

**National Organic Standards Board
Joint Materials and Handling Committee
Definition of Materials Discussion Document**

April 5, 2009

I. Introduction

Classification of materials has been debated since the Organic Food Production Act was enacted. Since 2005, the National Organic Standards Board has been actively working to provide increased clarity on the “definition (or classification) of materials.” A number of recommendations have been made, public comment has been heard and thoughtful debates have occurred. A Joint Committee comprised of the members of the Materials and Handling Committees is currently reviewing all past recommendations, the input of the Material Working Group and public comments received in preparation for a recommendation at our fall 2009 meeting. This anticipated recommendation will address both the question of agricultural versus non-agricultural and synthetic versus non-synthetic materials.

The purpose of this document is to inform the public of our current thinking and unresolved questions and to solicit comment as we finalize our recommendation.

We want to acknowledge the many people who have provided public comment on this topic over the past several years and to the many participants of the Material Working Group. This group has debated the topic and provided thoughtful discussion documents to aid our process.

II. Background

The need to provide additional clarity on the definition of materials for the National List has been recognized for several years. The topic of agricultural versus non-agricultural has been addressed by three NOSB committee recommendations dated July 14, 2005; September 15, 2006 and October 19, 2007, while synthetic versus non-synthetic has been the subject of a June 23, 2005 NOSB recommendation and a March 9, 2006 NOP response and proposed decision tree. These documents, as well as Material Working Group discussion papers and presentations and other reference materials, are listed in the Reference section below.

A final recommendation on this topic has proven elusive due to specific materials that illustrate gaps in current and proposed definitions. Examples of these materials include gums (which are listed in multiple sections on the National List), fermentation products, and natural flavors. While these examples illustrate the need to provide clarity, we are mindful that there is broad consensus on the classification for most materials. Our goal in developing a recommendation is not to re-write the National List. The NOSB expects that the document resulting from this process will confirm and support the vast majority of decisions made by prior boards.

After the November 2007 NOSB meeting, a group of the organic community came together as the Material Working Group (MWG) to provide discussion and perspective for NOSB consideration. This group is open to anyone interested. The MWG has provided a discussion paper and presentation for both the May 2008 and November 2008 NOSB meetings. In their presentations the MWG provided a list of questions for NOSB discussion. In summary:

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- Can the problem be solved without changing the regulation?
- At what point does a substance derived from agricultural stop being agricultural?
 - Can an agricultural product (i.e. vegetable oil) that undergoes a chemical change via mechanical/biological methods still be agricultural?
 - Does an extract derived from an agricultural product via hexane/synthetic solvent become nonagricultural?
 - Does an agricultural product combined or reacted with a nonagricultural substance become nonagricultural? What if that nonagricultural substance is on the National List?
- Can an agricultural product also be synthetic? If so can it also be certified organic?
- If something is organic must it be agricultural?
- Should there be a list of materials that have been reviewed and determined to be prohibited for use in handling despite the fact that the material may be certified organic?
- Is a product of fermentation agricultural or nonagricultural?

III. Current Direction of the Materials and Handling Joint Committee

The Materials and Handling committees working together have agreed to several overall principles that will guide our recommendation. We agree that a material is defined both from its source and the process used to make the material. For example, tartaric acid can be sourced from grape wine or from malic acid. If sourced from grape wine then tartaric acid would be a non-synthetic material. Alternatively, tartaric acid sourced from malic acid is synthetic. Pectin sourced from an agricultural source, either citrus peel or apple pomace, can be classified as either an agricultural product (pectin, high-methoxy) or synthetic (pectin, low-methoxy) depending on the process used to produce it ranging from extraction with acidified water (agricultural) to hexane extraction with ammonia chemical modification (synthetic).

Since a material is defined by both its source and the process used to make the material, we agree that a material can have multiple classifications, like pectin. We propose that better use of annotations could clarify the source and process that resulted in the classification of a material. We recognize that for materials currently on the list updating annotations would require public comment and rulemaking. We will be collaborating with the NOP in the coming months to determine how this approach can be best achieved.

As the “definition of materials” has been debated over the past several years the question of agricultural synthetics, or materials sourced from agriculture but processed to synthetic, continues to be debated. We recognize that a material can exist, low-methoxy pectin for example, that comes from a clearly agricultural source but is processed with synthetic chemicals to become synthetic. There is strong consensus that this material is now synthetic and should be classified as such while still recognizing the agricultural source. We reject the idea of an “agricultural synthetic” classification. There has been some discussion on whether we would, even in the cases of these materials, want to see organic agricultural sources. Generally we believe that, while desirable, this portion of the discussion is a distraction from the current debate and represents a minor portion of organic agriculture.

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Given that a material's classification results from both source and process, there is also a general consensus that the questions of agricultural versus non-agricultural and synthetic versus non-synthetic must be linked in some fashion, and that the relationship should be codified and formalized. General consensus of the committee is that the questions should be addressed together in sequence rather than addressed as two separate parallel questions. Generally we believe that if a material, either due to its source or the process by which it is made, is determined to be synthetic, that this determination comes first. Then, of those non-synthetic remaining materials, those with an agricultural source, whose processes were such that the material maintained its agricultural identity, would be classified as agricultural. The remaining materials would be non-synthetic, non-agricultural. Examples of these non-synthetic, non-agricultural materials include calcium chloride, clearly not from an agricultural source, and egg white lysozyme which is sourced from chicken egg whites (agricultural) and processed through extraction and purification and has been classified as non-agricultural because of this process. Non-agricultural "natural" substances would be considered "non-synthetic, non-agricultural."

Finally, there has been prolonged debate on the matter of microbiological materials or the products of microbiological fermentation and how we want to proceed in classifying these materials. We are greatly divided on this topic but there are some areas of consensus. Some of the committee members want to find a path to encourage the use of organic inputs and prevent, where possible, the use of synthetics. Others feel that these materials are used at small percentage levels and that organic integrity is not compromised by their inclusion. However, there is general agreement that microbiological materials are not livestock or "non-plant life" as has been proposed by previous boards, and that while intellectually intriguing, this is not the path we choose to follow. Finally, we recognize that, if microbiological materials or the products of microbiological fermentation are classified as agricultural, this classification has implications for livestock where these products, yeast as an example, are used as feed. If classified as agricultural, the microbiological materials or the products of microbiological fermentation used as livestock feed would be required to be 100% organic.

For the matter of microbiological materials or the products of microbiological fermentation we have two alternate recommendations that are currently under discussion. One option would be to define that microbiological materials or the products of microbiological fermentation are non-agricultural but where listed on 205.605(a) use annotations to provide direction on processing and inputs. The annotations could be used to require use of certain inputs and prohibit use of others. This option may also address concerns expressed about affecting feed for livestock. The second option would define that microbiological materials or the products of microbiological fermentation are agricultural but cannot at this time be certified organic because a standard for their production does not exist. The benefit of this option would be to address a number of currently listed materials on which a great amount of classification debate has been expended. Public comment on these two options is appreciated. Of particular interest are benefits and drawbacks of each option, the potential unintended consequences of each option and perspectives on these two options and their impact on the use of these microbiological materials or products of microbiological fermentation as livestock feed.

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The National Organic Program (NOP) in their March 9, 2006 response suggested that the NOSB's effort in this area could be clarified by documenting the intent of any recommendation on the "definition of materials." We find this suggestion useful and will include this information in our final recommendation. Specifically, the NOP asked for clear intent on what we were trying to prevent. We would expand this to include what activities we are trying to encourage. We ask for comment from the public on both sides of this topic.

IV. Request for Public Comment

In the above discussion we asked for public comment on several topics. These topics and specific questions that we have are listed below:

1. Provide specific examples where organic principles would be upheld or organic consumer expectations would be better met through a clarification of the definition of materials.
2. What do the members of the organic community hope to see accomplished by clarifying the classification of materials? What will be prevented? What should be encouraged?
3. For our two alternate recommendations for products of microbiological fermentation:
 - a. What are the benefits and drawbacks of each recommendation?
 - b. Are there unintended consequences resulting from either or both recommendations?
 - c. Specific to microbiological materials or products of microbiological fermentation and their use as livestock feed:
 - i. What would be gained if these materials became agricultural?
 - ii. Should microbiological materials or the products of microbiological fermentation used as livestock feed be required to be 100% organic?
 - iii. What are the economic implications if microbiological materials or the products of microbiological fermentation are required to be organic?
 - d. What organic principle is met if microbiological materials or the products of microbiological fermentation become agricultural?

V. Conclusion

The Materials and Handling Committees of the NOSB working together are continuing work on the topic of "definition (or classification) of materials" in anticipation of making a fall 2009 recommendation. We will use public comment received during the May 2009 meeting to enrich our perspective. Specifically we will be:

- Working with the National organic program to determine the feasibility of using annotations for items currently on the list to clarify source and process.
- Developing a decision tree as guidance for determining the classification of materials.
- Finalizing a recommendation for classifying microbiological materials and the products of microbiological fermentation.

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VI. References

National Organic Standards Board Recommendations & other documents:

- Handling Committee, “Recommendations Relative to “Agricultural” and “Nonagricultural” Substances,” July 14, 2005
- Handling Committee and Materials Committee, “Recommendations Relative to “Agricultural” and “Nonagricultural” Substances for National List Consideration,” September 15, 2006
- Materials and Handling Committees, “Discussion Document on the Definition of Materials,” October 19, 2007

Material Working Group

- March 25, 2008 – Discussion Document
- May 2008 NOSB Meeting titled “Clarification of Definitions -- Agricultural vs. Non-agricultural”
- November 2008 presentation at National Organic Standards Board Meeting titled “Clarification of Definitions -- Agricultural vs. Non-agricultural”

National Organic Program

- “Evaluation of the NOSB Recommendation on the Definition of Synthetic,” March 9, 2006

COMMITTEE VOTE:

The Joint Handling and Materials Committee moves to accept this document as the discussion document:

Moved: Katrina Heinze Second: Steve Demuri

Yes: 6 No: 0 Abstain: 0 Absent: 3