Paraquat Update

Colton Bond, Oregon Department of Agriculture
April 8, 2021
Background

• First registered in 1964.

• Contact Herbicide & Desiccant

• All paraquat products are Restricted Use (RUPs).
<table>
<thead>
<tr>
<th>Name</th>
<th>EPA/State Reg. No.</th>
<th>Registrant Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARAZONE 3 SL HERBICIDE</td>
<td>5481-615</td>
<td>AMVAC CHEMICAL CORP</td>
</tr>
<tr>
<td>PURGATORY 3SL</td>
<td>91234-87</td>
<td>ATTICUS LLC</td>
</tr>
<tr>
<td>DREXEL QUIK-QUAT</td>
<td>19713-617</td>
<td>DREXEL CHEMICAL COMPANY</td>
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<tr>
<td>HELMQUAT 3SL</td>
<td>74530-48</td>
<td>HELM AGRO US, INC.</td>
</tr>
<tr>
<td>DEVOUR</td>
<td>89167-24-89391</td>
<td>INNVICTIS CROP CARE LLC</td>
</tr>
<tr>
<td>PARAQ</td>
<td>34704-1117</td>
<td>LOVELAND PRODUCTS INC / CROP PRODUCTION SVCS</td>
</tr>
<tr>
<td>FIRESTORM HERBICIDE</td>
<td>82557-1-400</td>
<td>MACDERMID AG SOLUTIONS INC</td>
</tr>
<tr>
<td>PARAZONE 3SL HERBICIDE</td>
<td>66222-130</td>
<td>MAKHTESHIM AGAN NORTH AMERICA</td>
</tr>
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<td>66222-130</td>
<td>MAKHTESHIM-AGAN NA DBA ADAMA</td>
</tr>
<tr>
<td>PARAQUAT 43.2% SL</td>
<td>85678-58</td>
<td>REDEAGLE INTERNATIONAL LLC</td>
</tr>
<tr>
<td>PARA-SHOT 3.0</td>
<td>83529-27</td>
<td>SHARDA USA LLC</td>
</tr>
<tr>
<td>BONEDRY</td>
<td>82557-1</td>
<td>SINON USA</td>
</tr>
<tr>
<td>SOLERA PARAQUAT CONC</td>
<td>82542-3</td>
<td>SOURCE DYNAMICS</td>
</tr>
<tr>
<td>CYCLONE SL 2.0 HERBICIDE</td>
<td>100-1431</td>
<td>SYNGENTA CROP PROTECTION, INC.</td>
</tr>
<tr>
<td>GRAMOXONE SL 2.0 HERBICIDE</td>
<td>100-1431</td>
<td>SYNGENTA CROP PROTECTION, INC.</td>
</tr>
<tr>
<td>GRAMOXONE SL 3.0</td>
<td>100-1652</td>
<td>SYNGENTA CROP PROTECTION, INC.</td>
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<tr>
<td>TIGRIS PARAQUAT 3SL</td>
<td>92647-12</td>
<td>TIGRIS LLC</td>
</tr>
<tr>
<td>WILLOWOOD PARAQUAT 3SL</td>
<td>87290-35</td>
<td>WILLOWOOD, LLC -USA-</td>
</tr>
</tbody>
</table>
What is Prompting Changes?

More than 80% of paraquat fatality cases reported by registrants were due to ingestion of the product.

- In 2013, a 70-year-old female ingested some contents of a re-used iced tea bottle that contained paraquat,
- In 2010, a 44-year-old male mistakenly drank paraquat, which he thought was fruit juice.
- In 2008, an 8-year-old boy drank paraquat that had been put in a Dr. Pepper bottle.
- In 2003, a 49-year-old male took a sip from his coffee cup in which he had poured paraquat because the product’s bottle was deteriorating.
- In 2000, a 15-month-old boy ingested paraquat that had been transferred into a Gatorade container.
- In 2000, an 18-month-old boy ingested an unknown amount of paraquat solution from a bottle found in his father’s landscaping truck.
Recent Regulatory History

- **December 2016** – EPA Human Health Mitigation Decision

- **March 2019** – Special Training Available

- **November 2019** – Labeling changes implemented

- **September 30, 2020** –
  - Closed system;
  - Additional label restrictions proposed

- **January 11, 2021** – Comment period closes on proposed label restrictions
### Label Changes

- **Supplemental warning materials**
  - Warning Box on back panel
  - Counter card
  - Warning sticker

### Product Package Safety Requirements

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEVER TRANSFER THIS PRODUCT INTO FOOD OR BEVERAGE CONTAINERS OR CONTAINERS NOT EXPLICITLY INTENDED FOR PESTICIDES.</td>
<td>NUNCA TRANSFERA ESTE PRODUCTO A RECIPIENTES PARA COMIDA O DE BEBIDAS O RECIPIENTES NO EXPÍCLITAMENTE PREVISTOS PARA PLÁGUICIDAS</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
<tr>
<td>ONE SIP CAN KILL.</td>
<td>UN SORBO PUEDE CAUSAR LA MUERTE.</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
<tr>
<td>CONTACT WITH SKIN MAY RESULT IN POISONING.</td>
<td>EL CONTACTO CON LA PIEL PUEDE CAUSAR ENVENENAMIENTO.</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
<tr>
<td>EXPOSURE TO EYES MAY CAUSE SUBSTANTIAL EYE INJURY.</td>
<td>EXPOSICIÓN A LOS OJOS PUEDE CAUSAR LESIONES SUSTANCIALES EN LOS OJOS.</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
<tr>
<td>PARAQUAT SHOULD ALWAYS BE STORED TIGHTLY CLOSED IN ORIGINAL CONTAINER, AND IN A LOCKED PLACE AWAY FROM CHILDREN AND ANIMALS.</td>
<td>EL PARAQUAT DEBE ALMACENARSE SIEMPRE CERRADO EN SU RECIPIENTE ORIGINAL, Y EN UN LUGAR CERRADO, ALEJADO DE NIÑOS Y ANIMALES.</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
<tr>
<td>READ ENTIRE LABEL PRIOR TO USING THIS PRODUCT.</td>
<td>LEA LA ETIQUETA COMPLETA ANTES DE USAR ESTE PRODUCTO.</td>
<td><img src="danger.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Label Changes Cont’d

• Use limited to certified applicators only (no supervision)

• Training requirement

**2.2.4 ADDITIONAL CERTIFIED APPLICATOR Paraquat Dichloride Training**
Applicators must complete an EPA-approved paraquat training listed on the following Website: [https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators](https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators). The training must be completed a minimum of every three years.

• Registrants may only distribute products with updated labels after Nov. 14, 2019.
Special Training

• Label-mandated

• Required every 3 years

• Focuses on:
  • Paraquat Concerns, Health Effects, & First Aid
  • PPE, Application, & Storage
  • Product Labels & Regulatory Changes
Special Training Cont’d

• Training accessible online here: USParaquatTraining.com

• ~60 minutes

• Final exam
Closed-System

- Prevents spills, and placement of paraquat in inappropriate containers.

- Closed-system packaging for non-bulk containers (<120 gallons)


- Demo Video (Syngenta): https://youtu.be/duP0ThvnEAM

Who Must Comply with New Requirements?

• Those using paraquat products with the updated labeling.

• “use” includes:
  • pre-application activities involving mixing and loading the pesticide;
  • applying the pesticide;
  • and other pesticide-related activities, including, but not limited to, transporting or storing opened pesticide containers, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other paraquat-containing materials.
Sale/Use of Existing Stock?

- Pesticide registrants can no longer distribute paraquat products with old-labeling or that don’t meet closed-system requirements.

- Existing stocks of old-labeled products may be:
  - Sold by dealers until stock is exhausted, and
  - Used according to the label directions.
Additional Label Changes (Proposed)

EPA proposed mitigation measures include:

• Prohibiting aerial application for all uses (except cotton desiccation);

• Limiting the single application maximum rate for alfalfa to 1.0 lb active ingredient per acre;

• Requiring enclosed cabs for applications to more than 80 acres in a 24-hour period;

• Requiring PF10 respirators or enclosed cabs for applications to 80 acres or less in a 24-hour period;

• Prohibiting the use of mechanically pressurized handguns and backpack sprayers;

• Requiring a 48-hour Restricted Entry Interval for all crop uses (except for cotton desiccation); and

• Requiring mandatory spray drift management measures.
Additional Label Changes (Proposed)

EPA proposing:

• Add language that will allow truck drivers who are not certified applicators to transport containers of paraquat that have been opened, provided certain conditions are met.

• EPA is currently considering the following conditions:
  • Containers have resealable opening,
  • Opening must have tamper-evident device installed by a certified applicator (e.g. one-way valve),
  • No contact or access to paraquat,
  • Understands risks associated with paraquat.
Thank You!

Colton Bond
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