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# Tips for Mitigating Pesticide Spray Drift

Stephanie Blevins Wycoff, Extension Associate, Pesticide Safety Education

The heat of summer has arrived and crops across Virginia are growing fast. Unfortunately, so too are populations of pests ready to make their mark. In many situations, pesticides may be needed to protect crops from unwanted invaders. As pesticide applications increase, so does the concern for applicators to avoid the unintentional effects of spray drift.

## What Is Pesticide Spray Drift?

Pesticide spray drift occurs when pesticides unintentionally move through the air away from the application site. Drift can occur when using liquid or dry formulations, but it is most common with liquid pesticides. When liquid pesticides are used, droplets exiting sprayer nozzles have the potential to drift. Smaller droplets are more prone to drifting, while larger droplets tend to settle at the application site.

## Best Practices to Reduce the Potential for Pesticide Spray Drift

Pesticide spray drift can be managed in several ways. It is important to take every precaution possible to protect yourself, others, and the environment.

### ***Identify Sensitive Areas on or Near Your Property***

Sensitive areas include schools, hospitals, residential areas, recreation areas, parks, wildlife areas, beehives, other crops, etc. Be mindful of the land uses surrounding your property as well as areas you want to protect on your property. Keep pesticides away from sensitive areas. Never establish a sensitive area near places where pesticide applications occur routinely. It is also smart to keep lines of communication open with your neighbors and surrounding operations. Strong relationships can help prevent conflicts. For example, one way to help protect beehives is through a program sponsored by the Virginia Department of Agricultural and Consumer Services known as FieldCheck. This program encourages communication between agricultural producers, pesticide applicators, and beekeepers, and helps facilitate pollinator protection. It is free and completely voluntary. For information on FieldCheck, please visit: [vdacs.virginia.gov/pesticides.shtml](https://vdacs.virginia.gov/pesticides.shtml).

### ***Select the Proper Pesticide and Application Equipment***

If possible, choose pesticides with minimal toxicity (to people, animals, and the environment) and avoid pesticides that are volatile. Select formulations that are less likely to drift such as pesticides that can be applied using larger droplets. Use drift-reduction nozzles and drift guards whenever feasible. Operate application equipment at the minimum recommended speed and nozzle pressure. To ensure proper working order of your application equipment, be sure to perform regular maintenance such as calibration and nozzle inspection.

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# Tips for Mitigating Pesticide Spray Drift (Continued)

## ***Observe Your Local Weather Conditions***

Weather conditions play a significant role in the potential for spray drift to occur. Make sure to continuously monitor local weather conditions. This will help you select an appropriate time for a pesticide application. Conditions unfavorable for pesticide application include:

- Wind speeds of less than two mph or greater than 10 mph.
- Low humidity (less than 50%).
- High temperatures (greater than 82°F).

## ***Consider Using Buffers***

Buffers are areas specifically set aside to intercept spray drift. The effectiveness of a buffer varies depending on its size, the landscape (amount and types of vegetation versus open areas), and weather conditions. To determine the appropriate dimensions of a buffer, consider the types of application equipment being used, the size of the area being treated, and the proximity of your pesticide applications to sensitive areas.

## ***Stay Informed About Products With a Tendency to Drift***

Recently, the Environmental Protection Agency (EPA) issued a cancellation order for the federal registration of three products – XtendiMax with Vaporgrip Technology, FeXapan, and Engenia – due to problems with drift in several states. Although issues with these products varied from state to state, it is important to keep yourself informed on these matters. To read the cancellation order from the EPA, please visit:

[epa.gov/ingredients-used-pesticide-products/final-cancellation-order-three-dicamba-products](https://www.epa.gov/ingredients-used-pesticide-products/final-cancellation-order-three-dicamba-products).

## ***Additional Best Management Practices***

Be sure to keep records of all pesticide applications! Recordkeeping is crucial for many reasons and provides protection for your business in case of accidents. If a drift incident occurs, good records could prove that your operation is not responsible.

## **Online Resources**

- Environmental Protection Agency – [epa.gov/reducing-pesticide-drift](https://www.epa.gov/reducing-pesticide-drift)
- Pesticide Environmental Stewardship – [pesticidestewardship.org/pesticide-drift/](https://pesticidestewardship.org/pesticide-drift/)
- DriftWatch – [driftwatch.org/](https://driftwatch.org/)
- "Options for Dealing with a Pesticide Drift Incident" by Purdue Extension – [ppp.purdue.edu/wp-content/uploads/2016/08/PPP-110.pdf](https://ppp.purdue.edu/wp-content/uploads/2016/08/PPP-110.pdf)

# Extension Master Gardener Survey Leads to New Fact Sheets

Tim McCoy and Stephanie Blevins Wycoff, Extension Associates, Pesticide Safety Education

In 2020, VTPP and the Virginia Cooperative Extension (VCE) Emerging Pests and Pesticide Management (EPPM) Program Team made the training needs of Virginia's Extension Master Gardeners (EMGs) a top priority. The EPPM Program Team is a group of Extension agents and specialists who work together on pest management issues. This year, the EPPM Program Team set priorities to create integrated pest management (IPM) educational tools and resources for EMGs. These resources will assist EMGs in their interaction with homeowners and provide materials for EMG trainings and professional development provided by VCE.

In February 2020, an online survey was sent to Virginia Extension Master Gardeners to determine respondents' knowledge and attitudes toward IPM. The survey was open for two months, and the response rate was excellent! Almost 650 EMGs responded. The survey gathered information on:

- EMG knowledge and comfort level with teaching the principles of IPM.
- What resources EMGs relied upon to educate homeowners.
- What additional needs EMGs had related to IPM education.

As a result, several new VCE fact sheets (freely available to the public) have been produced by VTPP. More will be coming out in the next few months. Recent publications include:

- [ENTO-365NP "An Introduction to Integrated Pest Management."](#)
- [ENTO-384NP "Organic vs. Conventional \(Synthetic\) Pesticides."](#)
- [ENTO-385NP "Pesticide Storage & Disposal – A Quick Guide for Home Use."](#)
- [ENTO-388NP "Myth-busting Integrated Pest Management for Extension Master Gardeners."](#)

These one-page, quick reference documents are designed to help Extension Master Gardeners better serve the public at volunteer events and EMG help desks. The fact sheets are meant to supplement – not replace – the [VCE Pest Management Guide ENTO-336P "Home Grounds and Animals."](#)

Future publications will focus on additional topics Extension Master Gardeners identified as necessary to better understand and communicate IPM-related information. Expect to see fact sheets on topics such as:

- How to support and protect beneficial insects in your garden.
- Understanding pesticide toxicology to help select less toxic solutions.
- Emphasizing nonchemical control methods to reduce reliance on pesticides.

In addition to the EMG publications produced in 2020, VTPP was awarded an eXtension Foundation grant to develop digital pesticide safety training resources for EMGs. These materials will be available to Virginia Extension Master Gardeners through the Volunteer Management System. They will also be shared with other pesticide safety education programs around the country.

We hope these resources will help support the valuable volunteer work of Extension Master Gardeners throughout Virginia!



# Updates From Virginia Department of Agriculture and Consumer Services

*Please help spread the word about this important information...*

While DMV Customer Service Centers are reopening, the staggered openings and services by appointment only have implications for pesticide applicators and their ability to take the certification exam(s). To address this issue, the Virginia Department of Agriculture and Consumer Services has again extended the expiration date for all Notices of Authorization to test issued on or after December 20, 2019. All exam authorization letters issued on or after December 20, 2019 will now expire on October 31, 2020 or the current date of expiration, whichever is greater. Prospective applicators that do not take the exam(s) by October 31, 2020 or the current date of expiration, whichever is greater, will be required to submit a new application with appropriate fees to take the exam(s).

We will continue to provide the most current information related to applicator certification at:

[vdacs.virginia.gov/pesticide-applicator-certification.shtml](https://vdacs.virginia.gov/pesticide-applicator-certification.shtml)

# Snake Deterrents

Rachel Parson, Extension Associate, Pesticide Safety Education

## How can I keep snakes away from my house? What can I put down to deter them?

These appear to be common questions this summer judging from online forums and calls to Extension personnel. One remedy being passed around involves the use of mothballs. Mothballs are pesticides used to kill clothes moths and other fabric eating pests. Like all pesticides, mothballs are regulated by the Environmental Protection Agency (EPA). Their package contains labeling that describes how to use the product correctly, legally, and safely. It is actually illegal to place mothballs outside around the home. Mothball labels typically direct users to place them in tightly closed containers. Using mothballs outdoors can harm children, pets, and other animals, as well as contaminate soil, water, and plants.

**It is illegal to harm snakes in the state of Virginia unless it presents an imminent threat to personal health and safety.**

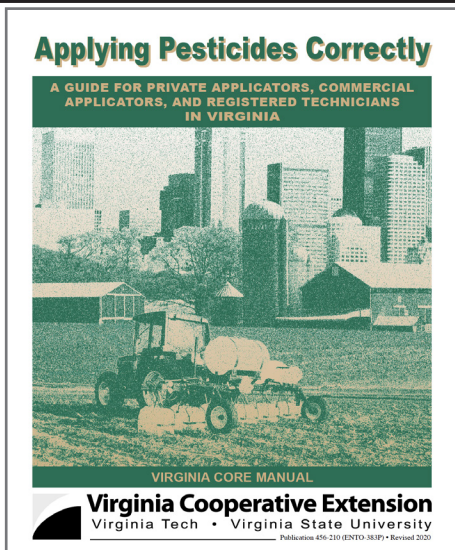
## So What Is A Person To Do?

1. Clear it away! Removing clutter from the yard and around the exterior of the home is one of the best ways to reduce the presence of snakes. Piles of wood, heavy brush, and other debris can provide shelter for snakes and the prey they feed on (e.g., mice, lizards, and birds). Keeping yards mowed closely around the home and where children and pets play will also reduce snake habitat.
2. Eliminate the food sources for mice and other rodents (e.g., pet food, birdseed, trash) that snakes feed on. Store these items in heavy plastic or metal containers with lids. In addition, many people have started raising backyard chickens for eggs. Be aware that young chicks and eggs are a natural food source for some snakes, and can attract them to your property.
3. Although cost and labor intensive, exclusion fencing can be built around the perimeter of yards. Typical wood or chain-link fencing will not exclude snakes and can cause them to become entangled. Three-foot-high, fine-meshed fencing, buried six to seven inches in the ground and set at an outward angle of about 30 degrees has been shown to exclude snakes.

## Online Resources

- “Managing Human Wildlife Interactions: Snakes” by Jim Parkhurst, Associate Professor, Fish and Wildlife Conservation, Virginia Tech – [pubs.ext.vt.edu/420/420-021/420-021.html](https://pubs.ext.vt.edu/420/420-021/420-021.html)
- Season of the Snake – Department of Wildlife Resources – [dwr.virginia.gov/blog/season-of-the-snake/](https://dwr.virginia.gov/blog/season-of-the-snake/)
- The Virginia Herpetological Society – [virginiaherpetologicalsociety.com/reptiles/snakes/snakes\\_of\\_virginia.htm](https://virginiaherpetologicalsociety.com/reptiles/snakes/snakes_of_virginia.htm)

# Updates From Virginia Tech Pesticide Programs



## 2020 Core Revision Is Complete

A new version of the Virginia Core Manual “Applying Pesticides Correctly” was completed and released for sale on July 18, 2020. This minor revision updates fees for applicators and pesticide businesses in the Commonwealth and is available for purchase through Virginia Cooperative Extension at:

[apps.cals.vt.edu/flex/PATManualOrdering/PATManualOrdering.html](https://apps.cals.vt.edu/flex/PATManualOrdering/PATManualOrdering.html)

## PAT Manuals Are Being Redesigned – We Need Your Help!

Twenty years ago, Virginia Pesticide Applicator Training (PAT) manuals were designed to meet the needs of commercial applicators preparing to take the certification exam. The look, organization, and formatting have performed well, but it is time to reflect on what has been working, what needs improvement, and how we can give the manuals modern appeal.

We need your help to make these resources as usable and effective as possible. Please complete a short survey and encourage others to do the same. There are two surveys - one for applicators and one for pesticide safety professionals. Both online and paper versions are available.



### Online Survey

Complete the survey online using your computer or phone –

- VCE agents and other pesticide safety professionals should follow this link to the survey:  
[virginiatech.qualtrics.com/jfe/form/SV\\_0wApqgteJokGmdT](https://virginiatech.qualtrics.com/jfe/form/SV_0wApqgteJokGmdT)
- Applicators should follow this link to the survey:  
[virginiatech.qualtrics.com/jfe/form/SV\\_9pn2RNaYtGADydL](https://virginiatech.qualtrics.com/jfe/form/SV_9pn2RNaYtGADydL)

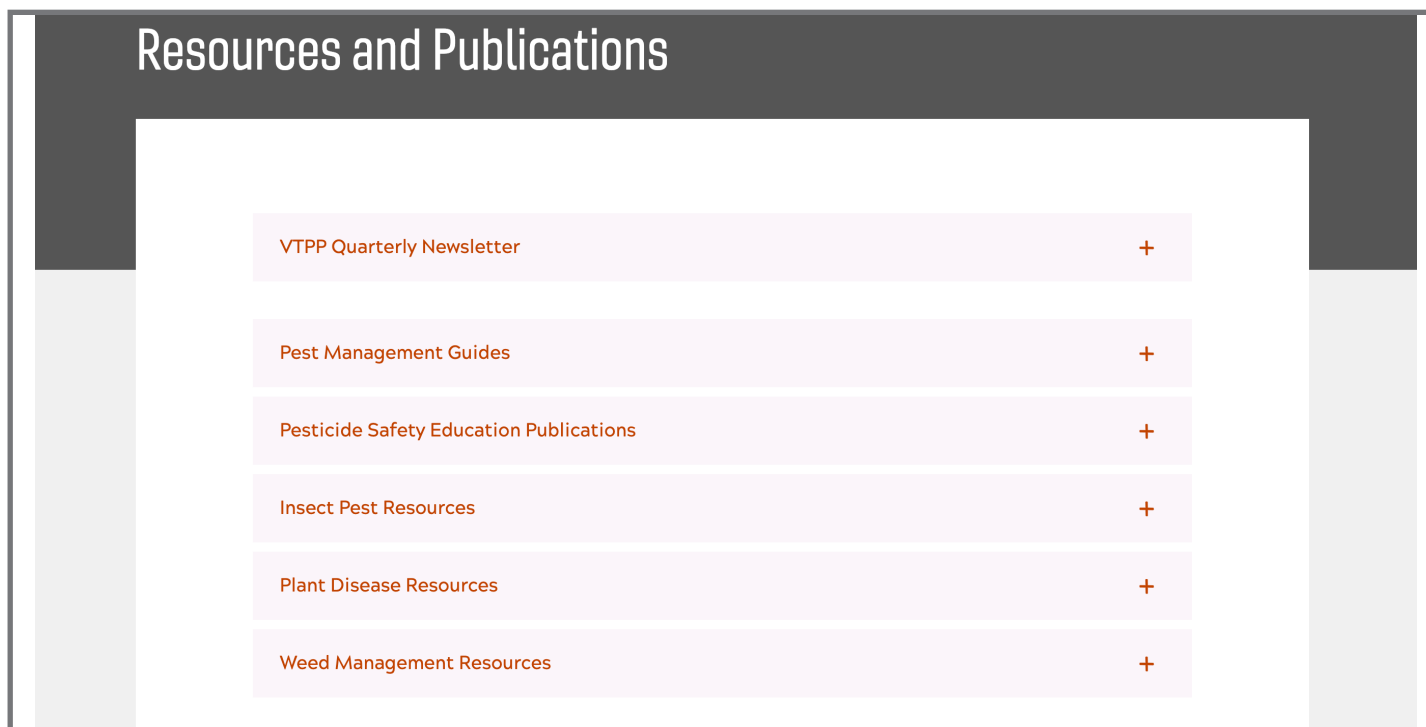
### Paper Survey

Paper copies of the survey are available at VDACS testing sites. If you are a test administrator, please encourage all test takers to complete the applicator survey following testing. Scan and email survey results to [dbeegle@vt.edu](mailto:dbeegle@vt.edu), or mail completed surveys to VTPP, 302 Agnew Hall, Blacksburg, VA 24061.

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# Updates From Virginia Tech Pesticide Programs (Continued)

## VTPP Website – Resources and Publications



The resources and publications section of VTPP.org now includes past copies of this newsletter, pest management guides, and other publications with important pesticide safety related content.

## Hokie BugFest Goes Virtual in 2020

With consideration of the COVID-19 pandemic, we have made the decision to go virtual in our tenth year of Hokie BugFest. We will be using [hokiebugfest.org](http://hokiebugfest.org) to host a 10-day virtual festival with at-home activities, videos, photo galleries, and more. Please visit [hokiebugfest.org](http://hokiebugfest.org) or find us on Facebook to keep up with the latest news regarding our festival and other activities.



October 7-17, 2020 • [Hokiebugfest.org](http://Hokiebugfest.org)