

**For Immediate Release**  
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Paraquat: Review Label Requirements  
Wilma Trujillo

Paraquat is the active ingredient in herbicides such as Gramoxone SL 2.0. Paraquat is a widely used broad-spectrum herbicide. It is a quick acting, non-selective compound (Group 22, Photosystem electron diverters), that destroys green plant tissue on contact and by translocation within the plant. It is also used as a crop desiccant/defoliant and as an aquatic herbicide. Paraquat continues to be a great tool for managing weeds, especially those that are resistant to other herbicides, but special precautions must be taken due to its toxicity.



Paraquat is extremely toxic to humans. For this reason, products containing paraquat are restricted use, meaning an applicator license is required to purchase, store and use the product. Since 2000, there have been 17 deaths, three involving children, caused by accidental ingestion of paraquat. These cases have resulted from the pesticide being illegally transferred to beverage containers and later mistaken for a drink and consumed. In addition to the deaths by accidental

ingestion, there have been three deaths and many severe injuries caused by the pesticide getting onto the skin or into the eyes of those working with the herbicide. The oral LD50 (lethal dose for 50% of the population) for humans is 3-5 mg/kg, which is roughly equal to 0.4 fluid ounces (1/200<sup>th</sup> cup) of paraquat for a 200-pound person.

Based on the high number of human health incidents associate with the herbicide, the Environmental Protection Agency (EPA) determined the following risk mitigation measurements were necessary for the herbicides containing paraquat to meet the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA):

1. Label changes emphasizing paraquat toxicity and supplemental warning material
2. Required targeted training for paraquat users
3. Close-system packing for all no-bulk (less than 120 gallon) end use product containers of paraquat
4. Restricting the use of all paraquat products to certified applicators



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**EXTENSION**

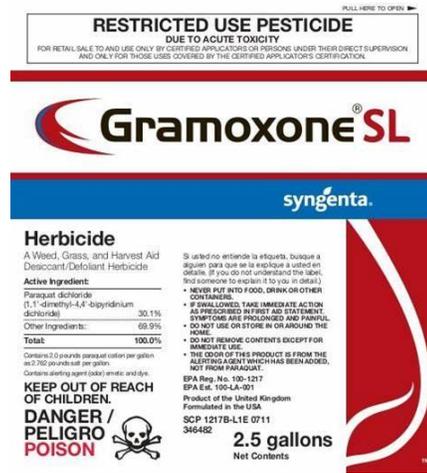
## County Extension Offices

**Logan County**  
508 South 10<sup>th</sup> Avenue  
Sterling, CO 80751  
970-522-3200

**Morgan County**  
914 East Railroad Avenue  
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only. This now prohibits the use by uncertified person working under the supervision of a certified applicator.

EPA is requiring all applicators who handle paraquat to take an EPA-approved paraquat training program every 3 years in order to **mix, load, apply, or handle paraquat**. You should expect to spend about 60 minutes on the course and the assessment quiz. Once the certified applicator successfully completes the training, a certificate will be automatically generated. Per the new labeling, applicators are required to retain certificates of training completion and the certificate should be made available to a CDA inspector, if requested. The required training is available via internet (i.e. <https://npsec.us/paraquat>) and provide important information about (1) paraquat's toxicity, (2) new label requirements and restrictions, (3) the consequences and examples of misuse, (4) how to apply paraquat with various application methods, (5) what to do in case of accidental exposure and (6) appropriate handling, storage, disposal and personal protection equipment (PPE).



Personal protective equipment **MUST** be worn when using paraquat-containing herbicides. Applicators should note that the required PPE may differ for applicators and mixers/loaders. Table 1 is an example of how the PPE requirements may differ depending on the task.

**Table 1. Summary of required PPEs for paraquat applicators and mixers/loaders.**

| Handler/Applicator   | Mixer/Loader  |
|--|---|
| <ul style="list-style-type: none"> <li>• Long sleeved shirt and long pants</li> <li>• Shoes plus socks</li> <li>• Protective eyewear</li> <li>• Nitrile, rubber, neoprene, PVC or other Class A chemical resistant gloves</li> <li>• Respirator with N, R, P or HE filter</li> </ul> | <ul style="list-style-type: none"> <li>• Long sleeved shirt and long pants</li> <li>• Shoes plus socks</li> <li>• Protective eyewear</li> <li>• Nitrile, rubber, neoprene, PVC or other Class A chemical resistant gloves</li> <li>• Respirator with N, R, P or HE filter</li> <li>• Chemical resistant apron</li> <li>• Face shield</li> </ul> |

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