



Paraquat Dichloride
Interim Registration Review Decision
Case Number 0262

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Approved by: _____

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I. INTRODUCTION

This document is the Environmental Protection Agency's (EPA or the Agency) Interim Registration Review Decision (ID) for paraquat dichloride (PC Codes 061601 and 061603, case 0262), herein referred to as paraquat. In a registration review decision under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Agency determines whether a pesticide continues to meet FIFRA's registration standard.¹ Where appropriate, the Agency may issue an interim registration review decision before completing a registration review.² Among other things, the interim registration review decision may determine that new risk mitigation measures are necessary, lay out interim risk mitigation measures, identify data or information required to complete the review, and include schedules for submitting the required data, conducting the new risk assessment and completing the registration review.³ For more information on paraquat, see EPA's public docket (EPA-HQ-OPP-2011-0855) at www.regulations.gov.

FIFRA⁴ mandates the continuous review of existing pesticides. All pesticides distributed or sold in the United States must be registered by EPA based on scientific data showing that they will not cause unreasonable adverse effects to human health or to the environment when used as directed on product labeling. In 2006, the Agency began implementing the registration review program. EPA will review each registered pesticide every 15 years. Through the registration review program, the Agency intends to verify that all registered pesticides continue to meet the registration standard as the ability to assess and reduce risk evolves and as policies and practices change. By periodically re-evaluating pesticides as science, public policy, and pesticide-use practices change, the Agency ensures that the public can continue to use products in the marketplace that do not present unreasonable adverse effects. For more information on the registration review program, see <http://www.epa.gov/pesticide-reevaluation>.

The Agency is issuing an ID for paraquat so that it can (1) move forward with aspects of the registration review that are complete and (2) implement interim risk mitigation (see Appendices A and B). EPA is currently working with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to improve the consultation process for national threatened and endangered (listed) species for pesticides under the Endangered Species Act (ESA).⁵ The Agency has not yet fully evaluated paraquat's risks to federally-listed species. However, EPA will complete its listed-species assessment and any necessary consultation with the Services before completing the paraquat registration review. Before completing registration review, EPA will also complete endocrine screening for paraquat under the Federal Food, Drug, and Cosmetic Act (FFDCA).⁶

Paraquat is a fast-acting, non-selective herbicide used for the control of broadleaf and grass weeds in agricultural and non-agricultural use sites. It also functions as a plant growth regulator (PGR), most commonly as a desiccant. Paraquat is a contact herbicide that inhibits

¹ Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) § 3(g), 7 U.S.C. § 136a(g); 40 C.F.R. § 155.57.

² 40 C.F.R. §§ 155.56, 155.58.

³ 40 C.F.R. § 155.56.

⁴ As amended by the Food Quality Protection Act (FQPA) of 1996, Pub. L. No. 104-170, 110 Stat. 1489.

⁵ Endangered Species Act (ESA) § 7, 16 U.S.C. § 1536.

⁶ Federal Food, Drug, and Cosmetic Act (FFDCA) § 408(p), 21 U.S.C. § 346a(p).

pesticide handler. Respirator fit tests are currently required by the Occupational Safety and Health Administration (OSHA) for other occupational settings to ensure proper protection.²²

If an applicator opted to make lower acreage applications with an enclosed cab rather than a respirator, they might incur the additional cost of purchasing a sprayer with an enclosed cab or hire a commercial firm to make the application, which could also increase application costs.

If an applicator was unable to make lower acreage applications with a PF10 respirator or an enclosed cab, they could use an alternative herbicide, which could increase treatment costs.

7. Prohibit Mechanically Pressurized Handguns and Backpack Sprayers

For mechanically pressurized handguns, the dermal MOEs range from 12 to 24 and the inhalation MOEs range from 13 to 16. For backpack sprayers, the dermal MOEs range from 21 to 190 and the inhalation MOEs range from 40 to 1,300. To fully mitigate potential risks to occupational handlers (mixers, loaders, and applicators) from mechanically pressurized handguns and backpack sprayers, the Agency has determined it necessary to prohibit these application methods.

Impacts of Prohibiting Mechanically Pressurized Handguns and Backpack Sprayers

Because of the small acreage and often difficult terrain of non-agricultural use sites, it is likely that applications to these sites would be made via handheld equipment. In areas where a backpack sprayer or mechanically pressurized handgun would be most useful, an applicator would have to choose a different active ingredient if applications of paraquat were not permissible using this equipment type. Because paraquat is usually cheaper than most other herbicide alternatives, switching to an alternative herbicide would likely result in increased operating costs for non-agricultural weed control.

According to the available usage data, spot treatments were not reported for the PGR use of paraquat and make up less than 2% of the herbicide applications of paraquat. Assuming that small area treatments potentially made with mechanically pressurized handguns or backpack sprayers are captured in spot treatment data, it does not appear that this mitigation would impact a significant number of acres treated with paraquat. While this application method may be critical for certain use sites, there are many alternatives available.

8. Require 48-hour Restricted Entry Interval for All Crop Uses Except for Cotton Desiccation

Paraquat is classified as Acute I for acute dermal, eye irritation, and primary skin irritation. As such, a 48-hour REI is required under the Worker Protection Standard.²³ Current REIs range from 12 to 24 hours and workers do not typically need to re-enter paraquat treated areas less than 2 days after application.

²² 29 CFR § 1910.134

²³ <https://www.epa.gov/sites/production/files/2016-02/documents/chap-10-feb-2016.pdf>