

Pesticide Enforcement and Compliance:

Examining State and Federal Response to Bee Decline

Despite mounting scientific data reporting pesticide risks to bees and other pollinators, and numerous incidents of native bee deaths across the country, in addition to reports of higher than average managed hive losses, federal and state response has been slow. Pesticide use in agricultural and on ornamental and garden sites continues to threaten bees. The U.S. Environmental Protection Agency (EPA), tasked with regulating pesticides, updated pesticide product labels to include language warning pesticide users of the hazards to bees, including statements such as, “Do not apply this product while bees are foraging,” and “Do not apply this product until flowering is complete and all petals have fallen.” Many beekeepers and others have found such language to be unenforceable and unrealistic. Given high rates of noncompliance with pesticide labels, along with the mobile nature of bees, beekeepers and concerned individuals must be vigilant with pesticide use and report potential violations. However, reporting bee kills and pesticide violations can be a confusing process. This factsheet sheds light on federal and state enforcement responsibilities, and how to go about reporting an ecological incident.

State and Federal Cooperative Enforcement

Reporting to the State

State pesticide regulatory agencies work with EPA to enforce federal and state pesticide laws are enforced. Section 26 and 27 of the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA) gives primary authority to the state to enforce against pesticide violations, but also authorizes EPA to override state authority if the state is not meeting its obligations.

EPA generally provides funding to states to assist in these enforcement activities, including the training of inspectors. An incident should first be reported to the state agency, as it is the first responder. Once investigated, violation cases are referred to EPA for possible federal civil or criminal enforcement action.

Reporting to EPA

In addition to first reporting to the state, one can also report an incident directly to EPA. According to EPA, once an ecological incident is reported, EPA’s Office of Pesticide Programs (OPP) verifies the incident report with state inspection reports. This is used to help flag chemicals of ecological concern, paint a better picture of real-world exposures and help improve EPA’s risk conclusions when conducting pesticide reviews.

Note: An incident report made only to EPA would be referred to the state in which the incident occurred for action. This may delay a timely response to the incident, so it is always advised to contact state authorities first.

FIFRA Section 6(a)(2): Manufacturer Reporting Responsibilities

According to EPA, Section 6(a)(2) of FIFRA requires pesticide product registrants to submit adverse effects information about their registered products to the EPA. The agency has invoked Section 6(a)(2) in the past to quickly gather information about the environmental effects of chemicals already in commerce. Can this little known section in FIFRA be used to gather incident data surrounding bee kills?

FIFRA Section 6(a)(2) states: “If at any time after the registration of a pesticide the registrant has additional factual information regarding unreasonable adverse effects on the environment of the pesticide, the registrant shall submit such information to the Administrator.” Many have long interpreted this section to mean that once any adverse effect on the environment has been identified, registrants are required to submit (additional) product information to the agency in order to address any data gaps for registration reevaluation.

However, Section 6(a)(2) “does not require a registrant to generate new data or to seek out additional information.” Reports of bee deaths, which is by all intents and purposes, an unreasonable adverse effect, can and should be reported under Section 6(a)(2). The problem is that the registrant is required to report these incidents to EPA, but only after the incidents are reported to them by the affected party. The manufacturer of the product suspected of causing the bee incident most likely will conduct its own investigation into the incident, and as many believe, can misstate the results of the investigation in their favor.

Even though Section 6(a)(2) is intended to require registrants to collect and report adverse effects associated with their chemicals, incidents should directly be reported to the local state agency and to the local EPA office, or online at the National Pesticide Information Center (NPIC).

Reporting a Pesticide-Bee Incident

For beekeepers, both commercial and backyard enthusiasts, finding a once healthy hive damaged or dying as a result of chemical exposures can be quite heart-wrenching. Many have observed dead and dying bees outside hives, while others have had bees mysteriously abandon hives, leaving behind a hive no longer viable.

Bee kills and hive losses have been occurring with alarming frequency over the last few years. Commercial beekeepers have reported losses as high as 90-100 percent, and average over-wintering losses have been significantly higher than those observed historically. While many factors have been implicated in bee losses, pesticides have been singled out as the major culprit. In particular, systemic pesticides, like the neonicotinoid class of insecticides, have been found by numerous studies to be highly toxic to honey bees and other bee species, and can lead to impairments in navigational and learning behavior even at very low levels of exposures. Contaminated plants, water and dust, spray drift, and user violation of the pesticide label are just some of the ways pesticides threaten bees.

It is important to act quickly if a bee kill and sick or dying bees is observed. This would help the relevant authorities determine

whether a pesticide violation has been committed, as well as help regulators and policy makers better understand real-world exposures, which can help improve state and federal pesticide laws.

Whether you professionally manage hives, or have urban or backyard hives here are some important steps to take in reporting an incident.

Reporting

1. **Contact your state pesticide regulatory agency.** A list of local state agencies can be found at Beyond Pesticides, <http://bit.ly/BPstates> or at the National Pesticide Information Center <http://pi.ace.orst.edu/erep>
2. It is also useful to **contact your state or regional environmental protection agency** to report the problem. A listing of EPA regions can be found here: <http://bit.ly/EPAregions>
You can also email beekill@epa.gov (Please CC Beyond Pesticides: info@beyondpesticides.org) or report online at NPIC's web portal <http://pi.ace.orst.edu/erep/>
3. If you are certain a pesticide was the cause and can identify the product, you may also want to **report the incident to the product's manufacturer.** Manufacturers are required by law to submit reports of adverse effects.

Interview

Once a call is made, be prepared to answer questions regarding the nature of the incident. Questions include: (a) dates of observed adverse effects, (b) weather conditions at time of incident, (c) timing and frequency of feedings (d) evidence of event (eg dead bees), (e) distance from any known pesticide application sites in the surrounding area.

Additionally, records regarding the upkeep of the hives will be requested.

Collecting Samples

While state inspectors should respond promptly to the site to begin an investigation, they may take a few days to arrive. In order to preserve bee samples for any future analysis, it is recommended to gently collect dead bee samples and freeze them immediately to slow decay and pesticide dissipation. At least 2 ounces can be collected and stored in a labeled zip-lock bag or container. Collect and freeze comb and bee bread samples as well. Samples must also be treated in this manner, should an independent analysis be needed.

Note: Proper documentation on how the samples were handled will need to be provided to the inspector describing how and when the samples were taken.

Inspection and Investigation

Inspectors must have experience in handling bee colonies and be properly dressed for the site inspection. As part of the inspection, samples of dead and dying bees from outside the hive entrance should be collected. Additionally samples of pollen, wax, or honey may also be taken. In cases of suspected pesticide drift, it will be necessary to collect surrounding vegetation samples or other residue samples to document off-site movement of the pesticide. Photographs of the hive and bees, including any dead or dying bees, as well as the area surrounding the hive would need to be taken.

Note: If the inspector is not trained to handle bees, the beekeeper may take samples on the inspector's behalf, ideally in the presence and under the direction of the inspector. The inspector should have a sampling plan in place and determine the sampling equipment needed to ensure proper collection of physical samples throughout the inspection.

As part of the on-site investigation, the inspector will note potential pesticide sources, including:

1. Agricultural/garden areas where crops are frequently sprayed or have had recent application;
2. Sites where pesticide-treated seeds have recently been planted;
3. Areas with flowering plants (crops, weeds, ornamentals) or other plants, which bees might consider desirable for foraging; and
4. Rights-of-way such as utility lines or roadside drainage ditches.

Other relevant pesticide applications, such as recent mosquito spraying, should also be determined and verified with the local vector control office for pesticide information.

Note: Planting of treated seed is not considered a "pesticide use" under federal law.

The investigation will determine what application method was used by the pesticide user, e.g. aerial, or ground etc, the type and amount of pesticide applied, and source copies of pesticide labels and labeling.

The length of the investigation will vary by state, so frequent follow-ups with the state agency is recommended. A written case summary should be provided between 6-8 weeks. A final report will be issued once the investigation is completed.

Enforcement Actions

The investigation may find that no violation could be documented or is unable to determine the responsible party and the case will be closed without further action. However, once the investigation confirms pesticide use or misuse was the cause of the bee incident, certain enforcement actions may take place. These may differ between states:

1. Written citation to applicator.
2. Revocation or suspension of applicant's permit, license, or certificate.
3. Issuance of civil penalties/fines.
4. Possible criminal proceedings.

The level of enforcement action may also be influenced by the violator's compliance history; that is, whether the violator has been found in violation of the law before, whether corrective action was taken by the target of the investigation, if restricted use products were used, and even the level of cooperation during the investigation. Negotiated settlements may also be recommended and overseen by the state. However, no provision for compensation for harmed parties has been provided for under pesticide laws.

A person harmed by a violation of the pesticide law may bring suit in a court of law for damages arising from the violation.



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