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Watch Out for: Pesticide Drift and Organic Production

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Before an agricultural product can be sold as "organic" in the United States, the producer must follow specific production standards established by the National Organic Program (CFR Title 7 Part 205 — www.ams.usda.gov/nop), and the producer's operation must be certified by a USDA-accredited agency. And while farms making less than $5,000 in annual sales of organic products do not need not be certified, they must follow and keep records to prove compliance with the same USDA standards as certified operations. In 2011, there were more than 17,500 certified organic farms and processing facilities in the United States, managing more than 4 million acres organically.

The requirements for organic certification are time-consuming and expensive. And if a neighbor applies a pesticide that drifts onto an organic field, the economic losses can be high — not to mention the loss of goodwill. This publication describes the consequences of pesticide drift onto organic farms, and steps that pesticide applicators and organic producers can take to reduce the risk of damage from drift.

Organic Production Standards

Organic production standards prohibit the use of most synthetic pesticides; exceptions are itemized in the National List of Allowed and Prohibited Substances (CFR Title 7 Part 205.601-604). The standards require that farmers document the steps they take to reduce the likelihood of a pesticide drifting onto their organic crops, poultry, and livestock. These steps can include physical measures (such as using buffer strips and barriers), cultural practices (such as timing of operations), and social methods (such as signs indicating the farm is organic or one-on-one communication with surrounding neighbors and commercial pesticide applicators).

These measures can't protect a farm completely. In many cases, people applying pesticides may not know that an organic farm is present. It might be the right-of-way industry, aerial applicators from other counties, or others who just are unaware of the presence of organic livestock or crops.

The Consequences of Drift

When a pesticide drifts onto an organic farm, there could be a variety of consequences. For starters, it may mean that the product may not be sold and labeled as organic. If the unapproved pesticide residues on a product are "too high" the product may not be sold, labeled, or represented as organically produced, possibly resulting in large economic losses for the producer.

The National Organic Program defines residues as "too high" when they are greater than 5 percent of the EPA's tolerance for the pesticide. If the EPA has not established a tolerance for a pesticide on the product, then "too high" is defined as residues greater than 5 percent of unavoidable residual environmental contamination. This means that samples of the organic product would have to be analyzed for the pesticide and the resulting value compared to the federally established standards.

This will take not only money, but also time. When organic crops are ready to be harvested, the time required may lead to spoilage in the field; the inability of the producer to meet their contracts with local restaurants, grocery stores, or other buyers; or may prevent delivery of the product to those who prepurchase products from the farm.

If pesticides drift onto soil, it is possible that crops or pasture grown on that land, along with any poultry or livestock eating those crops or pasture, could not be certified as organic for three years. If pesticides contaminate water used in crop or livestock production, it is possible that it may be prohibited for use in organic production until tests show residues at acceptable limits. If a particular field or production area is repeatedly subject to contamination by drift, it is possible that it would be deemed noncertifiable until the producer could provide evidence showing that the risk of contamination had been substantially reduced.

Monetary losses for the organic farmer could be significant or inconsequential, depending on the particular situation. One thing is for sure: it will be aggravating to have to deal with the problem. If the product were sold as nonorganic, the farmer may receive a price several times lower than what it would have been for an organic product, or may receive about the same price, depending on the market. Farmers may choose not to sell the product at all because it does not meet their own standards for quality, meaning loss of income from those acres. If the production area is so contaminated that it can't be used for organic production for a period of years, the loss could be multiplied over several seasons. If contamination is severe, the cost to remediate the problem may be significant.

In addition to these direct monetary losses, organic farmers may lose market share and customers if they cannot provide the products their customers expect. Temporary loss of customers could influence market opportunities in future years. In most of these instances, a long and protracted argument with insurance companies can ensue with pricing the loss. In some instances, drift onto organic farming operations can only be settled in court.

Preventing Problems

With so much at stake, organic farmers should take whatever steps are necessary to protect their crops and livelihoods from inadvertent pesticide drift. One of the more important steps is to register your organic farm with Driftwatch (www.Driftwatch.org). It's a free service that helps link organic farms with the pesticide application businesses and growers. When you register the location of your farm, an automatic notice will be sent to the commercial applicators in your area who have requested to receive such notices. Other applicators can also check the website to find the location of organic farms and other sensitive areas.

It's important that pesticide applicators do their part by learning where organic farms are, adjusting applications in and around those areas, and doing whatever is necessary to ensure that the areas producing organic crops, poultry, and

Steps Applicators Can Take to Reduce Drift Risk

There are a number of things pesticide applicators can do before and during applications to reduce the risk of pesticide drift onto organic farms.

Before Application

Before any application, applicators should locate organic farms by:

- Asking clients or neighbors if nearby farms are organic, and if so, exactly which adjoining fields are in organic production.
- Calling their state department of agriculture or a local organic certifying agency for a list of certified organic growers in the area.
- Checking the Driftwatch website.

Day of Application

On the day of application, applicators should:

- Review client farm maps to accurately locate the crop to be treated and any adjoining organic fields.
- Get up-to-date, accurate weather reports and pay specific attention to wind direction and wind gusts.

During Application

While applying pesticides, applicators should:

- Constantly monitor wind direction. Applicators should not apply pesticides when the wind is blowing toward the organic crop. Remember, even a little drift may lead to serious issues with selling and labelling something as organic.
- Track wind direction and speed in the event you are asked to document what you did that day.

livestock are protected from pesticides. It is important that you periodically check the Driftwatch website to see if anyone has registered their organic sites, beehives, vegetables, fruit, or other sensitive areas. This is an important first step in reducing off-site pesticide drift onto an organic farm. But it is only the first of many important steps that you will take when making pesticide applications around organic farms.

The bottom line is that it takes very little effort for organic producers and applicators to prevent pesticide drift problems. Organic and conventional agricultural production can coexist if practitioners respect one another's attempts to make a living. With better lines of communication and a little effort at common sense, pesticide drift can become a nonissue.

Driftwatch is an online registry that helps pesticide applicators, specialty crop growers, and stewards of at-risk habitats communicate more effectively to protect pesticide-sensitive areas. To see other publications in the Driftwatch series, visit the Purdue Extension Education Store, www.the-education-store.com, or www.Driftwatch.org.

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