



# BEYOND PESTICIDES

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March 23, 2018

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. LS: Glycolic acid

These comments to the National Organic Standards Board (NOSB) on its Spring 2018 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 glycolic acid on §205.603. It poses environmental and health hazards, is not essential, and is incompatible with organic production.

## Glycolic acid poses environmental and health hazards

The technical review (TR) states, “Glycolic acid is an important metabolite of ethylene glycol. Increased glycolic acid in the blood correlates directly with acute ethylene glycol toxicity and renal failure. . . . The primary areas of concern for glycolic acid however, are its dermal irritation potential and its potential to increase sensitivity to sunlight. Both of these factors result from glycolic acid’s ability to partially remove the stratum corneum layer of skin.”<sup>1</sup> Table 2 of the TR shows typical analyses of different grades, and technical glycolic acid has much higher concentrations of sulfates, formic acid, formaldehyde, ammonia, diglycolic acid, and methoxyacetic acid than higher purity grades. Technical grade is not used in personal care products because of the higher concentration of impurities, but “may be” used in teat dips.<sup>2</sup>

In 2010, the facility that manufactures glycolic acid released phosgene gas into the atmosphere which “caused the death of an employee. The State of West Virginia provided the plant operator with a permit to operate and produce glycolic acid in 2015. The permit expires in 2020 and permits respectively maxima of 1.9, 15.5, 15.2 8.14 and 5.85 tons/year of

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<sup>1</sup> TR lines 250-258.

<sup>2</sup> TR lines 296-314.

formaldehyde, methanol, formic acid, carbon monoxide and NOx to be released to the atmosphere from the plant's thermal oxidizer."<sup>3</sup>

### **Glycolic acid is incompatible with organic production.**

Glycolic acid is incompatible with organic production for several reasons –it is a synthetic designed to be used preventively, it contains “inert” ingredients not permitted in organic production, and there are no tolerances or exemptions from tolerance that would permit it to be used as petitioned.

The TR states, “The action of routine glycolic acid use is to remove both entry and colonization sites for colonizing bacteria that may lead to mastitis.”<sup>4</sup> It also says, “Glycolic acid is mildly bactericidal. It may be considered a medication for hyperkeratinization or prevention of mastitis in dairy cattle.”<sup>5</sup> [Emphasis added.] As a synthetic used to prevent, rather than treat, mastitis, its use would be contrary to the regulations at §205.238(2), which says the organic livestock producer must not “Administer any animal drug, other than vaccinations, in the absence of illness.”

The TR states, “Glycolic acid (3.0%) is used in a teat dip in which it is combined with the humectant/emollient glycerin (5.0%), the crosslinking (thickening) agent xanthan gum, the emulsifying agent C9-11 Pareth-8, a colorant FD&C Blue No. 1, a skin permeant, 1-octanesulfonic acid, a surfactant, sodium C14-16 Olefin sulfonate and sodium hydroxide to adjust pH.”<sup>6</sup> Glycerol, sorbitol, xanthan gum, and water are on the former List 4A of “inerts.” Sodium hydroxide is on the former list 4B. FD&C Blue No. 1, povidone k30, c9-11 Pareth-8, and sodium C14-16 olefin sulfonate do not appear on either list. Therefore, these ingredients would need to be petitioned in order for the product to be used in organic production.

The TR says, “There are no tolerances, exemptions from tolerances, or tolerance petitions for this antimicrobial pesticide.” If glycolic acid were to be used as a pre-milking teat dip, there would be a possibility of contaminating the milk with glycolic acid or the other ingredients or contaminants. The use of glycolic acid as a pre-milking teat dip is therefore not supported by EPA's tolerance system.<sup>7</sup>

### **Glycolic acid is not essential for organic production.**

While we support the phase-out of halogen-based teat dips, we have not seen any indication that the listing of glycolic acid would eliminate iodine- and chlorine-base dips. In fact, although the petition seeks to have glycolic acid listed as a pre- and post-milking teat dip, the TR states, “Glycolic acid has been shown to be an effective post-milking teat disinfectant for

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<sup>3</sup> TR lines 280-285.

<sup>4</sup> TR lines 106-108.

<sup>5</sup> TR lines 173-174.

<sup>6</sup> TR lines 111-114.

<sup>7</sup> TR lines 71-72.

dairy cows. Specifically, its petitioned use is as a component in a post milking teat dip to aid in the prevention of bovine mastitis.” This does not support its use pre-milking.

The TR describes many alternative materials and practices, including vitamin A (which is similar in its action to glycolic acid), homeopathic remedies, iodine, chlorhexidine, glycerine, hydrogen peroxide (these last four are on the National List), and “many practices that decrease the exposure of the teat end to pathogens and enhance the cow’s natural immunity to infection.”<sup>8</sup>

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry Shistar". The signature is fluid and cursive, written in a professional style.

Terry Shistar, Ph.D.  
Board of Directors

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<sup>8</sup> TR lines 407-483