

## CONCURRENCE IN SENATE AMENDMENTS

AB 1963 (Friedman)

As Amended August 23, 2024

Majority vote

**SUMMARY**

Requires, on or before January 1, 2029, the Department of Pesticide Regulation (DPR) to complete a reevaluation of paraquat dichloride (paraquat), and make the determination to retain, cancel, or suspend its registration, or to place new appropriate restrictions on the use of paraquat.

**Senate Amendments**

Delete the provisions of the bill as it passed the Assembly, which would have prohibited, on and after January 1, 2026, a person from using, manufacturing, selling, delivering, holding, or offering for sale a pesticide product that contains paraquat, and instead requires, on or before January 1, 2029, DPR to complete a reevaluation of paraquat, and to make the determination to retain, cancel, or suspend its registration or to place new appropriate restrictions on the use of pesticide products containing paraquat.

**COMMENTS**

*Paraquat:* The Centers for Disease Control and Prevention (CDC) describes paraquat as a "toxic chemical that is widely used as an herbicide (plant killer)." Paraquat is a contact herbicide that desiccates and destroys plant cell membranes within hours of application, and is one of the most widely used herbicides in the United States. Paraquat is used in many agricultural settings for the control of weeds and grasses, as a harvest aid desiccant (to remove green foliage before harvesting, such as for cotton or potatoes), and as a postharvest desiccant. Approved non-agricultural uses for paraquat include control of weeds and grasses around commercial buildings, electric transformer stations, pipeline pumping stations, public airports, and storage yards.

*Impacts of paraquat exposure:* According to the United States Environmental Protection Agency (US EPA), humans may be exposed to paraquat in food and drinking water since paraquat may be applied directly to growing crops and application may result in paraquat reaching surface and ground water sources of drinking water. Non-occupational exposures may occur as a result of spray drift from off-target applications of paraquat. US EPA states that occupational handler and post-application exposures are expected from paraquat usage. The CDC asserts that licensed applicators of paraquat are the people most at risk for exposure.

US EPA says that paraquat is highly toxic, that one small sip of paraquat can be fatal, and that there is no antidote. Because of paraquat's acute toxicity, all paraquat products registered for use in the United States are federally designated as restricted-use pesticides that can only be sold to and used by trained, certified applicators. There are no paraquat products registered for homeowner use and no products registered for application to residential areas in the United States. More than 60 countries have prohibited the use of paraquat.

Paraquat is also implicated in chronic health effects, especially the progressive neurodegenerative disorder Parkinson's disease. Experimental research has shown that paraquat crosses the blood-brain barrier and can enter and accumulate in dopaminergic neurons, the cells lost in Parkinson's disease. Dopaminergic neurons play an important role in the control of multiple brain functions, including voluntary movement and the regulation of many processes,

such as mood and stress. At least 10 epidemiological studies have linked paraquat exposure to Parkinson's disease, and a 2019 meta-analysis of 13 case-control studies showed paraquat exposure to be associated with a 1.64- fold increase in the risk of Parkinson's disease. Epidemiological results have not been unequivocal, however, as a recent report from the Agricultural Health Study suggests no association, contradicting positive associations previously reported in a nested case-control study from the same cohort.

In addition to human health concerns, paraquat poses risks to other organisms. US EPA's 2019 draft ecological risk assessment of paraquat identified potential risks to mammals, birds, terrestrial invertebrates, terrestrial plants, and algae due to paraquat exposure, and stated that paraquat is "very persistent in soil/sediment and accumulates in the environment in an adsorbed state."

*DPR's review of paraquat for reevaluation:* In 2022 and 2023, DPR received comments requesting that DPR reevaluate, suspend, or cancel products containing paraquat, including thousands of comments submitted pursuant to an email campaign and seven unique comments, which contained references to public literature and studies, from environmental and Parkinson's disease research organizations and from Parkinson's disease researchers and practitioners. DPR notes that it continues to evaluate the studies and comments submitted in 2022 and 2023 on paraquat, and anticipates completing its initial scientific review in the coming months. DPR will make a decision about its next steps following that review, including whether the review triggers a reevaluation of products containing paraquat.

### **According to the Author**

"Paraquat poisonings are deadly and research found that agricultural exposure to paraquat is associated with increased risk of Parkinson's disease... The people most at risk of paraquat exposure are primarily agricultural workers who mix, load, or apply paraquat, and enter areas after paraquat has been applied, as well as people living in agricultural communities who could be exposed from pesticide drift in the air or dust. In 2021 just over 430,000 pounds were applied in California, primarily in Kern, Kings, Fresno, Merced, and Tulare counties... The US EPA and independent scientists have well documented the hazards to public health and wildlife from the use of paraquat. Paraquat use has serious uncontrollable adverse effects. A considerable amount of evidence from studies in people, especially farmworkers, have linked paraquat exposure to the development of Parkinson's disease. A 2019 meta-analysis of 13 studies reported a statistically significant association where people exposed to paraquat are 1.64 times more likely to be diagnosed with Parkinson's disease... Paraquat is banned in more than sixty countries, including those with large agricultural economies, like the United Kingdom, China, and Brazil, as well as the European Union. California should follow their lead. There are reasonable, effective, and practicable alternatives to paraquat that are less destructive to the environment."

### **Arguments in Support**

The Environmental Working Group writes, "[AB 1963] has been amended several times, but it still does something that is very important – it [DPR] to expedite the scientific reevaluation of paraquat... Despite claims by the opposition, the science is independent and is clear – exposure to paraquat greatly increases the odds of getting Parkinson's Disease. They also claim that this pesticide is so tightly restricted in the way that it is used, that nothing further needs to be done. But – a survey of the counties where paraquat is most heavily used, shows that accidents and misuse occurs on a fairly regular basis, leading to exposure to farmworkers... And, we note that AB 2113 (Garcia) is now law and DPR will be receiving a much needed infusion of funds to do

these types of reevaluations. Paraquat is relevant and important pesticide for DPR to tackle to meet the concerns expressed by the Legislature in AB 2113."

### **Arguments in Opposition**

A coalition of opponents, including pesticide manufacturers, chemical industry trade associations, and agricultural trade organizations, writes, "...Paraquat has been widely used for decades and has been the subject of more than 1,200 safety studies submitted and reviewed by regulatory authorities around the world demonstrating its safety and safe use. AB 1963 ignores the thorough and independent regulatory review of paraquat and overrides the [DPR's] scientific decision making. The bill requires a formal reevaluation of paraquat by 2029, regardless of the department's views on whether a formal reevaluation is necessary. This requirement preempts the [DPR's] current, additional review of paraquat safety. This bill is being considered only shortly after AB 2113, a major new increase in the pesticide mill taxes to better fund DPR and ensure it undertakes timely reevaluations was negotiated with agricultural groups. It is significant to note that new revenues authorized in AB 2113 cannot be used for reevaluations. Therefore, the provisions of AB 1963 would constitute a significant fiscal impact on DPR and delay critical product reviews."

### **FISCAL COMMENTS**

According to the Senate Appropriations Committee, enactment of this bill could result in ongoing costs of \$214,000 annually to DPR to support one position for work on the reevaluation of paraquat, and in potential ongoing forgone revenue in the thousands of dollars annually due to a reduction in registration and renewal fees in the mill assessment collected by DPR for pesticide products that contain paraquat.

### **VOTES:**

#### **ASM ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: 5-2-0**

**YES:** Garcia, Connolly, McKinnor, Papan, Reyes

**NO:** Hoover, Ta

#### **ASM APPROPRIATIONS: 11-4-0**

**YES:** Wicks, Arambula, Bryan, Calderon, Wendy Carrillo, Mike Fong, Grayson, Haney, Hart, Pellerin, Villapudua

**NO:** Sanchez, Dixon, Jim Patterson, Ta

#### **ASSEMBLY FLOOR: 46-16-18**

**YES:** Addis, Alvarez, Arambula, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Juan Carrillo, Wendy Carrillo, Connolly, Mike Fong, Friedman, Gabriel, Garcia, Haney, Hart, Jackson, Jones-Sawyer, Kalra, Lee, Low, Lowenthal, Maienschein, McCarty, McKinnor, Muratsuchi, Ortega, Pacheco, Papan, Pellerin, Quirk-Silva, Ramos, Rendon, Reyes, Santiago, Schiavo, Ting, Ward, Weber, Wicks, Wood, Zbur, Robert Rivas

**NO:** Alanis, Chen, Davies, Dixon, Flora, Vince Fong, Gallagher, Hoover, Lackey, Jim Patterson, Joe Patterson, Sanchez, Ta, Villapudua, Waldron, Wallis

**ABS, ABST OR NV:** Aguiar-Curry, Bains, Cervantes, Megan Dahle, Essayli, Gipson, Grayson, Holden, Irwin, Mathis, Stephanie Nguyen, Petrie-Norris, Luz Rivas, Rodriguez, Blanca Rubio, Soria, Valencia, Wilson

**SENATE FLOOR: 29-8-3**

**YES:** Allen, Archuleta, Ashby, Atkins, Becker, Blakespear, Caballero, Cortese, Dodd, Durazo, Eggman, Glazer, Hurtado, Laird, Limón, McGuire, Menjivar, Min, Newman, Padilla, Portantino, Roth, Rubio, Skinner, Smallwood-Cuevas, Stern, Umberg, Wahab, Wiener

**NO:** Dahle, Grove, Jones, Nguyen, Niello, Ochoa Bogh, Seyarto, Wilk

**ABS, ABST OR NV:** Alvarado-Gil, Bradford, Gonzalez

**UPDATED**

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