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Submitted via [www.regulations.gov](http://www.regulations.gov)

**RE: Docket: AMS-NOP-16-0049**

**NOSB Crops Subcommittee Discussion Document; Container and greenhouse production: further clarifications**

Dear NOSB members:

Thank you for the opportunity to provide comments on the discussion document for container and greenhouse production. MOSA certifies almost 500 operations with greenhouses. Of these, the majority are certified for transplant production, many grow plants through to maturity in containers, and some utilize in-ground production. We also certify a number of operations without greenhouses, but where production is still container-based. We appreciate the NOSB's consideration of areas where methods of production do not entirely align with the National Organic Standards.

**We support the general direction of the NOSB to further define greenhouse production methods. We appreciate the clear definitions provided and offer some suggestions for areas where further clarification would be helpful. Our comments on the NOSB discussion questions are framed consistently with the order of the sections in the discussion document.**

**Consistency with mushrooms, aquatic plants, seedlings, and other "soilless" culture** - We appreciate and largely agree with the NOSB analysis regarding production methods and consistency with other production systems. We concur that sprouting is covered in the existing crop standards, and that the practice of sprouting seeds is similar to handling. We do not feel that further clarification regarding sprout production is needed. The production of wild aquatic plants, seedlings and transplants is covered under the existing regulation, but we concur that, for mushroom production, regulations are necessary (and we understand regulations are in development). We appreciate the steps toward clarifying container-based production of crops and we understand that cultivated aquatic plants are not addressed in this discussion. We are submitting separate comments regarding the Crops Subcommittee Proposal

on Hydroponic/Aquaponics/Biaponics and the Hydroponic and Aquaponic Task Force Report. We encourage innovative thinking to grow our organic industry.

**Land Considerations and Natural Resources-** While we do not agree that operations in buildings must observe a 36 month transition for the land underneath the building, we do agree that it is important to consider natural resource conservation with regard to greenhouse operations. The document states, *“The Task Force asked the NOSB to consider limiting the use of land where crops could be grown in the soil from being converted to container production.”* We do not think that limitations should be put on operations which prevent converting production to container-based when the soil *could possibly* be used for in-ground production, however, we agree that container-based growing should have requirements to meet and that the natural resources of the operation should be observed. It would seem difficult to verify that operations new to organic production, but with existing greenhouse structures, or containers *‘could’* have utilized in-ground production. It would also seem unfair to allow for conversion of *new* operations, while limiting expansion on *existing* organic operations. The suggestions from the NOSB include: maintaining the condition of the land beneath the container production, regulating the fate of the water or nutrient run-off from container production, positive actions for biodiversity, planting insectary plants among the containerized crop plants, and other similar techniques. We agree that these topics should be addressed in organic system plan paperwork, and we encourage the NOSB to develop a comprehensive set of natural resource criteria specific to greenhouse and container-based crop production for certifiers and farmers to use. (We’d note that the line regarding land with a building and an impermeable floor might speak to processing facilities as well. We sometimes struggle with how best to apply natural resource conservation requirements to organic operations in buildings.)

This section also includes the statement, *“The Task Force...also recommended limiting the conversion of nonorganic container plants to organic by re-potting them in organic growing media.”* This is an important topic to address; this one line in this NOSB discussion document does not seem to fully summarize the intent and questions of the Task Force. In their report, on pages 66 and 67 (as numbered, or page 69 of the entire report), the Task Force asked a series of questions and stated, *“Plants themselves should not be allowed to be “upsized” from use of prohibited materials or media into allowed growing media in order to eliminate transition periods. This would be analogous to digging up a plant and putting in another field after an application of prohibited materials. The only exception that applies the same standard for containers and in ground systems is where ~~transplants or~~ planting stock (such as bare root, or allowed non-organic planting stock or equivalents) are placed in allowed media/soil. Transition requirements should be clear in cases of drift or application of prohibited materials. We see no distinction between prohibited materials used on the plant or in the media with respect to transition of containers.”* The Task Force concluded by suggesting revision to section .209(a) in the 2010 recommendation, which exempted producers *“operating a greenhouse with crops grown in containers using a growing media that does not include soil from the production site”* from requirements 205.202(b) and 205.203(a). The suggestion given in the report was to update this section to require that *“for a producer operation with a greenhouse or other location with crops grown in containers, any soil used as growing media must meet the requirements of 205.202(b), 205.203(a).”* We interpret this to mean that soil used in an organic

container-based operation must be free of prohibited materials for 36 months prior to harvest of the crop, and that any other ingredients in the media also be allowed.

Our confusion with this topic begins with the definition of planting stock and the NOP's 5029 Guidance on seeds, annual seedlings, and planting stock. The Task Force touched on the "only exception." This "exception" is a rather large consideration in *this* discussion, and should be clearly addressed.

Let us explain: Planting stock is defined as "*Any **plant or plant tissue other than annual seedlings** but including rhizomes, shoots, leaf or stem cuttings, roots, or tubers, used in plant production or propagation.*" Since annual transplants have to be certified organic, and all greenhouse and container production on all certified organic operations is required to have acceptable growing media, we see the only concern is with planting stock. **Nonorganic planting stock.** We are concerned with container-based production during the initial transition to organic, and with the allowance to bring nonorganic stock onto the farm without review of the media. Seedlings have to be organic, and that includes review of the media. Planting stock, including both annuals and perennials, does not have to be organic if organic stock is not commercially available. Planting stock is defined as *any plant or planting tissue*. Berry bushes in pots ready to produce organic fruit, are an example. It would seem as if the media used in the pot for the planting stock must be acceptable for use in the organic system. NOP Guidance 5029 gives great guidance to certifiers in many areas, but the clarifications for nonorganic planting stock brought onto the organic operation actually confuse our review process. The 5029 document clarifies (section 4.1.2) that "*Certified operations may use non-organic seed and planting stock only if equivalent organically produced varieties of organic seeds and planting stock are not commercially available.*" and (section 4.1.6) that "*Use of non-organic planting stock to produce organic crops is subject to commercial availability as per §205.204(a)(1). If planting stock is from a nonorganic source and is used to produce perennial crops, then that planting stock may be sold, labeled or represented as organic planting stock after 12 months of organic management (§ 205.204(a)(4)).*" These clarifications make it clear that nonorganic stock is allowed when organic is not available, including plants that will yield an organic crop immediately, and that perennial planting stock *itself* may be sold as organic after one year of organic management.

The document goes on to state (section 4.3.3) that "*Substances used by a seed or planting stock purveyor prior to the harvest of their non-organic seeds or non-organic planting stock for sale and use in organic production are not considered "treatment"...* "*These substances do not need to be described in the OSP by the certified operation and do not require review by the certifying agent.*" To us, this seemed to indicate that the media (a substance) used by the nonorganic operation is not required to be reviewed, so we asked the NOP for clarification, and that was confirmed. We were told that root balls or potting media used in the nonorganic production of the planting stock are part of the non-organic production system, and so, do not require review. This presents a dilemma. We feel that it **is** appropriate to review the media. If nonorganic planting stock is brought onto the organic operation any unacceptable media should be replaced with acceptable media. We agree with the requirements suggested in this new discussion document, and would like to see the 'exception' addressed. It does not seem reasonable or consistent to allow planting stock potted in conventional media to be brought onto

an organic operation and allowed to produce an organic crop immediately, nor to allow for a year transition in that same media for sale as organic stock, when at the same time we would require other plants on the same operation either be from organic annual seedlings, or potted in acceptable media. We ask that the NOSB consider this issue and propose suggestions to resolve this lack of consistency in your final recommendation. We would like to see an one-size-fits-all approach applied.

**Rotation-** We agree that similar techniques like mulching or recycling and composting of the used growing media are functions with the same goals as crop rotation strategies, and should be employed on operations growing plants to maturity in containers. Strategies to meet the goals of crop rotation should be described in the OSP. While we like to think that organic is soil-based, it's really more about symbiotic relationships found in soil-like environments, with nutrients coming from natural processes.

**Containers and Growing Media-** We can appreciate the value of quantitative guidance for containers and growing media, but we are concerned with regulatory burdens, including the verification methods, whenever the organic regulations get specific on numbers. Please consider how certifiers *will sensibly be able to* verify any requirements. As we explained above, requirements for review of media, *in all situations*, is needed. All media in use on the operation should be acceptable, including media contained in allowed nonorganic planting stock. We also support the statement from the 2010 recommendation “*growing media shall contain sufficient organic matter capable of supporting natural and diverse soil ecology*,” but struggle with the proposed suggestion that it be *compost*-based, with a 20% *compost* composition requirement. Though media may be capable of supporting *natural and diverse soil ecology*, we recognize that growers sometimes use acceptable media that does not meet the NOP's specific definition of compost.

**Nutrition-** We like the acknowledgement that the backbone of organic production is the complex interaction between soils, plants, animals and humans. While soil's symbiotic relationships are key to organic production, life and all of its diversity exists in a continuum of living conditions in which the direct link to soil may vary. An organic producer's role is to nurture and steward the complex interactions found in nature, to foster cycling of resources, to promote ecological balance, and to conserve biodiversity. Soil is a part, but holistic thinking is the heart. We believe that systems need to be sustainable and in line with organic principles, and we support continued growth of the organic industry. We are anxious to see your recommendation.

Thank you for your work on this challenging topic. We are available to answer any questions you may have.

Respectfully submitted,

The MOSA Certification Team