



# BEYOND PESTICIDES

701 E Street, SE ■ Washington DC 20003  
202-543-5450 phone ■ 202-543-4791 fax  
info@beyondpesticides.org ■ www.beyondpesticides.org

September 20, 2013

National Organic Standards Board  
Fall 2013 Meeting  
Louisville, KY

## Re. MS: Research Priorities

These comments are submitted on behalf of Beyond Pesticides. 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, 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 supports the research priorities recommended by the Materials Subcommittee. The Materials Subcommittee (MS) recommends reconfirms support for giving priority in organic research to the following issues identified in 2012: whole farm systems, alternatives to antibiotics, evaluation of GE vaccines, and methionine alternatives. The MS supports the following new priorities: organic aquaculture, aquatic biodiversity, herd health, pastured poultry and salmonella, commercial availability assessments, consumer demand, fate of genetically engineered plant material in compost, and reduction of genetically modified content of breeding lines.

Beyond Pesticide also recommends the following for consideration: chlorine alternatives, sulfuric acid alternatives, biodegradable biobased bioplastic mulch, mined minerals, and chelating agents. Alternatives to chlorine and sulfuric acid were mentioned by the MS as topics for future review.

### 1. Biodegradable Biobased Bioplastic Mulch Degradation

We are concerned about the breakdown components biobased bioplastic mulch and how they influence the soil life as well as plant and, potentially, livestock growth –not just in how well/rapidly the mulch decomposes. Research should associate the action (efficacy) and decomposition of the mulch with different cropping systems, soil type, climates, etc. We may also want to introduce the concept of testing the mulch to meet various decomposition standards and to validate non-GMO status of the source materials.

### 2. Mined Minerals

Traditionally, organic farmers have used a variety of mined minerals, using them to provide essential macronutrients including phosphorus (rock phosphate), potassium (greensand), and nitrogen (Chilean nitrate), as well as humates and micronutrients. However, reliance on

nonrenewable resources and polluting activities is not sustainable. As supplies decline, the NOSB and the organic community as a whole need current information concerning supplies of minerals, pollution that results from extraction, and alternative sources of the nutrients derived from mined minerals.

### 3. Chelating Agents

A chelate (from the Greek *chele*, for claw) is an organic compound which holds a metal ion in a bond with two or more other atoms as a complex. As a complex, the metal ions are protected from other reactions that might prevent their uptake by plants. Humus contains natural chelating agents. Lignin sulfonate is on the National List as a synthetic chelating agent in crops. Lignin sulfonate has been petitioned as a chelating agent in plant aquaculture and others (e.g., ethylenediaminedisuccinic acid (EDDS) and ethylenediaminetetraacetic acid (EDTA)) have been petitioned in the past or are on the list of “inerts” to be evaluated. EPA’s Design for the Environment has assessed a number of chelating agents,<sup>1</sup> some of which may be natural, and it would be helpful to the NOSB if researchers could compare the assessments with the needs of producers of inputs into organic production.

### 4. Chlorine Alternatives

The MS proposal mentions alternatives to chlorine as a topic for further review. “Green chemistry” programs have identified problems with chlorine bleach,<sup>2</sup> as well as alternatives.<sup>3</sup> We also recommend that technical reviews routinely consult sources on Green Chemistry, such as EPA’s Design for the Environment<sup>4</sup> and the University of Massachusetts Toxics Use Reduction Institute.<sup>5</sup>

Thank you for your consideration of these comments.

Sincerely,



Terry Shistar, Ph.D.  
Board of Directors

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<sup>1</sup> <http://www.epa.gov/dfe/saferingredients.htm>

<sup>2</sup> [http://www2.epa.gov/sites/production/files/2013-08/documents/factsheet\\_whatstheproblemwithbleach.pdf](http://www2.epa.gov/sites/production/files/2013-08/documents/factsheet_whatstheproblemwithbleach.pdf)

<sup>3</sup> [http://www.sustainablehospitals.org/cgi-bin/DB\\_Report.cgi?px=W&rpt=Cat&id=28](http://www.sustainablehospitals.org/cgi-bin/DB_Report.cgi?px=W&rpt=Cat&id=28),  
<http://www.nhhealthyschoolenvironments.org/documents/AppendixB.1.SelectingGreenerDisinfectants.pdf>,

<http://www.sfapproved.org/87-Cleaners/234-Disinfectants/> and others

<sup>4</sup> <http://www.epa.gov/dfe/saferingredients.htm>

<sup>5</sup> [http://www.turi.org/Our\\_Work/Research/Green\\_Chemistry](http://www.turi.org/Our_Work/Research/Green_Chemistry)