

How to Handle Pesticide Drift Complaints

A Guide for Those Affected by Drift

FOR PRODUCERS, GARDENERS, AND HOMEOWNERS



Introduction

Pesticides play an important role in managing pests. They protect plants and animals from insects, weeds, and diseases; prevent damage to houses and other buildings; improve the efficiency of food, feed, and fiber production; and provide for more comfortable living. But all pesticides must be treated as chemicals that may endanger people, pets, livestock, plants, and the environment. They should be used only when necessary, applied correctly, stored safely, and disposed of properly.

In 1966, Illinois became one of the first states to regulate pesticides. Illinois still has one of the most thorough licensing and enforcement programs, surpassing even federal guidelines. Through education about the proper use of these chemicals, the Illinois Department of Agriculture (IDOA) and University of Illinois Extension work together to reduce pesticide misuse.

The most common type of pesticide misuse is pesticide drift. For many years, of the 120 or so pesticide misuse complaints received each year on average by the IDOA, about 60 percent of them involved pesticide drift. Complaint numbers have been considerably higher in recent years due to increased use of dicamba on soybeans and resulting drift injury. Regardless, drift complaints have been around for as long as pesticides have and certainly, dicamba is not the only pesticide that has caused unintended injury. Should you find yourself involved in a pesticide drift complaint, this document is designed to help you answer common questions.

What is Pesticide Drift?

The movement of pesticide spray particles and vapors off target by air is referred to as drift. Unfortunately, when applying pesticides there is a chance that some will escape from the target area. Drift is especially a concern because it removes a portion of the chemical from the intended target, making it less effective against the target species. That chemical may then be deposited where it is not needed or wanted.

This may threaten the safety and health of nearby people, cause injury to desirable plants and animals, impact environmental quality, and cause pesticide residues on non-target areas. Pesticide drift may have environmental, economic, health and legal ramifications.

There are two ways pesticides can be carried downwind to non-target areas: vapor drift and particle drift. Both types of drift should be considered when making an application, and steps should be taken to minimize their occurrence. The first step should always be to read and follow the pesticide label.

Vapor drift occurs when vapors produced by a pesticide are carried out of the target area. The process of vapor production, called volatilization, can occur up to several days after an application. The occurrence of vapor drift is sometimes difficult to predict, and relies on weather conditions occurring after a pesticide application. Some pesticides are more volatile than others, as are different formulations of the same pesticide.

Particle drift is the actual movement of spray particles off target, usually by the wind. Particle drift results mostly from the smaller drops created in the spraying process. Wind speed and direction are major factors in determining if droplets are carried off target. Factors such as nozzle selection, spray pressure, height of the spray boom, and weather all play a role in particle drift.

Can Drift be Prevented?

With the physical off-target movement of pesticides, prevention is key. Applicators should take steps to prevent physical drift and most do. No applicator wants their pesticide to move away from the intended location. Neighborly discussions before pesticides are applied are important so applicators are aware if sensitive plants are growing near the

application site. As an added protection in some small area situations, it may be possible to cover small, sensitive vegetation with tarps or buckets while nearby areas are being sprayed.

What if Drift has Occurred?

In the unfortunate case that drift has occurred, both parties should make an effort to discuss the suspected drift incident and rule out other possible causes of the observed damage. In cases where the cause of the damage remains unclear or where the parties will not work together, a formal (written) complaint may be necessary. Therefore, it's a good idea to know the basics of the complaint process and what resources are available to you.

Who Can Help

IDOA and Extension have important but different roles in assisting citizens of Illinois in dealing with pesticides. These roles are based on the Illinois Department of Agriculture's responsibilities to administer and enforce the laws related to the use of pesticides, and University of Illinois Extension's responsibilities to educate and solve problems.

The Role of University of Illinois Extension

The University of Illinois has three primary roles that impact its handling of drift complaints. These roles are: (1) educating, (2) problem solving, and (3) mediating.

Educational Role

Pesticide drift is best handled through education to prevent the problem from occurring in the first place. The University of Illinois Pesticide Safety Education Program (PSEP) educates applicators, operators, and other pesticide users on the safe use of pesticides, including drift reduction strategies, through presentations and written materials. But if drift injury should occur, University of Illinois personnel can assist.

Problem Solving Role

A proper diagnosis of pesticide drift requires quite a bit of problem solving to rule out any possible causes of injury, such as disease or insect damage, which can mimic chemical injury. Local Extension educators and state specialists may assist with this process by

making a determination after taking into account all received pictures and information from the client about the injury symptoms they are seeing. This could include but is not limited to growing conditions, planting date, species affected, when symptoms were first noticed, etc. The more thorough the information the better. Site visits by Extension personnel should not be expected.

The University of Illinois Plant Clinic on campus can be consulted for their expert opinion. Plant samples or pictures are usually submitted by the client. Please provide as much relevant information as possible and please do not expect a site visit by Plant Clinic staff. Fees associated with Plant Clinic services and sample submission procedures are outlined at [Plant Clinic Homepage](#). Questions can be directed to 217-333-0519. Plant Clinic staff will document their findings and comments in their case report which is shared back with the client. Remember that laboratory testing for pesticide residues is the most definitive way to tell if a pesticide is present and may have caused the injury. The Plant Clinic does NOT perform any laboratory analysis to detect potential herbicide residues in plant or soil samples. Instead, staff examine samples and consult with university specialists to rule out other possible causes of the symptoms. If herbicide damage is suspected (symptoms on the sample are consistent with the applied chemicals listed on the sample submission form) it will be noted on the final laboratory report, but the Plant Clinic cannot conclusively prove the presence or absence of pesticide chemicals in the sample. The Plant Clinic can provide a list of laboratories that clients can contact if they wish to pursue analysis on their own. If a written complaint is filed with IDOA, then IDOA will visit the site and collect samples for laboratory analysis.

Mediating Role

Pesticide drift can be a very challenging issue which can divide communities. Extension and Plant Clinic employees, may find themselves in a unique position, between the applicator and the person who is claiming pesticide drift problems. A staff member's role is to keep a neutral position in these unfortunately sometimes heated issues.

The Role of Illinois Department of Agriculture

The Illinois Department of Agriculture has three roles that impact its handling of pesticide drift complaints. These roles are: (1) education and licensing of applicators and operators in cooperation with the University of Illinois Pesticide Safety Education Program, (2) investigation of complaints, and (3) enforcement of pesticide laws. The roles of IDOA are determined by laws and statutes passed by the Illinois Legislature or the federal government.

Educational and Licensing Role

IDOA, through its partnership with the Pesticide Safety Education Program and Extension, educates pesticide applicators and operators on the safe use of pesticides. Part of this educational effort is aimed at avoiding pesticide drift. IDOA also certifies applicators and operators to determine that they have the knowledge to safely apply pesticides and grants licenses to individuals who meet certification requirements.

A pesticide license is required of everyone who purchases and applies restricted use pesticides. Also, anyone applying any restricted or general use pesticide in the course of employment must have a license. A person applying general use pesticides on his or her own property is exempt.

Investigation of Complaints Role

If a written complaint of pesticide drift is submitted to IDOA within the 30 day limit, then IDOA will investigate the complaint. The investigator assigned to the complaint will collect information and evidence to assist IDOA in determining whether or not pesticide use resulting in drift occurred. The investigator's role is to remain neutral and look for evidence of any label violations where the pesticide applicator used the pesticide NOT according to label directions. Be advised that label violations may or may not result in drift and drift can occur even when label directions are followed.

Enforcement Role

The third role that IDOA has is enforcement of pesticide laws. In its enforcement role, IDOA may send a warning letter to the applicator or operator, assess a fine, or revoke a license.

The Drift Complaint Process

How to respond to signs of pesticide misuse

The pesticide drift complaint process is started by obtaining a complaint form from IDOA's Bureau of Environmental Programs at [Pesticides: Uses & Misuses](#) or by calling 1-800-641-3934 (voice and TDD) or 217-785-2427. Complaint forms must be received by IDOA within 30 days of the incident or within 30 days of when the damage was first noticed. Complaints filed after that will be kept on record, but no administrative action can be taken.

The Complaint Process: Rights and Responsibilities

Once a complaint is filed with IDOA, a field investigator is assigned the case. In most cases, the inspector will interview the complainant and inspect the site. Various types of samples, such as plants, water or soil, may be collected for analysis at an approved laboratory. The investigator may also interview applicators in the area, examine pesticide records and collect weather data in an attempt to determine the nature and cause of the damage. The field investigator will then submit a report to the department for review.

Both parties will receive written notification if IDOA finds a violation and takes enforcement action. Penalties range from advisory or warning letters to monetary penalties of \$750 to \$10,000, depending on the type and severity of the violation. Penalties are determined through a point system defined in the Illinois Pesticide Act.

Even if a violation of the Illinois Pesticide Act cannot be substantiated, both the complainant and the alleged violator will be notified in writing of the complaint's status.

As previously mentioned, IDOA's role in pesticide misuse incidents is limited to determining whether a violation has occurred. IDOA cannot help complainants recover damages.

Common Questions

When should a person file a complaint with IDOA?

If it can be determined that the cause of injury is most likely non-chemical, then it is recommended to wait for proper diagnosis before filing a complaint, but time must be considered. Be aware there is a 30-day time line for filing a written complaint with IDOA, and that discussing the problem with University of Illinois Extension does not take the place of filing a formal complaint with IDOA. If there seems a reasonable probability that both parties will resolve the problem then a formal complaint may not be necessary. But if in doubt, filing a complaint may provide necessary protection. It is worth noting that complaints filed with IDOA are subject to Freedom of Information Act requests.

How much confidence should I have in residue test results and how easy is it to pinpoint the applicator?

Herbicide injury on plants cannot be definitively proven without confirmed laboratory test results, yet be aware that dicamba can cause leaf cupping on extremely sensitive species at concentrations below detectable limits. Situations have occurred where a grower is confident that drift has indeed occurred but later test results show no detected pesticide residues. Another uncomfortable scenario for everyone involved is when herbicide drift is confirmed but there is insufficient evidence to pinpoint the responsible applicator. Drift can travel a great distance and there can be multiple applicators in the area. It's helpful to be aware of these possible outcomes. Emotions often run high when there are accusations and injury. Keep in mind that if both herbicide drift and the violator are confirmed, any potential reparations would then need to be sought further through the legal system. Sometimes insurance settles claims without any formal litigation. Again, IDOA cannot help complainants recover damages.

What do I need to know about using a private lab for testing?

Realize that testing is active ingredient specific and very expensive if even possible. IDOA laboratory analysts will test for specific residues as appropriate given the likely determined cause. Independent analysis may be conducted using a private laboratory but the person submitting samples will be expected to

cover the cost which could be a few hundred dollars per active ingredient. Only certain tests are available and different labs offer different tests. Samples must be taken in a timely fashion and handled appropriately as chemicals can degrade over time. The Plant Clinic can provide you with a list of private labs which you can then call to discuss options, potential costs, and sample submission.

Will damaged plants recover and what can I do to help them?

Many landscape plants will recover from minor injury caused by pesticide drift. If a landscape plant does die it is most often due to multiple exposures to pesticide drift over a number of years or from the drift exacerbating other problems (i.e., insect injury, diseases, freeze damage) that previously existed with the plant. There is no treatment that will correct injury symptoms on plants and allow them to recover. Aside from watering as needed, there is unfortunately not much an individual can do but wait and see. It is recommended that plants receive 1 inch of water per week. Fertilizing is not recommended as it can bring out more distorted growth.

Are damaged plants safe to eat?

It is impossible to conclusively answer if fruits, leaves, or roots produced by a plant that suffered pesticide damage are "100%" safe to eat. The most conservative answer we can provide is that if the plant was injured by (or even exposed to) pesticide drift, it should not be eaten. If the plant recovers from the injury and chemical residues of the pesticide are not detected, then it is most likely safe for consumption. Even if the fruit or vegetable is listed on the pesticide label, it is difficult to determine if the pesticide residues resulting from the exposure are below the safe and legal level for consumption. Furthermore, the fruit or vegetable may have been exposed too close to the harvest date to be considered safe for consumption.

Should I be concerned about exposed livestock or pasture areas?

Livestock should be kept away from damaged plants since some poisonous plant species may become more palatable and/or more poisonous when damaged/wilted by herbicides. If you suspect livestock injury due to pesticide drift, contact a veterinarian. In addition, IDOA will handle complaint cases where livestock have been exposed to pesticide drift.

Reporting Pesticide Drift or Misuse

To file a complaint about pesticide drift or misuse, obtain from the Illinois Department of Agriculture's Bureau of Environmental Programs a complaint form at [Pesticides: Uses & Misuses](#) or by calling 800-641-3934 or 217-785-2427. Remember, complaints must be received within 30 days of the incident or within 30 days of when the damage was first noticed. IDOA will handle complaint cases where people, pets, or livestock have been exposed to pesticide drift.

Contacts

Suspected Exposure & First Aid

If pesticide exposure is suspected and the product is known, consult with the product label for First Aid information. If medical assistance is needed, provide the label to first responders and other medical personnel. A physician will be able to provide the best first aid advice when he or she knows what pesticide the person or animals were exposed to. In emergency exposure situations, the pesticide applicator must provide the attending physician with pesticide label information. Unfortunately, the product may not always be known in cases of suspected drift.

The Illinois Poison Center was established to provide information about the treatment of poisoning cases. Anyone with a poisoning emergency can call the toll-free telephone number for help 24 hours a day. Personnel at the Poison Center will give first-aid instructions and direct you to local treatment centers if necessary.

Nationwide telephone number:
800-222-1222

Note: For immediate medical assistance and transport, please directly dial 911.

Health & Environmental Concerns about Pesticides

National Pesticide Information Center (NPIC) is a toll-free telephone service that provides pesticide information to any caller in the United States, Puerto Rico, or the Virgin Islands. NPIC provides objective, science-based information about a wide variety of pesticide-related subjects, including pesticide products, recognition and management of pesticide poisoning, toxicology, and environmental chemistry. [NPIC's website](#) is an excellent resource for these topics as well. Guidance on reporting pesticide incidents can be found at [Where to Start with Pesticide Incidents](#). Excluding holidays, you can call NPIC Monday - Friday from 10 a.m. to 2 p.m. (CT) at 800-858-7378. You can also contact NPIC by e-mail at npic@ace.orst.edu.

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For more information about drift, injury symptoms, and drift reduction strategies, refer to the [Illinois Pesticide Applicator Training Manual: Private Applicator](#) or the [Illinois Pesticide Applicator Training Manual: General Standards](#). The booklet, [Field Guide to Herbicide Injury on Landscape Plants](#), can assist with diagnosing herbicide injury. It features photographs of specific injury symptoms that resulted from a field trial of various ornamental and vegetable species. These publications are available through [your local Extension office](#) and can be ordered directly at [Illinois Extension Distribution Services](#). Additionally, the online module titled, ["Herbicide Tolerant Crop](#)

[Stewardship](#)" provides tips for dealing with drift. Especially useful would be chapter 5, "Avoiding/Handling Injury." While it was created for producers, it would also benefit homeowners, gardeners, and really anyone who grows plants. In addition, the Illinois Pesticide Safety Education Program has several articles covering these same topics including:

- [Is it Spray Drift and What Do I Do?](#)
- [Understanding and Preventing Off-target Movement of Herbicides](#)
- [Considerations Before Consuming Produce Following a Pesticide Misapplication](#)
- [Illinois Pesticide Misuse 2015-2021](#)

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