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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, Flupyradifurone

PROCEDURAL BACKGROUND:

In 2015, Bayer CropScience submitted 2 product license applications to the Hawai'i Department of Agriculture, Pesticides Branch for products containing the new active ingredient Flupyradifurone. This active ingredient was new to the State of Hawai'i and subject to a full groundwater review which was conducted by Chittaranjan Ray and his team at the University of Hawai'i Water Resources Research Center (WRRC). The results of the review and other environmental fate data indicated that this chemical would potentially leach into groundwater. Despite branch reservations, Sivanto 200 SL and Sivanto Prime were both licensed in 2015 as general use products under the condition that no other products containing the active ingredient flupyradifurone will be licensed until an in-field study can be completed. A proposal for the in-field groundwater study was submitted in 2017 by UH-WRC totaling \$403,199.00, but due to lack of funding, the study was never conducted.

Since 2015, several products with the active ingredient Flupyradifurone have been submitted by Bayer CropScience and other registrants. These registrants were notified that the Pesticides Branch will request to add Flupyradifurone to the State Department's list of state restricted pesticides and that current pending products will not be licensed unless the Branch received their consent to register it as a state restricted pesticide product. A groundwater review contract was issued in 2021 until 2026 to review new active ingredients, not including flupyradifurone, and to evaluate existing groundwater modeling systems with the Branch's current model, CLERS. If the results of the contract conclude that CLERS is no longer a sufficient modeling tool, then the branch may re-review flupyradifurone using the new model. In addition, when funds are available, an in-field study may be attempted to help determine if the state restricted status is



warranted. If the infield study is funded and the results of that study do not support the state restriction, or if a new groundwater model is established and the results of running flupyradifurone through the new model suggests flupyradifurone is not a potential leacher, then the Branch will request the removal of the active ingredient on the list.

ACTIVE INGREDIENT BACKGROUND:

Flupyradifurone is a systemic insecticide that is federally registered for use on a variety of crops such as brassica, cucurbit, coffee, fruiting, leafy, bulb, tuberous and corm vegetables, citrus, pome and stone fruit trees, tree nuts, eggplants, peppers, taro, tomato, corn, bushberries, and ornamentals. It is also federally registered for use as seed treatment on rapeseed/canola and soybean seeds. Application methods consist of foliar spray, soil drench, and chemigation.

The preliminary environmental fate data submitted by Bayer CropScience 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 the likelihood of leaching to groundwater is high.

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 9 federally registered products containing Flupyradifurone registered under Environmental Science US, LLC, Cayer CropScience LP, and SBM Life Science Corp. There are 2 state registered products containing Flupyradifurone classified for general use registered under Bayer CropScience, 2 state products pending review under Environmental Science U.S., LLC, and three withdrawn applications, one under Bayer CropScience and two under SBM Life Sciences, that may be rescinded if the active ingredient does not become state restricted.

Based on the environmental fate data provided, the broad range of uses of the products, and the full groundwater review, it is recommended that Flupyradifurone be added to the State Department's list of state restricted pesticides referenced in section 4-66-32(g), HAR on January 1, 2027. This will allow currently registered products to finish the rest of their licensing period classified as general use and allow time for applicators and dealers to be educated on the restricted use status of any current products.

It is respectfully requested that the Board follow the recommendation set forth above.

ATTACHMENTS:

Attachment A: Preliminary groundwater review completed by Pesticides Branch

Attachment B: Full groundwater review completed by WRRC

Attachment C: WRRC's Proposal to Evaluate Leaching Potential of Agricultural Chemicals

Attachment D: Letter to Bayer dated 1/11/2022

Attachment E: List of State active products with the active ingredient Flupyradifurone

Attachment F: List of Federal products with the active ingredient Flupyradifurone