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1200 Pennsylvania Ave. NW.
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Subject: **Docket ID Number EPA-HQ-OPP-2010-0498**

Comments in Response to *Piperonyl Butoxide Registration Review: Draft Human Health and Ecological Risk Assessments*

The following comments are being submitted in response to the December 15, 2017 *Federal Register* notice announcing the availability of and seeking public comment on EPA's draft human health and ecological risk assessments for the registration review of piperonyl butoxide and the February 1, 2018 memorandum subject: "Authorization to extend the public comment period for certain registration review dockets." These comments are being submitted on behalf of the Western Integrated Pest Management Center and provide input on the use of piperonyl butoxide in the production of **field corn, coffee and tropical orchard fruit crops** and as a **trade irritant** in Hawai'i.

Field Corn

For field corn production in Hawai'i, piperonyl butoxide (PBO) is used to control armyworm, cutworms, corn earworm, leafhoppers, lesser corn stalk borer, wireworms and other lepidopteran pests. Corn producers typically use PBO in combination with pyrethroid insecticides. While there may be alternatives, PBO, in combination with the pyrethroid active ingredients, fits into IPM programs, and constitute another needed pest control tool, especially for management of the development of insecticide resistance.

Additionally, the 12-hour REI is helpful for cultivation of field corn in Hawai'i. Important worker activities that occur after an application of PBO include stand counts, scouting for insects and observing plant health.

Coffee and Other Tropical Orchard Crops

PBO is a very important synergist in products co-formulated with pyrethrins for growers of coffee and other tropical orchard crops in Hawai'i.

The important pest, coffee berry borer (CBB) is among the insect pests controlled by products containing PBO and pyrethrins. These pesticide products are used as a quick knock-down kill for CBB on coffee and,

thus, are important rotational tools or alternative control tools for coffee farmers. Pyrethrins+PBO works on contact to kill CBB. In hot, dry growing areas, pyrethrins+PBO remains more effective under conditions of heat and exposure to ultraviolet light than pesticides such as *Beauveria bassiana*, which is also labeled for use on coffee for CBB management. It is important for farmers to have additional tools that are effective for insect control that, when used properly, will minimize the development of resistance in insects, while providing producers with an economical and effective control measure.

Coffee and growers of tropical fruit in crop groups 23 (A and B) and 24 need products such as those with PBO to be able to control insect pests on the farm and to remain sustainable. Crops in group 23A are recommended to be removed from PBO product labels. Group 23A crops grown in Hawai'i include acerola and wax jambu.

Trade Irritant

There is no maximum residue limit (MRL) for PBO for many of the foreign coffee markets, including Japan. As such, a shipment has been rejected for being over the 0.01 ppm default MRL established by Japan. PBO residues can persist. Without an MRL for PBO, if any PBO residues are detected, the shipment can be rejected. The dissipation curve for PBO in coffee beans, is unknown. However, because PBO can be detected in the coffee bean after pulping, drying, and hulling/polishing, it is assumed that dissipation could be rather slow.

Growers must either not use any PBO product because of the very low MRL for PBO in Japan or move any product to which PBO has been applied to other markets. Non-establishment of MRLs for green bean coffee creates a hardship for Hawai'i's coffee growers as well as for other potential products and markets of produce from Hawai'i. In some cases, coffee growers have opted not to use products with PBO because of the likelihood that their shipment will be rejected. Some growers have also created forms for their fellow farmers to fill out so that they know if the farmer has used or intends to use products with PBO. Thus, coffee from growers who use PBO can be separated from the coffee that would reach foreign markets.

This is an important issue that, in our understanding, is currently being addressed by the chemical company (MGK), the PBO Task Force, and the Foreign Agricultural Service (FAS) of USDA. However, Japan's review process has gotten more rigorous. Therefore, it will require more time for the PBO data package to be reviewed—after it has been adequately translated.

Comments were received from a representative of the corn production industry and Extension personnel of the College of Tropical Agriculture and Human Resources of the University of Hawai'i at Mānoa.

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