

Paraquat Mitigation Measures Approved by EPA

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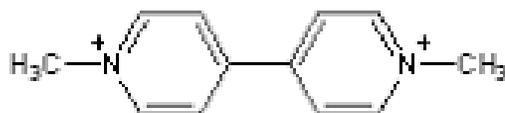


Figure 1. Chemical structure of paraquat.

The U.S. Environmental Protection Agency (EPA) has announced its final decision regarding proposed mitigation measures for the herbicide active ingredient paraquat (i.e. dichloride salt of paraquat, ortho paraquat CL, paraquat dichloride) due to increased human health concerns. Paraquat was first registered in 1964 in the US for weed control and crop desiccation; however, it is categorized as highly toxic through all routes of exposure by EPA where as little as one sip can be lethal with no known antidote. Many human poisonings through the ingestion of paraquat, either accidental or intentional, have been reported to EPA from poison control centers, product registrants, health agencies, environmental agencies and individual consumers. See Table 1 for a list of pesticide products containing paraquat.

Some Pesticide Products Containing Paraquat	
Blanco®	Bonedry®
Cyclone SL 2.0®	Devour®
Firestorm®	Gramoxone SL 2.0®
Helmquat 3SL®	Para-Shot 3.0®
Paraquat Concentrate®	Willowood Paraquat 3 SL®

Table 1. Pesticide Products Containing Paraquat

EPA has ordered the following measures to adequately protect applicators and the public.

1. Label changes emphasizing paraquat toxicity and supplemental warning materials.
2. Targeted training materials for paraquat users.
3. Closed-system packaging for all non-bulk (< 120 gallon) end use containers of paraquat.
4. Restricting the use of all paraquat products to certified applicators only.

Prohibiting the use of handheld or backpack sprayers (when applying paraquat) was considered, however due to compelling public comments EPA is permitting the continued use of handheld and backpack equipment if use complies with new closed-system packaging requirements and contains a dye to aid in early detection of leaks and spills.

Label Changes. EPA is requiring updated label language and supplemental warning statements including: 1) highlighting ingestion risk and clarifying toxicity statements, 2) targeted paraquat training statements, and 3) statements designating paraquat products to only be handled by certified applicators. Paraquat products sold/distributed by pesticide manufacturers shall contain these updated label statements no later than 12 months after the “label stamped date” by EPA. This is a variable deadline, however this transition will likely take place prior to the 2019 field season (See *).

Supplemental Warning and Toxicity Statements. EPA is requiring supplemental warning statements consisting of: 1) a warning sticker affixed to the cap of all paraquat containers with the text “DANGER-ONE SIP CAN KILL” accompanied by the image of a skull and crossbones; 2) a “product package safety requirements sticker” reiterating important warning statements to be affixed to the opposite side of the label; and (3) a product warning handout called a “counter card reiterating the same important warning information to be distributed with every paraquat container. All the supplemental warning materials must feature these messages in English, Spanish, and pictogram format.

Targeted Paraquat Trainings. EPA is requiring all applicators who handle paraquat to take an EPA-approved paraquat training program when indicated on the new product label. EPA-approved paraquat training programs must provide information on: (1) paraquat toxicity; (2) a summary of the new label requirements; (3) consequences and examples of misuse of paraquat; (4) how to apply paraquat; (5) what to do in case of accidental exposure, and (6) appropriate handling, storage, disposal, and personal protective equipment requirements and instructions. The paraquat training program will be available via an internet link included on all paraquat end-use labels. All persons handling paraquat are expected to take the training every three years and retain documentation of successful completion.

Certified Applicators Only. Paraquat products are only to be used or handled by certified applicators who have met certified applicator competency standards established by states, tribal, and federal agencies. They are not to be used by uncertified individuals working under the supervision of a certified applicator. The statement shall read “to be used by certified applicators only – not to be used by uncertified persons working under the supervision of a certified applicator”.

Closed System Standards. EPA is requiring all paraquat non-bulk (less than 120 gallon) end use product containers sold or distributed by product registrants comply with EPA-approved closed system standards no later than 12 months after the EPA label stamp date. This is variable, but final deadline likely after September 2020 (See *). The closed system packaging for paraquat products must be engineered so paraquat can only be removed from the container using closed system technology.

****Dealers may continue to sell and applicators may use existing stocks of paraquat products with the previously approved labeling until such stocks are exhausted. Always follow the product label requirements attached to the product container.***

Additional paraquat information can be found on the [EPA website](#) or see the [EPA Paraquat Mitigation Decision and Amendments](#). Contact the paraquat product registrant for more information on available trainings and exact implementation timeline. For additional paraquat regulatory information contact a [Montana Department of Agriculture field agent](#) or Cecil Tharp, MSU Pesticide Education Specialist (406-994-5067; ctharp@montana.edu) with general paraquat questions.