

June 18, 2024

ATTACHMENT 1 TO NOTICE OF EXEMPTION
Section 18 Specific Emergency Exemption

California strawberry growers are experiencing emergency conditions resulting from severe *Lygus hesperus* (*Lygus*) infestations for which there are no registered pesticide products sufficiently available to mitigate the concern. Specifically, due to recent regulatory changes in California limiting the use of neonicotinoid insecticides in certain agricultural commodities and increasing resistance development to synthetic pyrethroids, strawberry growers have lost access to critical pesticide applications that have previously been relied upon to address severe *Lygus* infestations. To address the immediate need for a pesticide to avert significant economic losses that are expected from severe *Lygus* infestations this growing season, the California Strawberry Commission (CSC) requested a Section 18 specific emergency exemption for use of Sefina Inscalis Insecticide (EPA Registration Number 7969-391, active ingredient: afidopyropen) on field-grown strawberries.

Section 18 Specific Emergency Exemptions

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Section 18 authorizes the United States Environmental Protection Agency (U.S. EPA) to allow a state agency to grant an unregistered use of a pesticide (not registered or not registered for that particular use) for a limited time to address an emergency condition. The regulations governing Section 18 of FIFRA define an “emergency condition” as an urgent, non-routine situation that requires the use of a pesticide. (40 CFR § 166.3.) An emergency condition is deemed to exist when there are no effective registered pesticides available; there are no feasible alternative control practices; and the situation involves the introduction of a new pest, or will present significant risks to human health, threatened or endangered species, beneficial organisms, or the environment; or will cause significant economic loss. There are four types of Section 18 emergency exemptions: specific, quarantine, public health, and crisis. The Department of Pesticide Regulation (DPR) is granting a Section 18 specific emergency exemption, following the issuance of a Section 18 crisis emergency exemption, for use of Sefina Inscalis Insecticide on field-grown strawberries.

DPR may request approval to issue a Section 18 specific exemption from U.S. EPA when growers or agricultural research scientists identify a pest situation that available tools, including registered pesticides, will not adequately control and provide documentation that a significant economic loss will occur due to the pest problem. DPR must submit information describing the pest emergency to U.S. EPA and obtain approval for the specific unregistered pesticide use before issuance. U.S. EPA performs a review to ensure there are no concerns, and whether the appropriate safety findings required by the Food Quality Protection Act can be made. If authorized by U.S. EPA, DPR may issue a Section 18 specific exemption allowing the use for up to one year. All uses under a Section 18 emergency exemption from registration require a restricted materials permit from the appropriate county agricultural commissioner prior to purchase and use.

On June 13, 2024, U.S. EPA authorized the use of Sefina Inscalis Insecticide containing the active ingredient afidopyropen on field-grown strawberries under a Section 18 specific exemption. This specific Section 18 exemption expires on October 31, 2024. The authorization of this specific exemption follows the authorization of a crisis exemption issued May 20, 2024, which allowed one application of Sefina Inscalis Insecticide on field-grown strawberries. Title 40 Code of Federal Regulations (40 CFR) section 166.45(b) specifies a Section 18 crisis emergency exemption from registration may be authorized by U.S. EPA no longer than 15 days, unless an application requesting a specific, quarantine, or public health exemption for the use has been submitted to U.S. EPA. Therefore, in this case, applications under the crisis exemption were authorized to occur beyond the 15 days while U.S. EPA was reviewing the specific exemption request. Under this Section 18 specific exemption, a maximum of two applications and a maximum of 28 fl. oz Sefina Inscalis Insecticide per acre (0.09 lbs. afidopyropen per acre) may be made this year inclusive of any use authorized under the previously issued crisis exemption (i.e., if one application was made under the crisis exemption, only one additional application can be made under this specific exemption). Applications may be made, at least 7 days apart, with ground application equipment such as tractor-mounted boom or airblast sprayers at a rate of 14 fl. oz. product per acre in Monterey, Orange, San Benito, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties. According to CSC, two applications of Sefina Inscalis Insecticide are required to replace the loss of neonicotinoid applications and to address the resistance development to pyrethroids.

This Section 18 exemption is based on monitoring data showing atypical current and severe infestations of *Lygus* on field-grown strawberries for which CSC submitted information demonstrating a lack of effective insecticides available for managing severe *Lygus* infestations. Specifically, growers in Santa Maria, a city located in Santa Barbara County, reported to CSC and DPR early and unprecedented infestations of *Lygus* 4-6 times above the University of California Integrated Pest Management (UC IPM) threshold for insecticide intervention. CSC also predicted similar infestations in Monterey, Orange, San Benito, San Diego, San Luis Obispo, Santa Cruz, and Ventura counties.

Afidopyropen is currently registered for use on greenhouse-grown strawberries to control insects, but not specifically *Lygus* bugs. However, afidopyropen is significantly effective against *Lygus* on field-grown strawberries at the proposed use rates. Allowing up to two applications of Sefina Inscalis Insecticide on field-grown strawberries this year would provide strawberry growers another insecticide with a different mode of action to integrate into existing pest management programs and alleviate growers' reliance on insecticides with demonstrated resistance. According to CSC, current pest management programs are ineffective at suppressing *Lygus* populations to commercially viable levels.

Summary of the Emergency

CSC is experiencing severe *Lygus* populations this year due to specific weather patterns (warmer winter temperatures and longer than average rainy season) and increased weed populations creating overwintering sites for *Lygus* in neighboring hillsides. According to the CSC, *Lygus* are the single largest cause of crop damage in California strawberry production from insects, and are the major cause of irregularly shaped, cat-faced strawberries. This crop damage results in unmarketable fruit and causes an estimated \$100 million in crop losses annually.

Federal regulations governing FIFRA Section 18 emergency exemptions from registration require the applicant to show that no effective registered pesticides and no feasible alternative control practices are available to address the emergency condition. (40 CFR § 166.20.) As described in more detail below, the applicant submitted information showing there are no effective registered pesticides available and no feasible alternative control practices to effectively address *Lygus* on field-grown strawberries.

Once *Lygus* populations are identified, California strawberry growers typically start spraying every other week with spray schedules increasing up to once a week later in the season. The production of specialty crops, such as strawberries, require substantially more farm laborers than other crops. As a result, growers prefer to use reduced risk pesticide products. However, the alternative currently registered reduced risk pesticide products are either not available for use after strawberry bloom (which occurs throughout the growing season), not effective for heavy infestations, and/or can create resistance management concerns. CSC has done considerable research on the use of bug vacuums to control *Lygus* infestations. Bug vacuums can remove a significant amount of *Lygus* in a treated area and California strawberry growers are consistently implementing this alternative control practice. When used in combination with traditional chemical controls, bug vacuuming has been shown to significantly reduce fruit damage caused by *Lygus* infestations. However, as confirmed by the University of California, the use of bug vacuums alone will not reduce damage to acceptable levels for heavy infestations. In addition, the use of bug vacuums may remove naturally occurring predators or beneficial insect populations. The UC IPM program also cites controlling weeds along roadways, ditches, and field borders near strawberry fields as fundamentally important to managing *Lygus* populations. To avoid migration of adult *Lygus* populations in the spring, mowing or discing under cover crops, especially legumes, before they flower and while *Lygus* are still in the nymphal stages can exhibit some level of control. Additionally, there are a few naturally occurring predators, such as the parasitic wasp, that have demonstrated some control against *Lygus*. Overall, non-pesticidal alternative pest control methods, such as weed control and use of naturally occurring predators, even when used in combination with currently registered pesticide products, are insufficient for suppressing *Lygus* to manageable populations.

According to the UC IPM website, synthetic pyrethroids, such as fenpropathrin and bifenthrin, are the most effective pesticides currently registered to control *Lygus* on field-grown strawberries. However, very high levels of resistance to pyrethroid insecticides have been identified in some growing areas. To delay resistance, UC IPM experts recommend growers make no more than two applications of all pyrethroids each year. In addition, synthetic pyrethroids have label restrictions prohibiting applications to blooming crops when bees are foraging. Similarly, *Lygus* treated with organophosphates, such as naled and malathion, have also exhibited high levels of resistance. Other alternatives include imidacloprid and thiamethoxam, neonicotinoid pesticides registered for use on field-grown strawberries. California strawberry growers previously relied on applications of thiamethoxam as a key component of a rotational insecticide schedule for control of *Lygus*. However, DPR recently adopted regulations to limit use of neonicotinoids in the production of certain agricultural commodities, including strawberries. Beginning January 1, 2024, in accordance with Title 3 California Code of Regulations (3 CCR) section 6990.1, applications of imidacloprid and thiamethoxam on strawberries are prohibited during bloom and at any time managed pollinators are present. Furthermore, the maximum application rate for both soil and foliar applications combined must

not exceed 0.3 pounds of active ingredient(s) per acre per growing season. As a result, many currently registered pesticide products are not a viable option to effectively control severe *Lygus* infestations on strawberries.

In summary, there are no effective registered pesticides and no feasible alternative control practices available to sufficiently suppress *Lygus* infestations on field-grown strawberries in Monterey, Orange, San Benito, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties. Afidopyropen is highly specific for sap-feeding insects and has been shown to be effective for control of *Lygus*. As stated above, afidopyropen is currently registered for use on greenhouse-grown strawberries for other insect pests. Under the Section 18 specific exemption, a maximum of two applications and a maximum of 28 fl. oz Sefina Inscalis Insecticide per acre (0.09 lbs. afidopyropen per acre) may be made this year inclusive of the use authorized under the previously authorized crisis exemption and this specific exemption (i.e., if one application was made under the crisis exemption, only one additional application can be made under this specific exemption). This Section 18 emergency exemption is necessary to avert significant crop and economic losses by the California strawberry industry. Without additional effective control of *Lygus*, strawberry growers estimate \$100 million in crop losses from *Lygus* damage alone.

CEQA Statutory Exemption for Emergencies

The California Environmental Quality Act (CEQA) statutorily exempts “[s]pecific actions necessary to prevent or mitigate an emergency” from Division 13 of the Public Resources Code. (Cal. Pub. Res. Code § 21080(b)(4).) CEQA defines an emergency as a “sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.” (*Id.* § 21060.3.) The CEQA guidelines elaborate that “emergency projects . . . exempt from the requirements of CEQA” include “Specific actions necessary to prevent or mitigate an emergency.” (Title 14, Cal. Code Reg., § 15269(c).)

DPR has determined that the projected crop loss due to severe *Lygus* infestations anticipated in field-grown strawberries in Monterey, Orange, San Benito, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties is an action properly subject to the CEQA statutory exemption for emergencies. As mentioned above, CSC states that without additional effective control of *Lygus*, strawberry growers will see an estimated \$100 million in crop losses from *Lygus* damage alone. Monitoring data from May 2024 shows severe *Lygus* infestations in Santa Barbara County and pest control advisors are estimating damage and crop loss over 30% without additional effective control of current *Lygus* populations. Based on projected crop losses reasonably expected to occur due to severe *Lygus* infestations and the lack of effective alternatives available to suppress *Lygus* populations to commercially viable levels, the proposed project meets the CEQA emergency definition. It is unexpected due to the unanticipated confluence of causes, such as the loss of effective pesticides, severe pest populations, and increasing resistance to available pesticide options. The occurrence involves a clear and imminent danger to property that demands immediate action, as evidenced by the significant potential crop yield losses. U.S. EPA also provided concurrence that this situation qualifies for a Section 18 specific emergency exemption.

Human Health and Environmental Analysis

As discussed above, this project is exempt from environmental review under CEQA as an emergency project (Cal. Pub. Res. Code § 21080(b)(4); Title 14, Cal. Code Reg., § 15269(c)). However, in collaboration with U.S. EPA, DPR has conducted a preliminary analysis of potential human health and environmental effects resulting from the application of Sefina Inscalis Insecticide on field-grown strawberries and has not identified any concerns. The Section 18 emergency exemption includes significant limitations on scope and is subject to regulatory controls. The allowable use is limited to two applications on field-grown strawberries to address *Lygus* infestation in Monterey, Orange, San Benito, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties. Furthermore, Section 18 emergency exemptions can only be used by certified applicators or those under their supervision with a restricted materials permit issued by the county agricultural commissioner. This exemption expires on October 31, 2024.

Human Health

The existing first aid and precautionary statements on the currently registered label and personal protective equipment and restricted entry interval on the proposed Section 18 use instructions are appropriate to support the added use proposed by this Section 18 emergency exemption request. The use on field-grown strawberries does not result in any increases to the maximum allowable single application rate or maximum allowable annual application rate from what is allowed on the currently registered label. U.S. EPA's April 2018 Human Health Risk Assessment for Section 3 Requests for a New Active ingredient evaluated other uses of afidopyropen with the same maximum single application rate and did not identify any human health risk estimates of concern.

Environment (flora, fauna, water, and air)

The Section 18 use instructions allow users to make two applications of Sefina Inscalis Insecticide this year to control *Lygus* on field-grown strawberries. This exemption expires on October 31, 2024. The proposed Section 18 use instructions only allow foliar-ground applications using methods such as tractor-mounted boom or airblast sprayers. There are no increases to the maximum single application rate or maximum annual application rate from the currently accepted label. Studies demonstrate afidopyropen residues quickly and steadily decline over time. Afidopyropen is not systemic and is not expected to accumulate in pollen or nectar. Based on the evaluated data, DPR does not expect the use of this product, in accordance with its registered label and the Section 18 use instructions, to have a significant adverse effect on the environment.