

## **Pesticide Poisonings and Future Pesticide Education Events**

*Amy Bowser, MSU Pesticide Education Program*

*Dr. Cecil Tharp, MSU Pesticide Education Program*

Pesticides save the Montana agricultural industry millions of dollars and if used properly present little risk to humans and/or the environment. There are still many reports of pesticide applicators not reading and following the entire pesticide product label; likely due to the proliferation of low toxicity pesticide products on the market today. This increases the potential for many types of misuse including pesticide poisonings which threaten individuals and may place a valuable management tool at risk of de-registration.

Pesticides were the ninth leading cause of poisoning in the US in 2015 according to the American Association of Poison Control Centers (AAPCC). Most poisonings were due to a lack of regard for regulations by the applicator including not reading and following the label, giving away pesticides to non-qualified applicators and transferring pesticides to non-labeled containers. Many pesticide poisonings were from herbicides containing paraquat and aluminum phosphide fumigants, both used across Montana for managing pests.

### **Paraquat Poisonings & EPA Use Revisions**

Paraquat products are commonly used in Montana for use as crop desiccants or as a substitute for managing glyphosate resistant weeds. Applicators should be aware that this important management tool is extremely toxic at extremely low doses with no known antidote. Some examples of paraquat products:

Blanco	Paraquat Concentrate
Bonedry	Parazone 3SL
Devour	Firestorm
Gramoxone SL	Willowwood Paraquat 3SL

The EPA has announced new restrictions for the use of products containing the herbicide active ingredient paraquat dichloride (otherwise referred to as “paraquat”), which has caused multiple pesticide poisoning incidents since 2000. Seventeen of the incidents were from the pesticide being transferred to beverage containers which were later ingested. Additionally, three deaths and multiple injuries were caused by paraquat contact with skin or eyes.

The revisions include restricting paraquat use to only certified applicators. Individuals working under the supervision of a certified applicator will not be allowed to handle the pesticide. The pesticide will also come in closed-system packaging designed to eliminate the possibility of transferring the pesticide to non-labeled containers. Finally, any individuals interested in using paraquat must hold a restricted use license and attend a special paraquat training.

### **Initial Training Opportunities**

Individuals wishing to apply restricted use products, including paraquat, or individuals with questions regarding pesticides may attend an MSU Extension private pesticide applicator initial certification program. MSU Extension is offering multiple private applicator training opportunities in the winter/spring of 2017.

Each program is designed to certify pesticide applicators to apply restricted use pesticides to land they own, rent, or lease. Certification not only includes education on pesticide toxicity, as well as instruction on how to read the pesticide label, but also covers topics including pesticides in the environment, calibration, laws, safety and integrated pest management.

Courses are located in Chester on February 1, Kalispell on March 7, Harlowton on March 9, and Lame Deer on March 29. Current private pesticide applicators may attend to receive private pesticide recertification credits for attending the session. Interested applicators can obtain more information and register for these events at the following website: <http://www.pesticides.montana.edu/pat/education/initial-PAT.html>.

## **Fumigant Poisonings & the Fumigant Training Tour**

Aluminum phosphide and magnesium phosphide products (i.e. Phostoxin, Fumitoxin) are used extensively across Montana for managing insects and/or rodents. This important management tool is effective in saving the Montana agricultural industry money if used properly; however fumigant applicators are urged to attend a fumigant education class due to the high toxicity of these products.

Nine cases of phosphine pesticide death occurred from 2010 to 2015 according to the American Association of Poison Control Centers and four more occurred early in 2017. Two of these were children in Utah who died from inhalation of phosphine gas from a commercial pesticide application of aluminum phosphide near their home in 2010. Early this year four children were killed and five people were hospitalized due to the misuse of aluminum phosphide at their home in Texas. These incidents occurred because of applicators not reading and understanding the pesticide product label and a general lack of knowledge regarding the proper use of high risk fumigants. The Utah incident caused the EPA to implement tighter restrictions on phosphine fumigants including more detailed fumigant management plans, mandatory monitoring equipment and buffers around occupied structures.

Applicators who are interested in using and learning more about how to apply fumigants may attend the Fumigation Training Tour. Locations include Malta on February 21, Lewistown on February 22 and in Choteau on February 23. Applicators may obtain more information and register for these events at the following website: <http://www.pesticides.montana.edu/pat/education/index.html>. Continuing education credits will be offered for commercial and private applicators in the following categories: Private (6 credits), Dealer (6 credits), Seed Treatment (6 credits), Demo & Research (6 credits), Ag. Plant Pest (4 credits), Ag. Vertebrate Pest (2 credits), and Rodent (2 credits).

## **Reducing Pesticide Exposure**

There are several ways a pesticide applicator can reduce their risk of pesticide exposure. Reading and following the label and wearing proper personal protective equipment when handling pesticides will greatly reduce your pesticide exposure. Additionally, attending pesticide education courses hosted by your local county extension offices and the MSU PEP is a great way to learn more about applying pesticides correctly. For more information on pesticides and how to use them appropriately please contact your local county extension office or the MSU Pesticide Education Program at [pesticides@montana.edu](mailto:pesticides@montana.edu) or (406) 994-5067. Please visit the MSU PEP website for pesticide information and resources at [www.pesticides.montana.edu](http://www.pesticides.montana.edu).