

TITLE 3. DEPARTMENT OF PESTICIDE REGULATION
Neonicotinoid Pesticide Exposure Protection
DPR Regulation No. 22-001

NOTICE OF PROPOSED REGULATORY ACTION

As directed by Food and Agricultural Code (FAC) section 12838, the Department of Pesticide Regulation (DPR) proposes to adopt 3 CCR sections 6990 through 6990.16 as control measures necessary to protect pollinator health as identified in the “California Neonicotinoid Risk Determination” (Risk Determination) and “Addendum to the July 2018 California Neonicotinoid Risk Determination” (Addendum). The proposed control measures would affect the pesticide regulatory program activities pertaining to pesticide use and enforcement by regulating certain production agricultural applications of pesticide products containing the nitroguanidine-substituted neonicotinoid active ingredients, clothianidin, dinotefuran, imidacloprid, and thiamethoxam (collectively referred to as neonicotinoids). In summary, the proposed control measures consist of application method and rate restrictions, application timing restrictions, and seasonal application rate caps for the four-neonicotinoid active ingredients and are specific based on crop group.

WRITTEN COMMENT PERIOD

Any interested person may submit comments in writing about the proposed action to the agency contact person named below. DPR will accept written comments that are submitted via U.S. mail and postmarked no later than April 26, 2022. Comments regarding this proposed action that are transmitted via e-mail to <dpr22001@cdpr.ca.gov> or by facsimile at 916-324-1491 must be received no later than 5:00 p.m. on April 26, 2022.

PUBLIC HEARING

A virtual public hearing has been scheduled for the time and place stated below to receive oral or written comments regarding the proposed changes.¹ A presentation on the proposed regulations will be given at 9:15 a.m. The hearing will commence at 9:30 a.m.

DATE: Monday, April 25, 2022

TIME: 9:30 a.m.

PLACE: Zoom (Virtual)

Webinar ID: 868 4348 8418

Password: 213892

Direct link to join the meeting from a web browser or Zoom client:

<<https://us02web.zoom.us/j/86843488418?pwd=eGJBNEh5YlptYnN4akFieGlqR041QT09>>

One tap to join from a mobile phone: +16699009128,,86843488418#,,, *213892#

Or call from a landline: +1 669 900 9128 – and enter the Webinar ID and Password (above) when prompted

¹ If you have special accommodation or language needs, please provide notice at least 10 business days before the public meeting by contacting the person named below. TTY/TDD speech-to-speech users may dial 7-1-1 for the California Relay Service.

The hearing will also be accessible via public webcast for persons who would like to watch this hearing without participating. The public webcast can be accessed by visiting the following web address: <<https://video.calepa.ca.gov/#/>>

A DPR representative will preside at the hearing. Persons who wish to make comments orally during the hearing may raise their hand using the Zoom functions and make oral comments when called upon. Persons calling into the zoom meeting who wish to make a comment orally during the hearing may raise their hand by dialing *9 on their phone's dial pad. This will indicate to DPR representatives that the person on the phone has raised their hand. Generally, persons will be heard in the order in which they raised their hand. Participants will also be given instructions on how to provide oral comment once they have accessed the hearing. The hearing will continue on the date noted above until all testimony is submitted. DPR requests, but does not require, that persons who make oral comments at the hearing also submit a written copy of their testimony via e-mail.

If persons experience technical difficulties during the hearing, persons may e-mail written comments to <dpr22001@cdpr.ca.gov>. Comments received through this e-mail during the hearing will be read at the hearing. DPR will also accept written comments that are submitted via U.S. mail and postmarked on the the day of the hearing. If the number of persons in attendance warrants, the hearing officer may limit the time for each oral comment in order to allow everyone wishing to speak the opportunity to be heard. Oral comments presented at a hearing carry no more weight than written comments.

EFFECT ON SMALL BUSINESS

DPR has determined that the proposed regulatory action does affect small businesses.

INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW

DPR protects human health and the environment through the regulation of pesticide sales and use, and by fostering reduced-risk pest management. DPR's strict oversight begins with product evaluation and registration; and continues through continuous evaluation, reevaluation and enforcement; statewide licensing of commercial and private applicators and pest control businesses; environmental monitoring; and residue testing of fresh produce. This statutory scheme is set forth primarily in FAC Divisions 6 and 7.

Pesticides are registered and licensed for sale and use with the U.S. Environmental Protection Agency (U.S. EPA) prior to California registration. DPR's registration evaluation is conducted in addition to U.S. EPA's evaluation. Before a pesticide is registered, both agencies require data on a product's toxicology and environmental fate to evaluate how it behaves in the environment; its effectiveness against target pests and the hazards it poses to non-target organisms; its effect on fish and wildlife; and its degree of risk to human health.

DPR continues to evaluate pesticides after they are registered. DPR's continuous evaluation program includes evaluating potential adverse effects resulting from the use of registered pesticide products and if necessary, placing products into formal reevaluation.

In 2008, DPR received an adverse effects disclosure that showed potentially harmful effects of imidacloprid to pollinators. Studies of imidacloprid revealed high levels of the insecticide in leaves and blossoms of treated plants, as well as increasing residue levels over time. The residues were present at levels acutely toxic to honey bees, potentially threatening pollinator health. After investigating the disclosures, DPR placed certain pesticide products containing imidacloprid and the related neonicotinoid active ingredients, thiamethoxam, clothianidin, and dinotefuran, into reevaluation on February 27, 2009 to assess the magnitude of their residues in the pollen and nectar of agricultural commodities and the corresponding levels of risk to honey bee colonies. Certain products containing clothianidin, dinotefuran, and/or thiamethoxam were included in the reevaluation as they are in the same chemical family as imidacloprid, and have similar properties and characteristics (e.g., soil mobility, half-lives, and toxicity to honey bees). This group of active ingredients are known as the nitroguanidine-substituted neonicotinoids, colloquially called neonicotinoids.

DPR's reevaluation included pesticide products labeled for outdoor uses that would result in substantial exposure to honey bees. Within the outdoor uses, DPR focused on gathering data on neonicotinoid pesticides used in the production of an agricultural food and feed commodity because they are commonly used at relatively high application rates, and are detrimental to pollinators. Production agricultural products are those used for the production for sale of an agricultural commodity, which is defined in 3 CCR section 6000. DPR evaluated risks to pollinators from neonicotinoid uses in agricultural food and feed commodities, including fruits, vegetables, grains, legumes, and fiber and oilseed crops such as cotton. Trees grown for lumber and wood products, Christmas trees, ornamentals and cut flowers, and turf grown commercially for sod are also considered agricultural commodities under 3 CCR section 6000. However, DPR did not evaluate risks to these commodities due to sufficient label mitigation or the lack of pollinator exposure (i.e., not attractive to bees, grown indoors, lower use rates) and widespread use.

This rulemaking focuses on the use of neonicotinoid pesticides in the production of an agricultural food or feed commodity. Neonicotinoids are systemic insecticides that are transported through the vascular system of plants to all tissues, including leaves, nectar, and pollen. Neonicotinoid pesticides used for the production of agricultural food and feed commodities are labeled for soil, foliar, and seed treatment applications. Both foliar and soil applications of neonicotinoid pesticides have resulted in residues in both nectar and pollen at levels that may pose risk to bees. Applications of neonicotinoid pesticides prior to bloom may still contaminate the pollen and nectar that bees forage on while visiting crops during the bloom period. Thus, DPR assessed risks to pollinators from both soil and foliar applications of neonicotinoid pesticides made to agricultural food and feed commodities. Soil applications are made directly to the soil, whereas foliar applications are made to the leaves of the plant. These two application types have different directions for use on pesticide labels. Additionally, due to the systemic nature of imidacloprid, dinotefuran, thiamethoxam, and clothianidin, both soil and foliar application methods result in uptake of the pesticide throughout the plant, but result in different pesticide residue levels over time. Therefore, DPR evaluated risks to pollinators independently for each application method and the resulting residues that would be expressed in a plant's pollen and nectar. Additionally, some neonicotinoid pesticide labels allow use as a seed treatment on seeds grown for agricultural food and feed commodities. Risks from residues in pollen and nectar of crops from seed treatment applications were evaluated in the preliminary pollinator risk assessments published by U.S. EPA. The preliminary assessments concluded that seed treatment applications result in low neonicotinoid

residues in pollen and nectar and thus pose a low risk to honey bees; DPR concurred with this assessment in its Risk Determination. Therefore, seed treatment applications are not part of this rulemaking.

When a pesticide enters DPR's reevaluation process, DPR scientists evaluate existing data and relevant new data not previously submitted to the department, to determine the nature and the extent of the potential hazard and to identify appropriate mitigation measures, if needed. As part of the neonicotinoid reevaluation, DPR required neonicotinoid pesticide registrants to provide additional data that would allow DPR scientists to conduct a scientific determination of risk. Registrants of the four active ingredients were required to provide, for each active ingredient, honey bee larval toxicity data and field-based residue studies of pollen, nectar, and leaves from specific agricultural food and feed commodities. For field-based residue data requirements, DPR's Pesticide Use Reporting database was used to determine the crops of focus for each active ingredient. In 2009, DPR informed the registrants of the four neonicotinoid pesticide active ingredients of the objectives and basic design of the residue studies that were required to be conducted. Depending on the active ingredient, registrants were required to conduct trials on a minimum of three to eight commodities. For each commodity trial, the registrants were required to sample three agricultural sites with three different soil types over two consecutive years. In 2012, based on the results from the first few residue studies, DPR modified its residue study strategy to require that the neonicotinoids be applied to the crops using worst-case application scenarios (e.g., maximum seasonal label application rate, minimum reapplication intervals, for two consecutive years).

In 2014, the California Legislature adopted Assembly Bill (AB) 1789 (Chapter 578, Statutes of 2014) requiring DPR to issue a determination with respect to its reevaluation of neonicotinoids by July 1, 2018, and adopt control measures necessary to protect pollinator health within two years after making the determination (FAC section 12838).

In compliance with FAC section 12838 and the legislative intent of AB 1789, DPR submitted the Risk Determination to the California Legislature in July 2018. In conducting the Risk Determination, DPR followed the methods established in "Guidance for Assessing Pesticide Risks to Bees," which compares the levels of neonicotinoid residues in nectar, pollen, and flowers of agricultural crops to concentrations that cause colony-level effects such as decreased colony strength and decreased stores of honey in honeycombs as described above. DPR's Risk Determination relied on U.S. EPA's preliminary pollinator risk assessments as a foundation and included additional data received by DPR after U.S. EPA's preliminary pollinator risk assessments were issued. In January 2019, DPR published an Addendum based upon additional submitted information.

In the Risk Determination and Addendum, DPR found that certain agricultural applications of neonicotinoids presented a hazard to honey bees. As required under FAC section 12838, DPR's proposed regulations are control measures, consistent with the risk determination on neonicotinoids, that are necessary to protect pollinator health. The proposed regulations would add restrictions to existing use of neonicotinoids, including restrictions on application rates, application timing, and seasonal application rate caps, to protect pollinator health.

DPR proposes to adopt sections 6990 through 6990.16, as directed by FAC section 12838, as

control measures on the use of neonicotinoids to protect pollinator health. Use of neonicotinoids under the proposed regulations will be more protective than existing laws and practice. Section 6990(a)(1-6) establishes definitions for terminology used throughout the regulation for consistent interpretation. Section 6990(b)(1-16) establishes a list the crop groups and application types (foliar, soil, or both) that the proposed regulations apply to. Section 6990(c)(1-3) establishes applications that are not subject to these proposed regulations, including situations in which the Risk Determination has concluded that the risk to bees is minimal and emergency situations where use of neonicotinoids is needed to address the emergency pest situation. Section 6990(d) establishes a legal presumption that the operator of the property intended to use managed pollinators at the time of the pesticide application if at any point in time during the growing season, the operator of the property uses managed pollinators. Sections 6990.1-6990.16 establish restrictions on the use of neonicotinoids for the following specific crop groups:

- (1) Berries and small fruits (Crop Groups 13 and 13-07)
- (2) Bulb vegetables (Crop Group 3 and 3-7)
- (3) Cereal grains (Crop Groups 15 and 16)
- (4) Citrus fruit (Crop Groups 10 and 10-10)
- (5) Cucurbit vegetables (Crop Group 9)
- (6) Fruiting vegetables (Crop Groups 8 and 8-10)
- (7) Herbs and spices (Crop Groups 19, 25, and 26)
- (8) Leafy vegetables including brassica (cole) (Crop Groups 4, 4-16, 5, 5-16 and 22)
- (9) Legume vegetables (Crop Groups 6 and 7)
- (10) Oilseed (Crop Group 20)
- (11) Pome fruits (Crop Groups 11 and 11-10)
- (12) Root and tuber vegetables (Crop Groups 1 and 2)
- (13) Stone fruits (Crop Groups 12 and 12-12)
- (14) Tree nuts (Crop Groups 14 and 14-12)
- (15) Tropical and subtropical fruit, edible and inedible peel (Crop Groups 23 and 24)
- (16) Coffee, peanuts, globe artichoke, mint, hops (female plants only), and tobacco

The proposed regulations incorporate a multi-level mitigation approach based on the relative attractiveness of each crop to bees. The proposed regulations designate each of the crops listed above into one of three categories: (1) highly attractive to bees; (2) moderately attractive to bees; or (3) not attractive to bees or harvested before bloom. In the proposed regulations, there are generally three types of restrictions proposed for each crop group: (1) prohibition of applications during bloom, (2) a seasonal application cap, and (3) crop-specific application rate and timing restrictions based on available data. For crop groups that are highly attractive to bees, all three restriction types are applicable at all times. For crop groups that are moderately attractive to bees, restrictions 1 and 2 are always applicable. However, the rate and timing restrictions (restriction 3) only apply when managed pollinators are brought into the field for pollination services. DPR also proposes exemptions from the proposed regulations for crops that are not attractive to bees or crops that are harvested before bloom. This multi-level mitigation approach offers higher levels of restriction when crops are expected to provide a large portion of the bees' diet. Additionally, the approach offers lower levels of restriction when crops are not expected to provide a significant portion of the bees' diet, as the expected level of exposure will not pose a significant adverse risk

to bees.

Adoption of these proposed regulations will benefit the State's environment by creating enforceable requirements that protect pollinator health, such as restrictions on application rates and timing. As stated above, according to information from DPR's pesticide use report database and the CDFA's "Economic and pest management evaluation of proposed regulation of nitroguanidine-substituted neonicotinoid insecticides: eight major California commodities," dated July 2, 2021, DPR projects the proposed regulations will reduce the amount of pounds of neonicotinoids applied and acres treated by 43% and 45%, respectively, from existing use.

During the process of developing these regulations, DPR conducted a search of any similar regulations on this topic and concluded that these proposed regulations are not inconsistent or incompatible with existing state regulations. DPR is the only agency that has the authority to regulate the use of pesticides.

IMPACT ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DPR determined that the proposed regulatory action does not impose a mandate on local agencies or school districts. DPR also determined that there are no costs to any local agency or school district requiring reimbursement pursuant to Government Code section 17500 et seq. There are no other nondiscretionary costs or savings imposed upon local agencies that are expected to result from the proposed regulation action.

County agricultural commissioner (CAC) offices are the local government agencies responsible for enforcing pesticide regulations in California, including any changes to pesticide regulations such as the proposed regulations. DPR establishes an annual work plan with the CACs, which already requires the CACs to conduct pesticide use inspections and investigations and enforce compliance with California worker protection laws and regulations. CACs will continue to enforce regulations according to their work plan and should be able to accommodate for any cost within their existing budgets and resources. Therefore, DPR anticipates that there will be no fiscal impact on these agencies. DPR does not expect any other local agencies to be affected by the proposed regulations, thus no fiscal impact on local agencies is expected.

COSTS OR SAVINGS TO STATE AGENCIES

DPR determined that no savings or increased costs to any state agency will result from the proposed regulatory action. DPR's budget revenue is based on fees from the registration and sale of pesticide products, including neonicotinoids. The proposed regulations will not result in cancellation or prohibit the sale of any currently registered products. The proposed regulations would, however, affect the amount of neonicotinoids used, and in some cases, require growers to use alternative pesticide products. DPR expects any possible losses in general retail sales of neonicotinoid products to be offset by additional sales of other insecticide products. The expected decrease is likely to be a small percentage of DPR's overall mill assessment fee revenue and is likely to be offset by a small increase in sales of alternative pesticides. DPR anticipates that it will be able to absorb any difference within its existing budget and resources. Therefore, the proposed regulations are unlikely to have a fiscal impact on DPR. DPR does not expect any other state agencies to be affected by the proposed regulations, and thus no fiscal impact on state agencies is

expected.

EFFECT ON FEDERAL FUNDING TO THE STATE

DPR determined that no costs or savings in federal funding to the state will result from the proposed action.

EFFECT ON HOUSING COSTS

DPR made an initial determination that the proposed action will have no effect on housing costs.

SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESS

DPR has made an initial determination that adoption of these proposed regulations will have a statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. While the proposed regulations will have a statewide economic impact, the impact will not be significant.

COST IMPACTS ON REPRESENTATIVE PRIVATE PERSONS OR BUSINESSES

In consultation with CDFA's Office of Pesticide Consultation and Analysis (OPCA), DPR has determined that the adoption of these proposed regulations will have an insignificant cost impact on representative private persons or businesses. As outlined below, DPR estimates the annual impact per grower to be \$470. The proposed regulations will reduce the amount of neonicotinoids applied, and in some cases, require growers to use an alternative pesticide. The impact of these changes is discussed in the economic impact assessment titled "Economic and pest management evaluation of proposed regulation of nitroguanidine-substituted neonicotinoid insecticides: eight major California commodities." This document is listed in the "Documents Relied Upon" section of the initial statement of reasons and is available from DPR. The proposed regulations will primarily affect California growers who use the neonicotinoid active ingredients on the following eight crops: almonds, cherries, citrus, cotton, grapes, strawberries, tomatoes, and walnuts. The economic impact assessment estimates an annual impact of \$12.2–13.3 million for these crops. Growers who farm crops treated with the subject active ingredients can expect to see increases in operating costs associated with the treatment costs of replacing neonicotinoids with alternative active ingredients that may result in minor reductions of gross revenues. Those reductions are not expected to result in noticeable shifts in crop selection.

Based upon CDFA's economic impact assessment, DPR extrapolated the costs associated with eight crops to estimate the economic impact of the proposed regulations on all affected crops and use patterns. This resulted in a total estimated annual direct economic cost of \$15.2 to \$16.6 million for all crops that would be affected by the proposed regulations. Using California Department of Finance's guidance, DPR assumed indirect cost to be equal to direct cost. That is, the total direct plus indirect costs were estimated as two times the direct cost. Using this assumption, DPR estimated that the annual combined direct plus indirect cost to all businesses impacted by the proposed regulations will be \$30.3 to \$33.3 million for all California businesses. The total combined statewide dollar costs that all businesses (including small business) are

expected to incur over the lifetime (5 years) of the proposed regulations is \$151.6 to \$166.3 million. DPR estimates that 70,500 growers will be affected by these requirements. Therefore, the average annual cost of the regulation for each affected grower is estimated as about \$470 (\$33.3 million / 70,500 growers).

In addition to the minor anticipated economic impacts, there are potential economic benefits to businesses. The proposed regulations are expected to result in reduced pollinator exposure to neonicotinoids, and therefore, benefit pollinator health. Additionally, the proposed regulations may decrease overall pollinator deaths, resulting in stronger bee colonies and potential financial benefits to beekeepers and growers. Today, more than 2.8 million managed honey bee colonies in the U.S. pollinate crops worth an estimated \$15 billion each year. Of these, over 1.1 million colonies are used in California. Both natural and managed pollinators are a critical piece to California agricultural, thus, protecting pollinators has economic benefits for the industry. However, DPR is not able to quantify these scenarios.

RESULTS OF THE ECONOMIC IMPACT ANALYSIS

Impact on the Creation, Elimination, or Expansion of Jobs/Businesses: DPR determined that the proposed action would not create or eliminate jobs or businesses in California because the neonicotinoid pesticide products can be used with restrictions. In cases where neonicotinoid pesticide products can no longer be used, alternative pest management tools and practices exist. Pest management will be necessary regardless of a decline in sales and use of pesticides subject to the proposed regulations, and thus the creation or elimination of jobs and businesses are not expected to be impacted. In addition, this proposal is unlikely to result in the expansion of businesses currently doing business within California because impacted growers are not expected to contract with other businesses to comply with the regulation and current pesticide dealers will continue to sell the regulated chemicals as well as sell alternative chemical(s). Any new demand for pest control services would be spread out among the already existing pest control businesses in the state and would likely be handled with existing staff.

The Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment: The proposed regulations will benefit the State's environment by creating enforceable requirements that protect pollinator health. The proposed regulations will reduce pollinator exposure of neonicotinoids resulting from certain agricultural uses by restricting applications on bee-attractive crops by limiting the application rates and timing, and establish seasonal application rate caps to ensure that residue levels in flowering crops are below the no observable effects concentration identified in the Risk Determination. Implementation of the proposed regulations will not adversely affect the health and welfare of California residents or worker safety.

CONSIDERATION OF ALTERNATIVES

DPR must determine that no reasonable alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed regulatory action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory

policy or other provision of the law.

AUTHORITY

This proposed regulatory action is taken pursuant to the authority vested by FAC sections 11456, 12838, and 12976.

REFERENCE

This proposed regulatory action is to implement, interpret, or make specific FAC sections 11501, 11708, 11733, 12824, 12825, and 14012.

AVAILABILITY OF STATEMENT OF REASONS AND TEXT OF PROPOSED REGULATIONS

DPR prepared an Initial Statement of Reasons and is making available the express terms of the proposed action, all of the information upon which the proposal is based, and a rulemaking file. A copy of the Initial Statement of Reasons and the proposed text of the regulation may be obtained from the agency contact person named in this notice. The information upon which DPR relied in preparing this proposal and the rulemaking file are available for review at the address specified below.

AVAILABILITY OF CHANGED OR MODIFIED TEXT

After the close of the comment period, DPR may make the regulation permanent if it remains substantially the same as described in the Informative Digest. If DPR does make substantial changes to the regulation, the modified text will be made available for at least 15 days prior to adoption. Requests for the modified text should be addressed to the agency contact person named in this notice. DPR will accept written comments on any changes for 15 days after the modified text is made available.

AGENCY CONTACT

Written comments about the proposed regulatory action; requests for a copy of the Initial Statement of Reasons, and the proposed text of the regulation; and inquiries regarding the rulemaking file may be directed to:

Lauren Otani, Senior Environmental Scientist (Specialist)
Department of Pesticide Regulation
1001 I Street, P.O. Box 4015
Sacramento, California 95812-4015
916-445-5781

Note: In the event the contact person is unavailable, questions on the substance of the proposed regulatory action may be directed to the following back-up person at the same address as noted below:

Brittanie Clendenin, Environmental Scientist
Department of Pesticide Regulation
Pesticide Registration Branch
1001 I Street, P.O. Box 4015
Sacramento, California 95812-4015
916-324-3896

This Notice of Proposed Action, the Initial Statement of Reasons, and the proposed text of the regulation are also available on DPR's Internet Home Page <<http://www.cdpr.ca.gov>>. Upon request, the documents can be made available in another language, or an alternate form as a disability-related accommodation.

AVAILABILITY OF FINAL STATEMENT OF REASONS

Following its preparation, a copy of the Final Statement of Reasons mandated by Government Code section 11346.9(a) may be obtained from the contact person named above. In addition, the Final Statement of Reasons will be posted on DPR's Internet Home Page and accessed at <<http://www.cdpr.ca.gov>>.