LS Comments

Aquaculture

Misc/all

Summary

No organic aquaculture 13
No net pens in organic aquaculture 21 (CFS, Cornucopia, Consumers Union, FWW)
No materials approvals without regulations defining system 56 (Beyond Pesticides, OTA, PCC Natural Markets, MOFGA, Cornucopia, CFS, National Organic Coalition, Consumers Union, FWW)
Add 5-year expiration date 30 (Cornucopia, Beyond Pesticides)
Reject all materials 11,880 signers of FWW petition
Supports all/most materials 2 (Oregon Tilth, AWG)

1. **Martin Barney** writes “to express my opposition to Organic labeling for open net penned farmed fish. Open net farmed fish pens are equivalent to feed lots for agricultural livestock.”
2. **Alice Castilano** makes the points: “Prohibit Open Ocean Systems…Require 100% organic feed…Prohibit organic salmon and other migratory fish…Prohibit carnivorous fish.”
3. **Bill Connor** writes, “Certifying farmed fish as organic, would be totally misleading to the public.”
4. **Ron DeGeorge** makes the points, citing CU, ““Prohibit Open Ocean Systems…Require 100% organic feed…Prohibit organic salmon and other migratory fish…Prohibit carnivorous fish.”
5. **Bobbie Knight** says, “Please reconsider your previous recommendations that would allow open ocean net pens to raise “organic” fish, and I urge you to reject all petitions related to aquaculture that are up for a vote, until standards are in place.”
6. **A.F.** opposes the routine use of synthetics, urges a systems-based organic aquaculture, and asks for a 5-year expiration date on all materials that are approved.
7. **Chris Maykut** says certifying farmed salmon and other seafoods as organic is a terrible idea.
8. **Carrie Megill** says, “Please reject all petitions related to "organic" aquaculture until specific standards are in place. Also, please reconsider the recommendations allowing fish raised in open net pens to be labeled "organic".”
9. **Deborah Pedersen** says, “Farmed fish should not be eligible for organic certification or labeling. Finfish aquaculture violates the principles of organic food production.”
10. **Henry Plemper** opposes selling as wild any fish with chemical-treated food.
11. **Fran Post** opposes certifying as organic any kind of farmed fish.
12. **Janis Prifti** makes the points: “Prohibit Open Ocean Systems…Require 100% organic feed…Prohibit organic salmon and other migratory fish…Prohibit carnivorous fish.”
13. **Alan Schroder** opposes allowing fish from farm-raised open-net open-ocean aquaculture operations as organic.

14. **Terry Shistar of Beyond Pesticides** opposes the recommendations of all petitioned materials for use in aquaculture –for production of either aquatic plants or aquatic animals– until the NOP adopts final practice standards for aquaculture. Any materials that are approved should have a five-year expiration date. Comments address general issues, those related to animal aquaculture, and those related to plant aquaculture.
15. **Paula Stober** urges the NOSB to follow Consumer's Union recommendations on not designating ocean farmed fish as "organic".
16. **Rebecca Wolfe** opposes all farmed fish.
17. **Timothy Brandon** says, “Fish raised anywhere are FARM raised and the label plainly should state that. ORGANIC must remain pure and untainted. To impose the organic label on any product outside of the planets breeding should not and aught not to bare the ORGANIC label.”
18. **Karen Thomas** says salmon farms in open waters should be illegal.
19. **Elizabeth Agostinho** asks that all petitions for the use of aquaculture materials should be tabled until the organic regulations pertaining to aquaculture have been finalized by the NOP. In addition, “Attempting to raise carnivorous fish on a vegetarian diet is unnatural and dubious at best.”
20. **An anonymous commenter** asks that all petitions for the use of aquaculture materials should be tabled until the organic regulations pertaining to aquaculture have been finalized by the NOP. In addition, “Attempting to raise carnivorous fish on a vegetarian diet is unnatural and dubious at best.”
21. **Beatrice Elsamahy** says, “There is nothing natural about Aquaculture, do not permit "organic" Aquaculture.”
22. **Mark Skinner** encourages tabling any pending petitions without review until regulations are in place.
23. **Duane Stanton** opposes “the possible near-future approval for the use of synthetic materials in aquaculture. I believe that the NOSB must reinforce the aquaculture standards established in 2007/2008 prior to expanding approvals.”
24. **Matthew Swyers** says, “Regulations for aquatic systems must take into account the significant differences between aquatic and terrestrial ecosystems, particularly with regard to the quantity of nutrients released into the environment. Also I do not support vegetarian diets for carnivorous fish or the use of synthetic materials.”
25. **Judy Landress** says, “On fish farming or aquaculture, we don’t want intensive operations that pollute the environment and are not defined by organic systems that are protective of the aquatic environment. DO NOT approve synthetic chemicals that are used in factory fish farms without clear organic standards!”
26. **Heidi Dew** says, “[R]egarding fish farming or aquaculture, I don’t want intensive operations that pollute the environment and are not defined by organic systems that are protective of the aquatic environment.”
27. **Gwendolyn Wyard of the Organic Trade Association** suggests that the Livestock Subcommittee table the recommendations on materials petitioned for use in organic aquaculture until a proposed rule has been released by NOP. She says:

    Material evaluation for the National List cannot occur in a vacuum

- National List criteria, particularly 'essentiality,' cannot be evaluated outside the context of production standards
- The need for annotations or specific restrictions on materials cannot be accurately assessed without knowledge of the production standards' general restrictions on material usage

OTA does not support NOSB's use of annotations redundant to current law

- Annotations redundant to current law can be construed as a "no confidence" vote in current standards enforcement and often draw unwarranted criticisms of organic operators and certifiers
- Recommendation of an annotation redundant to current law draws resources at the federal level from other rulemaking priorities

OTA is concerned that the urgency with which NOSB was tasked with reviewing aquaculture materials and the continued trend to annotate National List substances may delay the issuance of proposed and final federal rule making that organic consumers, producers, and handlers all anxiously await.

28. **Barbara Fite** says, "Say YES to Organic Policies for fish farming and eliminate the synthetic chemicals in the process."
29. **Betty J. Van Wicklen** asks for organic policy on fish farming before approving allowed materials.
30. **Eli Penberthy of PCC Natural Markets** believes it is premature to review potential synthetic additives when a framework and regulations for certified organic aquaculture have not yet been established, or implemented. They comment on specific materials as well.
31. **Catherine Snyder** is "concerned that open ocean aquaculture is incompatible with organic principles. In 2007, a coalition of more than 40 organic farmers, consumer advocates, animal welfare, conservation groups and even celebrity chefs joined forces to call on the USDA to ensure that the organic label does not include carnivorous fish and open ocean systems.
32. **Janice Palma-Glennie** is "very concerned about this corruption of organic standards, and risks to wild fish and fisheries and strongly urge the NOSB to deny all petitions to add materials to the National List for use in organic aquaculture systems. And i understand that there are additional risks of marine feedlots which can have significantly deleterious impact upon our marine environment, not to mention fisheries and human health."
33. **Cory Harden** says, "Please do NOT certify farmed fish as organic."
34. **Nelson Ho** says, "Marine fish farms replicate some of the worst practices of CAFO's, which could never receive organic certification…Use of fish meal and fish oil from wild forage fish results in overfishing of wild fish to feed carnivorous farmed species…Farmed fish have documented higher amounts of environmental contaminants since the feed concentrates mercury, lead, and persistent bioaccumlative toxins."
35. **Bob Yuhnke** asks "that the "organic" certification be preserved for seafood products that are harvested from the wild, and that are known not to have raised on artificial processed feed, or exposed to vaccines, antibiotics or poisons such as chlorine above background levels found in nature."
36. **Bernell Walz** strongly urges the NOSB to deny all petitions to add materials to the National List for use in organic aquaculture systems.

37. **Darryl Pope** says organic farmed fish are incompatible with organic principles.
38. **Susan Brown** opposes "the routine use of any synthetic materials in organic aquaculture and I oppose the use of any synthetics without clear regulations defining such a system."
39. **Elaine Packard** says, "Do not certify farmed seafoods as organic."
40. **Jon Broderick** says, "My family and I have been commercial salmon fishermen for decades. My four sons have fished with me since they were little and we've enjoyed healthy work and a good living, especially since wild salmon prices have recovered from the impact on the market of cheap farmed fish. Now I understand the aquaculture industry is asking for concessions from the USDA so that, in an attempt to increase its appeal to concerned consumers, farmed fish can be labeled "organic." For the sake of the American consumer we hope the USDA won't cave in to the aquaculture industry's interests."
41. **Max Broderick** says, "If you consider farmed salmon organic, all hope is lost for the organic cause."
42. **Allan Peterson** wants "the NOSB and NOP to insure the integrity of the word Organic by strict oversight. No synthetic chlorine materials in aquatic systems, and no routine use of tocopherols. Without adequate aquaculture guidelines, the Precautionary Principle should obtain."
43. **Eric Sideman of MOFGA** opposes the recommendations of all petitioned materials for use in aquaculture until the NOP adopts a final, systems based practice standard for aquaculture.
44. **Jim Pierce of Oregon Tilth** supports all aquaculture materials proposals except carbon dioxide and says, "The NOSB Livestock Subcommittee has done a commendable job of parsing, discussing and recommending these significant lists of materials. We encourage the full board to follow their lead and approve Chlorine, Tocopherols, Lignin Sulfonate and Vitamins as proposed. We encourage you all to discuss further the annotations for Minerals, Vitamins, Biologics and Micronutrients to more accurately align with current NOP regulations, and we encourage you to reconsider the recommendation for CO2." Regarding CO2, OT says, "Oregon Tilth disagrees with the proposed allowance for the use of synthetic CO2 in aquatic plant production. CO2 is a potent greenhouse gas and air pollutant. It could have two uses in aquatic plant production: as a nutrient supply of carbon and as a pH adjustment tool. For both of these uses synthetic CO2 would be prohibited under the current organic crop standards. The evaluation criteria for the inclusion of a synthetic material on the national list states that, "the substance cannot be produced from a natural source and there are no organic substitutes" [205.600(b)(1)]. Because natural sources of CO2 are available, synthetic CO2 does not meet the minimum criteria for inclusion on the National List." "Oregon Tilth asks that the subcommittee reconsider this annotation. Micronutrients are synthetic fertilizers. The National Organic Standards recognizes this fact and restricts their use by only allowing them as a last resort, in limited amounts, and in restricted forms. In addition, limiting micronutrient use in aquatic plant production to non---vascular plants will severely impact aquaponic and hydroponic organic producers."
45. **Jacqueline Goodsir** says, "Please deny the petitions to allow vaccines, synthetic vitamins, synthetic trace minerals, synthetic tocopherols and chlorine materials to the National List for use in organic animal aquaculture systems."
46. **Peter Broderick** asks that the Board deny these petitions until the following issues are addressed: Allowing specific substances to be added to the national list is premature, given

the lack of standards for aquaculture; any decision to approve these petitions would not be supported by substantial evidence in the record; and the general policy considerations regarding certification of aquaculture animal products as organic suggest a cautious approach at this stage.

47. **Anne Mosness** says, “Petitions to add synthetics to 205.611, including tocopherols, chlorine materials, vitamins and minerals should be denied and a full review of impacts and risks of industrial aquaculture undertaken.”
48. **Marie Hermansen** is “a lifelong Alaskan commercial salmon fisherman and, since 1997, a small animal veterinarian. I am saddened to see the USDA contemplating certifying farmed salmon as organic….Certifying farmed salmon as organic would be disingenuous at best. It would be a political move set to help a special interest group at the expense of the American public….There is a world of difference between wild salmon and farm raised in regard to heath benefits and concerns.”
49. **Red Anonymous** urges the NOSB and NOP to maintain the integrity of the US Organic label and program by focusing on aquaculture production systems that only rear herbivores… Please deny the petitions for synthetic feed additives until the whole system of production has been analyzed to ensure compatibility with the guidelines of the Organic Foods Production Act.
50. **Frances Dunham** says, “Chlorine materials and supplements must not be approved for organic aquaculture until a regulatory framework has been developed to protect and preserve the integrity of ecosystems.”
51. **Florence Sage** says, “No way should farmed fish be allowed to be labelled "organic'! That's a travesty of the hard-fought "organic" designation, and misleading to the consumer public.”
52. **Anonymous Nimbus** asks that “NOSB not add synthetics to 205.611, including tocopherols, chlorine materials, vitamins and minerals. It is too early in the process to be considering potential synthetic additives when a framework and regulations for certified organic aquaculture have not yet been drafted or established.
53. **Liana Hoodes of the National Organic Coalition** “is opposed to the listing of any materials on the National List for aquaculture until there is a final standard that defines the aquaculture system(s). We strenuously object to this materials process moving forward before there has been a regulation on organic aquaculture systems promulgated and completed through notice and comment rulemaking.”
54. "**Consumers Union** urges the Board to reject the four Livestock Subcommittee (LS) proposals for organic aquaculture materials until standards for organic aquaculture have been created.

    We are also remain concerned with the previous Board recommendations regarding aquaculture, and strongly urge the Board to reconsider certain recommendations. We believe that open ocean systems should be prohibited, wild-caught fish meal and fish oil should be prohibited, 100% organic feed should be required, and carnivorous and migratory fish should not be produced in “organic” aquaculture systems."

The following people submitted the comment below:

55. **Anonymous Anonymous**
56. **Ava Venturelli**

57. Bruce Smith
58. Carolyn Myres
59. Chantal Buslot
60. David Ludden
61. David Osterhoudt
62. Debra Mellentine
63. Doug Krause
64. Dr. William 'Skip' Dykoski
65. Eleanor Weisman
66. Elizabeth Ende
67. Irena Jankunas
68. J Beverly
69. J Beverly
70. Kim Fortin
71. L Schwartzman
72. Laura McGowan
73. Lisa Butterfield
74. Lorita Leighton
75. Lynn Magnuson
76. Molly Hauck
77. n anonymous
78. Susan Brown
79. Tatiana Torres
80. Tom Caine
81. Vivian Valtri Burgess
82. Yasiu Kruszynski

All of the materials petitioned for addition to the National List for organic aquaculture are synthetic substances that would be used routinely. I oppose the routine use of any synthetic materials in organic aquaculture and I oppose the use of any synthetics without clear regulations defining such a system.

Any system that is adopted must follow the strict guidelines of the Organic Foods Production Act. Fish in an organic aquaculture system should only receive synthetic inputs when natural feeds within a defined aquatic system are insufficient.

I urge the NOSB and NOP to maintain the integrity of organic by putting an emphasis on systems based aquaculture, rather than an input-based scheme. If I purchase organic, I am doing so because I expect the producers and processors of the products I buy to take important steps to safeguard the health of the environment.

Aquaculture materials, more than any others, should not be approved without the certainty that they will be considered under the same standards as petitions after 5 years. Without regulations in place, it is impossible to define the essentiality of synthetic

materials because the nutrients supplied by the system cannot be identified without describing the system. It is also impossible to characterize the impacts without knowing how much of the material may leave the system and where it will go. Every aquaculture material motion should be annotated with "until May 1, 2019 or five years from the date that use is allowed."

83. **George Lockwood** writes on behalf of the Aquaculture Working Group. He supports as proposed: tocopherols, vitamins, and minerals for aquatic animals; and micronutrients, lignin sulfonate, and vitamins for aquatic plants. He proposes amending the chlorine proposals for aquatic animals and aquatic plants to read, ""Chlorine materials – Disinfecting and sanitizing facilities, equipment, and culture water. Residual levels in the water shall not exceed the maximum residual disinfecting limit under the Safe Drinking Water Act." He proposes amending the vaccine proposal for aquatic animals to remove the language "except those produced with excluded methods." He asks to substitute in the CO2 for aquatic plants proposal "for use in containers, such as tanks and ponds, that are constructed of impervious materials" for "for use in contained systems such as tanks and ponds."
84. **Food & Water Watch** is opposed to the listing of any materials on the National List for aquaculture until there is a final standard that defines what organic aquaculture systems are. Opposes net pens.

In addition to general comments, a number of commenters addressed particular substances. These are described below.

Chlorine (animals and plants)

Summary

In favor of chlorine 4 (Cyanotech, Reed Mariculture, AWG, Oregon Tilth)
Specifically opposing chlorine: 6 individuals and Beyond Pesticides, Cornucopia, FWW, and NOC

1. **Gerald R. Cysewski of Cyanotech**, which produces microalgae for supplements, says, "The only sanitizing compounds that we have found to be effective and relatively safe to use are chlorine compounds and in particular sodium hypochlorite, and calcium hypochlorite."
2. **Timothy Reed of Reed Mariculture Inc**. says, "Chlorine compounds, particularly sodium hypochlorite, are essential for sanitizing water used to formulate culture media in the volumes required for commercial-scale production of microalgae (tens of thousands of gallons)."
3. **Terry Shistar of Beyond Pesticides** opposes the listing of chlorine. Disinfection of hard surfaces fits into an OFPA category of allowed listings, but disinfection of culture water does not. "We are pleased to see that the LS has not proposed to list the use for disinfection of culture water, having removed the reference that was in the proposal published in the fall,[13] which is a distinct use that is not in any delineated category in OFPA §6517 (c)(1)(B)(i). The LS-proposed chlorine annotation clearly does not allow use of chlorine in culture water. We support this limitation and note that any proposed changes to this annotation during the NOSB meeting would be a new and substantive change in the LS recommendation, not subject to full public consideration and therefore not allowed under new NOP rules described in the February 27, 2014 memo to the NOSB. The use in culture water is clearly

different from the use allowed under §6517 (c)(1)(B)(i) of OFPA, which identifies "production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleansers," under which chlorine has been permitted in terrestrial crops and livestock. In fact, the LS states, "Given that the materials' use in aquaculture applications is identical to existing uses in other production categories, the committee has not requested a new Technical Evaluation Report, but it is instead relying on recent TRs developed for Handling and Crops uses of this group of materials." Since the use of chlorine materials in other production categories is limited to disinfection of hard surfaces, the LS can only apply this reasoning if its proposal addresses only this use. In addition, the LS has checked the N/A column for all of the OFPA categories, which is incorrect. If a synthetic material is to be used in production, it must be in one of the OFPA categories." In addition, Beyond Pesticides cites alternative methods and the need to replace chlorine technologies.

4. **Pamela Coleman of Cornucopia Institute** gives the following rationale for opposing the listing of chlorine: Organic regulations for aquatic animals have not yet been developed. Two different uses have been petitioned. Relevant TR for aquatic systems is needed. Chlorine as a medical treatment is not essential. Chlorine is harmful to humans. Chlorine materials are harmful to the environment. Synthetic materials for aquaculture should have a firm expiration date.
5. **Liana Hoodes of NOC** opposes chlorine.
6. **FWW** opposes the use of chlorine unless annotated to exclude open net pens.

Tocopherols

Summary

In favor of listing: Oregon Tilth, AWG.
Opposed: 4 individuals plus OTA, Beyond Pesticides, PCC Natural Markets, FWW, and Cornucopia.

1. **Oregon Tilth** supports the listing of tocopherols.
2. **George Lockwood of the AWG** supports the tocopherols recommendation.
3. **Gwendolyn Wyard of OTA** addresses inconsistencies in the NOSB treatment of tocopherols in comments that generally oppose listing aquaculture materials before the NOP has proposed aquaculture regulations.
4. **Terry Shistar of Beyond Pesticides** points out that tocopherols are requested in order to facilitate the use of wild caught fish meal and fish oil, so problems associated with feeding wild caught fish in aquaculture are relevant to consider in evaluating tocopherols. They are a synthetic preservative.
5. **PCC Natural Markets** specifically opposes the use of synthetic tocopherols because "The tocopherols raise great concerns if they will be used to stabilize the fats in wild fishmeal — because wild fishmeal should not be allowed at all in organic aquaculture. There are natural alternatives to tocopherols including organic rosemary oil, rosemary extract, lecithin, vitamin C, and natural sources of vitamin E such as wheat germ oil."
6. **Pamela Coleman of Cornucopia** gives the following rationale for opposing the listing of synthetic tocopherols: Organic regulations for aquatic animals have not yet been established. Synthetic materials for aquaculture should have a firm expiration date. Petitioned use is for a

preservative, not a vitamin. Synthetic tocopherols are not consistent with organic agriculture. Synthetic tocopherols are not essential.

FWW opposes synthetic tocopherols because of its purpose – a stabilizer for fishmeal and oil in fish feed.

Minerals

Summary

In favor of minerals, Oregon Tilth and AWG.

Opposed to minerals, 4 individuals and Beyond Pesticides, NOC, PCC,

1. **Oregon Tilth** supports the listing of minerals and recommends that the annotation for minerals (for aquatic animals) match the organic livestock annotation at [NOP 205.603(d)(2)]
2. **George Lockwood of the AWG** supports the minerals recommendation.
3. **Terry Shistar of Beyond Pesticides** opposes the listing of minerals. "Neither the petition nor the subcommittee's proposal justifies the blanket approval of all synthetic minerals. …It appears that the Livestock Subcommittee has not considered the impacts of possible enrichment of the aquatic environment due to feed falling through net pens or being released in discharges from other systems."
4. **Liana Hoodes of NOC** opposes the listing of minerals.
5. **PCC Natural Markets** opposes the listing of minerals.
6. **Pamela Coleman of Cornucopia** gives the following rationale for opposing minerals:

Organic regulations for aquatic animals have not yet been developed. This petition is too broad. Addition of minerals may harm aquatic ecosystems. Ethanediamine dihydroiodide is not essential. International organic standards require natural sources of minerals. Synthetic materials for aquaculture should have a firm expiration date.

Vitamins in animal aquaculture

Summary

In favor:

Opposed: 3 individuals and Beyond Pesticides, PCC, NOC, Cornucopia

1. **Oregon Tilth** supports the listing of vitamins and recommends that the annotation for vitamins (for aquatic animals) match the organic livestock annotation at [NOP 205.603(d)(3)]
2. **George Lockwood of the AWG** supports the vitamins recommendation.
3. **Terry Shistar of Beyond Pesticides** opposes the listing of vitamins, giving the following reasons: "Neither the petition nor the subcommittee's proposal justifies the blanket approval of all synthetic vitamins… It appears that the Livestock Subcommittee has not considered the impacts of possible enrichment of the aquatic environment due to feed falling through net pens or being released in discharges from other systems. The checklist states that some vitamins can be produced by fermentation, and that some of those may be considered nonsynthetic, but the LS does not try to determine which synthetic vitamins are essential (that is, cannot be provided in a nonsynthetic form.)"
4. **PCC Natural Markets** opposes the listing of vitamins.
5. **Liana Hoodes of NOC** opposes the listing of vitamins.

6. **Pam Coleman of Cornucopia** gives the following reasons for opposing the listing of vitamins: Organic regulations for aquatic animals have not been established. This petition is too broad. The petitioner wants to allow any vitamin, including vitamins that are not even listed in the petition. Synthetic vitamins are not essential for fish. Natural sources of vitamins are available. Addition of nutrients may harm aquatic ecosystems. Manufacturing processes are confidential. Synthetic materials for aquaculture should have a firm expiration date.

Vaccines for aquatic animals

Summary

In favor: AWG and Oregon Tilth
Opposed: 7 individuals, Beyond Pesticides, and Cornucopia.

1. **George Lockwood of AWG** supports the listing for vaccines, but requests the deletion of the annotation "except those produced with excluded methods" until, at least, it also applies to terrestrial livestock.
2. **Oregon Tilth** supports the listing of vaccines and recommends that the annotation for vaccines (for aquatic animals) match the organic livestock annotation at [NOP 205.603(a)(4)]
3. **Terry Shistar of Beyond Pesticides** opposes the listing of vaccines and supports the minority position and justification.
4. **Pamela Coleman of Cornucopia** gives the following reasons for opposing vaccines: Organic regulations for aquatic animals have not yet been established. Modified live vaccines are capable of infecting other aquatic organisms and wild fish. Many **toxic chemicals are used in producing fish vaccines**, such as formaldehyde and oil-based adjuvates, which are still present in small quantities in the final vaccine and are not approved on the National List. The method of vaccine administration can injure or cause disease in some fish. **Many vaccines are produced using excluded methods** such as genetic engineering and the final products are not always clearly labeled as such. Aquaculture **increases disease pressure on wild aquatic organisms** and may not be compatible with the principles of organics. New NOP sunset process may prevent future reviews by the full Board.

Plant micronutrients

Summary

Supports: AWG
Supports with substantial modification: Oregon Tilth
Opposes: Beyond Pesticides, Cornucopia

1. **AWG** supports micronutrients.
2. **Terry Shistar of Beyond Pesticides** opposes the listing of plant micronutrients because it requests a synthetic input to be allowed without qualification or annotation as a normal part of the system. The NOSB must decide not the essentiality of micronutrients, but the essentiality of synthetic micronutrients.
3. **Oregon Tilth** supports the recommendation for the allowance of micronutrients in aquatic plant production, but does not support the annotation as proposed. "The annotation, *"to*

allow synthetic micronutrients for non-vascular plants only," is both excessively broad, allowing unrestricted application of synthetic micronutrients for algae production, and narrowly restrictive, effectively prohibiting micronutrient applications for water---based vascular plant production." Oregon Tilth also says,

> **Routine Synthetic Fertilization is Inconsistent with the Organic Standards:**
> The petition begins with the assumption that nutrients for aquatic plant production must be supplied synthetically (pg. 2). At the foundation of the organic standards is that nutrients and fertility must be supplied through organic management methods, including applications of plant and animal materials [§205.203(b---c)]. This principle underlies the allowance in NOP §205.601(j)(6) for the application of a particular micronutrient if it is found to be deficient after use of these organic management techniques. Organic producers are not permitted to apply "micronutrients," only a particular micronutrient. For example, if iron is found to be deficient after management of fertility through organic methods, then only iron can be applied synthetically.
>
> The petition states that conventional algae producers currently use a synthetic nutrient mix, such as the "Guillard f/2" media (pg. 2), and recommends allowance for these types of mixes. However, in a natural aquatic ecosystem, algae are supplied macro and micronutrients through natural nutrient cycling and organic matter decomposition (Addy and Green, 1996). For algae to be certified organic, producers must also devise a system that supplies nutrients to algae through organic management methods and without synthetic means. This is essential both to maintain consistency with organic crop production and to maintain confidence in organic products in the consumer marketplace. Oregon Tilth certifies aquaponic producers who are able to supply all needed aquatic plant nutrients through management of fish excrement, with the occasional addition of synthetic iron or boron when testing verifies deficiency. While we agree that a particular micronutrient may need to be occasionally supplemented by synthetic means in aquatic organic plant production, this must be an exception, not the rule.

4. **Pamela Coleman of Cornucopia** opposes micronutrients because: Organic regulations for aquatic plants have not yet been established. This petition is too broad. Natural sources of micronutrients are available. Addition of micronutrients may harm aquatic ecosystems. Manufacturing processes of micronutrients are proprietary and have been withheld from scrutiny by the NOSB. The Technical Report is not adequate to assess use of micronutrients in aquatic systems.

Carbon dioxide for aquatic plants

Summary

Supporting: AWG

Opposing: Beyond Pesticides, Oregon Tilth, and Cornucopia

1. **George Lockwood of the AWG** supports the listing of carbon dioxide, but suggests changing the annotation to read, "for use in containers, such as tanks and ponds, that are constructed of impervious materials."

2. **Terry Shistar of Beyond Pesticides** opposes the listing of carbon dioxide, which acts as a synthetic macronutrient in plant aquaculture, making it incompatible with organic production practices. Beyond Pesticides supports the minority position and justification.
3. **Oregon Tilth** disagrees with the proposed allowance for the use of synthetic CO2 in aquatic plant production. CO2 is a potent greenhouse gas and air pollutant. It could have two uses in aquatic plant production: as a nutrient supply of carbon and as a pH adjustment tool. For both of these uses synthetic CO2 would be prohibited under the current organic crop standards. The evaluation criteria for the inclusion of a synthetic material on the national list states that, "the substance cannot be produced from a natural source and there are no organic substitutes" [205.600(b)(1)]. Because natural sources of CO2 are available, synthetic CO2 does not meet the minimum criteria for inclusion on the National List.
4. **Pamela Coleman of the Cornucopia Institute** opposes the listing of carbon dioxide for the following reasons: Organic regulations for aquatic plants have not yet been established. A technical report for use in aquatic plant production is needed. Carbon dioxide is not essential to control pH. Synthetic CO2 as a macronutrient is not compatible with organic principles.

Lignin sulfonate for plant aquaculture

Summary

Support: AWG, Oregon Tilth
Oppose: Beyond Pesticides, Cornucopia

1. **George Lockwood of the AWG** supports the listing of lignin sulfonate.
2. **Oregon Tilth** supports the listing of lignin sulfonate because other synthetic chelating agents are not allowed in organic production.
3. **Terry Shistar of Beyond Pesticides** opposes the listing of lignin sulfonate, which is a by-product of paper pulping --the third largest industrial polluter to air, water, and land in both Canada and the United States, and releases well over 100 million kg of toxic pollution each year. It is not essential because the synthetic micronutrients it is used to deliver are not essential. "If the NOSB decides to move forward with this proposal, we urge the addition of the annotation, 'Until May 1, 2019 [or sunset date].'"
4. **Pamela Coleman of Cornucopia** opposes the listing of lignin sulfonate for these reasons: Organic regulations for aquatic plants have not yet been developed. The petition for lignin sulfonate for aquatic animals was rejected by the Livestock Subcommittee. Lignin sulfonate is not essential; it merely facilitates use of synthetic micronutrients. A Technical Review that addresses aquatic production is needed. Lignin sulfonate can harm native aquatic animals by removing dissolved oxygen from natural waterbodies. If this material is approved, an expiration date is essential to ensure re-evaluation in the future.

Vitamins B1, B12, & H in aquatic plant production

Summary

Supporting: Oregon Tilth, AWG.
Opposing: Beyond Pesticides, Cornucopia.

1. **Oregon Tilth** agrees with the closed positive listing of vitamins for use in aquatic plant production because it is consistent with the annotation for vitamins allowed for organic crop production [NOP §205.601(j)(8) Vitamins, B1, C, and E].
2. **George Lockwood of the AWG** supports the listing of synthetic vitamins.
3. **Terry Shistar of Beyond Pesticides** opposes the listing of synthetic vitamins B1, B7 (H), and B12 for use in plant aquaculture and cites concerns with manufacture, excessive loadings, accumulation in sediments, and essentiality.
4. **Pamela Coleman of Cornucopia** cites the following reasons for opposing the listing of vitamins: Organic regulations for aquatic plants have not been established. Manufacturing processes were withheld as proprietary. Addition of synthetic nutrients may harm aquatic ecosystems. New NOP sunset process may prevent future reviews by the full Board.

Acidified Sodium Chlorite

Summary

Supporting: 2 individuals (including former NOSB member Dan Giacomini)
Opposing: 2 individuals, Cornucopia, and Beyond Pesticides
Terry Shistar of Beyond Pesticides supports the recommendation of the Livestock Subcommittee to deny the petition because of lack of essentiality, as noted by the subcommittee, but also because organic production should be moving away from dependency on products of chlorine chemistry.
Steven Furrow supports the "listing of ASC with lactic acid for use as a teat dip treatment."
Daniel Giacomini says, "ASC is a valuable and desirable tool in the fighting of mastitis in organic dairy cows. There are alternatives already on the NL but as conditions, water quality, and microbial challenges change, those alternatives might not be effective and this substance could be. … The more types of alternative substances available as teat dips the less chance of resistance being developed in any of the mastitis causing bacterial species. In this case, alternatives on the NL are GOOD, not bad. Specifically, the the TR, as quoted in the petition. The TRs listing of alternative substances (Category 2 Q8), the TR is WRONG! According to the annotation and listing, in general "chlorine materials" are not now allowed in the rule as a teat dip."
Susan Brown says, "Acidified Sodium Chlorite (ASC) was petitioned for use as a pre and post teat dip treatment in organic livestock production. The Livestock Subcommittee indicates that, although the substance generally satisfies criteria for listing on the National List, there are a number of functional alternative substances available. Because of this, the Livestock Subcommittee does not recommend the addition of Acidified Sodium Chlorite because it is not essential for organic production."
Allan Peterson agrees "with the Livestock Subcommittee that alternatives are available. Addition is not required. Furthermore, we should be moving away from the use of chlorine chemistry products."
Cornucopia Institute rejects the petition to list ACS on the List as allowed for use on organic livestock as a pre and post teat dip treatment. Their rationale: The LS unanimously rejected this petition, ASC is note essential for use and many alternatives are available.

Francis Dunham says, "Acidified Sodium Chlorite is unnecessary for organic livestock production. Other substances can substitute for its use. Please do not approve its use for organic livestock. The new rules improperly prejudice the process in favor of synthetics, so it is critical that no new synthetics be listed."

Methionine

Summary

Supporters: 3 individuals or businesses, CROPP, Methionine Task Force (added methionine levels), OTA, United Egg Producers, California Natural Products, Organic Egg Farmers of America, and Cornucopia Institute (with resolution).
Opponents: 3 individuals, Beyond Pesticides, NOC, CFS, Consumers Union, FWW.

1. **Jonathan Goodson** wants to increase organic chicken production by increasing the amount of synthetic methionine that is fed.
2. **Terry Shistar of Beyond Pesticides** opposes the use of synthetic methionine in poultry feed. Poultry with adequate access to pasture do not need synthetic methionine. In addition, we oppose this proposal, which may increase the amount of synthetic methionine used. NOSB needs to focus on organic systems of poultry management.
3. **Liana Hoodes of NOC** opposes the Livestock Subcommittee's proposal to revise the calculations used to regulate the amount of synthetic methionine allowed in organic poultry feed, because it focuses on fine-tuning the application of the exemption for the use of synthetic methionine instead of moving the industry toward production practices that do not rely on this input.
4. **Beth Unger of CROPP** supports "the petition and resulting proposal from the Livestock Committee for the continued allowance of Methionine. The NOP ruling to cap allowed usage at 2 lbs per ton was a technical fix and does not meet the needs for the health and wellbeing of the birds. A 2 lb. average over the lifespan of the birds will push for continued exploration of alternatives to methionine while meeting the nutritional needs of laying hens."
5. **Ryan Miller** is in favor of using the average per ton of feed rather than the pounds per ton of feed because they would better be able to adjust to the developmental needs of the birds.
6. **Susan Brown** opposes the use of synthetic methionine in poultry feed.
7. **Allan Peterson** opposes "this chemical in poultry feeds. Poultry with true access to the outdoors do not need a methionine additive. A need for synthetic additions to feed is not organic."
8. **Ernie Peterson of Cashton Farm Supply**, Cashton, WI says, "Pounds per ton is not fair to Organic producers in the industry. With cooler weather in the northern area 100 layers will consume 25 to 30 pounds feed per day. Layers in southern states are eating 18 to 24 pounds feed per 100 layers. The difference in amount of feed consumed is influenced by weather….For the above reason I encourage you to continue to move away from the two

pounds per ton to an amount for the life of the layer. It has not been fair to penalize an organic producer for living in a warmer part of the United States."

9. **David Will of the Methionine Task Force** requests:
    a. Layers a 2.5 average per ton over the life of the bird
    b. Broilers a 2.5 average per ton over the life of the bird
    c. Turkeys and Ducks a 3.0 average per ton over the life of the bird
10. **Oscar Garrison of the United Egg Producers** supports the adoption of the proposed language utilizing a maximum average per ton of 100% synthetic methionine in the diet over the life of the flock.
11. **John Ashby of California Natural Products** supports OTA comments on methionine.
12. **Frances Dunham** says, "Synthetic methionine must not be used in feed for organic poultry. There are concerns that the amount of this substance could actually increase under the current proposal. Synthetic methionine is not needed by poultry with access to the outdoors. Please reject this proposal."
13. **Gwendolyn Wyard of the Organic Trade Association** supports "the livestock subcommittee's proposal to adjust the allowance of synthetic methionine ***to the levels needed*** to meet the nutritional requirements of organic poultry at all stages of life."
14. **Ashley Swaffar of the Organic Egg Farmers of America** supports "the initial petition and subsequent Livestock Committee recommendation to change the amount of DL-Methionine form 2 pounds maximum to 2 pounds average over the life of the bird."
15. **Center for Food Safety** opposes the methionine proposal laid out in August 2013 and oppose the recommendation of feed rates be expressed as an average as "the overall usage of synthetic methionine will not be lowered…. On the contrary, overall synthetic methionine use will largely remain the same." Additionally, methionine will languish on the List for another 4.5 years. Instead, they suggest that NOSB, USDA/NOP and the poultry industry develop a research plan for eliminating the use of methionine. CFS has conducted preliminary research on alternative sources of amino acids and presents a focus on insects, such as fly maggots, which are a sustainable protein source, high in methionine, which can be reared in poultry manure as a feed ingredient. Research also shows that magmeal—maggot powder—is superior to vegetable protein."
16. **Cornucopia Institute** supports the committee proposal to amend 205.603(d), to include "over the life of the flock" as younger birds need more methionine than older birds. However, Cornucopia questions whether synthetic methionine is necessary given poultry scientists and feed mills say there are alternatives. "Therefore The Cornucopia Institute believes that the NOSB should encourage aggressive research on natural sources of methionine, alternative poultry management systems, and breeding for poultry that perform well on less methionine. All of these methods have been shown to be effective in preliminary studies but require more robust research to be commercially viable. If the proposal above passes, we recommend that the Board also pass the following [Resolution]." The resolution states that "The National Organic Standards Board is committed to the phase-out of synthetic methionine for organic poultry production by the 2019 sunset date."
17. **Consumers Union** opposes the recommendation, since it does not appear to be moving producers away from synthetic methionine use; rather, it allows the maximum levels to be higher than what they currently are in certain situations.

18. **Food & Water Watch** opposes the petition to change the listing for synthetic methionine, based on this synthetic's long history of extensions, the feeble attempts to find an alternative and the industry's failure to take a systems---based approach to solving this problem.

Collaboration

Terry Shistar of Beyond Pesticides addresses recent USDA actions that usurp and deny the authority of the NOSB granted to it under the Organic Foods Production Act (OFPA). We believe these actions endanger public trust in the organic label. We urge the NOSB to: not abdicate its responsibilities under OFPA; support motions to delist sunset materials in subcommittee; support a motion on every petition to add an annotation calling for an expiration date in 5 years; and disclose interests fully on every issue, and ask others to do so.

Sunset

Terry Shistar of Beyond Pesticides asks that the NOP place a moratorium on changes announced in the September 16, 2013 Federal Register until the changes are announced with an opportunity for public comment. OFPA gives the NOSB responsibility for managing the National List. The NOP has usurped that authority. The NOSB should use every opportunity to assert its authority. This includes refusing to approve petitions because they may prove to be irretractable and unmodifiable in the near future.

Eli Penberthy of PCC Natural Markets strongly opposes the National Organic Program's (NOP) Notification of Sunset Process, published in the Federal Register on September 16, 2013 (78 FR 56811). He says, "The new policy, however, diminishes the incentive to develop organic, nonsynthetic alternatives."

> "Since the inception of the Organic Foods Production Act (OFPA) in 2005, the responsibility for making the case for the extended use of a given material was shouldered by those wanting to continue its use beyond the period of five years. Now, the NOP has set the default to leaving materials on the National List, unless a concerted effort is made to amass evidence of the need for removal. Clearly, this sharp reversal in NOP policy will allow many more exempted substances to be allowed in organics indefinitely, not the intent of OFPA.
>
> "The NOP claim that this rule change "increases transparency" is blatantly misleading. It removes decision-making from the full 15-member board and puts it in the hands of a much smaller subcommittee. Until now, all decisions have been made in a public meeting, and all transcripts were posted for public view. The new NOP policy changes that. Now, decisions can be made in private, in the subcommittee meeting, with the public unaware of the discussion. This is not transparent. NOP's decision is disappointing because it reduces transparency but even more so because of NOP's false claim that it increases transparency."
>
> "What is most troubling about this recent action by NOP is it is rule-making from the "top-down" — rather than the fully democratic process provided by OFPA."

Liana Hoodes of NOC "believes that the new USDA/NOP sunset policy violates OFPA, because it does not subject all materials to the required review, careful analysis, and public debate as a prerequisite for allowing a material to be relisted through the sunset process….**NOC asks the NOSB to work vigorously with the USDA/NOP to reinstate the historical sunset policy** that subjects materials to the same two-thirds vote of the Board that allowed them on the National List initially."