Agronomy Profile

Herbicide Drift and Volatility

Overview

To help ensure your herbicide stays where you intend—maximizing not only crop safety but the performance you're expecting in the targeted field—start by understanding drift and volatility.

What you should know

- Drift refers to physical movement of a herbicide.
- Drift occurs when droplets of herbicide are carried by the wind to an adjacent field.[1]
- Particle drift happens when the carriers of a herbicide evaporate quickly and particles of concentrated herbicide are left in the air. Particle drift has the potential to travel many miles to adjacent fields.[1]
- Volatility is related to the chemical composition of the herbicide and how it reacts under certain conditions, including temperature and tank mixes. If the chemistry of the product becomes unstable, the herbicide evaporates into the air, rather than staying on-target.

Action steps

1. **Always follow herbicide label and use directions:** Follow the label closely, including any nozzle and pressure recommendations. Droplet size can be a major factor in drift.
2. **Watch the weather:** You know not to spray when it's windy, but also pay attention to temperature, which can increase volatility for some herbicides. Watch for temperature inversions that can lead to unexpected drift.
3. **Mix carefully:** Not all tank mixes are created equal. Dicamba-based herbicides, for example, restrict mixing with AMS products, because they lower the pH of dicamba, increasing its volatility.
4. **Talk to your neighbors:** Discuss your respective herbicide systems. You don't have to use the same system, but make sure you're both being vigilant to issues of drift and volatility, and open the lines of communication before a crop injury occurs.

[1] Bachie. O. 2013. "Herbicide drift: How to avoid it." Farm Progress.

Understand the drift and volatility profile of your herbicides to maximize performance and reduce risk of off-target movement.

30-Second Summary

- To minimize drift and volatility risks, always follow herbicide label and use directions.
- Understand how factors like weather and application procedures can affect drift and volatility.
- If mixing chemistries, use only qualified tank-mix partners.
- Talk to your neighbors about your respective weed control systems and reducing risk of off-target movement.

NOTES:

For more information, contact:

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