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State of Hawai'i  
Department of Agriculture  
Plant Industry Division  
Pesticide Branch

October 2, 2024

**TO:** Advisory Committee on Pesticides

**FROM:** Greg Takeshima  
Pesticides Program Manager

**SUBJECT:** Proposed Amendment to List of State Restricted Use Pesticides to Include New Active Ingredient, Thiamethoxam

**PROCEDURAL BACKGROUND:**

Sometime in 2012, Syngenta Crop Protection submitted one product license application to the Hawai'i Department of Agriculture, Pesticides Branch containing the new active ingredient Thiamethoxam. This active ingredient was new to the State of Hawaii and subject to a full groundwater review which was conducted by Chittaranjan Ray and his team at the University of Hawai'i in 2013. The results of the review and other environmental fate data indicated that this chemical would potentially leach into groundwater. The registrant was informed on 7/01/2013 that the Branch would designate the active ingredient as restricted use in Hawai'i.

There were existing active state products with the active ingredient Thiamethoxam before the Branch's decision to add thiamethoxam to the list of state restricted use pesticides in 2013. However, due to unknown reasons, the amendment to the list never occurred and the products that were already approved for general use never transitioned to restricted use status. Since then, various registrants submitted product license applications with the active ingredient Thiamethoxam.

The Branch was inconsistent in conveying to the registrant the Branch's intention to add Thiamethoxam to the list of restricted use pesticides and several products were approved as general use. Registrants with products pending review or actively classified for general use were notified on 7/6/2022 that the Branch will designate the active ingredient Thiamethoxam as restricted use in Hawai'i. The registrants either withdrew their application, agreed to the restricted use classification, or did not respond. Syngenta petitioned to keep one of their



products, Optigard Flex Liquid, EPA Reg. No. 100-1306, as a general use product and the request was granted.

**ACTIVE INGREDIENT BACKGROUND:**

Thiamethoxam is a neonicotinoid insecticide that is federally registered for use on brassica, cucurbits, ginger, bushberries, citrus, peppers, tomatoes, watermelon, nuts, soybeans, stone fruits, tuberous vegetables, corn, ornamentals, turf, structures, and more. Additionally, it is federally registered as a seed treatment for beans, onions, greens, corn, cucurbits, rapeseed, and other crops. Application methods consist of crack and crevice sprays, bait stations, foliar spray, and soil treatment.

The preliminary environmental fate data submitted by BASF and the wide range of uses for this chemical triggered a full groundwater review to determine leachability in Hawai‘i’s soils and a full groundwater data package was requested from the registrant. After review of the persistence and mobility characteristics of this chemical, it was determined that there is likelihood of leaching to groundwater.

**AUTHORITY:**

Pursuant to section 149A-19(a), *Hawaii Revised Statutes* (“HRS”), the board...shall adopt rules to: (1) Determine the pesticides that are highly toxic to humans, designate pesticides as restricted use or non-restricted use, and establish a system of control over the distribution and use of certain pesticides and devices purchased by the consuming public...” The Hawaii Administrative Rules (HAR) Section 4-66-32 outlines the procedures to designate a pesticide or its use as restricted use if its uses can be reasonably be anticipated to result in groundwater contamination.

**RECOMMENDATION:**

To date, there are 40 federally registered products containing Thiamethoxam registered under Syngenta Crop Protection, LLC, S.C. Johnson & Son, Inc., Gulfstream Home and Garden, FMC Corporation, and other registrants. There are 15 state registered products and 2 pending license applications for products containing Thiamethoxam from the following registrants: Elanco US, Inc., Loveland Products, Inc., Bonide Products, LLC, S.C. Johnson & Son, Inc., and Syngenta Crop Protection LLC.

Based on the environmental fate data provided, the broad range of uses of the products, and the full groundwater review, it is recommended that Thiamethoxam be added to the State Department’s list of state restricted pesticides referenced in section 4-66-32(g), HAR.

It is respectfully requested that the Advisory Committee recommend restriction of Thiamethoxam to the Board of Agriculture as set forth above.

**ATTACHMENTS:**

Attachment A: Preliminary groundwater review completed by Pesticides Branch

Attachment B: Full groundwater review completed by UH

Attachment C: Email to Syngenta dated 07/31/2013

Attachment D: Syngenta's letter dated 08/25/2022

Attachment E: Email to Bonide Products, LLC dated 7/6/2022

Attachment F: Email to S.C. Johnson & Son, Inc. dated 7/6/2022

Attachment G: Email to Elanco US, Inc. dated 7/6/2022

Attachment H: List of State products with the active ingredient Thiamethoxam

Attachment I: List of Federal products with the active ingredient Thiamethoxam