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April 2, 2015

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. HS: 2016 Sunset: Egg White Lysozyme

These comments to the National Organic Standards Board (NOSB) on its Spring 2015 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 groups around the world.

Beyond Pesticides opposes the relisting of egg white lysozyme, based on the information available to us and the Handling Subcommittee (HS). We submit new information that has not been considered in past decisions, but which should have been requested. We note that the principal document available to the Handling Subcommittee and the NOSB is a technical review (TR) of enzymes, which addresses egg white lysozyme, but not in the detail one would expect from a review of the material itself.

Our role as public interest commenters on the NOSB materials review process is to ensure that NOSB decisions are based on OFPA criteria, backed up with adequate documentation. We are disappointed that given the inadequacies of the documentation, the HS has not requested a supplemental TR to document environmental and health impacts as well as the need for the material. Nor has it requested any information from the industry or public. This lack of information and failure to request more information is especially disturbing because any information received at this meeting will be considered "untimely" according to the new NOP sunset policy.

1. Environmental and health impacts
Egg white lysozyme is isolated from the whites of hens' eggs. It is most likely derived from nonorganic factory-farmed eggs from chickens kept in confinement, fed feed made from genetically engineered corn and soybeans treated with pesticides, and given antibiotics and arsenic to kill parasites. The health and environmental impacts of producing eggs in nonorganic factory farms are legion and include damage to streams from runoff from both egg producing

facilities and the farms producing the feed, increasing antibiotic resistance, and arsenic contamination of land and water. Genetically engineered corn and soybeans are responsible for decreases in biodiversity. Seed treatments on nonorganic corn and soybeans lead to decimated populations of pollinators.

Yet none of these impacts are addressed in the technical review (TR) that will form the basis of the Handling Subcommittee's recommendation.

Non-organic egg production is dependent on chemically-intensive production of corn and soybeans.

Corn

Non-organic corn production is an intensive user of pesticides and synthetic fertilizers. Most of the non-organic corn is also genetically modified.

Pesticide Tolerances —Health and Environmental Effects: The Beyond Pesticides *Eating with a Conscience* (EWAC) database shows that while field corn products grown with toxic chemicals show low pesticide residues on the finished commodity, there are 140 pesticides with established tolerance for field corn products,. Of these, at least 37 are acutely toxic creating a hazardous environment for **farmworkers**, 97 are linked to chronic health problems (such as cancer), 31 contaminate streams or groundwater, and 87 are poisonous to wildlife.

Pollinator Impacts: In addition to habitat loss due to the expansion of agricultural and urban areas, the database shows that there are 29 pesticides used on field corn products that are considered toxic to honey bees and other insect pollinators. For more information on how to protect pollinators from pesticides, see Beyond Pesticides' **BEE Protective webpage**.

- **This crop is foraged by pollinators.** ✔

Soybeans

California Farmworker Poisonings, 1992–2010: 1 reported. This poisoning incident represents only the tip of the iceberg because it only reflects reported incidents in one state. It is widely recognized that pesticide incidents are underreported and often misdiagnosed.

Pesticide Tolerances —Health and Environmental Effects: The EWAC database shows that while soybeans grown with toxic chemicals show low pesticide residues on the finished commodity, there are 83 pesticides with established tolerance for soybeans, 37 are acutely toxic creating a hazardous environment for farmworkers, 76 are linked to chronic health problems (such as cancer), 28 contaminate streams or groundwater, and 75 are poisonous to wildlife.

Pollinator Impacts: In addition to habitat loss due to the expansion of agricultural and urban areas, the database shows that there are 31 pesticides used on soybeans that are considered toxic to honey bees and other insect pollinators. For more information on how to protect pollinators from pesticides, see Beyond Pesticides' BEE Protective webpage.

- This crop is dependent on pollinators. ✔
- This crop is foraged by pollinators. ✔

The evaluation of egg white lysozyme must take into consideration the use of pesticides in the non-organic production of corn and soybeans and ensure that GMO grains are not used in production of organic products. The NOSB must consider the availability of organic eggs for this purpose, as well as the potential availability of organic egg white lysozyme if the demand was enhanced by removal of this listing.

2. Essentiality

The TR is also lacking in documentation on essentiality. It does not address alternative materials or practices.

3. Compatibility with organic and sustainable agriculture and handling.

Egg white lysozyme relies on industrial egg production, which is not consistent with organic and sustainable agriculture practices.

4. Ancillary Substances

The NOSB should make a determination regarding ancillary substances. So far, the ancillary substances associated with this material have not been reviewed or even listed. This is an important piece that needs to be incorporated into the review of every material during sunset.

5. Generally Recognized as Safe (GRAS)

The HS summary states,

> Egg white lysozyme was included as part of the tentative final rule (21 CFR 184) on direct food substances affirmed as GRAS in 1998. In 2000, a GRAS petition was submitted to FDA for egg white lysozyme. FDA follow up was identified; however, it is unknown if a conclusion was made on the GRAS status of egg white lysozyme (FDA, 2000).

The HS should determine whether egg white lysozyme is GRAS.

6. Conclusion

Although there is a lack of information on essentiality, it is clear that egg white lysozyme fails the criteria for no adverse impacts on health and environment, and compatibility with organic and sustainable agriculture and handling. Therefore, we urge the Board to not to relist egg white lysozyme.

Thank you for your consideration of these comments.

Sincerely,

Terry Shistar, Ph.D.
Board of Directors