

Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

Department of Entomology
123 West Waters Hall
K-State Research and Extension
Manhattan, Kansas 66506
785-532-5891
<http://blogs.k-state.edu/kansasbugs/>
<http://www.entomology.ksu.edu/extension>



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Proper Pesticide Use: Why Should an Applicator Care?

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The label is the law. Most pesticide applicators are familiar with that phrase. Yet, pesticides are sometimes used in ways that are inconsistent with product labels. Examples may include using a product on a site that is not labeled, using a rate greater than labeled, using an application method that is not labeled, and many others. Sometimes, pesticides have similar active ingredients, but different formulations. Using a formulation that is not labeled for a particular site is also a misuse. Even though the off-label practice seems harmless at the time, doing so may have unintended consequences, including additional limitations on pesticides. The pesticide toxicity and amount of exposure affects the amount of risk to human health. Remember pesticides are designed to kill certain organisms (insect, weeds, and diseases) and therefore have a degree of toxicity which could cause harm to humans. Label directions are written to minimize risks for applicators, bystanders, and the environment. The following paragraphs will explain why applicators should prioritize reading and following pesticide labels.

First, instructions ensure the health and safety of applicators, handlers, and others. Pesticides can enter the body through ingestion, inhalation, or absorption through the skin. It is important to use personal protective equipment to limit exposure to applicators and handlers, as well as others with whom they come in contact. Sanitation practices, such as washing your hands after an application are also important to reduce exposure to others.

Second, instructions ensure food and feed products are safe for use. Pesticides are extensively tested to determine the amount of exposure which is safe for consumers. Pesticides that are applied to a site not listed on the label can result in residues on our food, crops, air and in our water. Also, applying pesticides before labeled harvest intervals or crop rotation intervals could result in pesticide residues at harvest that are not safe for consumers. If pesticide residues are detected at levels that are too great, or if they are detected on crops for which the product is not labeled, economic losses could occur, as well as stricter regulations in the future.

Third, instructions ensure protection for the environment. Misapplications can increase the amount of pesticides in the environment, negatively affecting non-target organisms, such as plants, insects, reptiles, birds, fish, and mammals, which alters food webs and other aspects of ecosystems. It is important to follow label requirements that limit water contamination and other forms of off-target movement, because pesticide detections in environmental samples could result in additional regulations in the future. These types of restrictions are likely to increase as the Environmental Protection Agency begins to comply with the requirements of the Endangered Species Act.

Kansas Insect Newsletter

May 5, 2023 #3

Fourth, instructions ensure agronomic and economic success. It can be tempting to increase pesticide rates, but applying rates that are greater than labeled increases costs, as well as the risk of crop injury. Instructions for things like application timing, adjuvant selection, tank mix partners, and mixing order are intended to make sure applications do not have negative consequences such as incompatibility in the spray tank, crop injury, or carryover. Instructions about weather or equipment restrictions are often intended to reduce off-target movement, which can negatively affect the environment, as discussed in the previous paragraph, but can also cause injury to neighboring crops. In addition, labels include instructions to help manage pesticide resistance. These are critically important to ensure the effectiveness of products in the future.

The agrichemical industry spends hundreds of millions of dollars to develop pesticides, as well as the data to prove they can be used safely. It is the users' responsibility to follow label directions and take care to handle products in ways that ensure safe use. This is one of the most important steps to take to protect the well-being of our families and communities and ensure access to pesticides in the future.

Frannie Miller – Pesticide Safety and IPM Coordinator

HOME

Sincerely,

Frannie Miller
Pesticide Safety & IPM Coordinator
Kansas State University
600 W. Woodside
McPherson, KS 67460
Phone: (620) 241-1523
Fax: (620) 241-3407
<http://www.ksre.ksu.edu/pesticides-ipm>

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Kansas Insect Newsletter

May 5, 2023 #3

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