

MITIGATING HERBICIDE DAMAGE TO SPECIALTY CROPS



Drifted? Action Plan Response to Pesticide Drift Damage

Herbicides, insecticides and fungicides are considered pesticides and are all commonly used in agricultural and landscape operations. Unfortunately, when applying pesticides there is a chance that some drift will occur from the target area to areas where it is not needed or wanted. Pesticide drift into nontarget areas has many negative effects including:

Injury to off-target plants

Off-label application of pesticides resulting in one not being able to safely consume a crop

Complete production loss

If you suspect pesticide drift, how do you investigate, communicate and document it?

If you suspect pesticide drift, you should investigate, communicate, document and consider reporting the incidence. Below are steps of a proposed action plan.

Investigate

Many vegetable and fruit crops are sensitive to chemicals such as 2,4-D and dicamba. Depending on your operation, becoming familiar with identifying symptoms and damage at different stages (days) after potential drift is key. Review our publication [Mitigating Herbicide Damage To Specialty Crops: Herbicide Drift](#) for more information on how to identify symptoms of herbicides in vegetable crops.

When investigating damage to your crop, take pictures and write detailed notes. This will help outside investigators determine the cause.

Communicate

Communication should happen at different levels.

- **Communicate within your operation** – Discuss your concerns with your employees, business partners and/or family members. Cases of misuse of chemicals are common in vegetable and fruit operations and should

not be automatically eliminated. Rule out alternative explanations that may cause plant damage or injury. An example would be if your employee watered in newly set transplants with the same tank you use for herbicide applications.

- **Communicate with neighbors** – Talk to owners and operators of neighboring properties and rule out other possible causes of the observed damage. Avoid direct accusations as your neighbor may not be the source of drift damage.
- **Communicate with your support network** – Discuss your concerns with your insurance agent, extension agent and local Louisiana Department of Agriculture and Forestry (LDAF) inspector.

If the cause of the drift cannot be identified or if communication is not an option, you may consider a formal, written complaint. If a written or verbal complaint of pesticide drift is submitted to LDAF an investigation will occur.

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File Complaints with LDAF

Website – www.ldaf.la.gov

Email – pesticides@ldaf.state.la.us

Phone (Pesticide Division) – 225-925-3763

Proactive Measures

- **Liability coverage** – Many farms carry a limited amount of liability coverage, and in case of ordinary negligence, this may cover your losses.

NOTE: Noninsured Crop Disaster Assistance program (NAP insurance coverage) does not cover herbicide drift complaints, unless a prohibited pesticide was drifted onto a certified organic plot. Coverage is determined on a case-by-case basis. For more information, visit www.fsa.usda.gov/resources/programs/noninsured-crop-disaster-assistance-related-information.

- **Communication** – Speak to your neighbor before a problem occurs. Let them know what crops you grow, the times of year you are typically planting, maintaining and harvesting crops, and specific chemicals your crops may be sensitive to, especially if you reside or farm in an area with lots of pesticide usage for other agricultural and forestry crops.

Document

It is important to track your investigative process. Keep all documentation relevant to yields, records, claims and tests, as well as fees related to the incident such as consultant fees. Detailed notes or correspondence related to the incident should be kept. In the case of an official written complaint, all notes, records and correspondence will be required to be documented.

In the event pesticide drift has occurred, good record keeping is key to protecting yourself and your operation. Below is a list of records that can facilitate the process.

- **Pesticide records** – Keeping pesticide application records is a good business practice. Pesticide records help with:
 - Production cost – Buy the correct amount of pesticides based on your growing season, acreage, crop species, pest spectrum, etc.
 - Tracking success – Determine if the application has been successful or if the chemical has performed poorly.
 - Correct use of pesticides – Know when and where a pesticide was applied and the correct rate of the chemical. Minimize personal exposure.
- **Production records** – These are valuable tools to document:
 - Crops planted
 - Dedicated acreage in production
 - Expected yields
 - Sales prices
- **Field or crop damage records** – Document damage as soon as you see it. Chemical damage impacts crops differently by species, and visual crop injury may vary by the hour and by the day depending on the pesticide.
 - Regardless of the crop damage occurring, it is a good practice to take pictures or videos of your crops every production season at different growth stages to create a repository for your records.
 - Document any potential harm to employees or other operations (such as livestock, apiaries, etc.) that may be affected.

When Documenting Damage

- Use photographs and videos to record what you see. Take pictures at different angles including close-ups and landscape shots to show the extent of the damage.
- Include the date and the growth stage of affected plants.
- Indicate the location of the damaged crops in your farm. If you do not have a map, you can use a satellite service, such as Google Earth, and use geo-position stamping.
- Collect plant or soil samples.
- Document weather conditions at the time of the incidence and some days prior.
- Record the development and progress of symptoms over time.
- Take photos of damage as soon as you notice it. Also, take progression photos every three to four days to show how symptoms worsen or clear up.
- Are the symptoms widespread or only in a few rows or a specific side of the field?
- Do the symptoms occur on specific portions of the plant? For example, are the symptoms only on old growth, new growth, leaves or fruit?
- If the plants do not completely die, do you notice new growth coming out with the same symptoms, different symptoms or is the new growth emerging with a normal appearance?
- Are only your fruit or vegetable crops showing these symptoms or are plants around the field showing them as well? Are weeds that infest the field also showing symptoms?

Next Steps: Salvage the Crop or Move On?

Crop injury varies across crops, and patterns of damage may be observed at different times. After a drift incidence, you will have to assess whether you can salvage your crop or take actions to continue with production while treating the affected area. Remember the REI and PHI.

- REI stands for reentry interval. This is the period of time in which you must stay out of the treated area after application of the pesticide. Many pesticides have an REI of zero to 48 hours.
- PHI stands for preharvest interval. This is the minimum time you must wait between applying a pesticide and harvesting the crop. PHI can range from zero to 180 days.

The REI and PHI will be listed on the pesticide label.

Let's look at some scenarios and action items.

Scenario 1: Damage occurs to the plants and the production is lost.

Document this in your production records. To have a better estimate of that cost, you will need to consult your past production records. Make sure you compare it to

yields from the respective field in past years. If that is not an option, compare it to adjacent fields. This is a reason to keep proper records of your production and past years and other documentation is to help you with insurance claims.

The timing of the damage is of importance. Based on your marketing window, and if the production time allows after the drift incidence has occurred, you may decide to replant the area. To help you with this decision, you may consider the following budgets:

- **Enterprise budgets** are used to evaluate a whole enterprise, documenting costs of production and break-even prices.
- **Partial budgets** are used to evaluate a set of specific options. For example, consideration for adding buffer zones to help with potential future drift incidences.
- **Cash flow budgets** help to plan cash inflow (+) and cash outflow (-) and to see if the funds are available to continue growing the crop.

Scenario 2: Damage occurs to the plants but there is no visual damage to the crops harvested.

Pesticides may have a preharvest interval. This may determine whether you can sell your crop at all or if the crop is safe for consumption. Whether the crop can be harvested, or the harvest is delayed due to PHI, a discussion should occur with an insurance representative. Scenario 1 actions are advised, and you can also:

- Test the crop and see if it is allowed to be consumed.
 - If a tolerance for the pesticide exists (this is very crop- and pesticide-specific), LDAF can test the edible portion of the crop. If the results are below the tolerance level, the crop may be sold. If the results indicate the level of pesticide is higher than the tolerance level, the crop may not be sold.
 - If the crop cannot be consumed, you may need to continue harvesting to help maintain production but dispose of the contaminated produce and continue testing.
 - Keep records of the crop loss.
- Inform your end-consumer.
 - It may be the case that you cannot market your crop to a specific consumer base (e.g., if you are an organic grower or an off-label pesticide drifted onto your crop).
 - It may be possible that you can still market your crop pending proof that it is safe.

When in Doubt

Contact your local LSU AgCenter Extension agent for help in determining the steps to take when a crop is damaged. Find your agent at <https://www.LSUAgcenter.com/portals/it/find-your-agent>. The agent can look at your crop but legally cannot specify if the crop is damaged from a particular pesticide. To obtain that information, contact the Louisiana Department of Agriculture and Forestry inspectors to investigate, file formal complaints and conduct crop testing.

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Additional publications in this series:

- [Herbicide Drift](#)
- [Pesticide Tank Cleaning Notes and Procedures](#)

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