Department of Pesticide Regulation

Julie Henderson
Director

Gavin Newsom
Governor

Yana Garcia
Secretary for Environmental Protection

California Notice 2023-02

To: Pesticide Registrants and Other Stakeholders

Subject: SEMIANNUAL REPORT SUMMARIZING THE REEVALUATION STATUS OF PESTICIDE PRODUCTS DURING THE PERIOD OF July 1, 2022, THROUGH December 31, 2022

California regulations require the Department of Pesticide Regulation (DPR) to investigate reports of possible adverse effects to people or the environment resulting from the use of pesticides. Reevaluation of a registered pesticide is required if a significant adverse impact occurred, or is likely to occur, from its use.

Title 3 of the California Code of Regulations (3 CCR) section 6221, specifies several factors under which DPR may initiate a reevaluation: (a) public or worker health hazard, (b) environmental contamination, (c) residue over tolerance, (d) fish or wildlife hazard, (e) lack of efficacy, (f) undesirable phytotoxicity, (g) hazardous packaging, (h) inadequate labeling, (i) disruption of the implementation or conduct of pest management, (j) other information suggesting a significant adverse effect, (k) availability of an effective and feasible alternative material or procedure that is demonstrably less destructive to the environment, and (l) discovery that data upon which a registration was issued is false, misleading, or incomplete. An ongoing DPR pesticide review may trigger a reevaluation. Reevaluation triggers also include data or information received from state and county pesticide use surveillance and illness investigations, pesticide residue sample analyses, environmental monitoring activities, and issues that may concern other state or federal agencies.

When a pesticide enters the reevaluation process, DPR reviews existing data and may require that registrants provide additional data to characterize the nature and extent of the potential hazard and identify appropriate mitigation measures if needed.

DPR concludes reevaluations in several different ways. If the data demonstrate use of the pesticide presents no significant adverse effects, DPR concludes the reevaluation without additional mitigation measures. If additional mitigation measures are necessary, DPR will place appropriate restrictions on the use of the pesticide to mitigate the potential adverse effect. If the adverse impact cannot be mitigated, DPR cancels or suspends the pesticide product registration.

This report complies with the requirement of 3 CCR section 6225, which requires DPR to prepare a semiannual report describing pesticides reevaluated, under reevaluation, or for which factual or scientific information was received, but no reevaluation was initiated.

The report contains two sections:

I. *Formal Reevaluations*–initiated when an investigation indicates a significant adverse impact has occurred or is likely to occur; and,
II. *Ongoing Investigations (Evaluations)*–initiated when DPR receives possible adverse impact data or information resulting from the use of a product and/or active ingredient, but no formal reevaluation has been initiated.

CALIFORNIA NOTICE 2018-01

California Notice 2018-01 (Notice), titled *Expanding Use of Pesticide Products under Reevaluation*, was issued in January 2018. In accordance with this notice, DPR will not act upon an Application for Pesticide Registration or an Application to Amend Pesticide Product if it's relevant to the concern that prompted the reevaluation. The notice affects new products, supplemental distributor registrations, amendments, Special Local Needs, and Experimental Use Permits. DPR will evaluate Emergency Exemption requests on a case-by-case basis if a pest management or public health need arises. When DPR completes the reevaluation, DPR will be able to, in light of the reevaluation determination, consider the Application for Pesticide Registration or Application to Amend Pesticide Product.

FORMAL REEVALUATION

DPR initiates formal reevaluation when an investigation indicates a significant adverse impact has occurred or is likely to occur. Each reevaluation is summarized with regard to the following four areas: (1) *Basis and Scope*, (2) *Data Requirements* (if any), (3) *Summary of Scientific Evaluation* (e.g., protocol development, study/data submission and evaluation, DPR analysis papers, risk assessments) and *Related Legislation* (if necessary), and (4) *Mitigation Efforts and Status*.

CHLOROPICRIN – 30 Products

Basis and Scope

In October 2001, DPR placed pesticide products containing the active ingredient chloropicrin into reevaluation. The reevaluation is based on air monitoring data, which found that air concentrations at some distances from treated greenhouses exceeded the National Institute for Occupational Safety and Health reference exposure limit and the Occupational Safety and Health Administration permissible exposure limit of 100 parts per billion (ppb), averaged over an eight-hour period. In addition, DPR found that data submitted under the Birth Defects Prevention Act indicated a potential for chloropicrin to cause adverse health effects at low doses.

Data Requirements

Under this reevaluation, DPR required chloropicrin registrants to conduct and submit data on various worker exposure and air quality monitoring studies from field and greenhouse applications. In August 2005, DPR completed review of required monitoring data and began a risk assessment of chloropicrin uses as part of the reevaluation process to mitigate potential adverse effects at low concentrations. In January 2015, DPR notified chloropicrin registrants of a new data requirement to determine if chronic exposure to chloropicrin presents a carcinogenic hazard requiring mitigation. In July 2015, DPR established a mechanistic study data requirement to assess the carcinogenic hazard of chloropicrin.

Summary of Scientific Evaluation

The mechanistic study is proposed to be completed in three phases, depending on the outcome of each phase. Following each phase, DPR scientists will review the results to determine the need for the next phase, approve protocols, and set due dates. On several occasions, the Chloropicrin Manufacturers' Task Force (CMTF), which represents chloropicrin registrants, met with DPR to discuss technical elements, methodology, and study protocol.

In June 2016, DPR accepted the Phase 1 protocol for the mechanistic study titled, *Identification of mouse lung target cell type and target respiratory region for effects following nose-only inhalation exposure to chloropicrin vapor*. CMTF submitted all required quarterly interim reports on Phase 1 study progress and DPR and CMTF met throughout the course of the Phase 1 study to discuss proposed protocol amendments, questions, public literature, extension requests, and study progress. In January 2022, CMTF submitted the preliminary study summary report for Phase 1. In March 2022, DPR identified deviations from the Phase 1 chloropicrin mechanistic study protocol. CMTF responded to these deviations by amending the preliminary study summary report, providing a letter response, and committed to analyzing the nasal tissue for the final Phase 1 study report. Due to several unforeseen circumstances and COVID-19 related delays, the deadline for the Phase 1 final study report was extended to August 31, 2022, and draft Phase 2 protocol was extended to September 30, 2022.

On August 30, 2022, CMTF requested a six-day extension for submission of the final study. On August 31, 2022, DPR granted an additional two days for electronic submission (September 2, 2022) and six days for hard copy submission (September 6, 2022). CMTF submitted the final Phase 1 study report and draft Phase 2 protocol by the September deadlines. DPR received the final Phase 1 study report without the nasal tissue analysis complete. Nasal tissue analysis results are anticipated for submission in January 2023. DPR will meet with CMTF to discuss the next steps after completing evaluation of the nasal tissue analysis, Phase 1 final report and draft Phase 2 protocol. DPR anticipates a 2023 meeting after evaluation of the nasal tissue study report.

Mitigation Efforts and Status

During this reevaluation, U.S. EPA developed label mitigation measures under its Reregistration Eligibility Decision for chloropicrin products. These soil fumigant label measures require users to prepare site-specific Fumigant Management Plans and are intended to mitigate unacceptable exposures to workers, residents, and bystanders. The label restrictions, prohibitions, human health protective language and general information were implemented in two phases and went into effect in December 2010 and 2012.

In February 2010, DPR completed a risk characterization document (RCD) for chloropicrin as a toxic air contaminant (TAC). The RCD analyzed the risks associated with potential exposures to residents and bystanders from ambient and offsite air concentrations of agricultural use chloropicrin products. The California Air Resources Board's (CARB) Scientific Review Panel on TAC completed peer review in April 2010. In December 2010, DPR filed a regulation listing chloropicrin as a TAC and issued a risk management directive (RMD) to address resident and bystander exposures identified by the TAC evaluation. This RMD determined that the appropriate regulatory target level to restrict acute exposure to chloropicrin is 73 ppb averaged over an eight-hour period. Chloropicrin was designated as a TAC effective January 2011, and DPR initiated development of use restrictions following TAC procedures specified in state law. In November 2012, DPR completed its comprehensive RCD for chloropicrin, which included dietary and occupational exposure scenarios.

In May 2013, DPR proposed mitigation measures designed to protect bystanders and residents from acute exposures to chloropicrin for public comment. DPR developed these mitigation measures using U.S. EPA's label changes as the foundation for mitigating offsite exposures. DPR proposed additional restrictions beyond labeling and regulation to protect residents and bystanders including additional buffer zones, restriction on buffer zone credits, acreage limits, time periods between applications with overlapping buffer zones, emergency preparedness and response, and notice of intent requirements. DPR developed the proposed mitigation measures in consultation with the CARB, the air pollution control districts, and the county agricultural commissioners, as required by California Food and Agricultural Code (FAC) section 14024(a). In addition to consulting with state and local agencies required by law, DPR discussed early mitigation concepts with worker advocate groups and registrants. DPR also submitted its analysis entitled, "Evaluation of Chloropicrin as a Toxic Air Contaminant, Part B Human Health Assessment" for scientific peer review. DPR responded to comments and peer reviewers.

In early January 2015, DPR issued "Control Measures for Chloropicrin: Control of Resident and Bystander Acute Exposure from Soil Fumigation Applications." The controls are intended to reduce risk from acute exposures to residents and bystanders that might occur near fields fumigated with products containing chloropicrin. In April 2015, DPR issued interim recommended restricted material permit conditions for field fumigants containing chloropicrin. In February 2017, DPR issued revised interim permit conditions developed to mitigate hazards of offsite movement of field fumigation applications of chloropicrin.

In March 2020, U.S. EPA issued its interim registration review decision for chloropicrin products. The interim decision includes labeling changes such as general updates to the glove statement, clarification on shade houses, soil sealing, and application rates on the product label. DPR accepted the first amended product labels with this new federal language in late 2021. These federal revisions address separate issues from the scope of California reevaluation. DPR continues to monitor amended pesticide product registrations to ensure labeling compliance.

For information on human health risk assessment and mitigation for chloropicrin, visit Chloropicrin - Human Health Risk Assessment and Mitigation Documents and Activities.

CYFLUTHRIN - 19 Products

Basis and Scope

In May 1998, DPR placed pesticide products containing the active ingredient cyfluthrin into reevaluation. The reevaluation is based on DPR's investigations of a May 1997 respiratory irritation outbreak reported among orange harvesters exposed to cyfluthrin residues and other related pesticide illness reports. As part of the investigation, DPR's Worker Health and Safety Branch conducted two separate inhalation-monitoring studies in orange groves during orange harvest. As dust and pollen are a part of the normal working environment, DPR determined that additional variables in the work environment led to the workers' respiratory irritation symptoms. DPR compiled the results in its monitoring study titled, *Health and Safety Report HS – 1765*, which found a probability that cyfluthrin, applied close to harvest, led to the symptoms experienced.

Data Requirements

Under this reevaluation, DPR required registrants of pesticide products containing the active ingredient cyfluthrin to provide (1) a respiratory irritation study, (2) a worker exposure study, and (3) monitoring data for structural applications. In October 2001, the primary manufacturer submitted two worker exposure studies regarding hand harvesting of oranges and sweet corn, four indoor exposures studies, and a study titled, *Study on the RD_{50} Determination in Rats*. Based on this data, DPR determined structural monitoring data was no longer required.

However, during this reevaluation, DPR determined it had insufficient data regarding worker exposure during the hand harvesting of sweet corn. As a result, in February 2002, DPR required a worker exposure study be conducted during the harvesting of sweet corn. The results of the study were submitted to DPR in October 2004.

Summary of Scientific Evaluation

In 2006, DPR determined a comprehensive exposure assessment was necessary for cyfluthrin. In September 2008, DPR completed a cyfluthrin Exposure Scoping Document intended to lay the groundwork for the risk assessment process. DPR completed its review of the cyfluthrin sweet corn hand harvester studies. In August 2015, DPR completed a Summary of Toxicology Data document for chronic health effects on cyfluthrin.

Mitigation Efforts and Status

In January 2018, DPR issued a problem formulation document (PFD) to initiate risk assessment. In February 2018, DPR presented the PFD and initiation of the risk assessment for cyfluthrin to the Pesticide Registration Evaluation Committee (PREC). U.S. EPA completed its registration review and released the draft human health risk assessment in May 2020 and the interim registration review decision in September 2020. In March 2021, U.S. EPA revised the Agency's interim registration review decision. DPR continues to review and monitor federal decisions on cyfluthrin pesticide product registrations. If upon completion of the RCD, DPR concludes that use of cyfluthrin poses a risk to workers, DPR will proceed with mitigation.

For information on human health risk assessment for cyfluthrin, visit Cyfluthrin and Beta-Cyfluthrin - Human Health Risk Assessment and Mitigation Documents and Activities.

NEONICOTINOIDS (NITROGUANIDINE INSECTICIDES) - 188 Products

Basis and Scope

In February 2009, DPR placed certain pesticide products containing the active ingredients imidacloprid, thiamethoxam, clothianidin, and dinotefuran into reevaluation. The reevaluation is based on an adverse effects disclosure involving the active ingredient imidacloprid. DPR's evaluation of the adverse effects data noted two critical findings: (1) high levels of imidacloprid in leaves and blossoms of treated plants and (2) increases in residue levels over time. Thiamethoxam, dinotefuran, and clothianidin are in the same chemical family as imidacloprid, known as the nitroguanidine insecticide class of neonicotinoids, and have similar properties and characteristics (e.g., soil mobility, half-lives, and toxicity to honey bees).

Data Requirements

Under this reevaluation, DPR required registrants of pesticide products containing the active ingredients imidacloprid, thiamethoxam, clothianidin, and dinotefuran (collectively referred to as neonicotinoids) to provide the following data for each active ingredient: (1) LC_{50} (acute) toxicity study, on honey bees, starting at the larval stage through emergence; and (2) field-based residue studies in pollen, nectar, and leaves from specific agricultural orchard and row crops. For field-based residue data requirements, DPR used its Pesticide Use Reporting database to determine the crops of focus for each active ingredient. DPR determined that initial field residue studies were

inconclusive and did not involve "worst-case" scenarios (i.e., a residue study conducted at the permitted California maximum application rate and the minimum reapplication interval). DPR modified its residue study strategy to require controlled applications at the highest maximum application rate per year for two consecutive years. DPR required neonicotinoid registrants to conduct these two-year prescriptive residue studies for certain commodities.

Additionally, U.S. EPA required honey bee toxicity studies and additional field-based residue studies for their reevaluation of neonicotinoids, which were shared with DPR and the Health Canada Pest Regulatory Management Agency (PRMA).

Summary of Scientific Evaluation

In September 2009, DPR notified neonicotinoid registrants of the LC_{50} and field residue study data requirements. The residue study data requirements were different for each active ingredient based on key representative crops for which they are used on.

For imidacloprid, DPR required residue data on almonds, citrus, cotton, cucurbits, fruiting vegetables, pome fruit, strawberries, and later, also required data on stone fruits. In January 2011, imidacloprid registrants voluntarily removed use on almonds from their labels in lieu of generating data. By 2017, DPR had received the final report on chronic toxicity effects to adult honey bees, received all DPR required residue studies, and received U.S. EPA-required residue data on blueberry, citrus, corn, cotton, pumpkin, stone fruit, and rotational white clover used as forage.

For thiamethoxam, DPR required residue data on cucurbits, fruiting vegetables, pome fruit, strawberries, and later, almonds, citrus, cotton, and stone fruit. DPR granted a waiver request for pome fruit due to limited California field applications. In February 2013, rather than conduct a residue study for almonds, thiamethoxam registrants removed use on almonds from their labels. DPR received a final report on chronic toxicity effects to adult honey bees and received U.S. EPA-required residue data on blueberry, citrus, corn, cotton, stone fruit, and rotational white clover used as forage. By 2018, DPR had received the final report on chronic toxicity effects to adult honey bees, all DPR required residue data, as well as U.S. EPA-required residue data on cranberry, cucumber, pepper, tomato, citrus, soybean-treated seed, tomato, pumpkin, melon, corn, blueberry, and apple.

For clothianidin, DPR required residue data on almonds, cucurbits, fruiting vegetables, pome fruit, and stone fruits. In November 2009, the clothianidin primary manufacturer requested, and was granted, a waiver for the residue study on pome fruit due to limited use in California. In lieu of conducting the residue studies on fruiting vegetables, clothianidin registrants removed fruiting vegetables from their labels. By 2018, DPR had received the final report on chronic toxicity effects to adult honey bees, all DPR required residue data, as well as U.S. EPA-required residue data on citrus, cucurbits, cotton, pumpkin, potato, cucurbit, corn, grapevines, apples, melon, soybean treated seed, and peach.

For dinotefuran, DPR required residue data on cotton, cucurbits, and fruiting vegetables. By 2017, DPR received final reports evaluating foraging honey bees and hives after exposure to dinotefuran, acute toxicity effects to honey bee data, all DPR required residue data, as well as U.S. EPA-required residue data on potato, pumpkin, cherry, cranberry, stone fruit, bell pepper, cucurbit, cantaloupe, and blueberry.

DPR received all required data by early 2018. The data was evaluated and DPR issued a risk determination in July 2018. See more information below on this report.

Mitigation Efforts and Status

Between 2010 and 2012, imidacloprid and thiamethoxam registrants, respectively, agreed to remove almond use from all California product labels. DPR considered this an important step in pollinator protection since almond orchards require a large number of pollinators.

In August 2013, U.S. EPA notified registrants of neonicotinoids of new labeling requirements for all products having outdoor foliar use directions (except granular formulations). This required registrants to include prescribed bee protective language on their product labels by the 2014 agricultural-use season for both existing and new product registrations. In November 2013, DPR required registrants to submit amended labels to California. All California registered products contain the necessary pollinator protective label language.

In June 2014, DPR, U.S. EPA, and PRMA completed a collaborative document titled, *Guidance for Assessing Pesticide Risks to Bees*. In June 2014, a Presidential Memorandum creating a federal strategy to promote the health of honey bees and other pollinators was signed. In 2016 and 2017, U.S. EPA released a preliminary pollinator risk assessment for each of the active ingredients, which was a collaborative effort between DPR, U.S. EPA, and PRMA.

In July 2018, DPR issued the California Neonicotinoid Risk Determination and submitted it to the State Legislature in accordance with the requirements of FAC section 12838. Shortly after, DPR incorporated newly available information and issued an addendum to the California Neonicotinoid Risk Determination in January 2019. The Risk Determination and Addendum compares colony feeding study values to worst-case scenario residue values to determine risks to honey bees. In 2020, DPR received a formal scientific peer review on the Risk Determination and Addendum and incorporated feedback into the mitigation efforts.

In accordance with the requirement of FAC section 12838 for DPR to adopt necessary control measures to protect pollinator health, DPR continued to review data and consult with experts and other stakeholders to help inform potential mitigation decisions. DPR developed several mitigation options and contracted with the California Department of Food and Agriculture (CDFA) to provide an economic analysis of the various options. CDFA provided economic analysis reports to DPR in August 2019, July 2020, and July 2021, as DPR explored mitigation options and revised the proposed regulations.

In August 2020, DPR released draft mitigation measures to the public and held stakeholder outreach webinars to discuss the draft regulation proposal and solicit feedback. Following the webinars, DPR accepted comments from the public and stakeholders on the draft proposal through October 2020. During the comment period, DPR also posted additional background information, including CDFA's draft economic analyses.

After sharing the draft regulations with the public in August 2020, DPR reviewed comments and performed additional scientific analysis which resulted in a document titled "DPR's Response to Public Comments Received in Response to August 2020 Neonicotinoid Webinars" dated February 2022. DPR used this feedback along with peer review feedback to refine the regulation proposal as appropriate.

On February 25, 2022, DPR initiated formal rulemaking with a Notice of Proposed Action for Neonicotinoid Pesticide Exposure Protection. In April 2022, DPR held a virtual public hearing regarding the proposed changes. The comment period ended on April 26, 2022. DPR received 18 comments.

After consideration of the comments received, DPR proposed modifications to the rulemaking where appropriate. On October 5, 2022, DPR published a Notice of Modifications to Text of Proposed Regulations and a Notice of Addition of Documents to Rulemaking File, at which point a 15-day comment period began. DPR received 64 comments, and the department's response is currently pending. DPR is working to finalize the rulemaking package and anticipates release in April 2023 with a January 1, 2024, implementation date for the regulations.

For current information on DPR's proposed rulemaking, visit Neonicotinoid Pesticide Exposure Protection #22-001. For more information on the reevaluation for neonicotinoids, visit Reevaluation - Neonicotinoids.

SECOND-GENERATION ANTICOAGULANT RODENTICIDES (SGARs) - 64 Products

Basis and Scope

Second-generation anticoagulant rodenticide (SGAR) products are those that contain the active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone (collectively these active are referred to as SGARs). DPR conducted a preliminary investigation of unpublished wildlife incident data and mortality data and public literature submitted by California Department of Fish and Wildlife (CDFW) and other sources on anticoagulant rodenticides and prepared a report on its findings.

Based on the preliminary investigation, the Director found that a significant adverse impact has occurred or is likely to occur to non-target wildlife from the use of SGARs and proposed to begin reevaluation. In November 2018, DPR issued its proposed decision to begin reevaluation for SGAR products for public comment.

On March 12, 2019, DPR issued its final decision to begin reevaluation for SGAR products. The notice of final decision included a summary of comments and provided.

Data Requirements

Under this reevaluation, DPR required registrants of SGAR pesticide products to (1) submit compliance proposals by May 2019, and (2) submit existing data related to non-target wildlife exposure by June 2019. Registrants of brodifacoum, bromadiolone, and difethialone products submitted the required compliance proposals and existing non-target wildlife exposure data. However, in place of submitting compliance proposals and data, difenacoum registrants submitted voluntary cancellations for all registered difenacoum products. As of May 2019, DPR no longer has any difenacoum products registered for use in California.

In August 2020, DPR asked companies to identify efficacy data that could inform mitigation by demonstrating a lower concentration of active ingredient in the target pests, such as through reduced application rates, lowered concentration of the active ingredient, and alternative bait timings. By November 2020, companies either submitted new data to DPR or identified relevant studies for review from previous submissions. DPR scientists have completed their initial review of company identified data, data on file, and public literature.

Related Legislation

In September 2020, Governor Newsom signed Assembly Bill (AB) 1788 (Chapter 250, Statutes of 2020) to prohibit uses of SGARs due to their threat to mountain lions and other wildlife. As of January 1, 2021, AB 1788 prohibits the use of SGARs statewide subject to limited exceptions until the Director certifies completion of its reevaluation of SGARs, and the department's development, in consultation with the CDFW, and adoption of any additional use restrictions necessary to protect wildlife.

AB 1298 (Chapter 479, Statutes of 2021), signed in October 2021, revised a specific section in the FAC created by AB 1788. With this revision, effective January 1, 2022, the law provides an additional exemption when CDFW determines its necessary to control or eradicate an invasive rodent population for the protection of threatened or endangered species or their habitats.

Since December 2020, DPR and CDFW continue to meet at least once per year to ensure effective consultation under current legislation.

Mitigation Efforts and Status

In 2020, DPR contracted with Dr. Niamh Quinn of the University of California to conduct a study on rodenticide Best Management Practices (#19-C0061). This study is not limited to SGARs and the ongoing reevaluation; however, the results may provide general information to DPR on rodenticide practices. DPR authorized Dr. Quinn's use of SGARs in compliance with current legislation [FAC section 12978(e)(7)]. DPR determined that under the terms of the

contract the proposed research relates to SGAR reevaluation and its objective to ensure that any continued use of SGARs would not be expected to result in a potential significant adverse effect to non-target wildlife. The final report is pending submission to the department.

In March 2022, DPR received a second research authorization request for SGARs from Dr. Quinn. On July 14, 2022, DPR determined that the proposed research relates to SGAR reevaluation and its objective of ensuring continued use of SGARs will not reasonably be expected to result in significant adverse effects to non-target wildlife. However, the Director outlined three conditions under which the researcher must comply with and submit written agreement to. In August 2022, Dr. Quinn agreed to conditions set by the Director in compliance with current legislation [FAC section 12978(e)(7)]. DPR's conditional authorization of additional research by Dr. Quinn's is valid through July 13, 2023.

As of December 2022, DPR completed its review of the data on file. DPR is committed to a timely completion of the reevaluation and continues to work with SGAR registrants, the Anticoagulant Rodenticides Task Force, interested stakeholders, researchers, and federal counterparts to discuss potential mitigation strategies. In November 2022, U.S. EPA issued their proposed interim decision (PID) for anticoagulant rodenticides which included the four SGAR active ingredients. The federal comment period closes February 13, 2023. DPR continues to review and monitor federal decisions on SGAR pesticide product registrations.

For more information on the reevaluation for SGARs visit Second-Generation Anticoagulant Rodenticides (SGARs).

ONGOING INVESTIGATIONS (EVALUATIONS)

DPR conducts ongoing investigations of products (and active ingredients) for which the Department, or other State or county agencies, have identified possible hazards. As a result of evaluation, the investigation may lead to formal reevaluation.

DIPHACINONE AND DIPHACINONE SODIUM SALT – 55 Products

Basis and Scope:

Pesticide products containing the active ingredients diphacinone and diphacinone sodium salt (henceforth collectively referred to as diphacinone) are classified as a first-generation anticoagulant rodenticide (FGAR). Due to lower toxicity, diphacinone pesticide products require multiple doses before producing a lethal effect which can lead to the development of resistance in a target pest. In 2018, DPR completed an investigation of studies and data submitted to DPR regarding potential adverse impacts to non-target wildlife from use of all FGAR classified products, which included diphacinone products. The investigation found a decreasing rate of FGAR exposure among non-target wildlife. Based on the decreasing exposure rates and the chemical characteristics of FGARs, DPR decided not to begin reevaluation of FGARs, including diphacinone. That decision was successfully challenged in a lawsuit. (*Raptors Are The Solution v. Cal. Dept. of Pesticide Regulation* (Sept. 27, 2022, A161787) [nonpub. opn.].)

As a part of its continuous evaluation process, DPR has continued to track rodenticide use, particularly after the passage of AB 1788 in 2020. In late 2022, DPR began an updated investigation to reconsider the 2018 decision not to begin reevaluation of diphacinone and to determine if a significant adverse impact to non-target wildlife from the use of diphacinone pesticide products has occurred or is likely to occur as a result of changing pest management practices.

PARAQUAT DICHLORIDE – 8 Products

Basis and Scope:

Pesticide products containing the active ingredient paraquat dichloride are registered in California for use as an herbicide and defoliant on a variety of agricultural plants. Paraquat dichloride is listed as a California restricted material, and therefore not available for homeowner use and no products are registered for application in residential areas. In response to California Notice 2022-18 , titled *Notice of Decision to Renew Pesticide Product Registrations for 2023*, DPR received comments requesting that DPR reevaluate, suspend, or cancel products containing paraquat dichloride. These comments expressed concern regarding human health and environmental issues regarding the use of paraquat dichloride. DPR has begun its investigation of the information received and is currently evaluating data submitted with the comments.

For more information on this semiannual report or any of DPR's reevaluations, visit Pesticide Registration Branch - Reevaluation Program or contact Mr. Andrew Turcotte, Environmental Scientist, at <Andrew.Turcotte@cdpr.ca.gov> or 916-445-4403.

Original signed by

Tulio Macedo, Chief
Pesticide Registration Branch
916-324-3572

March 29, 2023

Date

cc: Mr. Andrew Turcotte, Environmental Scientist