

Drift Mitigation Reminders for Pesticide Applicators

Pesticides are a key tool in pest control, and proper applications are on the forefront of a pesticide applicator's mind. One of the main considerations is the on-target application of pesticides. Pesticide drift is the unintended movement of pesticides from the target area. Why is pesticide drift mitigation important?

Pesticide Drift Can Result In:

- Damage to neighboring crops and property
- Litigation
- Inadequate pest control
- Wasted pesticide
- Negative public perception of pesticides
- Fines and damages to pay for

Types of Drift:

There are two types of pesticide drift that an applicator should understand and work to mitigate: *vapor drift* and *particle drift*. Vapor drift occurs when the pesticide volatilizes during or shortly after the application and the vapors of the pesticide move off-target. Particle drift, the more common type of drift, occurs when spray droplets move off-site at the time of the application.

Spray drift factors

- The pesticide product
- Applicator attitude
- Equipment setup
- Weather conditions



Applicator Attitude

Responsible pesticide applicators should follow good management practices that result in effective pest control with little risk to the environment. Applicators should assess weather conditions and sensitive sites near the application area. Then they should set up equipment properly and ultimately make the decision to spray or not to spray. The applicator needs to read and follow the pesticide label carefully. Applicators should pay attention to product characteristics that might increase the potential for off-target movement.

Proper Equipment Setup:

Properly setting up application equipment can be key to mitigating pesticide drift. Be sure to refer to the pesticide label for specific application requirements to assist in mitigating drift.

- **Nozzle selection**

Select nozzles that provide the coarsest droplets possible while still providing the necessary coverage.

- **Spray pressure**

Avoid higher boom pressures that create more small droplets. Be sure to understand the nozzle requirements on proper boom pressure. Newer nozzle types may require specific applicator pressure to operate at the optimum level.

- **Boom height**

Louisiana requires the spray boom no more than 3 feet above the crop canopy during a ground application and no more than 20 feet above the crop canopy during an aerial application.

- **Application speed**

Ground applicators should consider maintaining operating speeds at less than 15 mph.

- **Drift reduction additives**

Consider using spray additives. Refer to the pesticide label prior to application and use within label requirements.

Be aware of conditions present before and during pesticide applications to mitigate pesticide drift. Be sure to set up application equipment to mitigate pesticide off-target movement. Do your best to keep your pesticide applications on-target! Be sure to read and follow label direction of the pesticide product that you are using. Understand drift potential and make adjustments. Consider a tank additive to reduce drift potential. Take the time to properly set up your application equipment. Prior to an application assess sensitive areas near the application zone and assess weather conditions. Make the decision to spray or not to spray.

Weather Conditions That Impact Spray Drift:

Applicators should assess weather conditions to make the best choice possible concerning whether to spray or not to spray.

- **Wind speed and direction**

Applications should ideally be made when there is a predictable wind between 3 and 10 miles per hour. Determine nontreated buffer zones or nontreatment areas to protect neighboring fields or sensitive areas from off-target pesticide movement.

- **Humidity and temperature**

Higher temperatures and lower humidity can cause some pesticides to evaporate and the droplets to become smaller. Refer to pesticide labels for specific application requirements.

- **Temperature inversions**

Do not make applications during a temperature inversion. Temperature inversions tend to occur in calm air and are very common in early morning, late afternoon and near bodies of water.

References

Brown, K. "What is an Air Temperature Inversion?" (Publication 3645, LSU AgCenter)

PSEP, LSU AgCenter. "Drift Mitigation for Pesticide Applicators", Instructional Video, 2019. (<https://youtu.be/7nGUN0DG564>)

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