

Recap of All Written Public Comments on Carrageenan and Hydroponics/Container Certification

Comments submitted to regulations.gov in advance of the

National Organic Standards Board

Fall 2016 Meeting

November 16-18

St. Louis, MO

Submissions delineated by:

**Farmers and Citizens
Public Interest Groups
Food Processors and Handlers
Government Officials/Advisors
Manufacturers and Ingredient/Input Suppliers
Distributors and Retailers
Trade Associations and Industry Consultants
Organic Certifiers and Material Review Organizations**



C O R N U C O P I A

I N S T I T U T E

How to Use This Document

For the benefit of National Organic Standards Board members, and other organic stakeholders, The Cornucopia Institute has compiled a recap of all formal written comments from all organic stakeholders and members of the public that were submitted prior to the **Fall 2016 NOSB meeting**. We have endeavored to catalogue the totality of these public comments as accurately and objectively as possible. For the carrageenan recap table, we included comments submitted before the Spring, 2016 meeting as well.

Cornucopia greatly appreciates the work, dedication and enormous time commitment required to serve on the NOSB. Our hope is to provide a valuable resource for the Board better enabling members to more fully understand the scope and sentiment of organic community participants, including:

- Farmers/Citizens
- Public Interest Groups
- Government Officials/Advisors
- Food Processors/Handlers
- Manufacturers/Ingredient Suppliers
- Distributors/Retailers
- Trade Associations/Industry Consultants
- Organic Certifiers/Materials Review Organizations

Because of the enormous number of comments received and the limited amount of time to record them all, this document includes a recap of comments relating to carrageenan and hydroponics/containers only. Comments on carrageenan and hydroponics represent the vast preponderance of all public input prior to the upcoming meeting. Under each agenda item, a table shows the number of comments submitted and the positions of various stakeholders on that particular item. The “Notes” section under each table provides additional explanation.

Thank you for your work on behalf of all organic stakeholders. Please feel free to contact us regarding this summary or our methodology.

Will Fantle
Research Director
The Cornucopia Institute

Abbreviation & Acronym Key

Aurora	Aurora Organic Dairy
BP	Beyond Pesticides
CCOF	California Certified Organic Farmers
CFS	Center for Food Safety
CR	Consumer Reports
Cornucopia	The Cornucopia Institute
CROPP	CROPP Cooperative
CU	Consumers Union
FDN	Food Democracy Now
FWW	Food and Water Watch
Infant Nutrition Council	Infant Nutrition Council of America
MOSA	Midwest Organic Services Assoc.
MOFGA	Maine Organic Farmers and Gardeners Association
NOC	National Organic Coalition
NOFA-VT	Northeast Organic Farming Association Vermont
OPWC	Organic Produce Wholesalers Coalition
OTA	Organic Trade Association
OTCO	Oregon Tilth Certified Organic
OSGATA	Organic Seed Growers Trade Association
PCC	PCC Natural Markets
PCO	Pennsylvania Certified Organic
Perrigo	Perrigo Nutritionals
RAFI	Rural Advancement Foundation International

HANDLING SUBCOMMITTEE

CARRAGEENAN

Petitioned/added: 1995 TAP, 2011 TR; 2016 Limited Scope TR.

Sunset 2018: To be voted on fall, 2016.

Subcommittee Vote:

Motion to remove carrageenan from the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b) if applicable: OFPA 6518(m)(6) - availability of alternatives.

Vote in Subcommittee:

Yes: 5 No: 2 Abstain: 0 Absent: 1 Recuse: 0

	Support Relisting	Oppose Relisting	Neutral/ Seeks Clarification
Farmers / Citizens	Consumers – 24; Indonesia Farmers – 9; Philippino Farmer – 8; Shanghai, China – 33	Consumers _k - 220	
Public Interest Groups		Cornucopia _i ; BP _v ; FDN; CFS _m ; CR _n ; NOC _o ; FWW _t	
Food Processors / Handlers	Sunopta _a ; Capsugel _b ; Imbibe, Inc.; Power Crunch; Earth Supplied Products, LLC - 2; Sunniva Caffee; Other Processors/Handlers – 3; Aurora; Kuen Lee		
Government Officials	Republic of Philippines Department of Agriculture _c ; Indonesian Government _a		
Ingredient Suppliers / Material Manufacturers	FMC Employees _e - 196; Murphy and Son; Star Kay White; Other Industry/Manufacturers – 2; Ingredients Solutions – 2; Shanghai Brilliant Gum Co.; Ltd; Perdue Foods; Perrigo Nutritionals		Ferrara _u
Wholesalers /Distributors / Retailers	CROPP _q ; Robin Coon _r	PCC _p	
Trade Associations / Industry Consultants	FSM Facebook Campaign _g – 1,793; United 4Food Science _h ; Marinalg International; Celtic Colloids; International Food Additives Council;		OTA-6

	International Food Products; North American Meat Institute; Dairy Farmers of America; Food Marketing Institute; Grocery Manufacturers Association; American Beverage Association; Indonesian Seaweed Farmers and Producers Association – 2205+7; Glasgow Consulting Group, LLC; Qingdao Gather Great Ocean Algae Industry Group; China Algae Industry Association; Nutritionists – 9; Food Scientists – 15; Nutrition Edge Communication; Natural Products Association; Allied Food Products, Inc.; Griffiths Foods; Int'l Dairy Foods Assoc.; Juice Products Assoc.; Infant Nutrition Councils		
Certifiers	CCOF _j		OTCO – 16, PCO – 2

Notes

- a. James Gratzek of Sunopta states: “The Handling Subcommittee’s recommendation to delist carrageenan unjustifiably imposes unnecessary cost and complexity into the food manufacturing process. Reformulation with alternatives such as gellan gum, locust bean gum and xanthan gum is possible, however, these ingredients are more difficult to work with and increase the overall cost to produce final products with no appreciable benefit to the consumer.”
- b. Stacey of Hanna states: “Capsugel has made a long-term investment in the development of a capsule that could be certified organic using the current National List of allowed materials and have found that there is a lack of food-grade setting agents suitable to do what carrageenan does for capsules.”
- c. Undersecretary Edgardo Gongona of the Bureau of Fisheries and Aquatic Resources states: “We contend that all three health-related assertions against carrageenan by NOC are based on inconclusive scientific arguments, and are rather haphazard extrapolations of findings derived from flawed methods and non-standard research processes. Furthermore, the two (2) negative environmental-related perceptions on seaweeds farming and carrageenan processing are exactly the opposite realities with the current state of modern and environmentally benign technologies used in the Philippines.”
- d. Reza Chairul from the Government of Indonesia states: “The decision you make about carrageenan in Washington, D.C. this November will affect people and the environment far beyond the borders of the United States. I know this because I am a carrageenan seaweed farmer in Indonesia. Farming carrageenan is how I earn a living and provide a good life for my family. Farming carrageenan is how I am able to send my children to school, so they will be educated and prepared to have even better lives when they grow up. Farming carrageenan is how women in my community are able to work. It is also one way we are able to protect and preserve the ocean environment around us.”
- e. James Swensen of FMC states: “Regulatory agencies around the world have consistently determined carrageenan to be safe, causing no hazard to human health. Seaweed farming is one of the most environmentally friendly types of aquaculture. Essential to organic products. Carrageenan is recognized as one of nature’s perfect stabilizers, a healthy ingredient that makes foods taste and look better.
- f. Monte Hilmoe of Star Kay White states: “Removing carrageenan as an ingredient option would compromise the ability to fulfill essential consumer needs regarding product stability, shelf-life, and overall quality. Its specific milk protein reactivity is unmatched by any other ingredient...”
- g. Food Science Matters Facebook Campaign 691 respondents: “Dear Mr. McEvoy, The Agriculture Marketing Service plays a critical role in ensuring the quality and availability of food for all Americans,” form letter.
- h. Susan Finn from United 4 Food Science states: “There is no legitimate rationale for removing carrageenan from the list of ingredients approved for use in organic foods. Options for formulating organic products that meet consumer demands are limited. Removing carrageenan may diminish the acceptability of certain organic products, which in turn may lead to consumer deselection away from organic foods altogether.”

- i. Nick Gardner of Marinalg states: "Carrageenan continues to be a safe, extremely versatile essential food ingredient which is compatible with organic principles and lacks organic alternatives."
- j. Kelly Damewood of California Certified Organic Farmers (CCOF) states: "Nine CCOF members include carrageenan on their Organic System Plan. It is used as a frozen soy product stabilizer, in beer production and personal care products, and in edible gel capsules used to package dietary supplements."
- k. At least 205 organic consumers submitted comments urging the NOSB to remove carrageenan from the National List. Most of these people cited personal experiences and health problems associated with their consumption of carrageenan.
- l. The Cornucopia Institute states: "The 2005 European Commission's recommendation that no more than 5% of food-grade carrageenan fractions should have molecular weight below 50 kDa has not been met by the industry"
- m. Cameron Harsh of the Center for Food Safety states: "The plain language of OFPA restricts the National List to only synthetic materials without which a particular product could not be made. Some manufacturers have been able to reformulate their products to remove carrageenan without replacement, determining that the product does not require the properties conferred by the additive to be acceptable to consumers. An extended shelf life should not be considered an essential property of organic foods."
- n. Charlotte Vallaey of Consumer Reports states: "The organic law allows for the five-year use of prohibited substances only if the use of the substance would not be harmful to human health. In the case of carrageenan, a substantial body of scientific literature points to potential harm to human health. We urge the NOSB, when faced with conflicting findings, to use the Precautionary Principle – when numerous well-designed studies by non-industry funded scientists point to harmful effects, the NOSB should err on the side of caution and protect the safety and health of consumers. We are concerned that the 2016 Limited Scope Technical Evaluation Report (TER) on carrageenan, by the Organic Materials Review Institute (OMRI), omitted important studies and study findings, which may impact the NOSB's decision-making process."
- o. Christie Badger of the National Organic Coalition states: "Research shows that the type of carrageenan used in foods can cause inflammation. Laboratory research in animals has shown ulcerative colitis-like disease and intestinal lesions and ulcerations in some animals. Additional studies in animals have shown carrageenan may act as a promoter of colon tumors. Moreover, research, including industry-sponsored research, shows that consuming foods with carrageenan can expose consumers to degraded carrageenan, which is classified as a possible human carcinogen (group 2B) by the World Health Organization's International Agency for Research on Cancer (IARC)."
- p. Eli Penberthy of PCC Natural Markets states: "PCC Natural Markets strongly supports the subcommittee vote NOT to relist carrageenan. Our primary reason is that the Organic Food Production Act's clear intent is to not allow synthetic additives whose primary purpose is to recreate or improve texture. See §205.600 (b) (4): "The substance's primary use is not as a preservative or to recreate or improve flavors, colors, textures, or nutritive value lost during processing, except where the replacement of nutrients is required by law." We believe that use of carrageenan has contradicted the intent of OFPA, is illegal, and that it must be delisted. Organic consumers are rejecting carrageenan in the marketplace and choosing alternatives without carrageenan, such as non-organic, non-GMO cream."
- q. CROPP states: "We expect complete removal by May 1, 2016. Although we have successfully removed carrageenan from our products we believe this is a material that is useful for certain applications. There is no scientific reason to remove it from the National List."
- r. Robin Koon, of a softgel encapsulation company states: "There are very few plant based materials that mimic the polysaccharide chains that carrageenan's have and are extremely strong, enabling it as a replacement for gelatin (and gelatin is from an animal source).
- s. The Infant Nutritional Food Council states: "The Joint FAO/WHO Expert Committee on Food Additives (JECFA) has determined the use of carrageenan in infant formula and formulas for special medical purposes does not present safety concerns. As an international expert scientific committee that reviews the safety of food additives and is administered jointly by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), Infant Nutrition Council encourages the NOSB to consider this JECFA evaluation when making determinations on carrageenan safety in infant formula. Removing carrageenan from the National List could negatively impact the availability of liquid organic infant formula products and reduce organic options available to consumers."
- t. Food and Water Watch (FWW) states: "In addition to questions of safety, carrageenan fails to meet the criteria of essentiality."
- u. The Ferrara Pan Candy Company states: "There are confections on the market made with carrageenan as a gelling agent. We did evaluate carrageenan in the formulation of some of our organic products. It does produce a nice gel. However, it leaves a slimy coating in your mouth for about 15 minutes after eating. We chose not to formulate with carrageenan because other ingredients provide better functionality."
- v. Beyond Pesticides (BP) states: "The evidence summarized by the 2015 Technical Review came up with a verdict of mixed results on virtually every issue regarding food grade (high molecular weight) carrageenan. However, there is widespread agreement that poligeenan, which contaminates food grade carrageenan at unknown and uncontrollable levels, does cause adverse effects, including cancer. The production causes adverse environmental impacts. And it is not necessary –organic processors have been moving away from the use of carrageen because of consumer pressure since it was last considered for sunset.

CROPS SUBCOMMITTEE

Hydroponic/Aquaponics/Biaponics Proposal and Container and Greenhouse Production Disc. Document

Hydroponic/Aquaponics/Biaponics Proposal:

- Part 1 (this part) is whether Biaponics fits into the Organic Foods Production Act (OFPA) and the USDA organic regulations in CFR Part 205 (referred to throughout as the NOP rule). This is a proposal that will go before the NOSB in Fall 2016.
- Part 2 is a Discussion Document on container systems for solid substrates, including which ones could or should be allowed under the existing NOP Rule and/or which would require a change in the Rule, along with suggestions for what changes need to be made.
- Part 3 will be a Discussion Document on the standards needed for bioponic systems to be allowed under the NOP organic rules, along with possible limits on what sort of systems would qualify as Biaponics. This will occur for spring 2017 if the proposal in part 1 passes.

The Container and Greenhouse Discussion Document will look at the gaps and inconsistencies in the 2010 NOSB recommendation on Production Standards for Terrestrial Plants in Containers and Enclosures (Greenhouses). The goal is to examine what is needed for growing plants to maturity in containers in order to be consistent with the organic regulations, to create definitions and standards for terms that were not precisely spelled out in the 2010 recommendation, and to create a stage for further rulemaking efforts if needed.

Subcommittee Vote: Motion to allow biaponics

Motion to allow biaponics (including hydroponics, aeroponics, or aquaponics) as consistent with organic production under the provisions and recommendations to be developed by the NOSB in 2017.

Yes: 2 No: 5 Absent: 0 Abstain: 0 Recuse: 0

	Support Proposal (allow hydroponics)	Oppose Proposal	Neutral/ Seeks Clarification
Farmers / Citizens	17 ⁱⁱ 237 (Coalition for Sustainable Organics form letter - a group funded/financed by industry participants)	364 ^{g,h,i,j,k,l,m,n,o,p,q,r,s} ; Jeff Moyer ^{*a} ; Dave Chapman ^b ; Colehour Bondera ^{*c} ; Bill Brammer ^d ; Eliot Coleman ^e ; Alison Massar ^f <i>*Former NOSB Member</i>	4(allow aqua not hydro) Allow sprouts
Public Interest Groups		BP ^t ; Cornucopia ^u ; CU ^v , NOC ^w ; FDN ^x ; Lopez Community Land Trust; RAFL ^z ; OSGATA ^{aa} ; Demeter Association ^{bb}	CFS ^y
Government Officials/Advisors	Hydroponic and Aquaponic Subcommittee of the NOSB Task Force ^{kk}	EU Expert Group for Technical Advice on Organic Production; 2010 NOSB Recommendation Subcommittee of the NOSB Task Force	Bernie Sanders; Senator Peter Welch; Congress ^{tt}
Ingredient Suppliers / Material Manufacturers	Sungro ^{ff} ; Vertigro; Marine Materials; Scott's Miracle Grow; Ocean Organics; Blue Planet; Ecoponics Systems International		
Wholesalers /Distributors / Retailers	PuraNatura; Driscolls; Wholesum Harvest; CEA Holdings; Naturipe Farms	Discovery Organics ^{cc}	
Trade Associations / Industry Consultants	Coalition for Sustainable Organics; Western Growers ⁱⁱ ; OPWC ^{mm} ; OTA ^{oo} ; Katherine DiMatteo; The Aquaponic and Hydroponic Organic Coalition; The University of Akron Research Foundation; Archi's Institute for Sustainable Agriculture; AeroGenesis Incorporated; Organic Suppliers Advisory Council ^{oo}	Organic Growers Alliance ^{hh} ; Eric Sideman ^{qq} ; Keep the Soil In Organic; Organic Research Associates ^{sss} ;	Canadian Horticultural Council ^{dd} ; Ontario Greenhouse Vegetable Grower ^{see}
Certifiers	CCOF ^{gg} ; Oregon Tilth ^{jj} ; MOSA ^{rr} ; Quality Certification Services	MOFGA; NOFA-VT ⁿⁿ ; Steven Wisbaum	

Notes

- Jeff Moyer, former NOSB chair, states: "The goal isn't to produce crops as efficiently as possible but to produce healthy crops from healthy soil for healthy people. We cannot do this without the soil. It is also important for your own work to know that future boards won't continually try and undo the hard work you put into decisions or populate the board with votes to undo decisions you make."
- David Chapman, hydroponics task force member and Long Wind Farm owner states: "It is inevitable that the hydroponic industry would want to gain access to the organic market, where a premium is usually paid for producing food in a way that emphasizes long term health over short term profit."
- Colehour Bondera, former NOSB member states: "We can not stand together about what organic means if "water" can be certified, then the integrity is lost to growth that does not benefit farmers, but rather a few large companies, with consumers (all of us) paying less for food, while actual organic farmers are going out of business!"
- Bill Brammer, owner of Be Wise Ranch and former president of CCOF states: "Hydroponic Greenhouse should have to develop its own label, but this produce is not Certified Organic in the minds of most growers, customers and health advocates. There are some big interest, who have deep pockets that are pushing this forward, but this is not taking the organic movement in a forward direction. This is short changing the customer who paid extra money for the superior overall qualities of certified organic produce."
- Eliot Coleman of Four Season Farm states: "The phrase "organic hydroponic" is an oxymoron."

- f. Alisson Massa, Board Member of the Jamaica Organic Agriculture Movement/helped write Jamaica's Organic Standard, states "Organic has been and must always be soil-based."
- g. Mary Lynch states: "As an organic farm adviser and teacher at the Organic College in Dromcollogher, Ireland, I am appalled that hydroponic production could even be considered for Organic Certification."
- h. Andrew Knafel states: "It seems obvious that the initial intent of organic has always been to improve the soil (for both the nutritional value of the produce and for the health of the soil). By allowing hydroponic organic we are in reality deceiving the public (intentionally) and not being transparent."
- i. Kimi Wei states: "Soil farming in smallholder farms which practice crop rotation and livestock to crop rotation, is a phenomenally sensible growing style that sequesters CO₂ in soil and reduces methane emissions from manure."
- j. Claudette Ohsann states: "Hydroponics does nothing to replenish the soil, giving back to the next crop."
- k. Barbara Sanderson states: "Eating food grown in healthy soil is important to a healthy gut. Our food needs to be loaded with healthy bacteria. This information is forefront of the medical research today."
- l. Devin Henry states: "This is not a comment against hydroponic farming. It is a comment opposing allowing hydroponically grown crop to be labeled organic by the USDA."
- m. Joshua Moore states: "Hydroponics is more of a factory then farming, there in it for the easy money with no regard for the small organic farmer."
- n. Donald Stever, an environmental lawyer and certified organic farmer states: "I urge members of the committee to review the film "Symphony of the Soil", produced by Lily Films, which very convincingly explains what soil is and why organic vegetables should be grown natural soil, not in an artificial chemical matrix."
- o. Christine Walasek states: "I am most concerned about the nutritional loss in the produce inherent when hydroponics is the growing method."
- p. Dr. Tony Mathews, a 40- year organic farmer from the UK states: "Because what happens in USA almost inevitably gets copied around the world, in time it will destroy the whole organic industry, putting untold numbers of farmers worldwide out of business. The ethically robust efforts of so many people who have struggled, and continue to struggle, to bring healthy food to people around the world and to limit the damage to our global natural systems will have been wasted if NOSB allows hydroponics to masquerade as organic."
- q. Barbara Alsop states: "They supply a long list of "approved" substances, and then tell us to guess what they are using. There is no way for the consumer to know what is being used, and to my knowledge, no way to establish after the fact what has been used."
- r. Frederic lawler of Abri vergetal Family Farm states: "In order to adopt equivalences with USDA organic standards, container production is now certified under Canada Organic Certification. This affected the perception the consumers have, being so similar to hydroponic production. Container based production were experimentd by some colleagues and they find out that most of the root system is not in soil but in the leaching tubing, making container soil based production a hydroponic system in reality."
- s. Rachel Wake states: "Organic growers in the UK do not want to see a lowering of organic standards to allow for hydroponic systems in the USA organic system, as hydroponics is not organic, as it lacks the essential element of the soil!"
- t. Beyond Pesticides (BP) states: "We believe that an organic system should not depend primarily on the addition of soluble fertilizers, and therefore suggest that if container production is allowed, that it be limited to those systems in which the soil volume is sufficient to provide adequate nutrition without additions of soluble fertilizers."
- u. The Cornucopia Institute (Cornucopia) states: "Allowing year-round imports from countries where hydroponic/container growing is illegal to then be labeled and sold as organic in this country undercuts legitimate US organic farmers. It is dead wrong — and patently illegal under the Organic Foods Production Act and the current regulations."
- v. Consumers Union (CU) states: "We are not opposed to hydroponic food production, but we do not believe it should be labeled "organic."
- w. National Organic Coalition (NOC) states: "The issue of Hydroponics/Aquaponics/Biaponics stands out for the members of the National Organic Coalition as one of great importance and historic significance."
- x. Food Democracy Now (FDN) states: "There is no question that organic farming - going back over one hundred years - has always been a soilbased production system. Therefore, production systems which are not based in the soil can not be considered organic under the OFPA and therefore, must never be certified organic. In the strongest possible terms we urge that the USDA-National Organic Program should implement an immediate moratorium, correcting its serious error which has allowed the certification of hydroponic operations."
- y. Center for Food Safety (CFS) states: "Further, allowing certifiers to grant organic status to operations in the absence of a formal standard outlining the requirements that must first be met contradicts OFPA."
- z. Michael Sly, charter NOSB chair, of Rural Advancement Foundation International (RAFI) states: "I strongly support the concerns of Dave Chapman and others regarding this matter and urge the board to not postpone action, to address this unfairness."
- aa. Organic Seed Growers and Trade Association (OSGATA) states: "The excerpt from the Rule Section (b) (1) under §6513 provides unambiguous clarity that hydroponic systems are foundationally incapable of fulfilling the requirement for careful soil management."
- bb. Jim Fullmer of the Demeter Association USA states: "This month (October 2016) the National Oceanic and Atmospheric Administration (NOAA) reported that measured CO₂ levels in the Earth's atmosphere reached the highest levels in 3 million years, exceeding 400 ppm, not temporarily but for ever. This happened over a very

short period of time approximately 100 years) with direct relation to global industrialization and the practices that came with it. Even if we stopped all the practices that contributed to this calamity today there still will be 400 ppm in the atmosphere until something is done to aid in pulling it out.”

- cc. Anne Moss, president of Discovery Organics states: “Canada does not allow non-soil based greenhouse production. England, Germany, Korea, Japan-in fact most countries prohibit non-soil based growing in their Organic Standards. The Coalition for Sustainable Organics led by Mr. Frankel are focused on crop production efficiencies. I suggest that instead of asking for continued erosion of the US Organic Standard, they create their own value-based standard that helps them promote non-soil based growing practices.
- dd. The Canadian Horticultural Council-Greenhouse Vegetable working Group states: “The two countries have, since 2009, enjoyed the benefits of reduced barriers and equivalency in their organic standardization through the CAN-U.S. Equivalency Agreement. However, hydroponics and aeroponics have an “additional requirement” under the equivalency agreement which means greenhouse vegetable growers are still working with two separate “rulebooks” for the production, labelling and trade of their products to a great extent. U.S.-grown product certified by the NOP as “organic” in the U.S. is not considered organic in Canada. In Canada, organic greenhouse crops must be grown in soil; hydroponic and aeroponic production is prohibited for organic production. The Canadian General Standards Board, working in hand with the Organic Federation of Canada and a wide range of stakeholders, are finalizing amendments to quantify the greenhouse crop soil volume requirements within the Canadian Organic Standard and ensure their official interpretation is consistent. With the NOSB-led process also well underway, the Canadian Horticultural Council (CHC) would like to encourage further Canadian-U.S. collaboration in order to realize greater uniformity in organic standard and the lists of organic permitted substances.”
- ee. Ontario Greenhouse Vegetable Growers state: “If US produce is to be exported to Canada labelled organic, it cannot have been produced hydroponically according to Canadian Food Inspection Agency regulations. Ontario Greenhouse Vegetable Growers feels that the differing regulations in Canada and the US lead to significant confusion amongst growers. OGVG supports having the regulations in Canada and the US mirror one another as closely as possible as it would result in better understanding of labelling requirements and equivalency, and stronger trade between the two countries.”
- ff. Kathryn Louis of Sungrow states: “We are concerned about the recommendation to redefine growing media... to contain a minimum 20% compost. Compost is less of a “soil” than is a material such as sphagnum peat, which is the current basis for the vast majority of commercial and consumer growing media.”
- gg. California Certified Organic Farmers (CCOF) states: “The evolution of systems on the spectrum of container and bioptic production will help innovators and next-generation farmers address modern concerns related to energy, climate, water, and the availability of nutrients.
- hh. Organic Growers Alliance of the UK states: “I question the right and legality of the NOP to certify such systems when they are so very obviously at odds with the global thinking on organic production techniques. All EU member states have to follow Article 4 of 834/2007 lays down the overall principles of organic crop production. This states that organic production shall be based on the appropriate design and management of biological processes, with ecological systems using natural resources and appropriate crop cultivation methods. A further revision of Article 4 of Regulation 889/2008 states: ‘Organic plant production is based on nourishing the plants primarily through the soil ecosystem. Therefore hydroponic cultivation, where plants grow their roots in an inert medium fed with soluble minerals and nutrients, shall not be allowed.’ The over ruling principle here is that organic production techniques feed the soil and not the plant.”
- ii. Bradley Fox of Horimasa City Farm Inc. states: “It is not so much that containers enrich the soil immediately beneath them, but that containers permit greater production within the same area. Turning this around, this means for the same amount of food produced, more land is freed up for the biodiversity of nature itself. Indeed, any reduction in agriculture’s footprint should be seen as a positive for biodiversity.”
- jj. Oregon Tilth states: “We agree with the Subcommittee’s concerns about the degradation of natural resources by paving over fertile soil or through effluent runoff, although we feel that these risks also present themselves in more traditional farming systems. OTCO would support adding greenhouse/bioptic specific examples to the Appendix of the NOP 5020 Natural Resources and biodiversity guidance. This would help ensure that natural resources on all types of organic operations are maintained or improved as required by the standards.”
- kk. The Hydroponic/Aquaponic Subcommittee of the NOSB Task Force states: “The practice of bioptics is to encourage these microorganisms of the soil food web to thrive in an aqueous system in order to provide a natural source of nutrients to plants in an environmentally sustainable manner. The result is a highly efficient crop production system that offers alternative organic food production methods to a growing population that must survive despite diminishing resources.” [Please note that their comments were not a part of the official published task force report made available to the public and this subcommittee, made up of industry participants, has no current legal status]
- ll. Western Growers state: “Containerized growing allows for the recapture and reuse of water resulting in efficiencies that reduce water use by up to 90 percent per pound of fresh produce and allows farmers to grow up to 10 times more organic produce per square foot per year than open field systems.”
- mm. Organic Produce Wholesalers Coalition (OPWC) states: “However, in an ensuing discussion, in which we shared information and questions, our group moved to a consensus that it would be better for the organic community to consider the 4 classes of ponics systems defined in the Crops Subcommittee proposal as individual cases, as opposed to the Subcommittee’s proposal to vote on them all at one time.”
- nn. Northeast Organic Farming Association Vermont (NOFA VT) states: “we recommend creating a recommendation based on minimum soil volumes and depth as well as a maximum limit on the amount of nutrients that can be

added post-planting. In addition we recommend establishing a minimum amount of compost or soil in growing media.”

- oo. John Phillips, co-chair of the Organic Suppliers Advisory Council of the Organic Trade Association states: “All systems should be required to use OMRI Listed microbial products and natural processes to encourage and develop a microbial community analogous to that found in soil. Producers should be encouraged to use and demonstrate the use of a regenerative nutrient recycling system, to recycle crop residues by composting or fermentation, and to derive all plant-based nutrients from plants grown by certified organic production. All feed used in Organic Aquaponic Systems to feed fish must be from organically produced crops or recycled animal by-products and natural minerals and supplement sources. OFIR records must be able to demonstrate an audit trail that documents that all inputs are derived from approved sources.”
- pp. The Organic Trade Association (OTA) states: “OTA encourages NOSB to refer this proposal back to the CS for further refinement. Guidelines on containerized and greenhouse production are badly needed, and we support CS’ ongoing work. However, we are concerned that CS has made some unwarranted assumptions about fertility management in these systems, and we believe that the process of developing these guidelines will benefit from input from an expert panel at a future NOSB meeting.”
- qq. Eric Sideman PhD, Hydroponics Task Force Member states: “In organic management, the bulk of the crop nutrients come from the biological activity decomposing complex organic molecules (compost, manures, seed meals, etc) in the soil. In contrast, hydroponic production is similar to conventional production in that it is based on fertilizer management. Even if there is some biological activity in the hydroponic solution, the bulk of the plant nutrients are being supplied directly to the crop by the fertilizer.”
- rr. Midwest Organic Sustainable Association (MOSA) states: “We support the continued expansion of the organic industry into new systems that are sustainable and in line with organic principles.”
- ss. Emily Brown Rosen of Organic Research Associates states: “Hydroponics may be a sustainable and valuable type of production system, but it should be labeled and marketed on its own merits, not confused with the existing organic label.”
- tt. Bernie Sanders, VT senator and Peter Welch, VT congress state: “Clarifying the appropriate circumstances in which organic certifiers should issue an Organic Label will help maintain the trust consumers have in the USDA Organic seal. It is our hope that the November NOSB meeting will be seen as an opportunity to bring further clarity and consistency to the USDA Organic Label standards.”