y
	605a	Cellulose: Annotation change[29]	14	1	0	0	0	Y
	605a	Cellulose: Backup relisting	11	3	1	0	0	Y
Votes to Delist								
Meeting	**List**	**Substance**	**Y**	**N**	**A**	**a**	**R**	**Pass?**
Fall 2014	601	Sulfurous acid	3	11	1	0	0	N
	601	Sodium carbonate peroxyhydrate	5	10	0	0	0	N
	601	Aqueous potassium silicate[30]	6	9	0	0	0	N
	605a	Gellan gum	3	12	0	0	0	N
	606	Tragacanth gum	3	12	0	0	0	N
	606	Marsala	15	0	0	0	0	Y
	606	Sherry	15	0	0	0	0	Y
Spring 2015	601	Ferric phosphate	3	11	0	1	0	N
Meeting	**List**	**Substance**	**Y**	**N**	**A**	**a**	**R**	**Pass?**
Spring 2015	601	Hydrogen chloride	1	13	0	1	0	N
	605a	Egg white lysozyme	11	3	0	1	0	Y
	605a	L-malic acid	2	12	0	1	0	N
	605b	Microorganisms	0	14	0	1	0	N
	605b	Activated charcoal	1	13	0	1	0	N
	605b	Peracetic acid	0	14	0	1	0	N
	605b	Cyclohexamine	14	0	0	1	0	Y
	605b	Diethylaminoethanol	14	0	0	1	0	Y
	605b	Octadecylamine	14	0	0	1	0	Y
	605b	SAPP	3	11	0	1	0	N
	605b	TSPP	14	0	0	1	0	Y
Fall 2015	601	Micronutrients, annotation change[31]	13	0	1			Y
	601	List 4 “inerts,” annotation change[32]	10	4	0			Y
	601	Ethanol	0	13	1			N
	601	Isopropanol	1	13	0			N
	601	Chlorine materials	2	12	0			N

[26] Change of classification recorded as two votes.
[27] NOP chose backup motion instead of annotated listing.
[28] NOP chose backup motion instead of annotated listing.
[29] NOP chose backup motion instead of annotated listing.
[30] Would not have been relisted under NOSB rules.
[31] Not sunset.
[32] Not sunset.

	601	Hydrogen peroxide	0	14	0			N
	601	Soap-based algicides/demossers	8	5	1			N[33]
	601	Soap-based herbicides	0	14	0			N
	601b	Newspaper/other paper mulch	0	14	0			N
	601c	Newspaper/other paper compost	0	14	0			N
	601	Plastic mulch and covers	2	12	0			N
	601	Soaps, ammonium	1	13	0			N
	601	Ammonium carbonate	2	12	0			N
	601	Boric acid	1	13	0			N
	601	Elemental sulfur	0	14	0			N
	601	Lime sulfur	1	13	0			N
	601	Oils, horticultural	0	14	0			N
	601	Soaps, insecticidal	0	14	0			N
	601	Sticky traps/barriers	0	14	0			N
	601	Sucrose octanoate esters	1	13	0			N
	601	Pheromones	1	13	0			N
	601	Vitamin D3	3	11	0			N
	601	Coppers, fixed	2	12	0			N
	601	Copper sulfate, plant disease	2	12	0			N
	601	Hydrated lime	0	13	0	1		N
	601	Potassium bicarbonate	1	12	1			N
	601	Aquatic plant extracts	5	6	3			N[34]
	601	Humic acids	4	10	0			N
	601	Lignin sulfonate, chelating	7	7	0			N[35]
	601	Lignin sulfonate, floating	14	0	0			Y
	601	Magnesium sulfate	1	13	0			N
	601	Micronutrients (w/o annotation change)	0	14	0			N
	601	Liquid fish products	1	13	0			N
	601	Vitamins B1, C, E	1	13	0			N
	601	Ethylene	3	9	2			N
	601	Sodium silicate	2	12	0			N
	601	List 4 “inerts”	2	12	0			N
	601	Microcrystalline cheese wax	1	13	0			N
	602	Ash from manure burning	0	14	0			N
	602	Arsenic	0	14	0			N
	602	Lead salts	0	14	0			N
	602	Potassium chloride	0	14	0			N
	602	Sodium fluoaluminate	0	14	0			N
	602	Strychnine	0	14	0			N
	602	Tobacco dust/nicotine sulfate	0	14	0			N
	605	Reclassification alginic acid[36]	13	0	1			Y

[33] Would have been delisted under old rules.
[34] Would have been delisted under old rules.
[35] Would have been delisted under old rules.
[36] Not sunset.

	606	Reclassification carnauba wax[37]	12	1	1			Y
	606	Flavors annotation[38]	14	0	0			Y
	605	Alginic acid	2	11	1			N
	605	Citric acid	2	12	0			N
	605	Lactic acid	2	12	0			N
	605	Attapulgite	3	11	0			N
	605	Bentonite	0	14	0			N
	605	Calcium carbonate	0	14	0			N
	605	Calcium chloride	0	12	2			N
	605	Dairy cultures	0	14	0			N
	605	Diatomaceous earth	0	14	0			N
	605	Enzymes	2	12	0			N
	605	Kaolin	0	14	0			N
	605	Magnesium sulfate	1	12	1			N
	605	Nitrogen	0	14	0			N
	605	Oxygen	0	14	0			N
	605	Perlite	0	14	0			N
	605	Potassium chloride	0	14	0			N
	605	Potassium iodide	0	14	0			N
	605	Sodium bicarbonate	0	14	0			N
	605	Sodium carbonate	0	14	0			N
	605	Carnauba wax	0	13	1			N
	605	Wood rosin	0	13	1			N
	605	Yeast	0	14	0			N
	605	Acidified sodium chlorite	1	13	0			N
	605	Alginates	2	11	1			N
	605	Ammonium bicarbonate	0	14	0			N
	605	Ammonium carbonate	0	14	0			N
	605	Ascorbic acid	0	14	0			N
	605	Calcium citrate	1	13	0			N
	605	Calcium hydroxide	0	13	1			N
	605	Calcium phosphates	2	10	2			N
	605	Carbon dioxide	0	14	0			N
	605	Chlorine materials	2	12	0			N
	605	Ethylene	3	11	0			N
	605	Ferrous sulfate	0	14	0			N
	605	Mono- and di- glycerides	6	8	0			N[39]
	605	Glycerin	0	14	0			N
	605	Hydrogen peroxide	0	14	0			N
	605	Magnesium carbonate	14	0	0			Y
	605	Magnesium chloride	0	14	0			N
	605	Magnesium stearate	1	13	0			N

[37] Not sunset.

[38] Not sunset.

[39] Would have been delisted under old rules.

	605	Nutrient vitamins and minerals	6	8	0			N[40]
	605	Ozone	0	13	0	1		N
	605	Phosphoric acid	1	12	0	1		N
	605	Potassium acid tartrate	0	14	0			N
	605	Potassium carbonate	1	13	0			N
	605	Potassium citrate	1	13	0			N
	605	Potassium phosphate	2	9	3			N
	605	Sodium citrate	0	14	0			N
	605	Sodium hydroxide	0	13	1			N
	605	Sodium phosphates	2	11	1			N
	605	Tocopherols	4	9	1			N
	605	Xanthan gum	5	8	1			N[41]
	606	Casings	0	14	0			N
	606	Celery powder	5	9	0			N[42]
	606	Chia	13	0	0	1		Y
	606	Black/purple carrot juice color	2	10	2			N
	606	Blueberry Juice color	5	5	4			N[43]
	606	Carrot Juice color	4	7	3			N[44]
	606	Cherry Juice color	3	9	2			N
	606	Chokeberry/Aronia Juice color	7	5	2			N[45]
	606	Elderberry Juice color	7	5	2			N[46]
	606	Grape Juice color	7	5	2			N[47]
	606	Grape Skin Extract color	6	6	2			N[48]
	606	Paprika color	5	7	2			N[49]
	606	Purple Potato juice color	5	7	2			N[50]
	606	Red radish Extract color	6	6	2			N[51]
	606	Saffron Extract color	7	5	2			N[52]
	606	Tumeric Extract color	3	9	2			N
	606	Beet juice extract color	6	6	2			N[53]
	606	Black Currant juice color	3	6	5			N
	606	Pumpkin Juice color	2	11	1			N
	606	Red Cabbage Extract color	2	11	1			N
	606	Dillweed oil	14	0	0			Y

[40] Would have been delisted under old rules.
[41] Would have been delisted under old rules.
[42] Would have been delisted under old rules.
[43] Would have been delisted under old rules.
[44] Would have been delisted under old rules.
[45] Would have been delisted under old rules.
[46] Would have been delisted under old rules.
[47] Would have been delisted under old rules.
[48] Would have been delisted under old rules.
[49] Would have been delisted under old rules.
[50] Would have been delisted under old rules.
[51] Would have been delisted under old rules.
[52] Would have been delisted under old rules.
[53] Would have been delisted under old rules.

	606	Fish oil	8	5	1			N
	606	Fructooligosaccharides	8	6	0			N
	606	Galangal, frozen	14	0	0			Y
	606	Gelatin	3	9	2			N
	606	Gums: Arabic, Carob bean, Guar, Locust bean	0	14	0			N
	606	Inulin-oligofructose enriched	14	0	0			Y
	606	Kelp	9	5	0			N[54]
	606	Lecithin - de-oiled	5	9	0			N[55]
	606	Lemongrass-frozen	14	0	0			Y
	606	Orange pulp, dried	5	7	2			N[56]
	606	Orange shellac - unbleached	0	13	1			N
	606	Pectin (non-amidated forms only)	0	14	0			N
	606	Peppers (Chipotle chile)	14	0	0			Y
	606	Seaweed, Pacific kombu	1	11	2			N
	606	Starches, Cornstarch (native), Sweet potato	2	12	0			N
	606	Turkish bay leaves	14	0	0			Y
	606	Wakame seaweed (Undaria pinnatfida)	1	12	1			N
	606	Whey protein concentrate	14	0	0			Y
	603	Alcohols: Ethanol	1	12	1			N
	603	Alcohols: Isopropanol	1	13	0			N
	603	Aspirin	0	13	0	1		N
	603	Atropine	0	14	0			N
	603	Biologics, Vaccines	0	14	0			N
	603	Butorphanol	0	14	0			N
	603	Chlorhexidine	1	13	0			N
	603	Chlorine materials	2	12	0			N
	603	Electrolytes	0	14	0			N
	603	Flunixin	1	12	1			N
	603	Furosemide	14	0	0			Y
	603	Glucose	0	14	0			N
	603	Glycerin	0	14	0			N
	603	Hydrogen peroxide	0	14	0			N
	603	Iodine	0	14	0			N
	603	Magnesium hydroxide	0	14	0			N
	603	Magnesium sulfate	1	13	0			N
	603	Oxytocin	0	14	0			N
	603	Fenbendazole	0	14	0			N
	603	Ivermectin	5	5	4			N[57]
	603	Moxidectin	0	12	2			N
	603	Peroxyacetic/Peracetic acid	0	14	0			N

[54] Would have been delisted under old rules.
[55] Would have been delisted under old rules.
[56] Would have been delisted under old rules.
[57] Would have been delisted under old rules.

	603	Phosphoric acid	0	14	0			N
	603	Poloxalene	0	13	1			N
	603	Tolazoline	1	13	0			N
	603	Xylazine	0	14	0			N
	603	Copper sulfate	0	13	1			N
	603	Formic acid	0	14	0			N
	603	Lidocaine	0	14	0			N
	603	Procaine	3	9	2			N
	603	Lime, hydrated	0	14	0			N
	603	Mineral oil	2	12	0			N
	603	Sucrose octanoate esters	0	14	0			N
	603	Methionine	3	10	1			N
	603	Trace minerals	0	13	1			N
	603	Vitamins	0	14	0			N
	603	List 4 “inerts” (voted under 601)						
	603	Excipients	1	12	1			N
	604	Strychnine	0	14	0			N
Fall 2016								
	601	Copper sulfate in rice—2 listings	0	14	0			N
	601	Ozone	1	12	1			N
	601	Peracetic Acid	0	14	0			N
	601	List 3 “inerts”	0	14	0			N
	602	Calcium chloride	0	14	0			N
	605	Agar-agar	0	14	0			N
	605	Animal Enzymes	0	14	0			N
	605	Calcium Sulfate-mined	0	14	0			N
	605	Carrageenan	10	3	1			Y
	605	Glucono delta-lactone	0	13	1			N
	605	Tartaric Acid	0	14	0			N
	605	Cellulose	2	11	1			N
	605	Potassium hydroxide	0	14	0			N
	605	Silicon dioxide	0	14	0			N
	606	Colors: Beta-carotene extract	6	8	0			N[58]
	603	Ivermectin[59]	14	0	0			Y
Fall 2017	601	Chlorine materials	0	15	0			N
	601	Soap-based herbicides	0	14	1			N
	601	BBBM	0	15	0			N
	601	Boric acid	0	15	0			N
	601	Sticky traps	0	15	0			N
	601	Copper sulfate, disease control	0	14	0	1		N
	601	Coppers, fixed	0	15	0			N
	601	Humic acids	0	15	0			N
	601	Micronutrients (soluble boron)	0	15	0			N

[58] Would have been delisted under old rules.

[59] Not sunset.

	601	Micronutrients	0	15	0			N
	601	Vitamin B1	15	0	0			Y
	601	Vitamins C and E	0	15	0			N
	602	Lead salts	0	15	0			N
	602	Tobacco dust (nicotine sulfate)	0	15	0			N
	605	Attapulgite	0	15	0			N
	605	Bentonite	0	15	0			N
	605	Diatomaceous earth	0	15	0			N
	605	Nitrogen	0	15	0			N
	605	Sodium carbonate	0	15	0			N
	605	Acidified sodium chlorite	0	15	0			N
	605	Carbon dioxide	0	15	0			N
	605	Chlorine materials	0	15	0			N
	605	Magnesium chloride	0	15	0			N
	605	Potassium acid tartrate	0	15	0			N
	605	Sodium phosphates	3	12	0			N
	606	Casings	1	14	0			N
	606	Konjac flour	11	4	0			Y
	606	Pectin (non-amidated forms)	0	15	0			N
	603	Chlorhexidine	0	15	0			N
	603	Chlorine materials	0	15	0			N
	603	Glucose	0	15	0			N
	603	Oxytocin	15	0	0			Y
	603	Tolazoline	0	15	0			N
	603	Copper sulfate	0	15	0			N
	603	Lidocaine	0	15	0			N
	603	Procaine	14	1	0			Y
Fall 2018	601	Ethanol	0	15	0			N
	601	Isopropanol	0	15	0			N
	601	Sodium carbonate peroxyhydrate	0	15	0			N
	601	Newspaper/recycled paper	0	15	0			N
	601	Plastic mulch	0	14	1			N
	601	Aqueous potassium silicate (plant disease)	5	10	0			N
	601	Aqueous potassium silicate (insects)	4	11	0			N
	601	Elemental sulfur (insect)	0	15	0			N
	601	Elemental sulfur (plant disease)	0	15	0			N
	601	Elemental sulfur (soil amendment)	0	15	0			N
	601	Lime sulfur (plant disease)	0	15	0			N
	601	Lime sulfur (insect)	0	15	0			N
	601	Sucrose octanoate esters	11	4	0			Y
	601	Hydrated lime	0	15	0			N
	601	Liquid fish products	0	15	0			N
	601	Ethylene gas	0	15	0			N
	601	Sulfurous acid	0	15	0			N
	601	Microcrystalline cheese wax	0	15	0			N

	602	Potassium chloride	0	15	0			N
	605	Calcium carbonate	0	15	0			N
	605	Flavors	0	15	0			N
	605	Gellan gum	1	14	0			N
	605	Oxygen	0	15	0			N
	605	Potassium chloride	0	15	0			N
	605	Alginates	0	15	0			N
	605	Calcium hydroxide	0	15	0			N
	605	Ethylene	0	15	0			N
	605	Mono- and di-glycerides	0	15	0			N
	605	Magnesium stearate	0	15	0			N
	605	Phosphoric acid	0	15	0			N
	605	Potassium carbonate	0	15	0			N
	605	Sulfur dioxide	0	15	0			N
	605	Xanthan gum	1	14	0			N
	606	Fructooligosaccharides (FOS)	1	14	0			N
	606	Gum arabic, locust gum, carob gum, guar gum	0	15	0			N
	606	Lecithin, de-oiled	3	12	0			N
	606	Tragacanth gum	0	15	0			N
	603	Ethanol	0	15	0			N
	603	Isopropanol	0	15	0			N
	603	Aspirin	0	15	0			N
	603	Biologics, vaccines	0	15	0			N
	603	Electrolytes	0	15	0			N
	603	Glycerin	0	15	0			N
	603	Phosphoric acid	0	15	0			N
	603	Hydrated lime	0	15	0			N
	603	Mineral oil	0	15	0			N
	603	Sucrose octanoate esters	10	5	0			Y
Fall 2019	601	Hydrogen peroxide (cleaning)	0	13	0	1		N
	601	Hydrogen peroxide (plant disease)	0	13	0	1		N
	601	Soaps, ammonium	0	13	0	1		N
	601	Oils, horticultural (insect)	0	13	0	1		N
	601	Oils, horticultural (plant disease)	0	13	0	1		N
	601	Pheromones	0	13	0	1		N
	601	Ferric phosphate	0	13	0	1		N
	601	Potassium bicarbonate	0	13	0	1		N
	601	Magnesium sulfate	0	13	0	1		N
	601	Hydrogen chloride	0	13	0	1		N
	602	Ash from manure burning	0	13	0	1		N
	602	Sodium fluoaluminate	0	13	0	1		N
	605	Citric acid	0	13	0	1		N
	605	Lactic acid	0	13	0	1		N
	605	Calcium chloride	0	13	0	1		N
	605	Dairy cultures	13	0	0	1		Y

	605	Enzymes	0	13	0	1		N
	605	L-malic acid	0	13	0	1		N
	605	Magnesium sulfate	0	13	0	1		N
	605	Microorganisms	0	13	0	1		N
	605	Perlite	0	13	0	1		N
	605	Potassium iodide	0	13	0	1		N
	605	Yeast	0	13	0	1		N
	605	Activated charcoal	0	13	0	1		N
	605	Alginic acid	13	0	0	1		Y
	605	Ascorbic acid	0	13	0	1		N
	605	Calcium citrate	0	13	0	1		N
	605	Ferrous sulfate	0	13	0	1		N
	605	Hydrogen peroxide	0	13	0	1		N
	605	Nutrient vitamins and minerals	0	13	0	1		N
	605	Peracetic acid	0	13	0	1		N
	605	Potassium citrate	0	13	0	1		N
	605	Potassium phosphate	0	13	0	1		N
	605	Sodium acid pyrophosphate	0	13	0	1		N
	605	Sodium citrate	0	13	0	1		N
	605	Tocopherols	0	13	0	1		N
	606	Celery powder	1	11	1	1		N
	606	Fish oil	0	11	2	1		N
	606	Gelatin	0	13	0	1		N
	606	Orange pulp, dried	7	5	1	1		N[60]
	606	Kombu	3	9	1	1		N
	606	Wakame	3	9	1	1		N
	603	Atropine	0	12	0	2		N
	603	Hydrogen peroxide	0	13	0	1		N
	603	Iodine (disinfectants, etc.)	0	13	0	1		N
	603	Iodine (topical treatment)	0	13	0	1		N
	603	Magnesium sulfate	0	13	0	1		N
	603	Fenbendazole	0	13	0	1		N
		Moxidectin	0	13	0	1		N
		Peracetic acid	0	13	0	1		N
		Xylazine	0	12	1	1		N
		DL-methionine	0	12	1	1		N
		Trace minerals	0	13	0	1		N
		Vitamins	0	13	0	1		N
Fall 2020	601	Soap-base algicides/demossers	0	15	0			N
	601	Ammonium carbonate	0	15	0			N
	601	Insecticidal soaps	0	15	0			N
	601	Vitamin D3	0	15	0			N
	601	Aquatic plant extracts	0	12	3			N
	601	Lignin sulfonate (chelating)	0	15	0			N

[60] Would have been delisted under old rules.

	601	Sodium silicate	0	15	0			N
	601	List 4 “inerts”	6	9	0			N[61]
	602	Arsenic	0	15	0			N
	602	Strychnine	0	15	0			N
	605	Kaolin	0	15	0			N
	605	Sodium bicarbonate	0	15	0			N
	605	Wood rosin (resin)	0	15	0			N
	605	Ammonium bicarbonate	0	15	0			N
	605	Calcium phosphates	0	15	0			N
	605	Ozone	0	15	0			N
	605	Sodium hydroxide	0	15	0			N
	606	Carnauba wax	3	11	1			N
	606	Beet juice extract color	0	15	0			N
	606	Beta carotene extract color	0	15	0			N
	606	Black Currant juice color	15	0	0			Y
	606	Black/purple carrot juice color	0	15	0			N
	606	Blueberry Juice color	13	2	0			Y
	606	Carrot Juice color	0	15	0			N
	606	Cherry Juice color	14	0	0	1		Y
	606	Chokeberry/Aronia Juice color	0	14	0	1		N
	606	Elderberry Juice color	0	14	0	1		N
	606	Grape Juice color	15	0	0			Y
	606	Grape Skin Extract color	0	15	0			N
	606	Paprika color	15	0	0			Y
	606	Pumpkin color	15	0	0			Y
	606	Purple Potato juice color	0	15	0			N
	606	Red cabbage extract color	0	15	0			N
	606	Red radish Extract color	0	15	0			N
	606	Saffron Extract color	1	14	0			N
	606	Tumeric Extract color	11	4	0			Y
	606	Glycerin	2	13	0			N
	606	Inulin-Oligofructose Enriched	0	15	0			N
	606	Kelp	11	4	0			Y
	606	Orange shellac	0	15	0			N
	606	Cornstarch, native	6	9	0			N[62]
	606	Sweet potato starch	11	3	0	1		Y
	606	Turkish bay leaves	15	0	0			Y
	606	Whey protein concentrate	15	0	0			Y
	603	Butorphanol	0	15	0			N
	603	Flunixin	0	15	0			N
	603	Magnesium hydroxide	0	15	0			N
	603	Poloxalene	0	15	0			N
	603	Formic acid	0	15	0			N

[61] Would have been delisted under old rules.
[62] Would have been delisted under old rules.

	603	List 4 “inerts”	6	9	0			N[63]
	603	Excipients	0	15	0			N
	604	Strychnine	0	15	0			N
Fall 2021	601	Copper sulfate	3	11	0			N
	601	Ozone	0	14	0			N
	601	Peracetic acid	0	14	0			N
	601	List 3 “inerts”	1	13	0			N
	601	Chlorine materials	0	14	0			N
	601	Magnesium oxide	0	14	0			N
	602	Calcium chloride	0	14	0			N
	602	Rotenone	0	14	0			N
	605	Agar agar	0	14	0			N
	605	Animal enzymes	0	14	0			N
	605	Calcium sulfate, mined	0	14	0			N
	605	Gluco delta-lactone	0	14	0			N
	605	Carrageenan	9	5	0			N[64]
	605	Tartaric acid	0	13	0	1		N
	605	Cellulose	0	13	0	1		N
	605	Chlorine materials	0	13	0	1		N
	605	Potassium hydroxide	0	14	0			N
	605	Silicon dioxide	0	14	0			N
	605	Potassium lactate	0	14	0			N
	605	Sodium lactate	0	14	0			N
	603	Activated charcoal	0	14	0			N
	603	Calcium borogluconate	0	14	0			N
	603	Calcium propionate	0	14	0			N
	603	Chlorine materials	0	14	0			N
	603	Hypochlorous acid	0	14	0			N
	603	Kaolin pectin	0	14	0			N
	603	Mineral oil	0	14	0			N
	603	Nutritive supplements, injectable	0	14	0			N
	603	Propylene glycol	0	14	0			N
	603	Acidified sodium chlorite	0	14	0			N
	603	Zinc sulfate	0	14	0			N

[63] Would have been delisted under old rules.
[64] Would have been delisted under old rules.