Penn State Pesticide Education Program • Pennsylvania Department of Agriculture

PESTICIDE HIGHLIGHTS

December 2020

Is Your N95 Respirator Fact or Fiction?

Whether you are looking for Personal Protective Equipment (PPE) for yourself or your employees, N95 respirators have been difficult to find over the past several months. The goal is to keep you and your pesticide handlers safe when they are working around pesticides. However, once you finally locate a respirator, you need to examine it closely before purchasing it to make sure it is not a counterfeit. These counterfeit respirators are typically marketed and sold under the guise of being a NIOSH-approved product, but they are not. NIOSH is the National Institute for Occupational Safety and Health and they issue recommendations for respirator use and provide testing, approval, and certification to verify that respirators in the workplace meet specific standards.

You can take several steps to verify that the respirator you purchase is a legitimate NIOSH-approved respirator (see photos below). First look for a NIOSH-approval label on or in the respirator packaging. Next, look for a NIOSH-approval (TC) number on the respirator. Signs that your respirator is a fake include the misspelling of NIOSH on the respirator, the respirator has a decorative fabric, presence of ear loops rather than headbands, etc. For a complete list of ways to identify a counterfeit N95 respirator and see examples, visit the Centers for Disease Control and Prevention website: **www.cdc.gov/niosh/npptl/usernotices/counterfeitResp.html**.

When looking at a NIOSH-approved filtering facemask respirator, the following information should be found on the respirator. The NIOSH name will appear in block letters on the respirator along with the brand name or registered trademark. Typically, an approval number along with the filter class which is either N, P, or R and the filter efficiency level (e.g., 95, 99, or 100) can be found on the mask. The final information on the facemask respirator will be a model number and a lot number. Purchase your PPE from reliable local sources or reputable online sources.

New PDA Pesticide Business Search Tool

The Pennsylvania Department of Agriculture (PDA) now has a public database that individuals can use to search for licensed pesticide businesses on its website. This database includes all active pesticide businesses licensed with the PDA. Individuals can search for businesses by category, county, and/or name. The goal is to provide the public with a way to find licensed pesticide businesses for providing pest control services. If your pesticide business license is out of compliance, your business will not be searchable on the database. The website can be found by going to **www.agriculture.pa.gov**, highlighting the top *Plants, Land, & Water* tab, then clicking on *Pesticide*, and clicking the linked text "interactive Pesticide Business Map" on that page.

How Online Recertification Course Completions Are Reported

Have you ever taken an online course to earn recertification credits and then checked your account the next day on the PaPlants website to verify that the credits had been applied? If so, you probably found out that the credits—you thought you earned—had not yet been added. Then you start to wonder, did I complete the course correctly?

To put your worries to rest, here is how the process works—at least with the online credits from Penn State Extension. After the applicator completes an online recertification course, passes the short quiz at the end, and fills out some additional information (such as certification number and date of birth), this information is automatically sent to the Penn State Pesticide Education Program and then compiled into a report. On the last business day of each month, all online recertification credit courses from Penn State Extension completed during that month are submitted to the Pennsylvania Department of Agriculture (PDA). When licenses are set to renew in March and September, course completions are submitted more frequently, at the middle and end of the month. Once PDA has received the report, the credits are usually posted to the applicator's account within 48 hours and will be visible on the PaPlants website as well.

Here are some tips when you take **any** online recertification course. When registering for an online recertification course, be sure to write down the contact information in case you have any questions about the course or the status of earned credits. Also, keep a copy of the completion certificate (if one is available) until you see your credits on PaPlants. **Remember:** A successfully completed course will only count for recertification credits once during your lifetime.

To find PDA-approved online recertification courses, visit: **www.paplants.pa.gov/PesticideApplicator/MeetingSearch.aspx**. Select *Online* as the meeting type, then select the Category you are interested in, and then click on *Search* to see all the courses that are available. To find more information about a specific course, click on *Details* in the first column to see the course description, category credits, and registration information.

Pennsylvania Inspectors Sweep EPA Awards

At the annual Environmental Protection Agency (EPA) Region 3 Pesticide Inspector's Workshop held October 6-8, 2020, EPA announced the recipient of the *2020 Inspector of the Year Award* and the *2020 Investigation of the Year Award*. The workshop, unique to EPA Region 3, is held annually and provides specific training for pesticide inspectors to conduct pesticide misuse investigations and routine pesticide licensing and records inspections for their home state agencies and EPA. Inspectors also receive credits toward annual training to maintain their EPA credentials. The EPA Region 3 territory includes Delaware, Maryland, Pennsylvania, Virginia, Washington DC, and West Virginia.

Each Region 3 state (and the District) submit their Inspector and Investigation of the Year nominations prior to the annual workshop. The nominations are reviewed by a team from the EPA Region 3 Chemical Safety Programs Branch, including the Branch Chief. The criteria for Inspector of the Year includes the quality of inspection reporting, being a team player, continually working to improve the program, willingness to take on additional duties, continually improving their knowledge and skills, and proving themselves as an environmental educator.

For 2020, EPA presented the Inspector of the Year Award to Christopher Strickler. Chris is the pesticide inspector for Lancaster and York counties. Chris repeatedly conducts thorough investigations, often searching out unique sources of data to supplement and corroborate the evidence collected from complainants and pesticide applicators. This enables thorough case review and accurate enforcement actions to be taken by the Department. Chris was selected from a slate of seven nominees across EPA Region 3.

The Investigation of the Year Award goes to an individual inspector or group that has conducted a pesticide investigation that demonstrates a keen attention to detail with proper documentation, follows standard operating and investigative procedures, and goes above and beyond normal duties to dig deeper and build a strong and comprehensive case. Also considered is if the case was notably challenging or complex and whether there was a potential for human exposure and/or environmental damage.

EPA presented the 2020 Investigation of the Year Award to Janet Driggers and Nicole Wood, pesticide inspectors for southwestern PA. Their investigation involved an unlicensed pesticide applicator making excessive applications – in terms of both quantity of pesticides applied and frequency of applications – to a residence of a family of four. The exemplary investigative work by Janet and Nicole in uncovering the evidence supporting the egregious actions of the applicator enabled the Department to file criminal citations against the applicator. Janet and Nicole's investigation was selected from four nominations submitted to EPA.

Congratulations to Chris, Janet, and Nicole for their stellar work in conducting pesticide investigations at an extremely high level and conducting themselves in a manner befitting the Commonwealth. You have made us proud!

Overview of COVID Response from Penn State and PDA

Life as we knew it drastically changed across the nation this spring with the onset of the COVID-19 pandemic. In Pennsylvania, the Governor took the necessary steps to help safeguard the Commonwealth by putting restrictions and closures on many businesses. Some entities that were classified as "life-sustaining" were able to remain open, such as grocery stores, gas stations, farms, health care, specific manufacturing, and transit systems. All other businesses were to close and remain closed until further notice. Penn State Extension was deemed "life-sustaining"—due to its work with agriculture—remained open although most of us had to work remotely from home. Those conducting research were permitted to continue coming into the office, lab, or field although they had to follow strict guidelines.

The Penn State Pesticide Education Program had to react quickly as many Private Applicators' pesticide licenses were up for renewal on March 31, 2020. We worked closely with the Pennsylvania Department of Agriculture to get needed information out to county extension educators and regional inspectors to answer questions they were receiving from pesticide applicators. We wanted to highlight all the online courses available for recertification credits as all in-person meetings were quickly cancelled. We also worked with other Penn State Extension teams to put on several online webinars to give applicators another option to earn their recertification credits.

Penn State Extension also made all their online courses free from April to mid-May 2020. Some courses even remained at a reduced cost (50 percent off) until the end of August 2020. A few of the most popular core and category recertification courses during that time included:

- Plant Health Diagnosis: Assessing Plant Diseases, Pests, and Problems
- Employee Landscape Training: Symptoms and Signs of Plant Health Problems
- Japanese Beetle Management
- Keeping Pesticides Out of Groundwater
- Problem Weeds in Field Crops: Managing Annuals and Biennials
- Problem Weeds in Field Crops: Managing Perennials
- Pesticide Sprayer Cleanup
- Aquatic Pesticide Management: Using Aquatic Herbicides for Pond Weeds and Algae
- Forage Weed Management
- Winterizing Pesticide Sprayers

The Pesticide Education Program provided information to the Plain sect community through the 1-800-Penn-IPM telephone line that also includes information about current pest conditions. Also, our program along with several other Penn State Extension Educators recently developed several correspondence courses for the Plain sect community and for those who have poor internet bandwidth that hinders their participation in online courses or webinars. These correspondence courses are workbooks that applicators read and complete several activities, and then take a quiz. The quiz is mailed back to us and graded. See the article on Page 7 in this newsletter for more details.

The Pennsylvania Department of Agriculture (PDA) also had to work remotely from home during this time. They had to quickly determine how to handle effects of all the cancelled in-person meetings on the March 31, 2020 renewal date for private applicators. They made the decision to move the renewal date to June 1, 2020 and that restricted-use pesticides could still be purchased until that date. However, the applicators with renewals that had been due March 31, 2019 could still not purchase restricted-use pesticides. PDA communicated this guidance to pesticide dealers as new certification cards were not mailed out immediately due to the pandemic. No changes were made to the public and commercial applicator renewals due on September 30, 2020.

Another issue that PDA had to tackle was how to give certification exams. Many offices were closed due to the COVID-19 pandemic so no exams were given until late May 2020. At that point, as some buildings and offices were able to reopen, a very limited number of exam sessions could start again. By June 2020, Pennsylvania was able to start limited testing in every PDA region. Exam sessions were limited to 10 people and wearing masks and social distancing were required.

Moving into 2021, these COVID-19 protocols will continue at all exam sessions.

Find Recertification Credits

Penn State Extension

- extension.psu.edu/pestcredits

Pennsylvania Department of Agriculture

- www.paplants.pa.gov

Legal Liability for Non-Target Herbicide/Pesticide Damage

On February 15, 2020, after several weeks of trial, a jury in a Missouri federal court quickly returned a verdict against Bayer (current owner of Monsanto's dicamba legal liabilities) and BASF and in favor of a peach producer named Bader Farms. The jury awarded $15 million dollars to Bader Farms as compensation for non-target injury to its orchards as a result of the use of new generation dicamba-containing products from Bayer and BASF onto nearby properties.

This verdict was a first-of-its-kind in the United States for dicamba non-target injury against a product manufacturer. The verdict remains under appeal. In the meantime, on June 24, 2020, Bayer announced that it had negotiated a $400 million class action settlement of most of its other legal liability arising from dicamba non-target injury. However, that settlement has yet to be finalized, months later.

The fallout from the introduction of the new seed and dicamba formulations beginning in 2015 and continuing thereafter have been well-documented and highly discussed – but mostly with regard to the actions and legal liabilities of the product manufacturers (referred to as "product liability").

What about an applicator's legal liability for non-target property damage from dicamba or any other herbicide/pesticide?

1. ***Product Liability:*** The end-line retailer, which could include a commercial applicator, can be found liable for product liability. However, if the applicator follows all label directives of the product manufacturer and commits no errors in the application, then the law provides that the applicator will be fully indemnified by the manufacturer should a claim of product liability be made. "Indemnified" means all legal liability will be paid by another who is primarily liable by law or contract. The legal wrangling that will ensue in such a circumstance, however, is best left to the respective insurance companies and their lawyers. That is why an applicator buys liability insurance and that is why insurance companies employ lawyers.

2. ***Negligence, etc.:*** What if a claim is made that the applicator did not follow the label directives, deviated from legal or regulatory requirements or failed to employ "best practices" of the industry?

This kind of claim was absent from the *Bader Farms* case and is absent from publicly available records of non-target dicamba injury lawsuits to this point. The *Bader Farms* case illustrates that a jury may readily find a manufacturer responsible for non-target dicamba injury and that a jury will accept that such property damage can cause wide-spread and egregious damages (as well as justify $250 million dollars in punitive damages to punish the manufacturers in the case). However, it does not teach us anything about how applicators might be judged in applying dicamba in its various product forms.

We must review some basic principles that apply in such a hypothetical claim. There are at least four recognized legal theories that may be asserted against an applicator.

Three of these legal theories are what might be characterized as "old school." The first is ***trespass to property*** (intentionally causing entry upon another's property – requiring an intent to cross the property line). The second is ***nuisance*** (interfering with the private use and enjoyment of another's property – generally viewed as requiring more than a one-time occurrence). Neither of these legal theories of liability apply well to a herbicide/pesticide non-target injury. The third is ***strict liability*** (liability for damage caused by use of an "ultrahazardous" substance or activity, regardless of the care taken to avoid damage). The textbook example of strict liability is blasting. Apart from one 1987 case, *Villari v. Terminix*, 663 F. Supp. 727 (E.D. Pa 1987), which applied this theory to insecticide use within a residential home, there is little in Pennsylvania law to lead to the belief that this theory would be found applicable to a non-target injury incident.

Negligence (failure to employ "reasonable care" to prevent damage to others or their property from one's actions) is the legal theory that would likely be asserted against an applicator in a non-target injury incident. The "standard of care" in such a case, i.e. what the attorneys argue to a jury is the amount of "reasonable care" that should have been exercised, is established in a particular claim by reference to the required and accepted practices in a particular industry, e.g. label directives, federal and state regulatory requirements, and "best practices" of the industry.

If an applicator adheres to all legal requirements and voluntarily-accepted standards for the particular activity, as well as properly uses all products according to manufacturer instructions and labels, an applicator has placed themselves in the best possible position to withstand claims of negligence in causing non-target property damage.

3. ***Insurance:*** It is also important to purchase liability insurance with the right type of coverage to ensure that the applicator is protected from financial liabilities and that victims of non-target injury can be compensated if legally justified. Standard liability insurance policies contain what is termed a "pollution exclusion" which excludes coverage for "chemical drift" (the insurance term that encompasses non-target injury), particularly if occurring from non-accidental means. A commercial applicator should confirm with their agent that they have purchased liability coverage containing specific coverage for intentionally applying chemicals as a paid service. The insurance term for this is "your work." In order for a liability policy to be effective in protecting any applicator, it must provide coverage for "your work." Non-commercial applicators also need to buy coverage for non-target property damage because liability coverage contained in a standard farm policy for example is unlikely to provide the correct coverage for chemical drift off the applicator's property.

An additional easy-to-read resource on insurance coverage for chemical drift is located in the June 2020 on-line edition of The Grapevine Magazine, titled "*Liability Coverage for Chemical Drift*" at **thegrapevinemagazine.net/2020/06/liability-coverage-for-chemical-drift/**.

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Don't Stir the Waters - Aquatic Application Defined

The question most often asked by applicators is, "What does the Pennsylvania Department of Agriculture (PDA) consider an aquatic pesticide application?" The Pennsylvania Pesticide Control Act of 1973 defines the Aquatic pest control category, Category 9, as "The use of a pesticide on standing or running water, excluding the use of a pesticide in a public health-related activity described in paragraph (16)." Paragraph 16 of the Act relates to the Public health invertebrate pest control category, Category 16, which covers pesticide applications that are made for managing invertebrate public-health related pests, such as mosquitoes. Category 16 applications can include the use of mosquito larvacides that are applied to aquatic environments. This type of aquatic application is made under Category 16, not Category 9 because it is being made to control an invertebrate public-health pest.

So what type of applications fall under the aquatic category? By definition this would include pesticide applications made to standing water such as ponds, lakes, and reservoirs along with running water that would include streams and rivers. These applications would pertain to the use of any pesticide (herbicides including algicides, insecticides, or piscacides that control fish) labeled for aquatic sites, excluding those being made to control public-health pests.

Category 16 covers applications made to aquatic sites such as ponds, streams, swamps, marshes, and wetlands.

Another part of this overall question to PDA relates to other sites that may also be included under the aquatic category. This would include sites such as swamps, marshes, wetlands, roadside drainage ditches, and flood zones. Typically these areas would fall under the definition of the aquatic category if there is standing water present at the time of application. This would also hold true for applications made to riparian areas. Remember, an aquatic pest control certification is only needed if the application is made directly to any water within these areas. Other category applications can typically be made up to the water's edge, provided the label does not have any set back or buffer zone requirements. If you have any questions regarding the application of a pesticide to an aquatic environment or determining if a site falls under the aquatic category contact PDA. Note, aquatic applications can be made by an individual (such as a private applicator) on their own property without a certification unless a restricted use pesticide is used.

All applicators, including private applicators, must follow some additional requirements regarding aquatic applications within Pennsylvania. These fall under the jurisdiction of the Pennsylvania Department of Environmental Protection (DEP) and the Pennsylvania Fish and Boat Commission (PFBC) even though PDA is designated as the primary agency within Pennsylvania for regulating pesticide use. These requirements come under Pennsylvania's Clean Streams Law and establish provisions for two different permits that may need to be obtained prior to making a pesticide application to any surface water within the Commonwealth. The one permit is titled the Joint Permit for Use of an Algicide, Herbicide or Fish Control Chemical in Waters of the Commonwealth and often is referred to as a Chapter 91 permit. This is a joint permit issued by DEP in conjunction with the PFBC and is required when a pesticide is applied to surface waters. The second permit is administered by DEP and is called the National Pollutant Discharge Elimination System (NPDES) permit. This permit may be required depending on the application site and area treated. For further information regarding either of these permits, contact the regional office of DEP's Clean Water Program.

Remember, always check the pesticide label before making an application in or around an aquatic site. Make sure it can be applied to the site and to check the label for any special precautions that must be taken when making an application in or near water.

(Non-Target Herbicide/Pesticide Damage con't from previous page)

With the uncertainty of result brought by recent dicamba product formulations, an applicator is well-advised to be mindful of each and every aspect of its adherence to law, label language and best practices, as well as to pay attention to purchasing the proper insurance coverage which is frequently assumed to be adequate.

Brook Duer, Staff Attorney, Penn State Center for Agricultural and Shale Law

What Do You Do with Excess Spray Mix?

Whenever you mix and load a pesticide, it is usually just the necessary amount for the application job. However, you may have some spray mix left over even after you applied it to all the planned application areas. When this happens, you need to make sure the excess pesticide spray mix (or rinsate) is correctly disposed of per the product label and in accordance with any local and state regulations.

One common method of correctly disposing of excess pesticide spray mix is by applying it to a labelled site per the label instructions. This can be done when a small amount is left in the tank. In the case of many ag herbicides, excess spray mix may be applied to fallow or set-aside land per label directions.

If you cannot do this because all your available labelled sites have been sprayed at the maximum labelled rate already, you may have two other options. First, you can check with your neighbors to see if their labelled sites need treatment from your excess pesticide spray mix. Second, you can reuse the rinsate for a future application as long as it is still within the prescribed label rate. Also ensure that only 10 percent of the next pesticide spray mix consists of the rinsate, and the other 90 percent of the mix is water. If you are going to reuse rinsate, store and label it separately to make sure it is not mistaken for other chemicals or used inappropriately. Be sure to keep good records of how you disposed of excess spray mix.

If it is not possible for you to dispose of excess pesticide spray mix using any of the previous methods, then there are two resources that you can contact for further information about proper disposal. One is your local solid waste management authority, and the other is your Department of Environmental Protection (DEP) regional office. They will be able to tell you about other disposal options or programs for collecting and disposing of unwanted excess pesticides. Additionally, they can also inform you of any potential local requirements for properly disposing of excess pesticide spray mixes.

Additionally, if you have excess pesticide products in their original container that you do not use anymore, then there is a program that you should consider using. The Pennsylvania Department of Agriculture (PDA) offers a program for Pennsylvania pesticide applicators and pesticide businesses called CHEMSWEEP. This program is designed to collect and dispose of old, unusable, or unwanted pesticides at little or no cost to the applicator and has a set four-year county rotation. However, CHEMSWEEP will NOT accept leftover pesticide spray mixes and rinsates. The PDA also offers the Plastic Pesticide Container Recycling program that collects empty pesticide containers in specific locations throughout the state. Find out more about these two programs in the articles on page 12 or visit the PDA websites listed below.

Taking steps to make sure that little to no leftover pesticide spray mix is left in the tank when the application is finished will help tremendously with disposal issues. Make sure to mix only the needed amount of pesticide for an application and follow the label directions for cleanup and disposal of the pesticide and its container.

Additional Online Resources for Pesticide Disposal

Environmental Protection Agency

- Safe Disposal of Pesticides: **www.epa.gov/safepestcontrol/safe-disposal-pesticides**

Pennsylvania Department of Agriculture

- CHEMSWEEP : **bit.ly/PDACHEMSWEEP**
- Plastic Pesticide Container Recycling Program: **http://bit.ly/PDAppcrp**

National Pesticide Information Center

- Disposal of Pesticides: **npic.orst.edu/health/disposal.html**

New Way to Earn Recertification Credits

In light of the COVID-19 pandemic, Penn State Extension needed to develop an alternative delivery method for applicators to earn recertification credits as all in-person meetings were cancelled for many months and are still very limited now. We initially promoted online courses and webinars but those who do not use the internet or those who have poor internet bandwidth could not use those delivery methods. Correspondence courses, which have been around for a long time but have not been used much lately, became a viable option.

Several Extension Educators decided to develop workbooks that included enough information to merit two recertification credits. This means that it takes an applicator about an hour to read through the workbook and complete the related activities, which helps in comprehending the material. Then the applicator must complete a written quiz, which will be mailed back to Penn State for grading. To obtain recertification, an applicator must get a 70 percent. If that is not earned, another quiz will be mailed to the applicator; up to three quizzes can be attempted. Once the quiz is passed, the applicator receives a completion certificate in the mail and their information will be included in an end of month report to the Pennsylvania Department of Agriculture (PDA).

Each workbook also includes an evaluation of the overall correspondence course and we would appreciate your time to complete it, rip it out of the workbook, and send back with your quiz. This will help us improve these courses and provide guidance on new future workbook topics.

These correspondence courses will become available in early 2021. To order, call 1-877-345-0691 and provide the title from the box to the right that you are interested in taking. These courses cost $10 plus tax. Shipping and handling will be **FREE** through March 31, 2021. The courses will also be listed on our website at: **extension.psu.edu/pestcredits**. Along the left-hand side under Education Format, click on *Guides and Publications* to find the available correspondence courses.

We hope that these correspondence courses help meet a need when face-to-face meetings are not being held or are very limited due to COVID-19 restrictions.

Several category and core workbooks are being developed now and are expected to be released in early 2021 and include the following:		
Forage Diseases	2 credits	Private Category, and Categories 01 and 18
Pumpkin Diseases	2 credits	Private Category, and Categories 03 and 18
Tomato Diseases	2 credits	Private Category, and Categories 03 and 18
Adjuvants and Pesticides	2 credits	Core
Pesticide Recordkeeping	2 credits	Core
Pesticide Spil Protocol	2 credits	Core
Pollinators and Pesticides	1 credit	Core
Other category workbook topics that are currently under development and are expected to be released in February or March 2021 include fumigation and soybean diseases. Potential future topics include: apple diseases, sweet corn insects, and greenhouses. The most current list of correspondence courses can be found at **extension.psu.edu/pestcredits** or by calling 877-345-0691.		

Want a Chance to Win a $15 Coupon Toward any Penn State Extension Offerings?

The Penn State Extension Pesticide Education Program is dedicated to delivering educational resources and information to certified pesticide applicators and stakeholders. As part of a self-evaluation, we are gathering input to help us plan future programming that is more directed to your needs. We have developed a survey to assess how Penn State Extension is meeting your certification and recertification needs, among a few other things. Specifically we are asking about your needs for core and category recertification credits, where you search for recertification credits, when are the best times to offer programming, possible core topics, and your awareness and interest in some of our other programs.

We would appreciate every certified applicator filling this survey out before April 30, 2021. Once we have 50 surveys completed, we will randomly select one applicator to win a coupon code worth $15 off any one Penn State Extension online recertification course or workbooks, as mentioned above, through the Extension website. When the next 50 surveys are returned, we will draw another name. You will only need to submit your name and email/address if you would like entered into the prize drawing.

The survey will take approximately 10 minutes to complete and can be found at: **tinyurl.com/PSUapplicatorSurvey**

2021 Penn State Extension - Pesticide Recertification Credits
2 + 2 Agronomic Educational Meetings

Additional meeting details (fees, category credits assigned) and registration will be available by calling the Extension phone number: 877-345-0691

January	2-hour webinar sessions	Crops Conference Series	Various credits assigned
February 11	10:00 am to 12:00 pm *recording will be available until April 30th	Agronomic Pesticide Update Series - Forages Webinar	2 core, 2 private category, 01, 18
February 25	10:00 am to 12:00 pm *recording will be available until April 30th	Agronomic Pesticide Update Series - Soybean Webinar	2 core, 2 private category, 01, 18
March 11	7:00 pm to 9:00 pm *recording will be available until April 30th	Agronomic Pesticide Update Series - Corn/Small Grain Webinar	2 core, 2 private category, 01, 18
March 11		Forage Workshop Series (This is a five session webinar; however, only this session has credits assigned)	2 core, 2 private category, 01, 18
Additional opportunities and information can be found at: extension.psu.edu/pestcredits			

2021 Penn State Certification Exam Prep
Pesticide Applicator Short Courses

Pesticide applicator short courses are a classroom-style setting meant to prepare individuals to take the certified pesticide applicator's exam. These fee-based courses, which are not required, can be used in addition to the self-study exam material packets. Prior to registering and attending a short course class, individuals are responsible for purchasing their own study packets.

Private Applicators **ONLINE** February 16, 18, 23, and 25, 2021 (Four half day sessions) Registration fee: $40	The Private Applicator Short Course is aimed at those who would like to become a certified PRIVATE pesticide applicator to apply restricted use pesticides for the purpose of producing an agricultural commodity on land that is owned or rented by them or their employer. To register for a short course, call 877-345-0691 or visit: **extension.psu.edu/private-pesticide-applicator-short-course**
Commercial/Public Applicators **ONLINE** Beginning in February 2021 (various dates for core and category) Registration fee: up to $75	The courses covers core and categories 06, 07, 10, and 23. To register for a short course, call 877-345-0691 or visit: **extension.psu.edu/pesticide-applicator-short-course**

2021 Penn State Extension - Pesticide Recertification Credits
Green Industry Educational Meetings

Additional meeting details (fees, category credits assigned) and registration will be available by calling the Extension phone number: 877-345-0691

January 21 January 28	12:00 pm to 2:15pm	Greenhouse Growers Day	**extension.psu.edu/greenhouse-growers-day-webinar**
January 19, 26 February 2, 9, 16	9:00 am to 12:00 pm	Turf and Ornamental Conference	**extension.psu.edu/turf-and-ornamentals-conference**
January 19, 21, 26, 28 February 2, 4, 9, 11, 16, 18	9:00 am to 12:00 pm	Arborist Short Course	**extension.psu.edu/arborist-short-course-series**
January 22 February 19	8:00 am to 10:30 am	Conifer ID for Green Industry	**extension.psu.edu/conifer-identification-for-green-industry-professionals**
February 8-11	Various times	Mid-Atlantic Fruit & Vegetable Convention and the annual Winter Tree Fruit Schools	**extension.psu.edu/winter-tree-fruit-educational-meetings-mafvc-and-winter-tree-fruit-schools**
March 15	8:00 am to 3:30 pm	Professional Pest Managers School	**extension.psu.edu/professional-pest-managers-school**
Additional opportunities and information can be found at: extension.psu.edu/pestcredits			

2021 Penn State Extension - Pesticide Recertification Credits
Green Industry 2 + 2 Webinars

2 + 2 webinars will be assigned 2 Core and 2 Category credits on **horticultural** topics.

These webinars will be held on various dates throughout the year. To see a current list of available opportunities and to register, go to: **extension.psu.edu/green-industry-update-webinar**.

Participants can join the live webinar, or watch a recorded version of the webinar that will be available for one week following the live webinar. After completing the webinar, participants will be given a link to a quiz to review the content of the webinar. Participants must earn 70 percent and then will receive recertification credits.

2021 Penn State Extension - Online Courses Available for Recertification Credits

To take any of these online courses, visit: **extension.psu.edu/pestcredits** On the left hand side, under Education Format, click on Online Courses. Applicators can only take each online course ONCE in their lifetime to earn credits because the content does not change.		
Personal Protective Equipment for Pesticide Applicators	1 CORE credit	Cost $15.00
Pesticide Sprayer Cleanup	1 CORE credit	Cost $15.00
Winterizing Pesticide Sprayers	1 CORE credit	Cost $15.00
Keeping Pesticides Out of Groundwater	2 CORE credits	Cost $25.00
Forage Weed Management	1 credit (PC, 01, 18)	Cost $15.00
Problem Weeds in Field Crops: Managing Annuals and Biennials	1 credit (PC, 01, 18)	Cost $15.00
Problem Weeds in Field Crops: Managing Perennials	1 credit (PC, 01, 18)	Cost $15.00
What's New in Pest Management	1 credit (PC, 01, 18)	Cost $15.00
Japanese Beetle Management	2 credits (PC, 06, 07, 18, 23)	Cost $25.00
Aquatic Pest Management: Using Aquatic Herbicides for Pond Weeds and Algae	3 credits (PC, 09)	Cost $59.00
Employee Landscape Training: Symptoms and Signs of Plant Health Problems	4 credits (PC, 06, 18, 23)	Cost $49.00
Plant Health Diagnosis: Assessing Plant Diseases, Pests and Problems	4 credits (PC, 06, 07, 18, 23)	Cost $59.00

PA Producers and Applicators Encouraged To Use FieldWatch®

FieldWatch® is a voluntary online program designed to help pesticide applicators view potentially sensitive crops and beehives in their area so they can make informed decisions when preparing to make an application. Developed by Purdue University and other agricultural stakeholders in 2009, this program is now used in 22 states and one Canadian province. In Pennsylvania, the program is being offered as a collaboration between Penn State Extension and the Pennsylvania Department of Agriculture.

Commercial specialty crop growers, commercial and hobbyist beekeepers, and applicators can go to the FieldWatch® website, which contains several mapping tools: DriftWatch® for specialty crop growers, BeeCheck® for beekeepers, and FieldCheck® for applicators. Users can register for the appropriate tool(s). Growers and beekeepers can then mark the location of their fields and/or hives on a highly accurate mapping tool. This will allow applicators to view the location and details of specialty crops and beehives near their application sites.

We have seen a significant number of people sign up in the last year since FieldWatch® became available in Pennsylvania! Currently over 2,600 acres of specialty crop fields, over 800 beehives, and more than 100 applicators/companies are registered on FieldWatch® in Pennsylvania. This can be a very helpful tool, so please check it out and use this valuable resource. We strongly encourage specialty crop growers and beekeepers to map their sites, and applicators to look at the map before applying pesticides.

This program receives industry and government support and is free to use, though users do have the option of becoming supporting members by paying an annual membership fee.

Go to **fieldwatch.com** for more information and to register!

**Please note that the FieldWatch® program is completely voluntary and does not provide a basis for any regulatory or legal action. Growers, beekeepers, and applicators are not required to use FieldWatch® and applicators are permitted to apply whichever pesticides they choose as long as they are following the label and complying with all state and federal laws.*

Pesticide Enforcement Actions: July 2019 to June 2020

Although not a popular subject, enforcement of the Pennsylvania Pesticide Control Act is a necessary part of the Pennsylvania Department of Agriculture (PDA), and reading through this summary is an opportunity for you to learn from the mistakes of others. The Act gives PDA the authority to take enforcement actions in the form of either a Request for Compliance, Notice of Warning, or Civil Penalty. The following is a summary of pesticide enforcement actions taken by the PDA against private applicators, commercial applicators, pesticide dealers, pesticide businesses, and citizens of the Commonwealth.

The Department conducted 323 pesticide-related inspections and investigations during State Fiscal Year 2019 (or SFY 2019, which runs from July 1, 2019 – June 30, 2020). This number is about one-third of the usual pesticide inspections and investigations from previous years and is directly attributed to the COVID-19 pandemic. PDA created guidance for inspectors that allowed for electronic and non-contact response to pesticide misuse complaints during the quarantine, but no routine pesticide inspection work was performed during the pandemic.

For SFY 2019, there were 117 enforcement actions taken, consisting of 30 Civil Penalties, 24 Notices of Warning, and 63 Requests for Compliance to various Pennsylvania firms and individuals. Some actions contained multiple violations of the Pennsylvania Pesticide Control Act. The civil penalties ranged from $100 to $2,000.

Below are the violated sections of the Pennsylvania Pesticide Control Act and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for SFY 2019:

Section	Description	# Violations
128.11	RUP Dealer Recordkeeping	3
128.31	Pesticide Business Licensing	27
128.33	Assignment of Work (Not Certified in Appropriate Category)	2
128.35	Pesticide Recordkeeping, Agricultural	2
128.35	Pesticide Recordkeeping, Non-Agricultural	69
128.41 - .42	Commercial Applicator Licensing	25
128.51	Pesticide Technician Training	2
128.65	Private Applicator RUP Records	4
128.103	Pesticide Handling, Misuse, Drift	21
128.112	Hypersensitivity Registry, Lack of Notification	12

Recordkeeping is an area that could use some improvement. For each application, a pesticide business must record:

- Date of application (including reentry time if required by the label)
- Customer name and address
- Pesticide brand name and EPA registration number
- Rate and total amount of each pesticide applied
- Applicator name and certification or registered technician number
- Address of the application site if different from the customer address

Each application record must be completed in written or printable form within 24 hours of the application. To assist with your recordkeeping requirements, download the Penn State Extension Pesticide Application Recordkeeping Manual at **extension.psu.edu/pesticide-application-recordkeeping-manual**.

Pesticide business licensing and applicator certification is another area that could be better, especially in the pest control and lawn care industries (including golf courses). Remember, any pesticide application made to the property of another or on a golf course requires an active pesticide business license and at least one certified commercial applicator in the appropriate category.

Section 128.103 of the Pennsylvania Pesticide Rules and Regulations pertains to pesticide handling, transportation, storage, use, and disposal. If you noticed, quite a few of the violations were in this part, which includes pesticide use endangering man, food, or the environment; pesticide use inconsistent with the label; unwanted residue on the property of another (drift); applying to the wrong property; applying unregistered pesticides (be careful buying pesticides off the internet!); and use of service containers (they must be marked with the brand name and percentage of active ingredient, and accompanied by a copy of the currently registered label).

For those of you that will be using registered technicians this spring, technicians need to receive 30 days of documented training by an active certified applicator with at least one year's experience in the appropriate category. And remember, pesticide technicians cannot perform unsupervised applications until they are fully registered, with their training record completed and payment received by PDA. Do not take pesticide technician training requirements lightly! Another Penn State Extension resource is their Pesticide Registered Technician Training Package. Find out more about this resource at: **extension.psu.edu/pesticide-registered-technician-training-package**.

Now is a great time to make sure your applicators are certified in the proper categories with their credits updated and renewals paid. The following chart indicates when license renewals are mailed and when licenses expire:

	Renewals Mailed	Expiration Date
Technicians	December	February 28
Private Applicators	January	March 31
Commercial/Public Applicators	July	September 30
Pesticide Dealers and Managers	October	December 31
Pesticide Businesses	October	December 31

As a pesticide business, each time you receive the new edition of the Pesticide Hypersensitivity Registry, please look through your service areas for any changes to the registry. A '+' before an entry means a new addition to the registry and a '@' means a change to that entry from the last edition. Individuals on the registry can also provide a work or school location that may be listed under a different town or county, so make sure you know all the locations listed for any given individual. The Pesticide Hypersensitivity Registry is published twice per year.

(con't on bottom of page 15)

CHEMSWEEP Program

The **CHEMSWEEP** Program collects unwanted or unusable pesticides and is available to pesticide applicators and pesticide businesses across Pennsylvania on a four-year rotation. Active private applicators and pesticide businesses in Bedford, Berks, Bradford, Butler, Columbia, Cumberland, Fulton, Lawrence, McKean, Montour, Northumberland, Schuylkill, Sullivan, Warren, and York should have received an inventory package in December 2020. Use the inventory form to list any waste pesticides you wish to dispose of and mail back to the regional Pennsylvania Department of Agriculture office listed at the top by **February 28, 2021**.

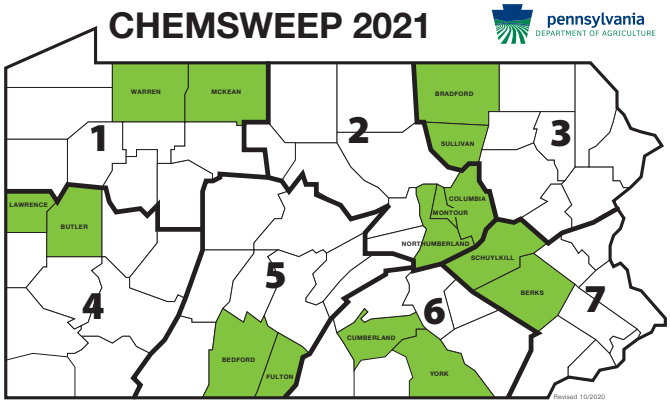
You will be contacted to have your inventory verified by a PDA inspector. They will look for any special circumstances such as leaking containers, unknown products, or other issues that may be of concern to the disposal contractor. Once the inventories are verified, PDA will work with the CHEMSWEEP contractor to schedule the collections. The program collects pesticides in June through October. The program does not anticipate any operational setbacks due to COVID-19 and collections are scheduled between June and October 2021.

CHEMSWEEP is not intended as an inventory management tool. Collections in some counties continue to increase every year. As applicators, you have the responsibility to manage your pesticide inventories and spray materials according to the label. Here are some tips:

- Store pesticides properly to prevent freezing or other damage.
- Use older materials first before opening new packages.
- Do not buy more product than you will use. Sending them out for disposal costs you money.
- When ordering, consider your current inventory and only order 90 percent of your forecasted needs.
- Manage leftover tank mix and rinsate responsibly as described on the label. Tank mix and rinsate will not be accepted for CHEMSWEEP disposal.

If you live in a selected county and did not receive the inventory mailer, contact your regional PDA office (listed below). There is no cost to participate unless your quantity exceeds 2,000 pounds. For inventories over 2,000 pounds the participant will be charged for the overage at PDA's contracted price.

Over **2.8 million pounds** of unwanted or unusable pesticide products have been disposed of by CHEMSWEEP in Pennsylvania from applicators just like you. Take this opportunity to properly dispose of those old, unwanted pesticides. If you have unwanted pesticides but do not live in a selected county, check to see if your county is holding a HHW event, otherwise please call **717-772-5210** for assistance.



Region 1: 814-332-6890
Region 2: 570-433-2640
Region 3: 570-836-2181
Region 4: 724-832-1073
Region 5: 717-705-5500
Region 6: 717-346-3223
Region 7: 610-489-1003

Plastic Pesticide Container Recycling Program

The **Plastic Pesticide Container Recycling** Program is a voluntary program that collects plastic jugs and barrels. This service is only available to agricultural and commercial pesticide applicators across Pennsylvania. The program offers pesticide users generating sizable plastic waste a free, easy, and responsible way to dispose of containers.

We all benefit in the recycling of these plastics by saving space in our landfills and the many products manufactured from the granulated material. In 2020, the Pennsylvania Department of Agriculture is estimating that over 125,000 pounds of containers will be collected and processed. When purchasing pesticides inquire if the material is available in reusable containers, which are shipped back to the supplier to be filled and used again.

To process non-reusable containers, they must be triple rinsed, have no pesticide residues inside or out, and have labels, foil, and caps removed. This is also part of the law as pesticide labels contain statements such as clean container promptly after emptying. Since the label is the law, not rinsing your empty containers in a timely manner would be a violation. Pour rinsate back into spray equipment and use as part of your fill. This program can only collect #2 HDPE plastic pesticide containers. Most of these collections are 2.5 gallon jugs, and 30 and 55 gallon barrels. Barrels must be cut lengthwise into equal quarters for processing.

Sixty-four recycling partners serve as drop off points for empty rinsed containers (see list on page 13). Due to COVID, please call before transporting to verify that the business is open. The predominant use for recycled pesticide containers is drain pipe, but it may also be used for fence posts, pallets, speed bumps, and marine pilings. For more information on the recycling program, call **717-772-5210**.

Plastic Pesticide Container Recycling Program Cooperating Businesses

Please bring pressure-rinsed or triple-rinsed plastic pesticide containers during posted business hours.

Due to COVID, please call before transporting to verify that the business is open.

City	Business	Phone #
PDA Region 1: Clarion, Crawford, Elk, Erie, Forest, Jefferson, McKean, Mercer, Venango, and Warren		
Erie	Site One, Inc.	814-455-7850
Meadville	Ernst Conservation Seeds	814-720-0819
North East	North East Fruit Growers, Inc.	814-725-3705
Sandy Lake	Lakeview Fertilizer	724-376-3615
Shippenville	J & J Feeds	814-226-6066
Tionesta	Long Acre Potato Farm	814-744-8454
Waterford	Team Turf Supply	814-796-1111
Waterford	Troyer Farms	814-796-1435
PDA Region 2: Cameron, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Tioga, and Union		
Jersey Shore	Eck's	570-398-2770
Klingerstown	Steve's Custom Application	570-648-4465
Kreamer	Kreamer's Feed Store	570-374-8148
Mifflinburg	Farmer's Exchange	570-966-1001
Mill Hall	Webb's Super-Gro	800-258-6689
Mt. Pleasant Mills	Mountain View Harness	570-539-2102
Washingtonville	Crop Production Services	570-437-3121
PDA Region 3: Bradford, Carbon, Lackawanna, Luzerne, Monroe, Pike, Sullivan, Susquehanna, Wayne, and Wyoming		
Columbia Crossroads	Judson's, Inc.	570-297-2153
Montrose	Andre & Son	570-278-1131
Montrose	Palmatier Enterprises	570-278-3350
Towanda	GROWMARK FS, Inc.	570-265-8141
PDA Region 4: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington, and Westmoreland		
Adrian	GROWMARK FS, Inc.	724-543-1101
Eighty Four	GROWMARK FS, Inc.	724-222-4303
New Wilmington	Centerra Cooperative	724-901-7063
Volant	Deerfield Farms Service	724-533-8004
PDA Region 5: Bedford, Blair, Cambria, Centre, Clearfield, Fulton, Huntingdon, Juniata, Mifflin, and Somerset		
Bedford	GROWMARK FS, Inc.	814-623-9061
Belleville	Union Mill Chemgro	717-935-2185
Clearfield	W & W Farm Supply	814-765-9044
Curryville	GROWMARK FS, Inc.	814-793-3664
Pleasant Gap	GROWMARK FS, Inc.	814-359-2725
Port Royal	GROWMARK FS, Inc.	717-527-4306
Somerset	GROWMARK FS, Inc.	814-445-5177
Thompsontown	Agronomy Center	717-535-5151
Warriors Mark	Helena Chemical	814-632-5177

City	Business	Phone #
PDA Region 6: Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry, and York		
Biglerville	Helena Chemical	717-677-4599
Carlisle	GROWMARK FS, Inc.	800-825-4769
Codorus	GROWMARK FS, Inc.	717-229-2311
East Berlin	GROWMARK FS, Inc.	717-259-9573
Elizabethville	Campbell Crops	717-362-1111
Elizabethville	Perdue Grain & Oilseed	717-362-8440
Ephrata	Hoover's Agway	717-733-6593
Gettysburg	Adams County Conservation District	717-334-0636
Gettysburg	Ag Com, Inc.	717-334-6224
Greencastle	Horstdale Farm Supply	717-597-5151
Harrisburg	PA Dept. of Agriculture	717-705-5858
Harrisburg	Site One	717-652-5813
Kinzers	Mr. Gideon King	N/A
Lancaster	Mel Weaver & Sons	717-898-9050
Lancaster	Site One	717-291-4434
Leola	Daniel's Farm Store	717-656-6982
Millerstown	N.O. Bonsall & Son	717-589-3146
Mt. Joy	Snyder's Crop Service	717-653-1120
Myerstown	GROWMARK FS, Inc.	717-866-5205
Myerstown	James Patches	717-949-3860
New Holland	Martin's Ag Service	717-354-4996
New Holland	R & M Nolt	717-354-0198
Quarryville	Little Britain Ag Supply	717-529-2196
Shippensburg	Crop Production Services	717-446-0434
PDA Region 7: Berks, Bucks, Chester, Delaware, Lehigh, Montgomery, Northampton, Philadelphia, and Schuylkill		
Coplay	GROWMARK FS, Inc.	610-799-3115
Johnsonville	GROWMARK FS, Inc.	610-588-1095
Leesport	GROWMARK FS, Inc.	610-926-6339
Reading	Timac USA, Inc.	610-375-7272
Richland	Ag Land Crop Protection	717-933-7000

Spotted Lanternfly Pesticide Applications

**This article is only applicable to commercial/public applicators and pesticide businesses, not private pesticide applicators.*

Figuring out which pesticide certification category is required for the type of pest control you are planning to do can be difficult. The spotted lanternfly is a new pest for some commercial/public pesticide applicators and businesses to control and has many wondering which pesticide certification category is required to make pesticide applications for it.

Spotted lanternfly may be relatively new and unique to the Commonwealth, but in terms of pesticide certification, it is just another pest. In general, pesticide certification categories are not based on the pest itself but rather the crops, use sites, and products applied. For instance, the knowledge base one needs for making pesticide applications to ornamental trees would be different from those making pesticide applications to trees with edible fruit. While you may be targeting the same pest, such as the spotted lanternfly, you may need more than one category depending on which commodity you are making applications to. In the example, certification in category 6 would be required to make applications to ornamental trees, whereas category 2 would be required to make applications to trees with edible fruit.

In general, most spotted lanternfly pesticide applications are being made in the following areas: homeowner landscapes, fruit trees and grapes, commercial building facades, forests, and outdoor recreation areas. All these different applications would fall under a different category, even though the target pest may be the same.

The potential spotted lanternfly categories are:

- **Category 2: Fruit and Nuts** – *The use of a pesticide in the production of tree fruits, nuts and berries*. For example, a pesticide business making a pesticide application to a homeowner's apple trees or any other edible fruit tree or bush or a commercial vineyard or orchard.

- **Category 5: Forest Pest Control** – *The use of a pesticide in a forest, forest nursery or forest seed producing area*. For example, a pesticide business making a pesticide application to a public or private forest or a forest edge/border.

- **Category 6: Ornamental and Shade Trees** – *The use of a pesticide in the maintenance of an ornamental tree, shrub, flower or other ornamental*. For example, a pesticide business making a pesticide application to plants in a homeowner's flower bed, ornamental trees in a homeowner's yard, ornamental trees in a business parking lot, or shrubs outside an office building. Additionally, a pesticide business making pesticide applications to Christmas trees.

- **Category 11: Household and Health Related** – *The use of a pesticide in, on or around a food handling establishment, a human or nonagricultural animal dwelling, an institution such as a school or hospital, an industrial establishment, a warehouse, a grain elevator and other types of structures whether public or private. The application of a pesticide to protect a stored, processed or manufactured product is also included. The use of a pesticide in outdoor perimeter treatments to control pests, which may infest the structure, is included*. For example, a pesticide business making a pesticide application inside a building (private home, school, hospital, retail establishment, warehouse, etc.) or on a building façade. Additionally, a perimeter pest treatment around the outside of the building to control pests that may enter the building.

- **Category 23: Park or School Pest Control** – *The use of a pesticide in a campground or recreational area of a public or private park or on school property*. This category is not required in a school or park situation but can be used in lieu of an applicable individual category if the pesticide application is made on a school (preschool and K-12), public or private park property, or campground with the exception of an application for wood destroying pests or pool chemicals.

If you are making a pesticide application for spotted lanternfly, or any other pest, and are unsure which category you are required to have on your commercial/public license, please contact Jessica Lenker, Pesticide Certification Specialist, at **jeslenker@pa.gov**.

Did You Know?	National Pesticide Information Center (NPIC)
	NPIC is a great resource for anyone looking for objective, science-based information about pesticides and pesticide-related topics. NPIC's scientists help explain complex information so you can make an informed decision about pesticides and their use. Visit their website at **npic.orst.edu** or call 1-800-858-7378 (weekdays from 11am to 3pm)

COVID Quarantines – Disruptive for Us, Deadly for Rats

The COVID-19 pandemic has driven major changes to many facets of our lives. Many businesses have had to close their doors or change the way they operate to keep their employees and customers safe. People are limiting their interactions with one another and leaving home less. With tighter than usual budgets and business closures, many businesses have been forced to suspend or cancel their pest control services. This raises concerns that when insect and rodent pests are unchallenged in the absence of people their populations may dramatically increase.

During the National Pest Management Association's annual conference, PestWorld's rodent expert, Dr. Bobby Corrigan, provided a talk that specifically addressed the affect of the pandemic on rats. Rats are notorious for causing damage in a variety of ways, including carrying a wide variety of parasites and disease-causing pathogens, contaminating food, and damaging structures by burrowing under them or gnawing through them. Rats are also infamous for their rapid reproduction, so an abrupt end to pest control measures intended to manage or eradicate them understandably raises some concerns. However, Dr. Corrigan's work has shown a silver lining to pandemic mitigation efforts where rats are concerned.

Rats are small animals with a fast metabolism. They routinely eat around 5-10% of their body weight (about 1-2 oz.) of food per day. They eat a wide variety of food, and virtually anything that people eat can be food for a rat. Rats are also creatures of habit; a sewer rat that made a living dumpster-diving is unlikely to wander into a forest to eat insects, nuts, and berries if the dumpster turns up empty. And with businesses being disrupted by COVID-19, many rats did find that the dumpster turned up empty. Because they must eat daily to survive, many rat populations quickly found that there simply was not enough food to go around. And for a small mammal with a fast metabolism that creates a desperate emergency that calls for drastic action.

The response of rats to their suddenly non-existent food supply varied. In many colonies, the dominant rats reduced competition for food and put some meat in their bellies by eating the smaller rats in the colony. Pest control technicians may recognize this behavior by finding bloodied clumps of rat fur, rat paws, and rat tails strewn about infested areas, along with a noticeable decline in small rat catches in traps. Many baiting programs suddenly achieved unprecedented bait acceptance, with technicians finding it virtually impossible to comply with the label instruction to "maintain an uninterrupted supply of bait" because so many rats were feeding so heavily on the bait. In some cases, entire populations of rats simply picked up and left. Dr. Corrigan mentioned consulting with a shopping mall that had a rat infestation for years that defied eradication efforts. Within two weeks of the mall closing due to COVID-19 lockdowns, it was entirely rat-free; all of the rats had either departed or starved. Rats also became unusually determined to get into new buildings that may supply food, so many homes and businesses with no history of rat problems suddenly found themselves with rats – especially if food smells escaped from the building.

Of course, people still need to eat, so the starving rat story does not apply everywhere. Rats around farms, feed mills, residences, and food-handling businesses that managed to continue operations as normal were largely unaffected because their food supplies remained unchanged. As COVID-19 mitigation efforts begin to lift around the country, we will likely see rats returning to their old haunts. After all, rats reproduce quickly enough to rebound within months from a major population knockdown. And when we return to business as usual, these opportunists will have no barriers to re-colonizing. However, we could learn from these observations to really prioritize exclusion and sanitation to prevent rats from returning. Just remember this simple wisdom: no food, no rats!

(Pesticide Enforcement Action con't from page 11)

This registry is available online and can be downloaded if you are a registered PaPlants user at **www.paplants.pa.gov** under "Programs."

Please take time this winter to review your pesticide handling and use practices, your applicator training and licensing status, your training protocols, and recordkeeping practices.

PennState Extension

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DEPARTMENT OF AGRICULTURE

Pesticide Highlights December 2020

extension.psu.edu

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