October 7, 2015

Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Avenue, SW
Room 2648-So., Ag Stop 0268
Washington, DC 20250-0268

Docket: AMS-NOP-15-0037

RE: Handling Subcommittee – 2017 Sunset Summaries for 206.605 (Non-agricultural)

Dear Ms. Arsenault:

Thank you for this opportunity to provide comment to the National Organic Standards Board (NOSB) on its 2017 Sunset Review process and the Handling Subcommittee votes posted for the fall 2015 meeting.

The Organic Trade Association (OTA) is the membership-based business association for organic agriculture and products in North America. OTA is the leading voice for the organic trade in the United States, representing organic businesses across 50 states. Its members include growers, shippers, processors, certifiers, farmers' associations, distributors, importers, exporters, consultants, retailers and others. OTA's Board of Directors is democratically elected by its members. OTA's mission is to promote and protect the growth of organic trade to benefit the environment, farmers, the public and the economy.

OTA thanks NOSB for carefully considering each handling input scheduled to sunset in 2017. It's critical that NOSB hear from certified farmers and handlers on whether these inputs are consistent with and essential to organic production and handling, or whether there are other effective natural or organic alternatives available.

OTA is submitting updated results to our electronic surveys that were created for each input under review for 2017. New submissions are flagged. As explained during the first stage of the review process, the surveys were created and made available to **every NOP certificate holder** and include 7-10 questions addressing the **necessity (farm and livestock) or essentiality (handling)** of the National List input under review. The names of the companies submitting the information are confidential (not disclosed to OTA). To ensure wide distribution of the surveys beyond OTA membership, OTA worked with Accredited Certifying Agencies (ACAs) and OMRI to distribute the survey links to all of their clients as well as to targeted clients they know are using the inputs under review. OTA also worked through its Farmers Advisory Council (FAC[1]) to help assist in distribution to NOP certified farmers.

[1] OTA's Farmers Advisory Council was established in 2013 to formalize two-way communication between OTA and member producers as well as regional organic producer organizations across the United States. Through dialog and input, FAC gives organic farmers a voice to directly influence OTA's policy and provides an avenue for OTA to share information and advocacy work with this stakeholder group.

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The comments submitted at this time include everything we have received through October 4, 2015. We have received the following total responses:

- 205.605(a) Nonsynthetic, Non-agricultural: 94 responses
- 205.605(b) Synthetic, Non-agricultural: 90 responses
- 205.606 Agricultural: 59 responses
- **Total: 243**

New survey comments have been provided on the following National List materials:

- Acidified sodium chlorite
- Ascorbic acid
- Bentonite
- Citric acid
- Calcium chloride
- Calcium phosphates
- Carbon Dioxide
- Diatomaceous Earth
- Enzymes
- Ethylene
- Glycerin
- Hydrogen Peroxide
- Natural flavors
- Nitrogen
- Perlite
- Sulfur dioxide
- Tocopherols
- Xanthan gum

New comments are highlighted below.

National List Criteria

Materials that have been placed onto the National List for use in handling should remain on the National List if: 1) they are still essential to and compatible with organic production and handling practices; 2) there are no commercially available alternative materials (natural, organic) or practices; and 3) no new information has been submitted demonstrating adverse impacts on humans or the environment (OFPA SEC. 2118 [7 U.S.C. 6517 and 6518] National List). Furthermore decisions must be transparent, non-arbitrary, and based on the best current information and in the interest of the organic sector and public at-large.

Based on survey results and/or feedback received directly by members, the following materials meet the essentially criteria listed above. We are not aware of any new information regarding adverse impacts on humans and on the environment.

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Non-agricultural non-synthetic (205.605(a)) Non-synthetic (non-agricultural): Allowed as ingredients in or on processed products labeled "organic" or "made with organic (specified ingredients or food group(s)).

Substance	Survey Information
Citric Acid	**New Handler Comments:** Required for the flavor profile of fruit flavored products. Critical. **New Handler Comments:** Used for pH control in juice products. Certified for 18 years. Selling products Nationwide. There are no allowed alternatives that work for our application. If this material is removed we will not be able to control the pH in our products. Critical and essential. **New Handler Comments:** Used for Lowering pH in thermal processing. Certified for five years. Sell organic products in all 50 states. Perhaps malic acid could be used as an alternative. The loss of citric acid would increase cost, reduce quality and nutrition by requiring longer cooking time, and it would use more energy to extend cooking time. Critical to our business. **New Handler Comments:** Making organic dry seasoning mixes. Certified for over 20 years. Based in the Midwest & selling products across the U.S. and Canada. Citric acid provides the desired acidic component. There are no allowed alternatives that function in the same manner. If citric acid were not available, the products that it goes into would not have as desirable of a flavor and may lose demand as a result. There would be a significant economic effect if citric acid were no longer approved for use. Critical to our business. **Handler Comment:** Our suppliers use citric acid in canned artichoke hearts, water chestnuts, pimentos, tomatoes and orange peel. Citric acid is use to adjust the pH of many of these ingredients as well as maintaining the quality and control of microorganisms. Alternate acids are not more natural and do not give the same flavor profile. We always confirm that the citric acid used by our suppliers is produced by microbial fermentation of carbohydrate substances. **Handler Comment:** Used for organic fruit processing and spreads as a pH adjuster. Company has been certified for 13 years. Products are sold in all 50 states. There are no other alternatives that will work. Citric acid is critically essential to our organic processing operation. **Handler Comment:** Used as an ingredient in our Ready to Drink (RTD) beverages. Primary function is as an acidulant. Company has been certified for 18 years. Our products have national distribution. Several of our RTD products are also sold in Canada and Norway. Loss of citric acid would all be negative for our organic products. It would require re-formulation of our entire line of RTD products. Not using an acidulant would also compromise the shelf-stability of our RTD products that currently do not require refrigeration. Our entire process for producing, shipping and selling our RTD products would need to change. The negative economic effects would be widespread and could prompt a discussion to determine if the products were financially viable to produce. Essential – critical. **Handler Comment:** The product is used for coagulation of soy and pea protein as the only approved buffer for coagulation in organic production. Company has been certified for 20 years and sells products to approximately 15 states and exports to Japan. Without the use of citric acid, there will not be any protein coagulation and no organic protein. The natural available is Hydrochloric acid, which is not allowed. Should we no longer be allowed to use this substance, we would not be able to produce organic soy and pea proteins. Essentiality – 10 Critical. **Handler Comment:** Used for flavor in cheese; cheese and dairy-based powders. Certified for 15 years. Finished products containing our ingredients are sold throughout the U.S. states and around the world. No known alternatives. We would not be able to make our products if this ingredient was not allowed. Essentiality – Critical. **Handler Comment:** Used for PH adjustment in organic starches. Certified for 13 years.

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	Products are sold in the 50 United States and exported to other countries. No suitable alternatives have been identified. Alternative management practices have not been identified. Loss of material would result in loss of ability to control pH, which is a quality measure of final product. Handler Comment: May also adversely impact end use applications. Product meeting end user expectations for pH would be limited, resulting in loss of sales. Essentiality – Critical.
Lactic Acid	**Handler Comment:** Lactic acid is used in a soy-based cheese alternate that we currently use. The lactic acid is present for flavor development and control of microorganisms. Alternates are not more natural and do not have the same flavor profile.
Bentonite	**New Handler Comment**: Used as a filtering agent in our certified juice concentrates. Certified for 8 years and selling products nationwide and exporting. There are no alternatives for this product/process. If the material is removed we could not filter our concentrates. 9- critically essential. Companies responding have been certified for up to 13 years. Products are sold in all 50 states and Canada. **Handler Comments:** Bentonite is used for organic juice concentrate processing as a filtering aid. No other natural or organic sources are known with the same specific function. This input is rated as critically essential to organic processing. The loss of allowance would result in lost quality and loss of sales.
Calcium Carbonate	**Handler Comment:** Calcium carbonate is used as a calcium source in soy-based cheese alternate. Because the soy-based cheese alternate is a substitute for milk-based cheese, our supplier would like to be able to provide a similar calcium level for nutritional purposes. Alternates are not more natural and may change the flavor of the soy-based cheese alternate.
Calcium Chloride	**New Handler Comment:** Processed vegetables. Certified for five years. Selling products in all 50 states. Adds calcium ions to the very soft SC water, which allows for firmer vegetable texture after processing. No alternatives to our knowledge. Without this material, our products would be greatly diminished. Reduced consumer expectation would lead to lower sales. Critical. **Handler Comment:** At times, calcium chloride is used by our suppliers as a firming agent in beans and brined vegetables. Substitutes may be available but they are not more natural and so we have not tested them. **Handler Comment:** Used in organic specialty feeds as a calcium source for livestock. Although other forms exist, calcium carbonate is well understood, and almost universally accepted as an approved feed additive globally. Board should recommend retaining its continued use. Loss of this input would result in decreased calcium availability, which will reduce organic livestock performance and production output. This input is critically essential.
Dairy Cultures	**Handler Comments:** Used in cheese and yogurt products as a stabilizer, flavor and acidifier. Products are sold in all 50 states with some export. Companies responding have been certified for 5-20 years. The loss of dairy cultures would result in a halt in production. All companies said they would not be able to produce organic products. Dairy cultures are critically essential to the processing of organic products.
Diatomaceous Earth	**New Handler Comment**: Used as a filtering aid in our certified organic juice products. Certified for 18 years and selling products nationwide and exporting. There are no alternatives for this product/process. If the material is removed we will no longer produce organic juice concentrates. 10- critically essential. **Handler Comments:** Diatomaceous earth is used to remove 4nsoluble and impurities in solutions. We do not use this directly but it is used by some of our suppliers. Diatomaceous earth improves the quality, flavor and appearance of ingredients without leaving a residual in the ingredient. Applications where used include vinegar and sugar processing. **Handler Comments:** Used as a filtering aid for juice concentrates. It's used in combination

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	with other filtering aids such as bentonite and perlite. All have a specific use and must remain on the National List. There are no other alternatives. This is critically essential to organic processing. **Handler Comments:** Used for organic honey filtration (processing aid). Operation has been certified for six years. Products are sold in 31 states. Currently no foreign export. Not familiar with any alternatives. It is possible to do a strained honey product without the Diatomaceous earth but it does not have the same clarity as filtered honey and crystallizes faster. Currently our entire organic honey customer base is for filtered organic honey. Without this material, we would no longer be able to process filtered organic honey. Diatomaceous earth is critically essential to our operation.
Enzymes	**New Handler Comment**: Used in making flavor extracts – it functions as a catalyst. Certified for 18 years. Selling products Nationwide and exporting. There are no allowed alternatives that work for this purpose. If this material is removed we could not make our organic flavors. Critical and essential – 10. **Handler Comments:** Microbial enzymes are used in the manufacture of cheese as a rennet substitute. The only known substitutes are derived from animal sources or through genetic engineering. We would not be able to use cheese in our organic products if microbial enzymes were not approved for use. **Handler Comments:** Used as a processing aid for organic juice concentrates. Company has been certified for 13 years. Products are sold in all 50 states. There are no other alternatives that will work. Enzymes are critically essential to our organic processing operation. Ancillary substances include: glycerol carrier 45%, stabilizing agent sodium benzoate <5g/kg & NaCl 80-100 g/kg. **Handler Comments:** Used in non-dairy beverages, sold in all 50 states. Certified for 15 years. No known alternatives, organic is not available. Products would be unacceptable to consumers if this material was removed. Critically essential. **Ancillary Substances** **Anti-caking & anti-stick agents:** calcium silicate, calcium stearate, magnesium silicate/talc, magnesium stearate, magnesium sulfate, silicon dioxide, sodium aluminosilicate **Carriers and fillers:** ammonium sulfate, autolyzed yeast/yeast extracts, barley grain, barley meal, calcium phosphate, calcium acetate, calcium carbonate, calcium chloride, calcium sulfate, corn flour, corn grain, corn steep liquor (powder), corn starch, dicalcium phosphate, dextrin, dextrose, dried glucose syrup, ethyl alcohol, flour, glucose, D-glycerol, glycol, inulin, lactose, lactic acid, maltodextrin, maltose, mannitol, microcrystalline cellulose, milk, mineral oil, potassium chloride, palm oil, potato starch, propylene, propylene glycol, purity gum (starch), rice grain, rice protein, saccharose, sorbitol, soy flour, soy oil, starch, sucrose, sunflower oil, stearic acid, trehalose, vegetable oil, water, wheat (flour/grain/starch) **Preservatives:** alpha (hops) extract, ascorbic acid, benzoic acids and their salts, calcium propionate, citric acid, potassium chloride, potassium phosphate, sodium acetate, sodium chloride, sodium benzoate, sodium propionate, sodium sulfate, sorbic acid and its salts, stearic acid, tannic acid, trisodium citrate, zinc sulfate **Stabilizers:** betaine (trimethylglycine), glucose, glycerol, maltodextrin, sodium chloride, sodium phytate, sorbitol, sucrose **pH control, buffers:** acetic acid, citric acid anhydrous, sodium citrate, sodium phosphate, trisodium citrate
Flavors	**New Handler Comment:** Certified for 18 years. Selling nationwide and exporting. We use only organic flavors. We've never had an issue with supply. Natural flavors are needed for use in some organic flavors. Requiring organic when available would help control abuse of natural flavors.

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	Handler Comments: -Products are sold in all 50 states for all responders, and some throughout the world. -Used in the production of organic flavors. Products are sold in all 50 states. They are essential and certain flavors are not available in organic form. Our company only uses organic flavors, which rely in some cases on the use of natural flavor isolates. Flavors are critically essential to our organic products. -Used in soup. Products are sold in all 50 states. Unaware of organic alternatives that would work. Commercial availability should apply to natural flavors. It would be appropriate to retain all flavors on the National List if commercial availability were assigned. Flavors are essential to our organic products. -We are doing our due diligence to validate organic flavors in our certified products. We have converted a portion of the formulas and continue to reevaluate as more organic flavors become available. -If available, have you conducted research (e.g. R & D trials) on the use of allowed natural or organic alternatives? Answers: Yes, Yes, No, No known alternatives, Yes. Organic flavors are used in our lab when the quality and form will match the need. We only use organic flavors. No. -We use some organic flavors, but because flavors are unique, we cannot replace most of our flavors with organic ones. -Natural flavors are used in all of our products. Removing natural flavors from the list or only allowing organic forms would lead to a decrease in product quality. -Flavors should not be sunset because we have custom flavors that cannot be manufactured with organic ingredients only. There would be major economic effects if flavors were removed from the National List. Flavors can make the difference between success and a failure. -Never researched the use of organic flavors further as this was deemed acceptable. -Organic flavors are used where they can provide the same quality and form. However, often quality and form can only be met with Natural Flavors. Only ones meeting the NOP annotations are used at our facility. -Organic extracts, organic essential oils, organic essences and organic distillates are available. Organic compound flavors cannot be compared from one formulation to the next due to the highly variable composition of these products. -Certified organic flavors are available but scarcely. -It would be appropriate to assign commercial availability to Natural Flavors. For many types of flavors, there is not an acceptable organic alternative that matches the flavor profile and function. Specific examples include vanilla, chocolate, coffee, dairy and many others. -Assigning commercial availability would help locate new product sources easier. It would be appropriate to assign commercial availability to natural flavors because: • Not all flavors are available in organic form. • In order to allow their use, the absence of an organic flavor of the same flavor profile and physical-chemical specification. • Organic flavors are not as strong as natural flavors • We only use certified organic flavors. -Most of the compounded natural flavors that are certified organic qualified only by virtue of containing a minimum of 95% organic solvent such as organic ethyl alcohol. The active flavoring substances are not organic. Compound flavorings should remain on 205.605 because the active flavoring constituents are not available as organic (non-agricultural). Obtaining certification for a compound flavor based upon the % of organic solvent used is not in keeping with the spirit of NOP. Affirm that compound flavors are non-agricultural by retaining them on the National List.

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-Is the supply of organic flavors sufficient? Unknown. Unknown. Unsure. Limited. No.
-Given the availability of some organic flavors, do you think that commercial availability should apply to the use of natural flavors in organic products (i.e. use organic when commercially available in quantity, quality and form)?

- Absolutely –agree!
- Yes
- Yes
- No
- No. Even though a flavor may be available in organic form. The organic form may not provide the quality needed for the final gummy product.
- Commercial availability should only apply to extracts, essential oils, essences and distillates, which are derived from a single agricultural product (e.g., orange oil, vanilla extract). It cannot apply to compound flavors because they vary greatly in flavor profile and physical-chemical specification from one product to another.
- Yes
- Yes
- Yes

-Flavors, used in compounded natural flavors. Products are sold in most states, flavors are exported but these are not organic flavors. Availability of organic alternatives: Commercial availability determination of our inputs is challenging due to the sheer volume (Over 2,000). We have conducted research on the use of organic alternatives. Typically this is costly and does not provide a result that is favorable to the organic alternative.

Is the supply of some specific organic flavors sufficient to warrant the sunset of some specific natural (non-organic) flavors on 205.605 of the National List? If so which ones?

- At this time, no. Flavors improve consumer selection of the food. The flavor is typically developed for, and very specific to, the food product. This includes stability, solubility, and appropriate food safety determinations while supporting other claims the food may be making – i.e., gluten-free, kosher. While it seems that there are many organic flavors, these flavors may no longer be available. In addition, organic flavors are <1% of the total flavor world.

Should commercial availability apply?

- While this would align to current practices for commercial determination, the time, money and over-all resources to determine this far exceed the resources to conduct the appropriate tests over the shelf life of the food. This would create an undue burden on the industry and stifle the growth of the organic processed food market. Perhaps there are alternatives that would require sensory evaluations of the flavor options and a paper exercise on suitability to desired function in the food.

Is it appropriate to retain all flavors but require commercial availability?

- This may be the desired end point but the industry is not YET ready for this "requirement." There should be a way to encourage this practice but a requirement will create chaos

Loss of natural flavors on the NL would result in loss of organic market since the foods would not be as desired by consumers. Critically essential.
-We use a couple of organic compliant natural flavors in some of our snack seasonings. We use a natural flavor as well as the organic flavor, but cannot achieve the same flavor profile with the organic version alone, as it does not deliver the same flavor impact. We also use an organic compliant natural smoke flavor for which there is no organic option. We do use both organic, when available, and organic-compliant. With extensive trials, we have determined the organic versions are not as strong, and do not deliver the same flavor impact in our application.

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	The efficacy of equivalent organic flavors should also bear significance. If it is not equal in function, that has to be taken into account. If it is an inferior option, it should not be forced on processors. If we cannot match our existing flavor profile, we risk a success line of products and the success of our company. Natural flavors are critically essential.
Nitrogen	**New Handler Comment:** Producing shelf-stable, thermally processed products. Certified for five years. Selling products in all 50 states. Use preserves quality or product by reducing oxidation. There are no alternatives to our knowledge. Quality would be diminished through oxidation resulting in reduced consumer preference for our products. Critical to organic processing. **Handler Comments:** Liquid nitrogen is used in cryogenic cooling/freezing in the frozen food industry. Nitrogen is currently used by some of our suppliers. The nitrogen dissipates into the air after freezing and does not remain in the food product. **Handler Comments:** Used as a packaging aid for canning. It keeps the can firm by displacing air. Products are sold throughout the states. There are no alternatives available or other management practices that would work in place. Nitrogen is critically essential our organic business. **Handler Comments:** Used for IQF tomatoes. Company has been certified for 13 years. Products are sold in 10 states and exported to other countries. Used to (flush) replace oxygen. No known alternatives or practices. Loss of this material would result in discoloration of tomatoes during storage. Product color will be refused by customer. Significant reduction to shelf life. We would likely stop the production of organic. Essential – critical. **Handler Comments:** Used as a packaging aid for canning. Keeps the can firm by displacing air. Certified for 13 years. Products are sold throughout U.S. and Canada. No known alternatives or practices. Loss of this material would result is loss of quality and thus loss of sales. Essential – critical.
Perlite	**New Handler Comment**: Used as a filtering aid in our certified organic juice concentrates. Certified for 18 years and selling products nationwide and exporting. There are no alternatives for this product/process. If the material is removed we will no longer produce organic juice concentrates. 10- critically essential. **Handler Comments:** Companies responding have been certified for up to 13 years. Products are sold in all 50 states and Canada. Perlite is used for organic juice concentrate processing as a filtering aid. No other natural or organic sources are known. This input is rated as critically essential to organic processing. The loss of allowance would result in loss in quality and loss of sales.
Potassium chloride	**Handler Comments:** Company responding has been certified for up to 15 years. Used in Cheese and Cheese and Dairy-Based Powders. Finished products that contain our ingredients are sold in all U.S. states and around the world. This input functions as a salt replacer. The loss of this material would limit our ability to make reduced sodium products and would likely eliminate the line altogether. This input is essential in organic processing due to the lack of an alternative.
Potassium iodide	**Handler Comments:** Companies responding have been certified for up to 13 years. Products are sold in all 50 states. Potassium iodide is used at our facility as a nutritional source of iodine. Not available in the same form and quality needed to ensure RDAs are safely met at the approved shelf-life. Alternatives are not available. Removing this ingredient would no longer allow products to be fortified with the iodine nutrient. This would change the quality and functionality of the product. By removing the nutrient for the product, there would be a loss of effectivity and loss of sales. This would impact the economic health of the operation. Essential.
Sodium bicarbonate	**Handler Comments:** Sodium bicarbonate is a component of our baking powder used in a wide range of baked items. There are no more natural substitutes that give a similar functionality.

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Waxes (Carnauba)	**Handler Comments:** Fruit snacks. Certified since 2002. Sell products in all 50 states. Functions as a polish and moisture barrier; prevents stickiness. We are committed to using organic where we can. If it were removed, we would have a sticky product that causes low productivity during pack out, which results in an increase in cost of goods and low consumer acceptance. Critically essential. No ancillary substance response.
Yeast	**Handler Comments:** We use Baker's Yeast for leavening and flavor development in a wide range of baked products and savory foods. We understand organic versions are becoming available. However, the range is limited. Thus, we request that this remain on the National List until a stable supply is developed. **Handler Comments:** Autolyzed yeast is used in a limited number of our products for flavor development in foods. It allows for the development of foods with good flavor and lower amounts of sodium. We understand organic versions are becoming available. However, the range is limited. Thus, we request that this remain on the National List until a stable supply is developed. **Handler Comments:** We use nutritional yeast for flavor development in addition to adding nutritional components to foods. We understand organic versions are becoming available however the range is limited and we request that this remain on the National List until a stable supply is developed. **Handler Comments:** Used for organic gravies, pizza, soups, breads, rolls and frozen entrees. Baker's yeast is used for leavening, yeast extracts for flavor. Products are sold in all 50 states with export to many countries. Organic yeast is available but no gluten-free versions. MSG is an alternative, but it is not acceptable to most consumers, and it is not allowed in organic products. The loss of yeast would result in millions of dollars lost in sales. We could not produce gluten-free leavened products without it, and the flavor of many products would be impaired without the yeast extracts. Yeast is critically essential to the processing of our organic products. **Handler Comments:** Nutritional yeast used as Specialty Feed additive. Company is eight years certified. Products are sold throughout the U.S. and in EU member states. The Allowed yeast for Animal Feeds is identified in the AFCO Official Publication 2015 page 455. I can't comment on the organic availability of this listing. We are always conducting research, prior to using a new component. However, organic certified alternatives are not always available. Also we could not comment on the organic status of the allowed yeasts types as listed in the AFFCO publication. Nor do we have a listing of ancillary substances for this list. **Handler Comments:** Used for flavoring in cheese; cheese and dairy-based powders. Company is 15 years certified. Products are sold throughout the U.S and around the world. We do use organic yeast in products. If yeast were removed from the NL, it would only affect our products should there be a shortage of organic yeast. On a scale of 1 to 10, yeast rates 5 for essentiality. **Handler Comments:** Used in pizza crust. Certified for eight years. Products sold in one state, no export. Organic is available but only sold in small quantities and would have to be imported. Loss of yeast would result in loss of organic products. Essential – Critical.

205.605(b) Synthetic: Non-agricultural (non-organic) substance allowed as ingredients in or on processed products labeled "organic" or "made with organic (specified ingredients or food group(s)).

Substance	Survey Information
Acidified sodium chlorite	**New Handler Comment:** Certified for at least 11 years. Selling products in all states and exported to Hong Kong and Canada. ASC is used as a processing aid/sanitizer to control microbes on the surface of meat, poultry, seafood and fruits and vegetables. There are no suitable alternatives. We believe ASC is the best antimicrobial intervention for organic

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	broiler processing. We have tested other alternatives but they are not as effective in controlling salmonella and campylobacter on fresh chicken carcasses and parts. Alternative management practices? None that will be as effective in meeting the USDA pathogen reduction program. Loss of this material would result in reduction of available organic poultry to market and economically a reduction in organic poultry revenue. Essentiality? 10 Critical. **Handler Comments:** ASC is under consideration as a sprouting seed disinfection treatment, as a possible alternative to the 20,000 ppm calcium hypochlorite that is currently recommended by FDA. If ASC is taken off the allowed list, there will be no incentive to consider it as an alternative to 20K chlorine in organic production. In terms of "allowed equally effective" organic or natural alternatives, I don't know of any presently. There has been some promising peer-reviewed research on competitive exclusion, but presently no "allowance" for this approach. There aren't any alternative management practices, not to my knowledge; seed can become contaminated from a number of environmental sources, even using GAPs. We are not presently using it, since it has not been approved for our specific use by EPA or FDA- but it is under consideration. If we could use it, research results suggest it could significantly enhance sprout safety. If it is not allowed, then things will stay pretty much the way they are now: periodic recalls, sporadic outbreaks, two major retailers not carrying sprout products, and generally lousy safety image. ASC is effective at 200 ppm, compared to 20,000 ppm calcium hypochlorite, which is not as effective. Allowance of ASC would arguably result in a lower negative environmental impact. The sprout industry continues to be economically depressed by high-profile outbreaks and recalls. The use of ASC could improve confidence, and contribute to significant growth of the sprout industry. Essential to critically essential.
Ammonium bicarbonate	**Handler Comments:** Used in certified organic crackers. Certified more than 10 years. We sell in all states. No known alternatives. Loss of this material would impact proper texture of product and result in loss of business. This material is critically essential to the processing of our organic products.
Ascorbic acid	**New Handler Comment:** Used as an antioxidant in organic juice and fruit spreads. Certified for 18 years and selling products nationwide. Organic lemon juice can be used in some instances but not all. Ascorbic acid is needed. Impact to the quality and marketability of the organic product(s) you are marketing) if the material were removed?: The quality of our products would not be acceptable. 10- critically essential. **Handler Comments:** Ascorbic acid is used by our supplier of pineapple juice to maintain color/reduce browning. There are no other more natural color preservatives for pineapple juice which naturally contains ascorbic acid. Quality and marketability of products would be impacted without ascorbic acid, leading to loss of sales. Critically essential. Ascorbic acid is used in many of our products as a Vitamin C source. It is stable and allows our products to meet the daily RDA for Vitamin C in a quality product. **Handler Comments:** Organic and Natural forms of Vitamin C do not have the shelf-life or allow for the concentrations of Vitamin C needed in our products. Many of our certified products contain Ascorbic acid as a Vitamin C source. This provides a good way for people to get the Vitamin in a certified supplement form. Should it be removed from the list, the products would not have the same function. Vitamin C is a large part of our business. Should it be removed, the economic health of our company would suffer.
Calcium hydroxide	**Handler Comments:** Calcium hydroxide/lime has been used for centuries to dissolve the pericarp (outer coating) of corn to improve its ability to stick together. This processing allows the manufacture of corn tortillas. Excess calcium hydroxide is removed from the corn in the process, leaving only a small residual of calcium. Calcium hydroxide is also

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	used by a few of our suppliers to assist in removing impurities from solutions. For example, calcium hydroxide can be used in the manufacture of cane juice to coagulate proteins and removed unwanted carbohydrates.
Calcium phosphates (mono, di & tri)	**New Handler Comment:** Used in organic baked goods, specifically as an ingredient in baking powder. Certified for 5 years and selling products nationwide. Not aware of any alternatives. If this material is removed from the National List we will no longer sell organic products. Critically essential to our organic products. No alternative. **Handler Comments:** Mono-calcium phosphate is a component of our baking powder, which is used in a wide range of products. There is no other more natural substitute for leavening when yeast is not appropriate. Critical to organic processing.
Carbon dioxide	**New Handler Comment:** Used in organic carbonated beverages. Certified for 18 years and selling products nationwide. There are no alternatives. We would not sell carbonated beverages if removed. 10- critically essential. **Handler Comments:** Carbon dioxide is used by some of our suppliers in the control of pests in the storage of grains and rice. It is used both for freezing foods and also for accelerated cooling, a critical food safety procedure. The carbon dioxide dissipates into the air after the cooling/freezing is complete and does not remain in the food product. We do not currently use carbon dioxide in manufacture but would like to have this as an option in the future should we need additional cooling on new products. **Handler Comments:** Used as a processing aid (carbonation) in our carbonated Ready to Drink (RTD) beverages. Company is headquartered in Northern California. We utilize co-packing facilities in California, Oregon, Florida and Pennsylvania. Our products have national distribution. Several of our RTD products are also sold in Canada and Norway. No alternatives are available. If carbon dioxide were removed, organic product effects would all be negative. It would require re-formulation of our entire line of RTD products as the product could not exist in its current form. Our entire process for producing, shipping and selling our RTD products would need to change and could become extremely expensive, possible rendering the product obsolete. This material is critically essential to our operation.
Chlorine materials	**New Handler Comment:** Used as a sanitizer in many of our certified organic manufacturing facilities. Certified for 18 years and selling products nationwide and exporting. There are some alternatives but chlorine is essential when alternatives are not as effective. GMP' - food safety requires sanitation. We would not sell organic products if removed. 10- critically essential. **Handler Comments:** Calcium hypochlorite, chlorine dioxide and sodium hypochlorite are used as algicides, disinfectants and sanitizers in the handling and processing of organic crops. These are critical for food safety purposes. Along with our own use in sanitation, our suppliers use chlorine in the cleaning of equipment and food contact surfaces, again a critical food safety activity. **Handler Comments:** Used as a sanitizing agent in most organic processing facilities. Other sanitizers do not work as well. Poor sanitation could lead to serious illness. Dead consumers don't buy organic products. Critically essential. **Handler Comments:** This ingredient is used in our cleaner and, along with sodium hydroxide, provides a very high-quality cleaning of the system. No alternatives are available that meet the same functionality and quality of cleaning that is possible with this ingredient. Any quality issue due to a lesser quality of cleaning would affect all products at our facility. Any quality or food safety issue due to using a lesser quality alternative ingredient would devastatingly affect the economic health of our facility. No alternatives exist that have proven to have the log reductions needed. Good Agricultural Practices (GAP) can help, but are not a 100% guarantee to prevent

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	contamination from pathogens. Without this material we would have difficulties complying with FSMA and more consumers could become ill. Critically essential. **Handler Comments:** SODIUM HYPOCHLORITE IS used to control the PH in water for a triple wash system that washes cut product, which works with Citric acid. We conduct 10 days' shelf testing per customers' request and products not washed do not survive 8-10 day study. With chemicals, we have had 12-15 days good, edible shelf life. Without the listing for chlorine, product might not make it to 10-day shelf life as required by each vendor and would need to change to 6-day shelf life for some products.
Ethylene	**New – Handler Comment:** We make organic pineapple juice. Certified for 18 years. Selling nationwide and exporting. Used for the ripening of pineapples. There will not be any organic pineapple juice in the quality and quantity that we need if ethylene is removed from the national list. This material is essential for ripening of citrus. We would not have enough supply to produce organic juice. We would loose sales and go out of business. **New – Handler Comment:** Used for ripening bananas, to ripen bananas for processing into puree or for dehydrating. Certified for 19 years. Selling products in most states in USA and is an ingredient in Stonyfield Farm Yogurt. Also sold to Switzerland and European Union. We have ripened naturally. Very time-consuming. We're not aware of any alternatives. It allows efficient ripening. Loss of this material would greatly increase waste and loss, and increase labor costs. It's critical to our business. **New – Handler Comment:** Production of organic banana puree. Used to ripen bananas. Certified for two years. Located in Costa Rica and selling products to USA and Europe. Not aware of any alternative materials. Without this material, the quality of our products and business would be highly affected. This operation cannot be done without ethylene. It's critical to our business.
Ferrous sulfate	**Handler Comments:** Used in organic certified animal feeds. Certified for four years. Selling products in 49 states. Used in specialty feeds. Not aware of any alternative management practices that would eliminate the need for this specific substance. Without this substance, organic livestock production performance would drop. Substance is critically essential to organic processing of livestock feed.
Glycerides (mono & di)	**Handler Comments:** Mono- and diglycerides are used in drum drying of certain ingredients such as potato flakes. It prevents the potatoes from sticking to the drum. Potato flakes have unique water absorption properties due to their surface area. For this reason, drum-dried potato flakes are a preferred source for water-binding function.
Glycerin	**New – Handler Comment:** Used in the manufacturing of organic flavors. Certified for 18 years, selling products nationwide. Our suppliers need this material. Critically essential. **Handler Comments:** Organic baked goods and certified organic personal care products. Also used in many flavors. Over 15. 50 states and many countries. Used as a humectant and solvent. We have not conducted research (e.g., R & D trials) on the use of allowed natural or organic alternatives. Loss of this material would result in impaired quality and marketability of products and loss of sales. Critically essential. **Handler Comments:** Glycerin is used as an emulsifier in most of our natural flavors. Its use is critical in both quality and function of the flavors and our product. Organic or natural is not available in the quality/form needed. We have conducted research trials. The flavors of our products are a large contributor to high-quality standards. If glycerin was removed from the list, all of our flavor profiles may change. This could create a decrease in quality. If organic glycerin must be used for all flavors, this would drastically increase the cost of our products and could pose a change to quality. This would affect the economic health of our company. Critically Essential.
Hydrogen peroxide	**New Handler Comment:** Sanitizer for aseptic packaging. Certified for 18 years and

	selling products nationwide. No alternatives are available. We would not sell organic items in aseptic packages if hydrogen peroxide is removed. Critical to our organic business – essential: 10. **Handler Comments:** Hydrogen peroxide is an effective and environmentally benign substance used to reduce/control microorganisms for food safety purposes. Hydrogen peroxide dissipates completely during its use and does not remain in the food. Hydrogen peroxide is used by some of our suppliers. We would like to have it remain on the list so that our ingredients still meet our requirements from a food safety perspective. **Handler Comments:** Used as a sanitizer for packaging during aseptic box manufacturing. Hydrogen peroxide is essential in sanitizing aseptic boxes prior to filling. No alternatives known. This is a food safety issue—the product is needed. Loss of this material would result in loss of sales for aseptic products. Critically essential. **Handler Comments:** Used for organic products sold throughout all 50 states. This is used in the sanitizer that is used in our facility. Hydrogen peroxide is an important ingredient in ensuring that our microbiological standards are kept to the upmost quality. Organic and natural alternatives that provide the same assurance of function and quality are not available. Maintaining a clean and food-safe environment is critical to our operation. Any negative result from using a lesser-quality sanitizer would risk the product quality of all products. Any quality breach due to using a sanitizer with less efficacy would create a devastating breach in our quality system. It would critically affect the economic health of our business. Critically essential.
Magnesium chloride	**Handler Comments:** Companies selling to 50 states and many other countries. Certified from 13 to 15 years. Magnesium chloride is used in the manufacture of tofu to cause the soy protein to curd and to develop firm texture. Other calcium and magnesium-based products do not give the same result. The magnesium chloride we use is naturally derived from sea water. Loss of this material would cause organic tofu production to go away. The texture would be horrible. We would go out of business. Critically essential to organic tofu processing.
Nutrient Vitamins and minerals	**New Handler Comment:** Used for the fortification of organic beverages. Certified for 18 years and selling products nationwide. Necessary because fortification for essential vitamins as defined by FDA. We would not produce items with vitamins if the vitamins were removed from the list. They are essential to our organic fortified products. **Handler Comments:** Certified for 13 years. Sell throughout the U.S. As a dietary supplement company, we fortify products with Nutrient Vitamins and Minerals per the standard to help consumers maintain overall health. Due to the formulation, the amount of nutrients must be very small for the product to be manufactured to quality standards. Often organic forms of vitamins do not have the same concentrated dosage as synthetic vitamins. To meet RDA amounts in our products, organic/natural forms are often not possible. Switching to organic or natural forms of nutrients would affect quality in that the possible dosage able to be obtained would be less and not meet RDA values. Additionally, organic and natural nutrients would decrease shelf-life of the product. Less nutritional value per serving coupled with a decreased shelf-life would greatly impact our business and we would lose customers. This would greatly impact the economic health of our operation. This substance is critically essential to our organic products. **Handler Comments:** Used in cereals, bars, baby food, infant formula, grain products, breads, gluten-free foods, dairy products. Certified for 15 years. Selling products in all 50 states and in many countries. There are no organic alternatives. If vitamins and minerals were removed, some products could not be sold, others would be nutritionally inferior and less desirable to consumers. Over 100 million dollars in lost sales. This substance is critically essential to our organic products.

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	Ancillary Substances: acacia gum, corn starch, medium-chain triglycerides (from palm oil), modified food starch, sucrose, sunflower oil**,** sodium ascorbate crystalline, silicon dioxide, tocopherols, maltodextrin, polysorbate 80**,** propylene glycol**,** glycerol monooleate**,** triglycerol monooleate**,** citric acid**,** sodium benzoate.
Ozone	**Handler Comments:** Ozone is an effective and environmentally benign substance used to reduce/control microorganisms for food safety purposes. The ozone dissipates completely during its use and does not remain in the food. Ozone is used by some of our suppliers. Thus, we would like to have it remain on the list so that our ingredients still meet our requirements from a food safety perspective.
Phosphoric acid	**Handler Comments:** Phosphoric acid is used in sanitation of food contact surfaces and food equipment. This cleaning is critical in our food safety program. No residual remains that could contaminate the food.
Potassium acid tartrate	**Handler Comments:** Used in many types of baked goods. Sold in 50 states and other countries. Certified for over 10 years. Leavening agent. Other acids have undesirable effects in the products. Loss of this material would result in impaired quality and marketability of products and loss of sales. Critically essential.
Potassium citrate	**Handler Comments:** Certified for 13 years. Products sold in 50 states. Acidulant, Buffering Agent, Potassium source. Our facility uses sodium citrate and citric acid, but neither provides the same functionality as potassium citrate for some products. Organic alternatives are not available. If available, we would test in our lab. If this ingredient were removed, those products that use it in the formulation would be changed. They would not have the same function or quality as the current product. Any time there is a change to quality, there is the potential to lose a customer. If a customer is looking for a particular functionality that only potassium citrate can deliver, then we would not be able to provide. This would negatively affect the economic health of our business. Critically essential.
Potassium phosphates – need more comments	**Handler Comments:** Used in "Made with organic" nondairy beverages sold in 50 states and other countries. Certified for over 10 years. Buffering agent (pH control) to prevent precipitation and impaired mouthfeel. Tried alternatives but they do not work well. Loss of this material would result in impaired quality and marketability of products and loss of sales. Critically essential.
Sodium citrate	**Handler Comments:** Plant-based dessert, plant-based ice cream, plant-based yogurt, organic fruit snacks, organic fruit gummies – 95%+ organic and made-with. Certified for over 20 years. Products sold in all 50 states. Used for cream plug in cream, emulsifier, and as a processing aid. We have not found any alternatives. Essential. **Handler Comments:** Cheese; cheese and dairy powders and seasonings. Certified for over 15 years. Products sold in Wisconsin, Pennsylvania, Missouri, & South Dakota. Finished products are sold throughout the U.S. Used for the emulsification of cheese. Sodium phosphates are an alternative, but they are being considered for removal as well. Currently use sodium phosphate, but it is being considered for removal as well. We would not be able to manufacture our products without this ingredient. Loss of this substance would result in the loss of all organic business. Entire business unit eliminated. Ingredient is essential. **Handler Comments:** Used in the preparation of fruit for use in our yogurts. Products are sold in all 50 states. We use sodium citrate primarily for its ability to buffer pH, but we know that it also does have an effect on the flavor of our products. Neither citric acid nor potassium citrate would have the same buffering effect in our products. We already use citric acid, in addition to sodium citrate, in our fruit so we know that we need these ingredients for entirely different purposes and one could not substitute for the other. It is harder to predict the outcome of trying to substitute potassium citrate for sodium citrate in our products, but we do know that it would pose a considerable reformulation challenge.

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	Essential **Handler Comments:** Fruit Snacks 50 MM dollar business. Certified since 2002. Products in 50 states. Used for pH Buffer; critical for gel structure and flavor. For organic fruit snacks it helps the product solidify. Otherwise, it remains a liquid and we have not found another material that works for us. We are initiating an investigation on an alternative solution but do not know of one at this time. Ingredient is essential **Handler Comments:** Gummy Confections, Gummy Nutritional Supplements, Panned Jelly Beans. Products are distributed around the U.S. and have been certified for up to 20 years. Used as an acidulant, flavor and sodium source. One facility uses both citric acid and potassium citrate. However, only the function can be obtained with sodium citrate in specific products. Allowed organic alternatives are not available. Products using this ingredient will have a decrease in quality and function if this material is removed. Any production loss due to decrease in quality would impact the economic health of the operation. Companies would not be able to manufacture products without this ingredient. Ingredient is essential.
Sodium hydroxide	**Handler Comments:** Sodium hydroxide is used widely in food processing for cleaning food contact surfaces and equipment. Use of this substance is essential in our food safety program. It is always fully rinsed from equipment after used in a cleaning step. Sodium hydroxide is also likely used to adjust the acidity in several ingredients supplied to us.
Sodium phosphates – need more comments	**Handler Comments:** Used as an emulsifier in organic cheese products. Vital to the operation. No other alternatives are acceptable. We could not make the product without these emulsifiers. We would be unable to produce an organic cheese product. Critically essential.
Sulfur Dioxide	**New Handler Comments**: Used as a stabilizer in wine, though Sulfur Dioxide has a number of important functions in winemaking. Made with Organic Grapes Wines. Certified for 6 years. Our products are sold in all 50 states, and are exported to other countries. There are no alternatives that perform the same functions as Sulfur Dioxide. The stability of wines made with added Sulfur Dioxide (Sulfites) is much greater than those made without Sulfur Dioxide. Those without Sulfur Dioxide have a very short shelf life, which is not desirable in wines. These other wines compare very poorly to wines made with Sulfur Dioxide when compared in blind taste tests. Sulfur Dioxide has been used for hundreds of years because it is effective in maintaining wine quality. This would effectively end our participation in the Organic business. We have certified hundreds of acres as Organic, and have certified three of our winery facilities as organic. Wines made without Sulfur Dioxide would not be commercially acceptable, in our opinion. Essential on scale of 1-10: 10 Critical – to our business and to NOP certified "made with" wine. **New Handler Comment**: Used as an antimicrobial/antioxidant in "made with" certified wine. Certified for 15 years. Products are sold nationwide, and exported globally to many countries including Canada, the EU, and Japan. SO2 is the most effective tool available to organic winemakers to inhibit undesirable microbial growth in wine. It is also an antioxidant, especially in white wine, ensuing it stays fresh. There are no organic or natural sources of SO2. We are not aware of any equivalent organic inputs that can achieve the same result. No, there are no alternative management practices. Barrels are an essential part of our wine making practices, and cannot be managed for spoilage microbes without SO2. If this material were removed from the NL the shelf life of our products would decrease = inability to compete with international organic wines that allow the use of SO2. Devastating to brand quality and longevity. **Essentiality on scale of 1-10:** 10 Critical – to our business and to NOP certified "made with" wine.
Tocopherols	**New - Handler Comment:** We are a supplier of fish oil to support certified organic products. Our products are sold in all 50 states and exported to other countries.

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	Tocopherols are used as the primary antioxidant in edible oils, and tare used as stabilizers. Edible oils such as fish oil need tocopherols to ensure stability. There is no suitable alternative. Polyunsaturated oils are highly unstable. Tocopherols are the primary and best solution to combat oxidation. With respect to ancillary substances, tocopherols need to have a vegetable oil carrier, Non GMO. Loss of tocopherols would result in the elimination of fish oil from organic products in the USA, a substantial source of EPA and DHA. No negative environmental effect. Tocopherols are derived from a renewable resource – they are plant-based. Loss of this material would be substantial, over 10M $ business. **Handler Comments:** Certified organic massage and organic blends made with organic cosmetics, creams, lotions. Certified for 9 years. Sold in 50 states and six other countries. Used as a preservative and antioxidant. Rosemary antioxidant has shorter shelf life and strong odor. Tried this but it negatively impacted the odor of the product. Loss of this material would impact shelf life of product and odor. Essential. **Handler Comments:** Cookies and crackers. Certified since 2002. 50 states and Canada. Antioxidant. Yes, but other alternatives—for example, organic rosemary extract—do not show efficacy in extending shelf life. Organic product effects (effects to the quality and marketability of the organic product(s) you are marketing): - shorter shelf-life. Essential, Critical. **Handler Comments:** Certified since 2002 (13 years). Used in certified products sold throughout all 50 US States. Tocopherols are used in our supplement blend for Vitamin E. They are also used as an antioxidant in our moulding starch and other ingredients. If removed, it would significantly affect our company. Alternatives are not available. If this ingredient was removed, there would be a potential loss of shelf life for our products. Additionally, products using tocopherols for Vitamin E would not have the same function. The loss of Vitamin E and decrease of shelf-life would negatively impact the economic health of our company. Critically essential. **Handler Comments:** Oils, mayonnaise, cereals, bars, baked goods. Certified for over 15 years. 50 states and many other countries. Antioxidant to protect fats from oxidation. Rosemary extract, but it does not work as well and it imparts a rosemary flavor that is not acceptable in most products. Loss of this material would cause massive problems with rancid oils and millions of dollars lost in sales. **Handler Comments:** Organic ready-to-use frostings. Certified for one year. Products sold in 50 states. Antioxidant. None. No availability of allowed alternatives (organic or natural) for this substance. Extremely difficult to find an antioxidant without an aftertaste, even at the smallest effective input rates. Researched extensively. If this were removed, we would not be able to market as organic. Would cease to exist. Large recall of all products labeled organic. Eliminates value proposition of the products (organic). Critically essential.
Xanthan gum	**New - Handler Comment:** Used as a thickener in organic juice and fruit spreads Certified for 18 years and selling products nationwide. Unaware of an alternative that works. If the material were removed we would not produce some products. **New - Handler Comment:** We utilize xanthan gum in organic dry dip and dressing mixes as a thickener. Certified for over 20 years and selling products across U.S. and Canada. There are no organic alternatives for xanthan gum. Other organic gums are available, but they do not provide the same function as xanthan in our application. There are no alternative management practices that would eliminate the need for the specific substance. If we were no longer allowed to use it, the products that the xanthan gum go into would need to be discontinued as other products are not available that would perform the same function. Sales for the last 12 months of products that utilize xanthan gum are roughly

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	$585,000. This would be a significant impact to our business. Critical to making our organic products. **Handler Comments:** Used in organic frostings and cake mixes, cake and cookie mixes, beverages, soups, and frozen entrees and in juice and fruit spreads. Functions as a thickener and stabilizer. Sold throughout the U.S. Other gums and thickeners do not have comparable function. Alternatives don't work as well. The specification sheets do not list ancillary substances except for organic guar gum. The loss of this input from the National List would result in loss of sales due to decreased quality and marketability. We would cease to exist due to massive recall of products labeled organic. Eliminates our entire value proposition (organic). Would not be able to market as organic. Essential to all companies that responded. **Handler Comments:** Used in cake and cooking mixes, beverages, soups and frozen entrees as a thickener and stabilizer. Company has been certified for over 15 years. Sold in 50 states and other countries. Other gums and thickeners do not have comparable function. Researched alternatives but they do not have a comparable function. Loss of this product would lead to decreased quality and marketability of our products. **Handler Comments:** Thickening agent in juice and fruit spreads. Certified for 13 years. Products are sold throughout U.S. and Canada. Xanthan has a specific form needed. There are no other alternatives that work. Loss of this product would lead to loss of sales. **Handler Comments:** Stabilizer and thickener in creams and lotions. Certified for 9 years. Our products are sold in 50 states and 7 countries. There are no alternatives with the same quality and function. Cellulose can work but it's not as effective. **Handler Comments:** Ancillary Substances: None known, none listed on the specification sheet. For mixed blends, organic guar gum is used.

In closing, we thank the Board for its time and commitment. OTA is committed to collecting information from our broad membership and beyond in order to assist NOSB in determining whether or not a substance on the National List remains essential to organic handling.

Again, on behalf of our members across the supply chain and the country, OTA thanks NOSB for the opportunity to comment and for your commitment to furthering organic agriculture.

Respectfully submitted,

Gwendolyn Wyard
Senior Director of Regulatory and Technical Affairs
Organic Trade Association

cc: Laura Batcha
Executive Director/CEO
Organic Trade Association

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Appendix A – Survey Questions (Example: Xanthan Gum)

1. Please describe the types of certified products or processes this substance is used in:

2. How many years has your company been certified organic?

3. Where is your organic production located (state, region, country, etc):

4. How many states are your products sold in? Are they exported to other countries?

5. What is the function of the substance in your products or processes (e.g. stabilizer, thickener, flavor, sanitizer, etc.)?

6. Describe the availability of allowed alternatives (organic or natural) for this substance in terms of quality, quantity and form:

7. If available, have you conducted research (e.g. R & D trials) on the use of allowed natural or organic alternatives?

8. Are there any alternative management practices that would eliminate the need for the specific substance?

9. NOSB is requesting information about the ancillary substances (e.g. carriers, preservatives, stabilizers) that may be used in xanthan gum. Based on the ingredient statement provided in specification sheet that accompanies the xanthan gum you purchase, please list any ingredients that are added and remain in the product you buy. Note: The "ancillary substances" should be listed in the ingredient statement found on the specification sheet.

10. Describe the effects to your operation should you no longer be allowed to use xanthan gum:

Describe the effects to your operation should you no longer be allowed to use xanthan gum:

Organic product effects (effects to the quality and marketability of the organic product(s) you are marketing):

Environmental effects (effects to environment if the substance was no longer allowed AND

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effects to environment from potential alternatives):

Economic effects (effects to economic health of your operation):

11. Based on your answers to the questions above, rate the essentiality of this substance (i.e. how necessary is this substance to the continued success of your organic products and operation?):

1 Less Essential	2	3	4	5 More Essential	6	7	8	9	10 Critical

12. Does your company intend on submitting comments directly to NOSB regarding the sunset review of this substance?

If you would like assistance or guidance in submitting comments to NOSB, please provide your email address, and OTA staff will contact you directly:

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