MATERIALS COMMITTEE

SOLVENTS AND EXTRACTANTS

EXECUTIVE SUMMARY

Cornucopia believes that the use of volatile synthetic solvents should be prohibited for all ingredients in certified organic foods, including those on the National List.

- 205.270(c) should be rewritten as follows (addition emphasized):

> (c) ~~The handler of an organic handling operation must not use in or on agricultural~~ Products sold, labeled, or represented as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s))," or in or on any ingredients labeled as organic **must not be made using**:
> (1) Practices prohibited under paragraphs (e) and (f) of §205.105.
> (2) A volatile synthetic solvent or other synthetic processing aid not allowed under §205.605: Except, That, nonorganic ingredients in products labeled "made with organic (specified ingredients or food group(s))" are not subject to this requirement.

SOLVENTS AND EXTRACTANTS

Thank you for the discussion document on extractants and solvents. We believe that the current rule, which prohibits the use of synthetic volatile solvents only by certified organic handlers, is extremely misleading to consumers who should rightfully expect all ingredients in a certified organic product to be produced without the use of volatile synthetic solvents.

The use of annotations to prohibit volatile synthetic solvents for some materials on the National List, but not for others, adds to the confusion and inconsistency.

Moreover, the recent decision by the NOSB, at the Fall 2011 meeting, to prohibit certain volatile synthetic solvents in annotations, has made it clear that the prohibition against volatile synthetic solvents in organic foods must be clarified immediately.

Specifically, the NOSB's recommendation to allow DHA algal oil extracted with the volatile synthetic solvent isopropyl alcohol, but to prohibit the volatile synthetic solvent hexane, makes no sense and illustrates the need for clarification and consistency.

Just as the use of genetic engineering, sewage sludge and ionizing radiation is prohibited for all ingredients in organic foods, regardless of whether they are

agricultural or nonagricultural, synthetic or non-synthetic, we believe the use of volatile synthetic solvents should be prohibited for all ingredients.

Our answers to the questions requested by the Materials Committee:

Question 1: How should "volatile synthetic solvent" be defined, especially in relationship to the rule 205.270(c)2? Should we make a distinction between different types of solvents? If possible, reference to a standard scientific or regulatory definition is preferred. Should the toxicity of a volatile synthetic solvent affect how it is treated in classification and materials evaluation? Does supercritical carbon dioxide meet the definition?

We support the definition of "volatile synthetic solvent" given in the discussion document: "a volatile synthetic solvent is a synthetic chemical with boiling point less than 287 degrees Celsius that can dissolve another substance."

We agree that using the boiling point of a chemical to determine whether it classifies as "volatile" or "very volatile" is useful, especially since it provides a specific reference point that leaves no room for interpretation. Using this definition will ensure that commonly used volatile synthetic solvents, such as hexane and isopropyl alcohol, will fall under this definition.

Supercritical carbon dioxide cannot be evaluated using this criteria, since it is a gas, and should therefore be evaluated separately by the NOSB.

Question 2: Is there a distinction between volatile solvents used for extraction vs. volatile solvents used for other purposes? Solvents are also used for purposes other than extraction, such as purification of a substance via crystallization. Solvents are also common inert ingredients in formulated pesticide products.

The rule does not specify that volatile synthetic solvents are prohibited only for the purpose of extraction. Therefore, the prohibition in the rule is against volatile synthetic solvents, regardless of how they are used.

Question 3. Should the process of extraction change the classification of an agricultural product to a non-agricultural material? Does it matter whether the extractant is synthetic or non-synthetic? When this happens to an agricultural material that is currently organically grown, does this changed material then need to be petitioned?

The process of extraction should not necessarily change the classification from agricultural to non-agricultural, since this classification depends on the original material. However, the process of extraction may result in a change of classification from non-synthetic to synthetic.

If an agricultural material is extracted with a volatile synthetic solvent, it should be classified as synthetic and be petitioned.

Question 4. Since §205.270 Organic Handling Requirements explicitly prohibits volatile organic solvents, ["(c) The handler of an organic handling operation must not use in or on agricultural products intended to be sold, labeled, or represented as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s))," or in or on any ingredients labeled as organic: (2) A volatile synthetic solvent or other synthetic processing aid not allowed under §205.605: Except,
That, nonorganic ingredients in products labeled "made with organic (specified ingredients or food group(s))" are not subject to this requirement"], should consumers expect that non-agricultural ingredients identified as "organic" be produced or extracted with the same restriction? Please explain the rationale for a different standard for agricultural and non-agricultural if that is the position.

Yes, we believe the prohibition against volatile synthetic solvents should apply to **all** ingredients in an organic formulated product, regardless of whether the ingredient is agricultural or non-agricultural.

In the Preamble, the USDA intended the prohibition against volatile synthetic solvents to apply to the 5% nonorganic ingredients, just as genetic engineering and ionizing radiation is prohibited for **all** ingredients.

The current language in the rule, prohibiting certified organic handlers from using volatile synthetic solvents, but allowing certified organic handlers to purchase ingredients from non-certified handlers who **do use** volatile synthetic solvents, is a loophole with serious implications for the integrity of organic products.

One way to ensure that organic products be produced without volatile synthetic solvents is to apply the restriction against volatile synthetic solvents to the organic products, rather than the organic handler.

205.270(c) should be rewritten as follows (addition emphasized):

> (c) ~~The handler of an organic handling operation must not use in or on agricultural~~ Products sold, labeled, or represented as "100 percent organic," "organic," or "made with organic (specified ingredients or food group(s))," or in or on any ingredients labeled as organic **must not be made using**:
> (1) Practices prohibited under paragraphs (e) and (f) of §205.105.
> (2) A volatile synthetic solvent or other synthetic processing aid not allowed under §205.605: Except, That, nonorganic ingredients in products labeled "made with organic (specified ingredients or food group(s))" are not subject to this requirement.

Question 5. Similarly, should synthetic substances allowed for use in organic crop production under §205.601 be allowed or prohibited from using volatile synthetic solvents in their production or extraction? Should non-synthetic substances used in organic crop production be allowed or prohibited from using volatile synthetic solvents in their production or extraction, regardless of chemical change or significant residues?

Any input that is produced with the use of a volatile synthetic solvent should be classified as a synthetic, and be reviewed by the Board. Classification as a synthetic and subsequent review by the Board is the only way to ensure that possible residues, environmental pollution, and other impacts of the solvent will be examined.

Question 6. Is guidance needed concerning whether or under what circumstances the use of an extractant/solvent causes chemical change in the extraction process?

Chemical change as a result of extraction would classify a material as synthetic, but a material should be classified as a synthetic when a volatile synthetic solvent is used at all.

Question 7. What is a significant residue of a synthetic solvent?

Any residue is significant. Volatile synthetic solvents should not be used in any ingredients destined for certified organic foods.

Question 8. Should the prohibition on the use of volatile synthetic solvents include the use in any ingredient in the history of the product?

Yes. Certified organic products should be produced without the use of synthetic volatile solvents, and this prohibition should apply to **all** ingredients. As we mentioned earlier, it makes no sense to apply the prohibition against volatile synthetic solvents only to organic handlers, therefore allowing an organic handler to purchase ingredients from non-certified handlers that do use volatile synthetic solvents.

Question 9. For substances already on the National List, should it be assumed that any extractant is allowed, or should the NOSB attempt to specify allowed extractants moving forward or for previously listed substances?

Volatile synthetic solvents should not be allowed in any ingredients in certified organic foods, including ingredients on 605 and 606. The language in the rule should be changed to ensure that consumers' expectations are met, and volatile synthetic solvents are not used in the production of organic foods. The prohibition against volatile synthetic solvents in 205.270(c) should apply to all products, rather than applying only to organic handlers.

Any substances already allowed should be scrutinized under the more restricted criterion as they come up for sunset review.