

VTPP Quarterly

A Newsletter From Virginia
Tech Pesticide Programs

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Pesticide Application Basics

Daniel Frank – Director of VTPP

Proper use of pesticides is key for not only controlling a pest, but protecting yourself, others, and the environment. Following all safety precautions and using common sense can prevent pesticides from causing unintended and unnecessary harm. Whenever you apply pesticides to control a pest organism, keep the following points in mind.

Follow all label directions. Information on the pesticide label provides you with instructions on how to use the product safely and correctly. Furthermore, pesticide users are required by law to comply with all of the instructions and directions for use on the label.

Wear the correct protective clothing. The pesticide label tells you what personal protective equipment (PPE) is needed when applying the product.

Keep in mind that PPE standards are meant to reduce exposure to pesticides, not eliminate it. Wearing anything less than what is listed on the label can be dangerous. Never eat, drink, use tobacco products, or handle cell phones when handling pesticides. It is also important to wash your hands before using the bathroom, and be careful not to wipe contaminated gloves onto your skin or clothing.

Use the correct type of application equipment. Many pesticide products are sold ready-to-use (RTU) or as concentrates. Many RTU products are packaged so that application equipment is not required; however, some may be easier to apply with the appropriate tools. For example, dust formulations are much easier to apply if you use a bulb duster rather than trying to sprinkle them out by hand. Pesticides sold as concentrates must be diluted (mixed), often with water, before use. When mixing pesticides, use measuring cups and tools that have been designated

exclusively for this use. Whether applying pesticides with a backpack, tow-behind, or tractor mounted sprayer, make sure the equipment is in good working condition and the hoses and connections do not leak.

Use the product in a manner intended by the manufacturer. Some pesticides are designed to be sprayed, others to be dusted, and still others to be placed as baits that the pests eat. The label will tell you where and how to use the selected product. When mixing pesticides, measure the proper amount of product as specified on the label. More is not better when it comes to applying pesticides. Applying too much of a pesticide can damage plants or other treatment surfaces, and it can pose health and environmental risks. If applying pesticides in enclosed spaces, use only products specifically labeled for indoor use. Many products intended for outdoor use are designed to break down into less toxic substances with ventilation and exposure to sun and rain. Without these conditions, the pesticide may linger and cause health risks for humans and/or pets. If applying pesticides outdoors, it is best to spray on a calm day, preferably in the morning or evening when there is less wind (3-5 mph is ideal). In these conditions, there is less potential for airborne movement (drift) of the pesticide to an unintended site.

Use careful cleanup procedures after application.

Always clean the inside and outside of application equipment immediately after use because pesticides are often harder to remove once they dry. Clean application equipment at a location where any spilled rinse water will not contaminate water supplies or other non-labeled areas. Choose a location that is inaccessible to children and/or pets. Remove nozzles and screens, and flush the sprayer system at least twice with clean water. The rinse water can be captured and applied to areas listed on the label. Wash your hands thoroughly with soap and water immediately after handling pesticides, and shower every day that you work with pesticides. Change into clean clothes and wash the ones you wore as soon as possible, keeping them separate from other laundry. Wash pesticide contaminated clothing in hot water using detergent, and line-dry (recommended) after washing. Clean the washer afterwards by running a complete cycle without clothes but with a full amount of hot water and detergent. If clothes have been saturated with a pesticide, they should be discarded.

Using Pesticides to Help Control Invasive Species

Rachel Parson – Extension Associate

Invasive species are plants, animals, fungi, or other living organisms that are introduced to an area outside of their native range, and whose introduction causes economic or environmental harm. These species are transported to different locations mostly through human activities such as commerce and transportation, but spread can also occur naturally. Invasive species often share traits that help them out-compete native organisms, such as the ability to

- Reproduce at high rates.
- Survive in a variety of climates.
- Have few natural predators, especially in nonnative areas.
- Adapt to pest control efforts.

Historically, Virginia has not been an entry point for new invasive species coming into the U.S. Instead, invasive species typically spread into Virginia from introductions that have occurred in other states. Invasive species can have significant impacts on Virginia's natural resources and agricultural operations. Control efforts for these pests alone cost the state millions of dollars each year.

Because invasive species do not respect state borders, coordination of control efforts is often conducted at the federal level. In many cases, federal and state taskforces are established to organize the response to an invasive species threat. When the U.S., or the state of Virginia, declares an invasive species a threat, regulatory pest management programs are developed to prevent or reduce its spread and control any newly discovered outbreaks. Regulatory pest management programs often involve a multifaceted approach of

- Identifying potential and actual risks posed by the pest.
- Carrying out research on the pest's biology.
- Establishing quarantines to prevent further spread.
- Conducting distribution/damage surveys.
- Identifying and implementing effective control tactics.
- Educating the public.

Recently, these regulatory pest management efforts have occurred for such insect pests as the spotted lanternfly and red imported fire ant.

The goals of regulatory pest management are three-fold:

1. Prevention – The first goal is to prevent the introduction of an invasive species and its establishment into unaffected areas.
2. Eradication – If prevention is not successful, the next immediate goal is to eradicate the pest. Unfortunately, many invasive species have established, spread, and increased in population size before they have even been detected. This can make prevention and eradication efforts difficult or unfeasible.
3. Slow/Prevent Spread – If the pest becomes established, the final goal is to slow or prevent further spread in order to mitigate losses. Pesticides (insecticides, herbicides, fungicides, etc.) are one of the main tools used to slow and prevent the spread of invasive species and mitigate losses in infested areas. Pesticides can provide cost effective and quick control results, especially in the early phases of species introduction when little is known about the effectiveness of other control options. An example of an invasive species “slow-the-spread” success involves the spongy moth (formerly known as the gypsy moth). This insect has been suppressed for many years through the aerial application of biological pesticides containing the bacterium, *Bacillus thuringiensis kurstaki* (Btk).

To learn more about invasive species in Virginia and the U.S., visit these websites:

- invasivespeciesva.org/species.
- invasivespeciesinfo.gov/.
- chesapeakebay.net/state/invasive_species.

Blast From the Past

Stephanie Blevins Wycoff – Extension Associate

Pesticide Safety Poster of the Month

Figure 1 shows one of many pesticide safety education posters that were released by Virginia Cooperative Extension (VCE) between 1968 and 1974. It is part of the Pesticide Safety Poster of the Month Collection and was distributed in May 1970. The poster’s message

is simple and concise, yet still extremely applicable in the world of pesticide safety education today. You should never spray insect repellents directly toward your eyes, nose, or mouth. To apply correctly, spray the repellent on your hands first, then apply it to your face.



Figure 1. VCE Pesticide Safety Poster of the Month, May 1970.

Program Updates

VTPP Updates

2022 Pesticide Safety Educators Workshop

The 2022 Pesticide Safety Educators Workshop (PSEW) — our annual in-service training for Virginia Agriculture and Natural Resource Extension agents — will be held on Wednesday, August 24 and Thursday, August 25 at the Hotel Roanoke. 2022 marks the 30th year for this train-the-trainer workshop sponsored by VTPP and the Virginia Department of Agriculture and Consumer Services (VDACS). PSEW is designed to update agents and specialists on pesticide applicator training procedures and practices for the coming year. It also provides a venue to recognize the

outstanding teamwork enjoyed between VDACS and Virginia Cooperative Extension.

Register for the conference at: eventbrite.com/e/2022-virginia-pesticide-safety-educators-workshop-tickets-379838115027. Room reservations should be made directly with the hotel by August 10.

New Training Manuals

VTPP has revised three commercial pesticide applicator training manuals in spring 2022: Category 3B, Turf Pest Control; Category 6, Right-of-Way Pest Control; and Category 10, Demonstration and Research Pest Control. These manuals can now be purchased online at: register.ext.vt.edu/portal/events/reg/participant-TypeSelection.do?method=load&entityId=1677976.

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VDACS Updates

2022 Commercial Pesticide Applicator and Registered Technician Certification

VDACS-OPS recently implemented an online system for applicator certification and has been entering recertification credit into the new system. Applicators whose certificates expire on June 30, 2022, and who have taken the required recertification course(s) will have their certificate automatically renewed, and a new certificate will be sent to them. VDACS-OPS is

issuing and mailing certificates at regular intervals, however, not all applicators will receive their renewed certificates at the same time, and some may not receive their renewal until after June 30, 2022. If an applicator has taken the required recertification course, even if they do not receive an updated certificate until after the expiration date, the applicator is considered certified. As a reminder, regulations governing the pesticide fees charged by VDACS-OPS have been amended, and there is no fee for pesticide applicators to renew their certificates.

For pesticide businesses that sell restricted use pesticides, it is possible that a currently certified applicator who wishes to purchase a restricted use pesticide will not have their renewal certificate until after June 30. Pesticide businesses needing to confirm the certification status of an applicator prior to sale of a restricted use pesticide can contact VDACS-OPS at opsclrt.vdacs@vdacs.virginia.gov or 804-786-3798.

For those applicators who are due for renewal but have not completed the required recertification course(s) by June 30, 2022, their certificate will expire. If a pesticide applicator applies a pesticide after June 30 and has not completed the required recertification course, they will be in violation of Virginia's laws and regulations and subject to enforcement action. Applicators who do not take a recertification course by August 29 of the expiration year listed on their certificate and who wish to be certified, are required by law to retest and submit a new application and fee.

For current information regarding the 2022 Commercial Pesticide Applicator and Registered Technician Certification Renewals, please visit: vdacs.virginia.gov/pesticides.shtml.

2022 Pesticide Collection Program

Do you or someone you know need assistance with the disposal of unwanted or outdated pesticides? Location dates and times have been announced for the 2022 Pesticide Collection Program. Information about the program, as well as the 2022 Pesticide Collection Program brochure, can be found at: vdacs.virginia.gov/pesticide-collection.shtml.