



Sunset 2017 Review Summary Meeting 1 - Request for Public Comment Crops Substances April 2015

Introduction

As part of the [Sunset Process](#), the National Organic Program (NOP) announces substances on the National List of Allowed and Prohibited Substances (National List) that are coming up for sunset review by the National Organic Standard Board (NOSB). The following list announces substances that are on the National List for use in organic crop production that must be reviewed by the NOSB and renewed by the USDA before their sunset dates in 2017. This list provides the substance's current status on the National List, use description, references to past technical reports, past NOSB actions, and regulatory history, as applicable. If a new technical report has been requested for a substance, this is noted in this list. To see if any new technical report is available, please check for updates under the substance name in the [Petitioned Substances Database](#).

Request for Comments

While the NOSB will not complete its review and any recommendations on these substances until the fall 2015 public meeting, the NOP is requesting that the public provide comments about these substances to the NOSB as part of the spring 2015 public meeting. These comments should be provided through www.regulations.gov by April 7, 2015 as explained in the meeting notice published in the [Federal Register](#).

These comments are necessary to guide the NOSB's review of each substance against the criteria in the Organic Foods Production Act (7 U.S.C. 6518(m)) and the USDA organic regulations (7 CFR 205.600). The current substances on the National List were originally recommended by the NOSB based on evidence available to the NOSB at the time of their last review which demonstrated that the substances were found to be: (1) not harmful to human health or the environment, (2) necessary because of the unavailability of wholly nonsynthetic alternatives, and (3) consistent and compatible with organic practices.

Public comments should focus on providing new information about a substance since its last NOSB review. Such information could include research or data that may support a change in the NOSB's determination for a substance. Public comment should also address the continuing need for a substance or whether the substance is no longer needed or in demand.

Guidance on Submitting Your Comments

Comments should clearly indicate your position on the allowance or prohibition of substances on the list and explain the reasons for your position. You should include relevant information and data to support your position (e.g., scientific, environmental, manufacturing, industry impact information, etc.).

For Comments That Support Substances Under Review:

If you provide comments in support of an allowance of a substance on the National List, you should provide information demonstrating that the substance is:

- (1) not harmful to human health or the environment;



- (2) necessary to the production of the agricultural products because of the unavailability of wholly nonsynthetic substitute products; and
- (3) consistent with organic crop production.

For Comments That Do Not Support Substances Under Review:

If you provide comments that do not support a substance on the National List, you should provide reasons why the use of the substance should no longer be allowed in organic production or handling. Specifically, comments that support the removal of a substance from the National List should provide new information since its last NOSB review to demonstrate that the substance is:

- (1) harmful to human health or the environment;
- (2) unnecessary because of the availability of alternatives; and
- (3) inconsistent with crop production.

For Comments Addressing the Availability of Alternatives:

Comments may present information about the viability of alternatives for a substance under sunset review. Viable alternatives include, but are not limited to:

- Alternative management practices that would eliminate the need for the specific substance;
- Other currently exempted substances that are on the National List, which could eliminate the need for this specific substance; and
- Other organic or nonorganic agricultural substances.

Your comments should address whether any alternatives have a function and effect equivalent to or better than the allowed substance, and whether you want the substance to be allowed or removed from the National List. Assertions about alternative substances, except for those alternatives that already appear on the National List, should, if possible, include the name and address of the manufacturer of the alternative. Further, your comments should include a copy or the specific source of any supportive literature, which could include product or practice descriptions; performance and test data; reference standards; names and addresses of producers or handlers who have used the alternative under similar conditions and the date of use; and an itemized comparison of the function and effect of the proposed alternative(s) with substance under review. The following table can help you describe recommended alternatives in place of a current substance that you do not want to be continued.

Written public comments will be accepted through April 7, 2015 via www.regulations.gov. Comments received after that date may not be reviewed by the NOSB before the meeting.



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Reference: 7 CFR §205.601 Synthetic substances allowed for use in organic crop production.

[Alcohol: Ethanol, Isopropanol](#)

[Chlorine Materials: Calcium hypochlorite,](#)

[Chlorine dioxide, Sodium hypochlorite](#)

[Hydrogen peroxide](#)

[Soap-based algicide/demossers](#)

[Herbicides, soap-based](#)

[Newspaper or other recycled paper](#)

[Plastic mulch and covers](#)

[Soaps, ammonium](#)

[Ammonium carbonate](#)

[Boric acid](#)

[Elemental sulfur](#)

[Lime sulfur](#)

[Oils, horticultural](#)

[Soaps, insecticidal](#)

[Sticky traps/barriers](#)

[Sucrose octanoate esters](#)

[Pheromone](#)

[Vitamin D3](#)

[Coppers, fixed](#)

[Copper sulfate](#)

[Hydrated lime](#)

[Potassium bicarbonate](#)

[Aquatic plant extracts](#)

[Humic acids](#)

[Lignin sulfonate](#)

[Magnesium sulfate](#)

[Micronutrients: Soluble boron products,](#)

[Sulfates, carbonates, oxides, or silicates of zinc,](#)

[copper, iron, manganese, molybdenum,](#)

[selenium, and cobalt](#)

[Liquid fish products](#)

[Vitamin B1, C, E](#)

[Ethylene](#)

[Sodium silicate](#)

[EPA List 4 - Inerts of Minimal Concern](#)

[Microcrystalline cheesewax](#)

205.602 Prohibited nonsynthetic substances

[Ash from manure burning](#)

[Arsenic](#)

[Lead salts](#)

[Potassium chloride](#)

[Sodium fluoaluminate](#)

[Strychnine](#)

[Tobacco dust \(nicotine sulfate\)](#)



Alcohols (ethanol, isopropanol)

Reference: 205.601(a)(1)

(i) Ethanol. As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems.

(ii) Isopropanol. As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems.

Technical Report(s): [1995 TAP](#); [01/2014 TR - Ethanol](#); [02/2014 TR - Isopropanol](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#) ; [11/2005 NOSB sunset recommendation](#) ;
[04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/2017

Background from Subcommittee:

Ethanol (ethyl alcohol) is currently allowed for use in organic crop production as an algicide, disinfectant and sanitizer, including irrigation system cleaning. Ethanol was added to the National List in 1995 and has been relisted at sunset in the past. Ethanol provides broad-spectrum antimicrobial activity against vegetative bacteria, viruses and fungi, and is commonly used in organic production for disinfecting pruning tools. Essential oils can be used as disinfectants, but their efficacy is in question.

Isopropanol (isopropyl alcohol) is currently allowed for use in organic crop production as an algicide, disinfectant and sanitizer, including irrigation system cleaning. Isopropanol was added to the National List in 1995 and has been relisted at sunset in the past. Isopropanol provides broad-spectrum antimicrobial activity through the dissolution of lipid membranes and rapid denaturation of proteins and is used in organic production for disinfecting irrigation lines and disinfecting pruning tools. Commercial isopropanol is produced primarily through direct and indirect hydration of propylene. Isopropanol can be produced through natural fermentation processes.

[Supplemental Review Information](#)

Additional information requested by NOSB

NONE

Chlorine materials

Reference: 205.601(a) - As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems. (2) Chlorine materials -For pre-harvest use, residual chlorine levels in the water in direct crop contact or as water from cleaning irrigation systems applied to soil must not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act, except that chlorine products may be used in edible sprout production according to EPA label directions.

(i) Calcium hypochlorite



(ii) Chlorine dioxide

(iii) Sodium hypochlorite

Technical Report(s): [1995 TAP](#); [2006 TR](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#) ; [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/27/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from Subcommittee

The chlorine materials Calcium hypochlorite, Chlorine dioxide and Sodium hypochlorite were added to the National List in 1995 without petition and have been relisted in subsequent sunsets. These chlorine materials are on the National List in three areas: 1) 205.601 Synthetic substances allowed for use in organic crop production, 2) 205.603 Synthetic substances allowed for use in organic livestock production, and 3) 205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic’ or “made with organic (specified ingredients or food group(s)).” Chlorine materials are widely used disinfectant and sanitizing materials. However, all three of these chlorine materials can be harmful to health and the environment, and care must be taken for safe handling.

Mode of action (from 2006 Technical Report): In water and soil, sodium and calcium hypochlorite separate into sodium, calcium, hypochlorite ions, and hydrochlorous acid molecules. Hydrochlorous acid molecules diffuse through the cell walls of bacteria, changing the oxidation-reduction potential of the cell and inactivating an enzyme essential for the digestion of glucose, destroying the microorganism’s ability to function. Chlorine dioxide kills microorganisms directly by disrupting the transport of nutrients across cell walls.

Calcium hypochlorite and sodium hypochlorite are highly caustic and are a concern for occupational exposures. Acute exposure to high concentrations can cause eye and skin injury; ingestion can cause gastrointestinal irritation and corrosive injuries to the mouth, throat, esophagus and stomach. Chlorine dioxide is a severe respiratory and eye irritant, and inhalation of chlorine dioxide can cause nose, throat and lung irritation. The reaction product of chlorine dioxide, chlorate, can cause oxidative damage to red blood cells. (2006 TR)

Alternative materials that could potentially be substituted for chlorine materials include hydrogen peroxide, peracetic acid and ozone.

Additional information requested by NOSB

1. Are there less toxic disinfecting and sanitizing materials that could be practically substituted for chlorine materials in organic crop production?
2. Are all three of these chlorine materials needed for use in organic crop production?



Hydrogen peroxide

Reference: 205.601(a)(4) - As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems.

Reference 205.601(i)(5) - As plant disease control.

Technical Report(s): [1995 TAP](#); [2015 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#) ; [11/2005 NOSB sunset recommendation - deferred](#); [06/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

The 2015 Technical Report indicates that Hydrogen Peroxide can be used for Fire Blight control as an alternative to antibiotics. If you grow apple and pears, will you use this substance for Fire Blight, and if not, why not?

Soap-based algicide/demosers

Reference: 205.601(a)(7) - As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems.

Technical Report(s): [1996 TAP](#); [2015 TR in development](#)

Petition(s): N/A

Past NOSB Actions: **Actions:** [09/1996 NOSB recommendation](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

What alternative materials are available for use as an algicide/demoser?



Herbicides, soap-based/ (Soaps, herbicidal)

Reference: 205.601(b) As herbicides, weed barriers, as applicable (1) herbicides soap-based—for use in farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops.

Technical Report: [1996 TAP](#); [2015 TR in development](#)

Petition(s): N/A

Past NOSB Actions: **Actions:** [1996 recommendation](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from subcommittee:

In April, 1995 soaps were approved in organic crop production, but not as herbicides. In September, 1996, soap-based herbicides were approved, but only for use in farmstead maintenance and ornamental crops. Soap-based herbicides were relisted in subsequent sunsets, without changes in annotation.

A Technical Report was requested for all the Soap listings, but was not received by the deadline for finalizing this posting.

Additional information requested by NOSB

1. Are soap-based herbicides needed or widely used on organic farms for farmstead maintenance or ornamental crops?
2. What alternatives to soap-based herbicides are available for those uses?

Newspaper or other recycled paper

Reference: 205.601(b) As herbicides, weed barriers, as applicable. (2) Mulches. (i) newspapers or other recycled paper, without glossy or colored inks.

Reference: 205.601(c) - As compost feedstocks - Newspapers or other recycled paper, without glossy or colored inks.

Technical Report: [1995 TAP](#); [2006 TAP](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB



1. To what extent have newspapers shifted to soy ink?
2. What pigments are used in colored newspaper inks, and how does their toxicity compare with carbon black, the pigment used in black ink?
3. Does the diversion of newspaper to mulch significantly reduce the supply of recycled newsprint?

Plastic mulch and covers

Reference: 205.601(b) As herbicides, weed barriers, as applicable. (2) Mulches. (ii) Plastic mulch and covers (petroleum-based other than polyvinyl chloride (PVC)).

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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[Supplemental Review Information](#)

Additional information requested by NOSB

NONE

Soaps, ammonium

Reference: 205.601(d) As animal repellents—Soaps, ammonium—for use as a large animal repellent only, no contact with soil or edible portion of crop.

Technical Report: [1999 TAP](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

1. Are ammonium soaps effective as animal repellents?
2. What alternative animal repellants are available?



Ammonium carbonate

Reference: 205.601(e) As insecticides (including acaricides or mite control). (1) ammonium carbonate — for use as bait in insect traps only, no direct contact with crop or soil.

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#) ; [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

[Supplemental Review Information](#)

Additional information requested by NOSB

NONE

Boric acid

Reference: 205.601(e) As insecticides (including acaricides or mite control). (3)Boric acid - structural pest control, no direct contact with organic food or crops.

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from Subcommittee

Boric acid, derived from the mineral borax, has long been considered a “least-toxic” pesticide because it is non-volatile when placed in bait or gel formulations, thus eliminating direct exposure. However, if misused boric acid is a reproductive toxicant, a suspected endocrine disruptor, and toxic to plants and animals. Borax mining causes environmental damage. Based on a life cycle analysis and if used in a manner that causes exposure, boric acid raises challenging issues of health and environmental/mining impacts, and there are alternative materials and practices that may be less harmful.

[Supplemental Review Information](#)

Additional information requested by NOSB

Are there situations in which boric acid is the only, or safest, means of controlling the pest?



Elemental sulfur

Reference: 205.601(e)(5) - As insecticides (including acaricides or mite control).

Reference: 205.601(i)(10) - As plant disease control.

Reference: 205.601(j)(2) - As plant or soil amendments.

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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[Supplemental Review Information](#)

Additional information requested by NOSB

1. Is this substance still used in crop production in all three categories? If not what has changed?
2. Has the use of this substance increased or decreased during the current sunset cycle?
3. What are the specific purpose(s) you use elemental sulfur in your organic crop production? Are there any viable non-synthetic or management alternatives, for any of your current uses for elemental sulfur that might be able to provide adequate control of the targeted pest or disease?

Lime sulfur

Reference: 205.601(e)(6) - As insecticides (including acaricides or mite control).

Reference: 205.601(i)(6) - As plant disease control.

Technical Report: [1995 TAP](#); [2014 TR](#)

Petition(s): N/A

Past NOSB Actions: Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

1. How has the removal of the two previously allowed antibiotics (for fireblight control) impacted/or will impact your use of Lime Sulfur? Do you now (or will you) use lime sulfur as part of your organic control of fire blight in your organic apple or pear production?



2. Has the importance of lime sulfur in your organic farm system plan increased or decreased during the current sunset review cycle?
3. In the December 3, 2014 Technical Review it mentions many alternatives to Lime Sulfur as possible substitutes: Have you tried any of these materials in your organic farming and how effective were they and for what use: insecticide or plant disease control?

Oils, horticultural

Reference: 205.601(e)(7) - As insecticides (including acaricides or mite control). —narrow range oils as dormant, suffocating, and summer oils.

Reference: 205.601(i)(7) As plant disease control. - narrow range oils as dormant, suffocating, and summer oils.

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [04/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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[Supplemental Review Information](#)

Additional information requested by NOSB

1. Is this substance still used in organic crop production in both listing categories? If not what has changed?
2. Has there been any change in the use patterns or alternatives that would make the need for continued listing for Horticultural Oils un-necessary?
3. Has the use of this substance increased or decreased during the current sunset cycle?

Soaps, insecticidal

Reference: 205.601(e)(8) - As insecticides (including acaricides or mite control).

Technical Report: [1994 TAP](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))



Sunset Date: 6/27/17

Additional information requested by NOSB

Has any information been published in the last 10 years regarding the effect of soap on beneficial insects?

Sticky traps/barriers

Reference: 205.601(e)(9) - As insecticides (including acaricides or mite control).

Technical Report: [1995 TAP](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

[Supplemental Review Information](#)

Background from Subcommittee:

This listing covers a wide range of traps and coatings made with a number of different materials. Some are coated paper, some are coated plastic, and some are a sticky chemical that is brushed on plants. Coated plastic, at least, produces plastic waste that goes to the landfill. The sticky coating may contain petroleum distillates, and the traps may contain volatile attractants. Most are non-specific and kill non-target insects, spiders, mites, reptiles, and amphibians.

One TAP reviewer suggested the traps are compatible with organic only in processing plants. Another suggested they should be used only for monitoring or mass trapping.

Additional information requested by NOSB

1. Can/should the wide range of products covered by this listing be categorized by use and type of material?
2. Are some uses of sticky traps incompatible with organic production?

Sucrose octanoate esters

Reference: 205.601(e)(10) - As insecticides (including acaricides or mite control).

Technical Report: [2005 TR](#)

Petition(s): [2004 Sucrose Octanoate Esters](#); [Amendment #1](#); [Amendment #2](#)



Past NOSB Actions: [08/2005 NOSB recommendation for addition to NL](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

NONE

Pheromones

Reference: 205.601(f) - as insect management.

Technical Report: [1995 TAP](#); [2012 TR](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

1. The newest Technical Review, March 27, 2102 mentions some points of concerns with the micro-encapsulated forms of pheromones: How many, if any forms of micro-encapsulated pheromones are used in organic crop production? What are the concerns in using these, if any exist (as stated in the TR)?
2. Have the use of pheromones increased or decreased during the current sunset cycle?
3. Have the ways that pheromones are used/or applied changed during the current sunset cycle? Is there specific new technology or potential application methods that have shown promise for use in organic crop production during this current sunset cycle?

Vitamin D3

Reference: 205.601(g) - as rodenticides.

Technical Report: [1995 TAP](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))



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Additional information requested by NOSB

NONE

Coppers, fixed

Reference: 205.601(i) As plant disease control. (2) Coppers, fixed —copper hydroxide, copper oxide, copper oxychloride, includes products exempted from EPA tolerance, *Provided*, That, copper-based materials must be used in a manner that minimizes accumulation in the soil and shall not be used as herbicides.

Technical Report: [1995 TAP](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB meeting minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

[Supplemental Review Information](#)

Additional information requested by NOSB

1. For growers: Has the removal of the two previously allowed antibiotics (for fireblight control) impacted/or will impact your use of Copper? Has the importance of copper in your organic system plan increased or decreased during the current sunset review cycle?
2. For growers: is testing for copper causing you to change your spray program in any way?
3. For ACA's: Are you requiring testing? Have there been situations where copper is accumulating in soil such that non-compliances have been issued?

Copper sulfate

Reference: 205.601(i) As plant disease control. (3) Copper sulfate —Substance must be used in a manner that minimizes accumulation of copper in the soil.

Technical Report: [1995 TAP](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB meeting minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)



Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

1. For growers: Has the importance of copper in your organic system plan increased or decreased during the current sunset review cycle?
2. For ACA's: So, are you requiring testing? Have there been situations where copper is accumulating in soil such that non-compliances have been issued?

Hydrated lime

Reference: 205.601(i)(4) - As plant disease control.

Technical Report: [1995 TAP](#); [2001 TAP](#); [2002 TR for Calcium Hydroxide](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [04/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

NONE

Potassium bicarbonate

Reference: 205.601(i)(9) - As plant disease control.

Technical Report: [1999 TAP](#); [2015 limited scope TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1999 NOSB meeting minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2010 NOSB sunset recommendation reaffirmation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

[Supplemental Review Information](#)

Additional information requested by NOSB

1. The newest TR dated January 22, 2015 lists a variety of possible alternative materials and practices that could potentially serve as possible replacements for Potassium Bicarbonate. Have you used any of these materials or methods in your organic farming and did they give you the desired result needed in your disease control program?

2. Is Potassium Bicarbonate still needed in your organic farming operation? If so why?

Aquatic plant extracts

Reference: 205.601(j) As plant or soil amendments (1) Aquatic plant extracts (other than hydrolyzed)—Extraction process is limited to the use of potassium hydroxide or sodium hydroxide; solvent amount used is limited to that amount necessary for extraction.

Technical Report: [2006 TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [04/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

NONE

Humic acids

Reference: 205.601(j) As plant or soil amendments (3). Humic acids - naturally occurring deposits, water and alkali extracts only.

Technical Report: [1996 TAP](#); [2006 TR](#)

Petition(s): N/A

Past NOSB Actions: [09/1996 meeting minutes and vote](#); [04/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

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Additional information requested by NOSB

NONE

Lignin sulfonate

Reference: 205.601(j) As plant or soil amendments. (4) Lignin sulfonate - chelating agent, dust suppressant.

Reference: 205.601(l)(1) - As floating agents in postharvest handling.



Technical Report: [1995 TAP](#); [2011 TR](#)

Petition(s): N/A, [2014 Petition to remove as floating agent](#)

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [04/2006 sunset recommendation](#); [04/2011 NOSB recommendation to amend](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

1. Note that the Crops Subcommittee has received a petition to remove lignin sulfonate for use as a floating agent. Will removal of this material create disruption to your business?
2. Lignin sulfonate is typically derived from the by-product in the spent liquor when pulped paper is chemically processed. It is soluble in water and can have negative impacts in aquatic ecosystems. Should use of lignin sulfonate be subject to documented monitoring of waste water in the OSP?

Magnesium sulfate

Reference: 205.601(j)(5) As plant or soil amendments. - allowed with a documented soil deficiency

Technical Report: [1995 TAP](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2011 sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

Is non-synthetic magnesium sulfate available in the marketplace?

Micronutrients

Reference: 205.601(j) As plant or soil amendments. (6) Micronutrients - not to be used as a defoliant, herbicide, or desiccant. Those made from nitrates or chlorides are not allowed. Soil deficiency must be documented by testing.

(i) Soluble boron products

(ii) Sulfates, carbonates, oxides, or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and cobalt

Technical Report: [2010 TR Micronutrients](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010](#)



[NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

Does the current annotation apply to today's practices and procedures?

Liquid fish products

Reference: 205.601(j) As plant or soil amendments (7) Liquid fish products —can be pH adjusted with sulfuric, citric or phosphoric acid. The amount of acid used shall not exceed the minimum needed to lower the pH to 3.5.

Technical Report: [1995 TAP](#); [2006 TR](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

Is the annotation sufficient for situations when fish is blended with other ingredients?

Vitamin B1, C, E

Reference: 205.601(j)(8) - As plant or soil amendments.

Technical Report: [1995 TAP](#); 2015 TR in development

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

NONE



Ethylene gas

Reference: 205.601(k) - As plant growth regulators. Ethylene gas - for regulation of pineapple flowering.

Technical Report: [02/2000 Supplemental TAP](#); [2007 TAP](#); [2011 Supplemental TR](#)

Petition(s): N/A

Past NOSB Actions: [11/1995 NOSB recommendation](#); [10/2001 recommendation](#); [11/2005 NOSB sunset recommendation](#); [04/2011 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

1. Could certifiers or organic pineapple growers provide the Crops Subcommittee with information of current application techniques used in applying Ethylene for pineapple flower induction? Please supply for both for small scale and large scale producers.
2. During the current Sunset cycle what alternative materials or practices have been looked at in organic operations? Have growers looked at any of those alternatives mentioned in the January 25, 2011 Supplemental Information Report to the NOSB and the Crops Subcommittee? If so please explain whether or not they could serve as possible alternative replacements to the current use of Ethylene for pineapple flower induction?
3. Have small scale organic pineapple producers looked at the alternative application methods mentioned for ethylene gas that would make it more feasible for smaller sized operations? If so how did it impact organic pineapple production?

Sodium silicate

Reference: 205.601(l)(2) - for tree fruit and fiber processing.

Technical Report: [1996 TAP](#); [2011 TR](#)

Petition(s): N/A

Past NOSB Actions: [09/1996 meeting minutes and vote](#); [04/2006 sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

1. Are there any emerging practices (mechanical or physical) for pear or other tree fruit handling during the packing process that would be a reasonable alternative to using this “waterglass” material for a “wet dump”?
2. If lignin sulfates are removed from the list, what impact would that have on your level of use of sodium silicate materials?



EPA List 4 - Inerts of Minimal Concern

Reference: 205.601(m) As synthetic inert ingredients as classified by the Environmental Protection Agency (EPA), for use with nonsynthetic substances or synthetic substances listed in this section and used as an active pesticide ingredient in accordance with any limitations on the use of such substances.
(1) EPA List 4 – Inerts of Minimal Concern.

Technical Report: [2015 Limited Scope TR: Nonylphenol ethoxylates \(NPEs\)](#)

Petition(s): N/A

Past NOSB Actions: [02/1999 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [04/2010 recommendation](#), [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background

The Crops Subcommittee is working towards a solution to reviewing the inerts that were formerly on EPA List 4 by collaborating with the Design for the Environment Program of the EPA. Until this project is further along, the CS commissioned a Technical Report on the class of inerts known as Nonylphenol Ethoxylates (NPE). The US EPA is encouraging industry to eliminate the use of NPE (TR 2015, line 137) because of toxicity concerns and persistence in the environment. It is unlikely that the NPEs would pass favorably through the Design for Environment screening process. Therefore the Crops Subcommittee is considering removing them through an annotation at the next meeting, while maintaining the general listing for EPA List 4 at sunset while the new program starts up.

Additional information requested by NOSB

1. Commenters are urged to read the [TR for NPEs](#) linked here. Please comment on the suitability of the alternatives mentioned for specific types of generic product formulations in specific situations.
2. Would removing NPEs from use with 2 years notice (from now) be sufficient time? How would this affect your business?

Microcrystalline cheesewax

Reference: 205.601(o) - As production aids. Microcrystalline cheesewax (CAS #'s 64742-42-3, 8009-03-08, and 8002-74-2)-for use in log grown mushroom production. Must be made without either ethylene-propylene co-polymer or synthetic colors.

Technical Report: none

Petition(s): [2007 Petition](#); [2008 Petitioner response to questions](#)

Past NOSB Actions: [2008 NOSB recommendation](#)

Recent Regulatory Background: Federal Register rule amendment published 02/14/12 ([77 FR 8089](#))



Sunset Date: 3/15/17

Background from Subcommittee:

Microcrystalline cheesewax is used to seal the plug or sawdust spawn that is used to inoculate logs for growing mushrooms. It is a petroleum product and, though used in small quantities, does not biodegrade. There are many data gaps in the information concerning the allowed components of microcrystalline cheesewax. “Natural” soy wax from domestically-produced non-GMO soybeans—made by hydrogenating soy oil—is now available and was not considered when microcrystalline cheesewax was listed.

[Supplemental Review Information](#)

Additional information requested by NOSB

1. Is soy wax nonsynthetic?
2. Is soy wax sufficiently available to meet the needs of producers who grow organic mushrooms on logs?

Reference: 7 CFR §205.602 Nonsynthetic substances prohibited for use in organic crop production.

Ash from manure burning

Reference: 205.602(a)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from Subcommittee

Ash from manure burning was placed on §205.602 based on its incompatibility with organic production: “Burning these materials is not an appropriate method to use to recycle organic wastes and would not be considered a proper method in a manuring program because burning removes the carbon from these wastes and thereby destroys the value of the materials for restoring soil organic content. Burning as a disposal method of these materials would therefore not be consistent with section 2114(b)(1) of the OFPA (7 U.S.C. 6513(b)(1)).” (Preamble to proposed rule, December 16, 1997. 62 FR 241: 65874)



[Supplemental Review Information](#)

Additional information requested by NOSB

NONE

Arsenic

Reference: 205.602(b)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from Subcommittee:

Arsenic is prohibited by the Organic Foods Production Act (OFPA) 7 U.S.C. §6508(c)(1) CROP MANAGEMENT.—“For a farm to be certified under this title, producers on such farm shall not –

- (1) Use natural poisons such as arsenic or lead salts that have long-term effects and persist in the environment, as determined by the applicable governing State official or the Secretary.”

The Senate Committee report says, “The Committee recognizes that certain natural materials present environmental and health hazards. An example would be the use of arsenic which, although natural, is known to be extremely toxic, and which is therefore explicitly prohibited from use in organic production under this title.”

[Supplemental Review Information](#)

Additional information requested by NOSB

NONE

Lead salts

Reference: 205.602(d)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17



Background from Subcommittee:

Lead poisoning can cause a number of adverse human health effects, but is particularly detrimental to the neurological development of children. Lead accumulates in soils, so it is important to avoid soil applications of materials containing lead, whether the lead is in synthetic materials or naturally occurring (nonsynthetic) lead salts.

Additional information requested by NOSB

NONE

Potassium chloride

Reference: 205.602(e) - unless derived from a mined source and applied in a manner that minimizes chloride accumulation in the soil.

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

How widely is this used and is it primarily in blended products or by itself?

Sodium fluoaluminate

Reference: 205.602(f)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [1994 NOSB meeting minutes and vote](#); [11/2005 sunset recommendation](#); [2012 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

NONE



Strychnine

Reference: 205.602(h)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Additional information requested by NOSB

NONE

Tobacco dust (nicotine sulfate)

Reference: 205.602(i)

Technical Report: none

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 NOSB sunset recommendation](#); [10/2010 NOSB sunset recommendation](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#))

Sunset Date: 6/27/17

Background from Subcommittee:

This listing refers to the raw material from tobacco processing (tobacco dust) as well as the extracted active substance, nicotine sulfate. Both can very toxic to humans and the environment when used as fertilizer (tobacco dust) or pest control (nicotine sulfate). In 2008, EPA received a request from the registrant to cancel the registration of the last nicotine pesticide registered in the United States. This request was granted, and since January 1, 2014, this pesticide has not been available for sale.

[Supplemental Review Information](#)

Additional information requested by NOSB

NONE