



Teresa Marks  
Acting Director

# Department of Pesticide Regulation



Gavin Newsom  
Governor

California Notice 2019-03

## **NOTICE OF FINAL DECISION TO BEGIN REEVALUATION OF SECOND-GENERATION ANTICOAGULANT RODENTICIDES**

Pursuant to Article 8, Subchapter 1, Chapter 2, Division 6 of Title 3 of the California Code of Regulations (3 CCR), the Director of the Department of Pesticide Regulation (DPR) notices its final decision to begin reevaluation of pesticide products containing the second-generation anticoagulant rodenticide (SGAR) active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone. The Director, under 3 CCR section 6255, files this notice of final decision with the Secretary of the Resources Agency to be posted for a period of thirty (30) days for public inspection.

### **REEVALUATION**

Pursuant to 3 CCR sections 6220, 6253, and 6254, DPR hereby begins reevaluation of products containing the SGAR active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone. This reevaluation involves 15 registrants and 74 pesticide products. A list of products included in the reevaluation is available upon written request to the address listed below or on DPR's Web site at:

<<http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/sgars.htm>>.

### **BASIS OF REEVALUATION**

DPR registers SGAR pesticide products to control rodents. A target pest will consume a lethal dose of a SGAR after one feeding. However, the mechanism of action for these pesticides results in a delay between consumption of a lethal dose and death of the exposed target pest. As a result, the target pest may continue to consume the bait even after consuming a lethal dose, allowing for a concentration above the lethal dose of the SGAR to accumulate in the body of the target pest. DPR has received reports that secondary non-target exposure may occur when non-target wildlife feed on the exposed target pest.

In 2014, DPR adopted regulations to designate the SGAR active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone as California restricted materials and to add use restrictions, in order to change the use patterns of these pesticides. As a result, rodenticides containing these four active ingredients can only be sold by licensed dealers, and can only be purchased and used by certified applicators or applicators under the supervision of a certified applicator.

After implementing these regulations, DPR continued to receive reports that SGARs may have caused or are likely to cause significant adverse impacts to non-target wildlife. In accordance with 3 CCR section 6220, the Director investigated these reports.

DPR prepared an investigatory report on potential significant adverse impacts reportedly caused by anticoagulant rodenticides. The investigation reviewed and analyzed information and data from a variety of sources, including peer-reviewed scientific publications, statewide sales and use reporting data, and unpublished wildlife incident and mortality data. As part of this investigation, DPR scientists analyzed 11 different studies examining the possible impacts of anticoagulant rodenticides on non-target wildlife, and 152 California Department of Fish and Wildlife (CDFW) loss reports submitted to DPR since 2014. The report is available on DPR's Web site at:

<[https://www.cdpr.ca.gov/docs/registration/reevaluation/2018\\_investigation\\_anticoagulant.pdf](https://www.cdpr.ca.gov/docs/registration/reevaluation/2018_investigation_anticoagulant.pdf)>.

The investigation found that while the 2014 regulations changed SGAR use patterns by restricting their purchase, sale, and use, reported rates of non-target wildlife exposure to SGARs have not decreased. Additionally, the investigation found evidence of possible population-level impacts among non-target wildlife in California due to statistically significant associations with SGAR exposure and sublethal impacts. The investigation indicated that non-target wildlife exposure to SGARs might be significant due to the chemical characteristics of SGARs, which are known to have properties of high toxicity, persistence, and bioaccumulation. The investigation also noted that brodifacoum has relatively higher rates of exposure among non-target wildlife as compared to other SGARs.

Based on the investigation, the Director found that a significant adverse impact has occurred or is likely to occur from the use of SGARs. On November 16, 2018, DPR issued the Notice of Proposed Decision to Begin Reevaluation of SGARs and Public Report (California Notice 2018-22). After noticing the proposed decision, DPR provided a 60-day public comment period, which closed on January 16, 2019. DPR has reviewed and responded to relevant public comments raising a significant environmental point received during the comment period. DPR's responses are listed below.

## **SUMMARY OF CALIFORNIA NOTICE 2018-22 COMMENTS**

DPR received 17,234 comments in response to its Notice of Proposed Decision to Begin Reevaluation of Second-Generation Anticoagulant Rodenticides and Public Report (California Notice 2018-22). The majority of the comments support the proposed decision to begin reevaluation. In addition, some comments also suggest DPR adopt mitigation measures, or reconsider its decision not to reevaluate first-generation anticoagulant rodenticides (FGARs). Over 15,800 of these comments were a form/template email. DPR considered all comments received during the 60-day public comment period. The relevant comments raising a significant environmental point are categorized and briefly summarized below along with DPR's response. Please note that individual comments may fall into multiple categories.

### **Comments Supporting Reevaluation**

DPR received 23 comments exclusively supporting DPR's proposed decision to begin reevaluation.

DPR agrees.

### **Comments Supporting Reevaluation and Suggesting Mitigation Measures**

DPR received 16,383 comments supporting its proposed decision to begin reevaluation and suggesting DPR adopt various mitigation strategies for SGARs. Suggested mitigation strategies include banning some or all of the SGARs, suspending some or all of the SGARs, placing additional use restrictions, and/or adopting additional regulations.

Before mitigation strategies can be developed and adopted, DPR must first evaluate scientific data to characterize SGARs' effects on non-target wildlife. Based on this evaluation, DPR can then determine if any adverse effects can be mitigated, how any adverse effects can be mitigated, and if additional restrictions on use, or other regulatory actions, are necessary.

### **Comments Supporting Reevaluation and Requesting DPR Reconsider its Decision not to Reevaluate First-Generation Anticoagulant Rodenticides**

DPR received 7,925 comments supporting DPR's proposed decision to begin reevaluation of SGARs and also requesting DPR reconsider data involving the first-generation anticoagulant rodenticides (FGARs) active ingredients warfarin, diphacinone, and chlorophacinone, and also place FGARs into reevaluation.

DPR recently evaluated all the reported episodes and information submitted to it regarding anticoagulant rodenticides, including FGARs. A summary of this investigation is available at <[https://www.cdpr.ca.gov/docs/registration/reevaluation/2018\\_investigation\\_anticoagulant.pdf](https://www.cdpr.ca.gov/docs/registration/reevaluation/2018_investigation_anticoagulant.pdf)>. In accordance with 3 CCR section 6220, DPR will investigate any new reported episodes or information it receives regarding FGARs. However, FGARs, and therefore comments pertaining to FGARs, are outside the scope of DPR's specific decision to begin reevaluation of SGARs.

### **Comments Supporting Reevaluation and Providing Public Literature**

DPR received one comment [Defenders of Wildlife] supporting DPR's proposed decision to begin reevaluation and providing public literature on SGARs.

DPR will evaluate the studies during its reevaluation.

### **Comments Supporting Reevaluation and Alleging DPR's Registration of SGARs Violates Environmental Laws**

DPR received two letters [Center for Biological Diversity and Animal Welfare Institute] supporting DPR's proposed decision to initiate reevaluation of SGARs and alleging that DPR's continued registration of SGARs runs afoul of several environmental laws.

All pesticide products that require registration with the U. S. Environmental Protection Agency (U.S. EPA) must first be registered with U.S. EPA before they can be registered with DPR for use in California. DPR's registration process allows for further evaluation to determine whether the product's lawful use will have a significant adverse impact on California's environment. This includes determining whether lawful use of registered SGAR products will result in significant adverse impacts to non-target wildlife in California, including whether lawful use is likely to harm any legally protected wildlife. DPR's decision to initiate reevaluation of SGARs allows DPR to evaluate in further detail whether additional mitigation is necessary so that lawful use of a registered SGARs will not have a significant adverse impact on California's wildlife, including on protected species.

### **Comments Opposing the Proposal to Begin Reevaluation of SGARs**

DPR received six letters [Bell Laboratories, Syngenta, Liphatech, Responsible Industry for a Sound Environment/Crop Life America, National Pest Management Association, California Cattlemen's Association] opposing DPR's proposed reevaluation SGARs. All of these letters stated that DPR's proposed decision was premature because not enough time has passed since DPR's 2014 regulations went into effect to determine whether the regulations are effectively mitigating adverse impact to non-target wildlife. In addition, five of the commenters also claimed that the data relied upon in DPR's investigatory report was biased and/or incomplete and that the data did not present sufficient evidence to warrant the reevaluation.

However, commenters did acknowledge that significant data gaps exist in characterizing SGARs effect on non-target wildlife. One commenter requested DPR delay reevaluating SGARs until it has more current and comprehensive data. Another commenter requested DPR fill data gaps and work with CDFW to obtain unbiased population level data instead of commencing a reevaluation of SGARs. Similarly, another commenter stated that DPR should conduct a comprehensive evaluation of all available data and focus on stopping unlawful purchases and use of SGARs instead of reevaluating SGARs. Finally, one commenter suggested that DPR could monitor ongoing research and implement a sampling program without formally initiating a reevaluation of SGARs.

Under 3 CCR section 6220, DPR is required to investigate all reported episodes and information it receives indicating that a pesticide may have caused, or is likely to cause, a significant adverse environmental impact. DPR's investigatory report considered the strengths and limitations of the referenced data in terms of statistical significance and methods and found that the referenced

data was generally sound. DPR's investigatory report provides sufficient evidence to support the Director's finding that a significant adverse impact has occurred or is likely to occur and that reevaluation should be initiated at this time. Reevaluation provides DPR the ability to obtain more current and comprehensive data regarding SGARs possible adverse impact on non-target wildlife to fill the existing and acknowledged data gaps, including data on unlawful sales and use of SGARs. During reevaluation, DPR will determine if any adverse effects can be mitigated, how any adverse effects can be mitigated, and if additional restrictions on use, or other regulatory actions, are necessary.

### **NEXT STEPS**

After completing its review of the public comments, the Director is adopting the proposed decision to begin reevaluation of SGARs. DPR has not determined all of the data it may require pursuant to this reevaluation. However, in general, DPR intends to obtain data related to SGAR exposure rates as well as any resulting risk of adverse impacts to non-target wildlife.

For information regarding the reevaluation process, please contact Ms. Brenna McNabb, at <Brenna.McNabb@cdpr.ca.gov> or by telephone at 916-445-0179.

*Original signed by Ann M. Prichard*

Ann M. Prichard, Chief  
Pesticide Registration Branch  
916-324-3931

*March 12, 2019*

Date

cc: Ms. Brenna McNabb, Environmental Scientist, DPR