

ISSUES IN ORGANIC CROP LABELING: FOOD PROCESSING PROCEDURES MAY DECERTIFY ORGANIC CROPS

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Organic crop production permits the use of few disinfectant or pesticide products. Importantly, however, disinfection is a key part of crop production. For example, disinfection significantly reduces food-borne pathogens. Decisions about pesticide labeling, which is the sole province of the U.S. Environmental Protection Agency (EPA) Office of Pesticide Programs, are made independent of organic standards.

New pesticide labeling requirements complicate the use of many crop production disinfectants. A proposed Agricultural Marketing Service (AMS) rule may resolve the conflict between limitations on the use of peracetic acid on “organic foods” and EPA’s implementing regulations governing products that contain this ingredient.

Peracetic acid is contained in many crop production disinfectants. Peracetic acid has not been identified as an active ingredient in most of these products. The use of peracetic acid in organic crop production is presently limited to fire blight control. Use for plant disease and other pathogen control may be deemed as a violation of U.S. Department of Agriculture (USDA) organic standards. EPA regulations currently deem peracetic a pesticide active ingredient thus triggering the need for manufacturers to disclose the presence of peracetic acid as an active ingredient in the product. As a result, use of products critical to the prevention of biofilm and food-borne pathogens will negate otherwise organic crop production. The proposed rule will allow up to 5 percent concentration of peracetic acid in these products.

The National Organic Standards Board (NOSB) allows additions to the National List of Allowed and Prohibited Substances (National List) only after any individual or organization submits a petition to amend the National List. Peracetic acid was added to the

National List in 2003 for disinfecting equipment, seed, and plant material, and for the use of fire blight control.

In 2008, a petition to expand the use of peracetic acid in organic production was submitted to AMS. The petition responded to new EPA labeling requirements for pesticides. The regulation requires labeling these products with both hydrogen peroxide and peracetic acid as active ingredients. Previously, these products listed hydrogen peroxide as the sole active ingredient. Under USDA organic regulations, hydrogen peroxide is permitted for plant disease control in organic crop production. Use of peracetic acid to control plant disease is limited to fire blight control under the USDA regulations. Peracetic acid has been reported to impact adversely soil and crop environment under certain conditions.

Fortunately for organic producers, AMS is acting to address this gap. At a public meeting in 2009, the NOSB reviewed the petition and issued a recommendation to allow greater use of peracetic acid. The NOSB expressed interest in continuing the availability of hydrogen peroxide products that would now be required to identify peracetic acid as an active ingredient. The NOSB's amendment would allow up to 5 percent concentration of peracetic acid in hydrogen peroxide products. The 5 percent allowance would resolve the regulatory conflict. AMS is now proposing to implement the 2009 NOSB recommendation.

The rules governing the use of pesticide products in organic production are complex. All ingredients, both active and inert in pesticide products, and all uses of those products must meet National Organic Program (NOP) criteria for organic crop production. The Organic Foods Production Act of 1990 requires the secretary of agriculture to create a National List. The National List identifies substances that may be used in organic crop and livestock production. Generally, non-synthetic substances are allowed, and synthetic substances are prohibited unless specifically allowed.

The National List adds, removes, and changes pesticides through a petition process. Once received, petitions are reviewed by the NOSB based on criteria in the Organic Foods Production Act, and makes

formal recommendations to USDA. These recommendations allow USDA to undertake rulemaking action to amend. A NOSB subcommittee reviews every petition, and then publishes a proposal with a request for public comment. The NOSB then analyzes the comments, votes on the petition, and makes a final recommendation to the NOP. USDA may not add a substance to the National List without the NOSB's recommendation, but it can reject its recommendation.

The current restrictions on peracetic acid seem contrary to the regulatory status of its chemical composition. Peracetic acid is not "manufactured." It is formed in situ, as a reaction between hydrogen peroxide and acetic acid during production of the end-use product. And acetic acid or vinegar is approved for organic crop production. Peracetic acid breaks down to acetic acid, oxygen, and water, which are generally recognized as safe (GRAS) by the U.S. Food and Drug Administration for use in food production. This designation exempts these substances from usual Federal Food, Drug, and Cosmetic Act food additive tolerance requirements. GRAS is not necessarily organic, however.

Under USDA organic regulations, hydrogen peroxide is also permitted for plant disease control in organic crop production. Even synthetic acetic acid is approved for limited use in the NOP. The NOSB's recommendation to continue the use of hydrogen peroxide pesticides and sanitizers would characterize the small amount of peracetic acid in these products as "formally allowed as inert." Again, EPA does not consider it inert.

Chemical sanitizers, like peracetic acid, are a critical component of food production sanitation programs. Automatic wash systems such as flumes are often used to remove dirt and transport fruit and vegetables around the processing plant. Flumes can cause a number of bacteriological problems by spreading of contamination, and allow biofilm formation. Sanitizers like peracetic acid are used for microbial control during these processes.

Additionally, peracetic acid is a component of many biopesticides, which are important for managing

diseases in organic crops. Biopesticides target pests such as bacterial cells, endospores, yeast, and mold spores. Biopesticides usually are less toxic than conventional pesticides and break down to benign substances in the environment. Producers can use the products according to label directions without concern about accretion of toxins in the soil. They also typically decompose quickly and can be effective in very small quantities. Lower application rates mean lower exposure, and potential pollution problems may be avoided. EPA encourages the development and use of biopesticides because they generally pose fewer risks than conventional pesticides.

Another indicator of their relative safety is that EPA generally requires less data to register biopesticides than conventional pesticides. This results in faster EPA registration, often less than a year to 18 months, compared to longer times for conventional pesticides. Many biopesticides are defined as minimum risk pesticides by FIFRA because their active and inert ingredients are “demonstrably safe for the intended use.” That is, these minimum risk pesticides are exempt from the regulatory requirements of FIFRA because they meet the requirements set forth in 40 C.F.R. § 152.25(f). Additionally, most minimum risk pesticides can be used on organic crops because they meet the NOP “natural” criteria. The Organic Foods Production Act allows the use of “natural substances” in organic production unless a substance is specifically prohibited at 7 C.F.R. § 205.602.

Without the proposed rule, producers would be limited in the use of biopesticides and sanitizers. Limiting these products makes compliance with the NOP difficult, increases costs to manufacturers through fees and research related to registration, and increases pesticide registration time. It may also increase the presence of pathogens in food.

USDA accepted comments through March 7, 2013. EPA expects to issue a final rule later this year.

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