



# BEYOND PESTICIDES

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April 10, 2016

Ms. Michelle Arsenault  
National Organic Standards Board  
USDA-AMS-NOP  
1400 Independence Ave. SW.,  
Room 2648-S, Mail Stop 0268  
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## Re. HS: Oat Beta-glucan

These comments to the National Organic Standards Board (NOSB) on its Spring 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 opposes the listing of oat beta-glucan because it is grown using chemical-intensive methods, is not essential for organic production and handling, and is incompatible with organic production and handling. Oat beta-glucan is a soluble fiber extracted from oats that is claimed to deliver same fiber-related benefits as whole oats. Two other petitions –for barley beta-fiber (barley beta-glucan) and sugar beet fiber– that made similar claims were resoundingly denied (by votes of 12-3 and 15-0) in April 2013. The concerns that were raised at that time were lack of essentiality and incompatibility.

## The production of oat beta-glucan is harmful to human health and the environment.

Below are the pesticides with established tolerances (residue limits for pesticides used in the U.S. or by countries exporting to the U.S.) for oats. While not all the pesticides on the list are applied to all oats, there is no way to tell which pesticides are applied to any given crop.

**Pesticide Tolerances —Health and Environmental Effects:** The Eating with a Conscience database<sup>1</sup> shows that while oats grown with toxic chemicals show low pesticide residues on the finished commodity, there are 56 pesticides with established tolerances for oats, 20 are acutely toxic creating a hazardous environment for farmworkers, 52 are linked to chronic health

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<sup>1</sup> <http://www.beyondpesticides.org/resources/eating-with-a-conscience/overview>.

problems (such as cancer), 14 contaminate streams or groundwater, and 48 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 19 pesticides used on oats that are considered toxic to honey bees and other insect pollinators. Although oats are not dependent on pollinators or foraged by pollinators, pesticides applied to the crop affect pollinators foraging on weeds in the field and plants surrounding the field.

*In the list below, impacts of pesticides used on oats are designated by **A** = acute health effects, **C** = chronic health effects, **SW** = surface water contaminant, **GW** = ground water contaminant, **W** = wildlife poison, **B** = bee poison, **LT** = long-range transport.*

<a href="#">2,4-D</a> (C, SW, GW, W, B)	<a href="#">Flufenacet</a> (C, W)	<a href="#">Metolachlor</a> (C, SW, GW, W)
<a href="#">Acetochlor</a> (C, SW, W, B)	<a href="#">Fluometuron</a> (C, W, B)	<a href="#">Myclobutanil</a> (C, W)
<a href="#">Alachlor</a> (SW, GW, W)	<a href="#">Fluridone</a> (C, W)	<a href="#">Phosphine</a> (A, C)
<a href="#">Boscalid</a> (C, W)	<a href="#">Fluroxypyr</a> (C, W)	<a href="#">Picloram</a> (GW, W)
<a href="#">Bromoxynil</a> (A, C, GW, W)	<a href="#">Glufosinate ammonium</a> (C, SW, W)	<a href="#">Piperonyl butoxide (PBO)</a> (C, W)
<a href="#">Captan</a> (A, C, W)	<a href="#">Glyphosate</a> (C, SW-URBAN, W)	<a href="#">Prometryn</a> (C, W, B, LT)
<a href="#">Carboxin</a> (C, W)	<a href="#">Imidacloprid</a> (A, C, W, B)	<a href="#">Propiconazole</a> (A, C, W)
<a href="#">Carfentrazone-ethyl</a> (W)	<a href="#">Iproconazole</a> (C)	<a href="#">Pyraclostrobin</a> (C, W)
<a href="#">Clopyralid</a> (A, C, GW, W)	<a href="#">Lambda-cyhalothrin</a> (A, C, W, B)	<a href="#">Pyrethrins</a> (C, W, B)
<a href="#">Clothianidin</a> (A, C, SW-URBAN, W, B)	<a href="#">Malathion</a> (A, C, SW-URBAN, GW, W, B)	<a href="#">Pyriproxyfen</a> (C, W)
<a href="#">Cryolite</a> (C)	<a href="#">Mancozeb</a> (C, W, B)	<a href="#">Spinetoram</a> (C, B)
<a href="#">Cyfluthrin</a> (A, C, W, B)	<a href="#">MCPA</a> (C, GW, W, B)	<a href="#">Spinosad</a> (C, W, B)
<a href="#">Deltamethrin</a> (A, C, W, B)	<a href="#">Mesotrione</a> (C)	<a href="#">Spiromesifen</a> (W)
<a href="#">Dicamba</a> (A, C, GW, W)	<a href="#">Metalaxyl</a> (A, C, W)	<a href="#">Sulfentrazone</a> (C, W)
<a href="#">Difenoconazole</a> (C, W)	<a href="#">Metconazole</a> (C, W)	<a href="#">Sulfuryl fluoride</a> (A, C)
<a href="#">Diflubenzuron</a> (C, W)	<a href="#">Methomyl</a> (A, C, W, B)	<a href="#">Tebuconazole</a> (A, C)
<a href="#">Diquat Dibromide</a> (A, C, W)	<a href="#">Methyl parathion</a> (A, C, W, B)	<a href="#">Thiamethoxam</a> (C, B)
<a href="#">Diuron</a> (C, SW, W, B)		<a href="#">Triadimenol</a> (A, C)
<a href="#">Endothall</a> (A, C, W)		<a href="#">Trifloxystrobin</a> (C, W)
<a href="#">Flubendiamide</a> (C)		

## Oat beta-glucan is not essential to organic production and handling.

Although the Handling Subcommittee did not request a Technical Review (TR) for oat beta-glucan, the TR for barley beta-fiber could be applied to oat beta-glucan. Oat beta-glucan could be made from organic oats, and although the petitioner points to the lack of organic beta-glucan as a failure of organic processors to respond to a need, it more likely results from the absence of need among organic processors for such a highly processed fiber.

As pointed out in the barley beta-fiber TR,<sup>2</sup>

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<sup>2</sup> Lines 449-459.

Processing is needed to isolate a 75% soluble fiber that makes it possible to fortify foods and beverages to a level where a heart-healthy claim can be made. Whether such fortified products are necessary is a matter of opinion that is subject to interpretation. Studies have found that some of the benefits claimed are also conferred by the consumption of whole barley, so it could be argued that further processing and isolation is not necessary (DeMoura, 2008). Whole grains provide the nutritional benefits of  $\beta$ -glucan along with essential vitamins, minerals, complex carbohydrates and protein (Kantor, et al., 2001). The synergy of phytonutrients found in the whole grain package is difficult to replicate (Jones et al., 2002). High  $\beta$ -glucan waxy hull-less barleys can be used for many applications (Arndt, 2006). Whole-grain food intake by a large middle-aged, multiethnic cohort was correlated with reduced risk of physical characteristics linked to atherosclerotic cardiovascular disease in a way that was not attributable to individual risk intermediates, single nutrient constituents, or larger dietary patterns (Mellen, et al., 2007).

This applies to oat beta-glucan as well. The TR also says,<sup>3</sup> “There is at least one source of organic oat 70%  $\beta$ -glucan ... on the market. The product is certified under the NOP by the ACA BCS.” Furthermore, the TR lists a number of other organic sources of fiber, including whole grains, fruits, and vegetables. It comments, “These are not soluble or isolated, so they are not seen as a practical way to fortify foods and beverages to levels needed to make a ‘heart healthy’ claim.”<sup>4</sup> To meet the essentiality criterion under the Organic Foods Production Act (OFPA), the material must be “necessary to the production or handling of the agricultural product,” not necessary to make a marketing claim.

## Oat beta-glucan is not compatible with organic production and handling.

It is unnecessary to add dietary fiber if natural fiber is not removed. Thus, its use is contrary to §205.600(b)(4), “The substance’s primary use is not as a preservative or to recreate or improve flavors, colors, textures, or nutritive value lost during processing, except where the replacement of nutrients is required by law.” This regulation codifies the expectations of organic consumers that they are buying food that is healthful because it is whole food grown in accordance with organic principles.

## Conclusion

Beyond Pesticides opposes the petition to list oat beta-glucan because it does not meet the criteria under OFPA of freedom from health and environmental harm, essentiality, and compatibility with organic practices.

Thank you for your consideration of these comments.

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<sup>3</sup> Lines 467-468.

<sup>4</sup> Lines 462-463.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry Shistar". The signature is written in a cursive style with a long horizontal stroke at the end.

Terry Shistar, Ph.D.  
Board of Directors