Off-target movement of pesticides

Tips for preventing and responding to off-target movement

THREAT

With many crop protection options available for field crops, it is imperative they are used correctly to ensure they end up on the intended target. Off-target pesticide movement may pose a risk to the environment and neighbouring crops.

Off-target movement refers to the unintentional movement of the pesticide during application. It occurs when droplets or vapours containing the active ingredient are carried away by air currents and transported beyond the intended target area. Be sure to read and follow all label directions.

ACTION

- Diagnose the problem – familiarize yourself with the damage to the crop or adjacent areas. Are there patterns in the field? Is there evidence of spray application nearby? Rule out possible look-alike causes.
- Review sprayer history for possible tank contamination linked with field pattern damage.
- Contact the appropriate people – talk to your neighbour and the sprayer operator.
- Document the details of the problem – collect spray records, take photos, and document any yield loss from the damaged area.
- Report the pesticide incident to the **pesticide company** (see label for a toll-free number) and to **PRMA** by completing the Voluntary Incident Reporting Form.

KEY REMINDERS

- **Read and follow product labels:** Before using any pesticide, carefully read and understand the product labels. Pay close attention to the recommended application rates, wind speed limitations, temperature restrictions, buffer zones, and other instructions specific to the product.
- **Communication:** Talk to your retailer, agronomist, and/or crop protection representative on best management practices for pesticide application.
- **Weather monitoring:** Before planning spray applications, regularly check weather conditions, including wind speed and direction. Avoid spraying during windy or gusty conditions, as this significantly increases the chances of spray drift. Avoid spraying during periods of dead calm and temperature inversions, as spray particles can hang in the air and move to off-target areas.
- **Equipment calibration:** Ensure spraying equipment is calibrated correctly to deliver the correct application rate. Worn nozzles can give wrong application rates and produce more draftable fines resulting in miss application and particle movement. Regularly maintain and inspect your equipment to prevent leaks, clogs, or other issues contributing to drift.
- **Nozzle selection and pressure:** Choose appropriate nozzles for the product and rate you are applying. Larger droplets are less prone to drift and are created by using lower pressure and specific nozzle size. Consider using drift-reducing nozzles or technologies specifically designed to minimize spray drift.
- **Boom height:** Adjust boom height to ensure proper nozzle overlap and spray coverage at the lowest level possible. Lowering boom height to the targeted application site helps to reduce unnecessary spray movement.
- **Cleaning:** Rinse the inside of the tank after use to prevent residual build-up and tank contamination in future applications. Wash the outside of the sprayer before spraying a different crop to prevent damage to sensitive crops.
- **Buffer zones:** Adhere to the buffer zone distances stated on the product label. Maintain adequate buffer zones between treated areas and sensitive areas such as water bodies and other natural areas.
- **Continuous Education:** Stay updated on the latest research, regulations, and best practices related to spray drift management. Attend workshops, training sessions, or consult with agricultural experts to enhance your knowledge and skills.

More information can be found at:

Information sources:
Sprayers 101; www.sprayers101.com
Spray Drift, Ontario Grain Farmer
www.OntarioGrainFarmer.ca/2023/06/01/spray-drift/

Visit www.gfo.ca/agronomy to download.
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