

Date of Hearing: April 18, 2023

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS

Alex Lee, Chair

AB 1042 (Bauer-Kahan) – As Amended March 16, 2023

SUBJECT: Pesticides: seeds

SUMMARY: Requires the director of the Department of Pesticide Regulation (director) to adopt regulations to govern the use and disposal of seeds treated with a pesticide. Specifically, **this bill:**

- 1) Requires the director to adopt regulations to govern the use and disposal of seeds treated with a pesticide.
- 2) Requires that regulations adopted to govern the use and disposal of seeds treated with a pesticide prohibit the use of such seeds that meet any of the existing statutory conditions for the cancellation of the registration of a pesticide.
- 3) Prohibits a person from selling, delivering, or using seeds treated with a pesticide that are not registered for that use.
- 4) Requires, on and after January 1, 2025, a use report to be submitted by, or on behalf of, a grower to the director or a County Agricultural Commissioner (CAC), on a form and in a manner prescribed by the director, when seeds treated with a pesticide are used by the grower in the state.
- 5) Requires, based on those use reports, the director or CAC, on and after January 1, 2026, to annually report to the public both of the following:
 - a) The pounds of pesticides applied as seed treatment in California, separated by crop type, active ingredient, and county of application; and,
 - b) The cumulative acres planted with seeds treated with a pesticide in California, separated by crop type, active ingredient, and county of application.
- 6) Requires the director to endeavor to eliminate from use in the state any seed treated with a pesticide that endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented. Requires the director, in carrying out this responsibility, to develop an orderly program for the continuous evaluation of all seeds treated with a pesticide.
- 7) Requires the director to prohibit or regulate the use of environmentally harmful materials, including seeds treated with a pesticide.
- 8) Corrects dated gender references in existing statute.

EXISTING LAW:

- 1) Establishes the state's program for the registration, sale, transportation, and use of pesticides. (Food and Agriculture Code (FAC) § 11401 et seq.)
- 2) Provides that the purpose of California's pesticide program is to, among other things:
 - a) Provide for the proper, safe, and efficient use of pesticides essential for the production of food and fiber and for the protection of public health and safety;
 - b) Protect the environment from environmentally harmful pesticides by prohibiting, regulating, or ensuring proper stewardship of those pesticides;
 - c) Assure agricultural and pest control workers of safe working conditions where pesticides are present; and,
 - d) Encourage the development and implementation of pest management systems, stressing application of biological and cultural pest control techniques with selective pesticides when necessary to achieve acceptable levels of control with the least possible harm to nontarget organisms and the environment. (FAC § 11501)
- 3) Requires the director, and the CAC of each county under the direction and supervision of the director, to enforce the pesticide program and the regulations that are issued pursuant to it. (FAC § 11501.5)
- 4) Requires the director to adopt regulations that govern the conduct of the business of pest control. (FAC § 11502)
- 5) Defines "pesticide" as including any substance, or mixture of substances, which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, as defined, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever. (FAC § 12753)
- 6) Requires the director to endeavor to eliminate from use in the state any pesticide that endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented. Requires, in carrying out this responsibility, the director to develop an orderly program for the continuous evaluation of all pesticides actually registered. (FAC § 12824)
- 7) Requires, before a substance is registered as a pesticide for the first time, there to be a thorough and timely evaluation. Authorizes appropriate restrictions to be placed upon the pesticide's use, including, but not limited to, limitations on quantity, area, and manner of application. Requires that all pesticides for which renewal of registration is sought to be evaluated. (FAC § 12824)
- 8) Authorizes the director, after hearing, to cancel the registration of, or refuse to register, any pesticide that, among other things:
 - a) Has demonstrated serious uncontrollable adverse effects either within or outside the agricultural environment;
 - b) The use of which is of less public value or greater detriment to the environment than the benefit received by its use;
 - c) For which there is a reasonable, effective, and practicable alternate material or procedure that is demonstrably less destructive to the environment; and,

- d) That, when properly used, is detrimental to vegetation, except weeds, to domestic animals, or to the public health and safety. (FAC § 12825)
- 9) Requires the director to prohibit or regulate the use of environmentally harmful materials, as specified. Requires the director, in so doing, to consider the effect of all such materials upon the environment, and take whatever steps the director deems necessary to protect the environment. (FAC § 14102)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author: "One would think that the Department of Pesticide Regulation would regulate all pesticide uses – that is not true. DPR does not protect Californians from the pesticides used to treat seeds. As a result, a huge volume of pesticide use in California may be completely unknown. AB 1042 takes the long-overdue step of resolving this loophole by ensuring [DPR] regulates pesticide-treated seeds, consistent with its mandate."

Pesticide treated seeds: Pesticides, such as fungicides, insecticides, bactericides, algacides, slimicides, and nematocides, are applied to seeds prior to planting to protect them from diseases, insects, or other pests. Pesticide treatments on seeds are used for localized plant protection; to protect against soil and aboveground pests; and, as systemic pesticides that absorb into the plant and distribute throughout its tissues. Treatments are made to a variety of crop seeds from grains and oilseed crops (e.g., wheat, corn, canola, etc.), to fruits and vegetables (e.g., broccoli, melons, etc.), as well as to "seed pieces" (e.g., potatoes). Treatment of seeds can occur in commercial seed treatment facilities, after which growers can purchase and plant already-treated seed, or growers may choose to treat seed on their own – known as "on-farm" seed treatment – and then plant the treated seed.

According to the United States Environmental Protection Agency (US EPA), treating seeds with pesticides has become a common agricultural practice to improve seed quality by reducing soil borne diseases and by discouraging insects or other pests.

In addition to agricultural use, treated seeds can be used in residential gardens.

Fate of pesticide treated seeds in the environment: According to a summary of the fate of neonicotinoid-treated seeds in the environment presented by the Department of Pesticide Regulation (DPR), 90% or more of pesticides applied to seeds can move offsite and leach into water or soil and be taken up by non-crop plants. Additionally, approximately 2 – 3% of the neonicotinoids on treated seeds is lost as dust at planting, and another 2 – 3 % is taken up by plants. Neonicotinoids applied to seeds protect the plant from root feeding plants for a maximum of 2 – 3 weeks. Other pesticide classes, such as fungicides, are commonly in seed treatment products, however less is known about the environmental fate of non-neonicotinoid pesticides used in seed treatment products.

DPR reports that managed pollinators, such as honey bees, and wild pollinators are exposed to the pesticides applied to treated seeds through dust, agricultural soil, crop flowers, and nearby wildflowers. Birds are also exposed to the pesticides on seeds through the seeds themselves, such as by ingestion, and through the water. Aquatic invertebrates are exposed to pesticides

from treated seeds through dust, seeds, and water. Pesticides from treated seeds can also be absorbed by aquatic plants.

Occupational exposure: According to the US EPA, workers at commercial seed treatment facilities can be exposed to pesticides on treated seeds when performing tasks directly associated with the seed treating and coating processes; performing tasks associated with the packaging, storing, or transporting of treated seeds; cleaning treatment machinery; and, loading and planting the seeds.

For on-farm seed treatment, workers can be exposed to the pesticides used on seeds when treating seeds prior to loading them into planters or when directly applying liquid or solid product to seeds already in planting equipment.

Regulation of pesticide treated seeds: According to DPR's website, "Pesticide-treated seeds are exempted from review by the [US EPA] under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as "treated articles." To the extent that a seed is treated to protect the seed, the seed does not fall under the state definition of "pesticide" and is excluded from review by DPR. Seed treatment products must be registered by [US EPA] and DPR when the coating process is conducted in California. However, there is limited information on which commodities utilize treated seeds, which active ingredients are used for each commodity, and the extent to which treated seeds are used in California."

California Department of Food and Agriculture seed inspection data from 2010 – 2021 show that many seed treatment products found on seeds in California are not registered for use in the state, meaning that pesticides not allowed for use in California are entering the state and planted via treated seeds.

Statutory definition of pesticide: The California Food and Agricultural Code (FAC) Section 12753 defines a "pesticide" as including any spray adjuvant and "any substance, or mixture of substances, which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, as defined, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever."

How much treated seed is used in California? While regulators concur that treated seed use has significantly increased over recent decades, little direct information is available to assess treated seed use in California. DPR requires reporting of all agricultural pesticide use, including the type of pesticide applied, the amount applied, the area treated, and the application method. However, DPR argues that pesticide-treated seeds do not fall under the state definition of a pesticide and are exempt from pesticide use reporting. They say that seed treatment products are considered industrial use and do not have the same reporting requirements. Therefore, publicly available pesticide use data in California does not currently account for pesticides applied as seed treatments and little direct or detailed information is known about the amount and types of pesticides on seeds in the state.

In the absence of formal tracking data on the use of treated seeds in California, the report *Neonicotinoids in California: Their Use and Threats to the State's Aquatic Ecosystems and Pollinators, with a Focus on Neonic-Treated Seeds* estimates that if seed treatments were fully used on crops where they are allowed, the amount of [neonicotinoid pesticides] applied as seed treatments would equal 512,000 pounds annually. This total exceeds the 410,000 pounds of

[neonicotinoid pesticides] that are applied by other means and reported through the [pesticide use report]. This potential use of [neonicotinoid]-treated seeds would cover roughly 76% of the total cropland area in California, approximately 4 million acres. Neonicotinoid pesticides are just one class of pesticides. They are known to harm pollinators and other non-target insects, and have been linked to adverse effects in other wildlife and humans.

Unfortunately, the lack of data on treated seeds is a national problem. According to a May 2020, article in *BioScience*, pesticide use data in the United States also does not currently account for pesticides applied as seed treatments. The article notes that while we find that seed treatment use has increased in major field crops over the last several decades, there is a high degree of uncertainty about the extent of acreage planted with treated seeds, the amount of regional variability, and the use of certain active ingredients. The article says that one reason for this uncertainty is that farmers are less likely to know what pesticides are on their seed than they know about what pesticides are applied conventionally to their crops. This lack of information affects the quality and availability of seed treatment data and also farmers' ability to tailor pesticide use to production and environmental goals.

DPR's treated seed workshop: DPR held a virtual Pesticide-Treated Seed Public Workshop on November 15, 2021, to articulate the current regulatory framework surrounding pesticide-treated seeds; to characterize potential for off-site movement of seed coatings; and, to gather additional information on current use and potential impacts of pesticide-treated seeds. Some of the facts on treated seeds cited in previous sections of this analysis were presented by DPR at that workshop.

Following the workshop, DPR requested public comment, to be submitted by February 15th 2022, on specific questions about pesticide-treated seeds, including:

- What California crops are typically grown from pesticide-treated seeds? Is there any industry tracking the portion of those crops that rely on pesticide-treated seeds?
- Is there any tracking of how much (e.g., acres treated, pounds applied) total pesticide treated seed is planted in California?
- What kind of insect or other pest pressures do seeds face?
- For crops that use pesticide-treated seeds, are these primarily imported, treated in California at a treatment facility or seed retailer, or treated on site?
- Is there any industry tracking or documentation that details how much pesticide treated seed is imported into California for use in California?
- How much seed treatment product does the seed retain versus how much is lost in the treatment process? What information is available on the mass of pesticide on the seed at the time of planting?
- The peer-review literature heavily focuses on environmental impacts from neonicotinoid treated seeds. Is there information focused on other active ingredients utilized in pesticide treated seeds?
- Is there any information on the relative environmental impact of pesticide-treated seeds versus other application methods?

The types of questions posed by DPR illustrate the profound lack of, and need for, information on treated seeds used in the state, as well as the need for a regulatory program governing the tracking and use of pesticide-treated seeds.

DPR's website lists the public comment received, but there does not appear to be any additional reporting on DPR's website on subsequent actions taken, or planned to be taken, on treated seeds since the public comment process.

This bill: This bill sets up a regulatory program at DPR to both gather information on and regulate the use of pesticide-treated seeds using a similar structure under which DPR currently regulates other methods of pesticide use. Specifically, this bill requires the director to adopt regulations to govern the use and disposal of seeds treated with a pesticide, and requires that those regulations prohibit the use of such seeds that meet any of the existing statutory conditions for the cancellation of the registration of a pesticide. These provisions are consistent with existing statutory requirements on other uses of pesticides in the state.

Litigation on pesticide-treated seeds in California: On February 17, 2023, the Natural Resources Defense Council, on behalf of Californians for Pesticide Reform, Friends of the Earth, Center for Biological Diversity, and Pesticides Action Network North America, filed a lawsuit against DPR in Alameda County Superior Court regarding the regulatory status of pesticide-treated seeds in California. This action followed a previous petition filed in 2020, which prompted the lawsuit.

Under the lawsuit, the petitioners/plaintiffs claim,

"...the failure of [DPR] to comply with their duties under California's Administrative Procedure Act (APA), Cal. Gov't Code §§ 11340 et seq., when developing a policy that allows one of the largest sources of pesticide contamination in California to go unregulated under state law. DPR is responsible for regulating pesticide use in California, "tak[ing] whatever steps" are "necessary to protect the environment." Cal. Food and Agric. Code (FAC) § 14102. DPR has effectively exempted from regulation all crop seeds treated with pesticides prior to planting... without following the procedures required by law, resulting in severe consequences to the environment and public health.

For decades, DPR has maintained a policy that treated seeds are not "pesticides" subject to regulation... Because DPR did not give notice to the public of this policy, allow members of the public to request hearings or comment on it, or otherwise comply with the requirements of the APA in adopting the treated-seeds policy, it constitutes an "underground regulation" in violation of the APA.

...DPR has a duty to prohibit or regulate pesticides as necessary to "protect the environment." FAC § 14102. It also must "endeavor to eliminate from use in the state any pesticide that endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented." Id. §12824. By effectively exempting treated seeds from regulation as pesticides under California law, DPR has shirked its duties, leading to environmental harms described above. Furthermore, by failing to follow APA requirements, DPR prevented those impacted by its treated-seeds policy from commenting on the policy before it was adopted."

Previous related legislation:

SB 1282 (Leno and Allen, 2016). Would have required all commercially available seeds and plants sold at retail establishments, excluding noxious weed seeds and plants that have been

treated with a neonicotinoid pesticide to be labeled as such. This bill failed passage on the Senate floor, was granted reconsideration, and subsequently died on the inactive file.

Arguments in support: According to a coalition of supporters, "Seed treatments are potentially the greatest source of pesticide contamination in the United States, yet due to a gaping loophole in federal pesticide law, The Treated Article Exemption, they go unregulated. As such, they are not tracked, labeled, or regulated in the same manner as other pesticides. The Environmental Protection Agency has upheld the current classification despite repeated efforts by concerned citizens and organizations. 210 products are registered as seed treatments by CDPR, representing 68 unique active ingredients. This does not account for seeds imported from other states which may use other active ingredients or products. However, CDPR itself stated in a 2021 workshop: "...[pesticide-coated] seed does not fall under the state definition of 'pesticide' and is excluded from review by CDPR."

Coated seeds are incredibly damaging to the environment. A single seed coated with a neonicotinoid insecticide can kill a songbird. There is enough active ingredient on a single seed to kill 80,000 bees. As much as 95% of the coating dusts or sloughs off, killing local wildlife, persisting in soil for up to three years, and infecting ground and surface water.

A CDPR evaluation found 93% of urban water samples in Los Angeles, Orange, and San Diego County and 67% in urban areas of Alameda, Contra Costa, Placer, Sacramento, and Santa Clara County contained seedcoating chemicals at levels above EPA's chronic benchmark for harm to aquatic ecosystems.

AB 1042 is not a chemical ban; it simply clarifies CDPR's authority to regulate pesticide-coated seeds within currently prescribed California state law. Californians and the land, water, and wildlife they steward have a right to be protected from pesticide pollution and effects, especially when current applications may have no benefit to the growers paying for them."

Arguments in opposition: According to a coalition of opponents, "[AB 1042] would require unnecessary and burdensome regulations of treated seeds, resulting in fewer pest and disease prevention options available to California farmers. This additional regulatory review will add significant expense to the California Department of Pesticide Regulation (CDPR) and County Agricultural Commissioners, whose budgets are already fiscally challenged.

Treated seeds protect plants against pests, diseases, and fungi from infancy, at the most vulnerable stage. This treatment provides the best chance to develop into healthy, high-quality plants, maximizing the harvest potential. Additionally, treating the seed often reduces the need for and or number of foliar applications of pesticide materials, providing better environmental protection and fewer passes with equipment through the field, resulting in reduced carbon emissions.

...Treated seeds are regulated by the US EPA and CDPR as a "treated article."... Because these products are being protected by the already regulated and approved pesticide, there is no reason to duplicate that review. Similarly, the "seed" or "article" is treated with a material that appropriate regulators have already reviewed; this relieves EPA, CDPR, and County Agricultural Commissioner from duplicating efforts and allows them to focus scarce resources on regulating and enforcing the existing pesticide regulatory system. Given the thorough review of the pesticide material, the duplicated review required by AB 1042 would have no additional benefit to health, safety, or the environment.

...AB 1042 would "ban" the sale of treated seeds, then require timely, extensive regulatory review across multiple products, greatly reducing the availability of safe and effective crop protection tools... Until this duplicative review is accomplished, no treated seeds will be available, likely for several years. In the likely event that proponents of this measure or any other interested parties would fight budget augmentations, personnel allocations, and the regulations themselves (therefore further delaying and preventing treated seeds from being regulated), an effective ban would be created only in California to the detriment of California farmers."

REGISTERED SUPPORT / OPPOSITION:

Support

American Bird Conservancy
Audubon California
Ban Sup (Single Use Plastic)
California Native Plant Society
Californians for Pesticide Reform
CALPIRG, California Public Interest Research Group
Center for Community Action & Environmental Justice
Center for Food Safety; the
Clean Water Action
Endangered Habitats League
Environment America
Environment California
Environmental Justice for Clean Water
Environmental Protection Information Center
Environmental Working Group
Facts Families Advocating for Chemical and Toxics Safety
Friends Committee on Legislation of California
Friends of Harbors, Beaches and Parks
Friends of The Earth
Midpeninsula Regional Open Space District
Natural Resources Defense Council (NRDC)
Nontoxic Schools
Peregrine Audubon Society
Point Blue Conservation Science
Raptors are The Solution
Sierra Club California
The Growing Solutions Fund
Urban Wildland Group, The

Opposition

Agricultural Council of California
American Seed Trade Association
California Agricultural Aircraft Association
California Alfalfa & Forage Association
California Association of Pest Control Advisers

California Association of Wheat Growers
California Cotton Ginners and Growers Association
California Farm Bureau Federation
California Fresh Fruit Association
California Grain & Feed Association
California Seed Association
California Warehouse Association
Croplife America
Far West Equipment Dealers Association
Grower-Shipper Association of Central California
Nisei Farmers League
Pacific Seed Association
Plant California Alliance
Western Agricultural Processors Association
Western Growers Association
Western Plant Health Association

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