



BEYOND PESTICIDES

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October 11, 2016

Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Ave., SW
Room 2648-S, Mail Stop 0268
Washington, DC 20250-0268

Re. CS: Soy wax

These comments to the National Organic Standards Board (NOSB) on its Fall 2016 agenda are submitted on behalf of Beyond Pesticides. Founded in 1981 as a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to bridge the interests of consumers, farmers and farmworkers, Beyond Pesticides advances improved protections from pesticides and alternative pest management strategies that reduce or eliminate a reliance on pesticides. Our membership and network span the 50 states and the world.

Beyond Pesticides petitioned the NOSB to list non-GMO soy wax on the National List for use in growing mushrooms on logs. Soy wax is synthetic because it is made by hydrogenating soy oil – the same process used to make margarine. We petitioned to give those who grow mushrooms on logs a non-petroleum alternative for sealing inoculation sites and exposed ends of logs. We agree with the CS proposal to include the annotation, “Must be made from non-GMO soybeans if soy wax from organic soybeans is not commercially available.”

Currently, mushroom growers who grow shiitakes and other saprophytic mushrooms on logs may use microcrystalline cheese wax to seal the plugs and log ends. The wax helps to prevent other fungi from colonizing the exposed surfaces. Microcrystalline cheesewax is a petroleum product, and as such, is the product of a series of processes from oil extraction to refining and manufacture that damage the environment and pose risks to the health of humans and the ecosystem. The petroleum-based wax does not readily biodegrade, and at least one inspector reported seeing piles of wax fragments long after the logs had decomposed. It was our hope that approval of soy wax for the use would allow mushroom growers to replace the petroleum-based wax with a natural biodegradable material. If enough soy wax meeting the criteria of the Organic Foods Production Act is available, we plan to petition for the removal of the petroleum-based wax.

Upon investigation, we found that there is some ambiguity about “non-GMO” soy wax. The product we found was demonstrated to be “non-GMO” based on certification that it does not contain genetically engineered soy protein. However, soy wax is hydrogenated soy oil (which is also found in margarine), and does not contain any protein. Nevertheless, the decision tree used by the Organic Materials Research Institute (OMRI) to determine whether a substance is prohibited as a product of excluded methods does appear to permit the use of products made from soy oil made from genetically engineered soybeans. So the Crops Subcommittee, with our concurrence, proposed an annotation “made soybeans grown without the use of excluded methods.” We are pleased to see that the current proposed annotation requires the wax to be made from organic soybeans when commercially available.

We also suggested an expiration date for the listing, to allow for easier delisting or annotation in the event that an organic product is found to be available. The expiration date would allow this listing to be removed in favor of a totally nonsynthetic alternative. Because the NOSB’s sunset policy prohibits annotation at sunset, these possibilities are only possible with an expiration date. Nevertheless, we do support the proposal made by the Crops Subcommittee.

The discussion of the soy wax petition highlights issues around the prohibition of genetically engineered inputs (termed “excluded methods”) in organic production. The National Organic Program (NOP) told the NOSB that if it truly wants to exclude soy wax made from genetically engineered soybeans, then it should include that in the annotation. The NOSB was reluctant to do so, however, because some members thought that such an annotation might suggest that excluded methods are not truly excluded in other materials on the National List. The disagreement and/or confusion was so great that the NOSB chair called an “emergency break” to discuss it.

It turns out that the NOP was right. The OMRI decision tree does permit a number of crops inputs that are made from genetically engineered crops, including soybean meal, cotton gin trash, or other materials applied to the soil; oils derived from nonorganic or non-segregated source crops; substrate for a non-GE microbe or enzyme that may contain nonorganic commodity crops. So, if the NOSB wants to limit the use of soy wax to that made from non-GE soybeans (soybeans grown without the use of excluded methods), then it needs to specify that requirement. And the concern that other materials allowed in organic production might also come from genetically engineered crops is also valid.

Thank you for your consideration of these comments.

Sincerely,



Terry Shistar, Ph.D.
Board of Directors

Attachment: Soy wax FAQ

Soy Wax FAQ

Why did Beyond Pesticides petition to have soy wax added to the National List?

In reviewing the listing for microcrystalline cheese wax, we became aware that there is another, more natural, alternative that is not currently allowed for use by organic mushroom growers.

How is the wax used?

Some edible and medicinal mushrooms grow on wood. These include shitakes, hen of the woods, reishi, oysters, and others. Mushroom growers who produce these saprophytic mushrooms may grow them on logs or wood chips. If they are grown on logs, the logs are inoculated by drilling holes and inserting a plug or sawdust spawn. The plugged hole is then often covered with wax to protect the spawn from insects and the wood from colonization by other fungi.

What is microcrystalline cheese wax?

Microcrystalline cheese wax is a petroleum product. When petitioned, the petitioner said it was made from paraffin, petrolatum, and blended wax.

What is soy wax?

Soy wax is hydrogenated soy oil, produced by a process similar to that used in making margarine.

If soy wax is natural, why is it not now allowed to be used?

Hydrogenation, a process to make an oil more solid by adding hydrogen to some of the carbon atoms, is a chemical process. According to the guidance for classification of materials, soy wax is synthetic and must be on the National List in order to be used.

Why did Beyond Pesticides ask for an annotation requiring the use of non-GMO soy oil?

We knew of the availability of soy wax made from “non-GMO soy oil” and had seen the certificate stating that it did not contain genetically engineered proteins. This meets the criteria in OMRI’s decision tree for “no excluded methods.”

Why do the Crops Subcommittee and Beyond Pesticides support the annotation “Must be made from non-GMO soybeans if soy wax from organic soybeans is not commercially available.”?

“Non-GMO soy oil” can be made from genetically engineered soybeans because the requirement used by OMRI –not the only materials review organization, but an influential one – bases its decision on the presence of genetically engineered proteins. Soy oil does not contain protein. The Crops Subcommittee preferred to be clear that the wax did not originate from genetically engineered soybeans. That is also our preference. The best way to ensure that the

soy oil is not made from genetically engineered soybeans is to require it to be organic if possible –and that supports organic growers as well.

If the listing of soy wax says “made from soybeans that are not produced by excluded methods,” will that imply that other substances on the National List might be produced using excluded methods?

Some materials that are allowed in organic production could be made from genetically engineered crops. They include corn gluten meal, corn steep liquor, cottonseed meal, alfalfa meal and pellets, compost, compost tea, cotton gin trash, molasses, soybean meal, sugar, and oils from canola, corn, cottonseed, or soy. In the case of some of these materials, the Organic Materials Review Institute (OMRI) applies decision trees to assess whether it is “considered a GMO or product of a GMO.” OMRI does not judge all materials made from GE crops to be “a GMO or product of a GMO.” Some materials that are not considered by OMRI to be excluded as GE are: substrate for a non-GE microbe or enzyme that may contain GE crops; oils that may be derived from GE crops; manure from animals that may have been fed GE crops (and may thus contain GE crop residues); soy meal used for fertilizer.¹ Other materials review organizations or organic certifiers may have different criteria,² but OMRI’s materials decisions are widely used by organic producers and certifiers.

So, some materials on the National List that are not annotated to exclude the manufacture from genetically engineered materials could be produced using excluded methods.

What did the National Organic Program say?

At the NOSB meeting, Miles McEvoy said, “I would say based on this discussion it would be very good to clarify that the soy wax is made from non-GMO soybeans. Because you're talking about interpretations and this would make it very, very clear. From an enforcement perspective, from a certifier perspective we want the standards to be very, very clear. The way it's written currently is clear.”

Is Beyond Pesticides or the Crops Subcommittee proposing the delisting of microcrystalline cheese wax?

Neither we nor the Crops Subcommittee is currently proposing to delist microcrystalline cheese wax. If there is an adequate supply of soy wax made from soybeans that are not genetically engineered, then we might in the future propose that microcrystalline cheese wax could be sunsetted.

¹ OMRI Generic Materials List with the OMRI Standards Manual for Review to USDA NOP Standards. http://www.omri.org/sites/default/files/app_materials/OMRI-GML-2015small.pdf.

² Certifiers say organic rules limited in addressing GMOs, The Organic and Non-GMO Report, June 2009. http://www.non-gmoreport.com/articles/jun09/certifiers_organic_rules_addressing_gmos.php.