

ANR NEWSLETTER

Greensville-Emporia Winter 2020/2021

PG. 2

Upcoming Programs

Organic vs. Conventional Pesticides

PG. 3

Facts About Red Imported Fire Ants

PG. 4

Pesticides- Continued

Well Water Testing

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Virginia Tech • Virginia State University

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Pesticide Collection Event

Sara Rutherford

Virginia Cooperative Extension (VCE) in partnership with the Virginia Department of Agriculture and Consumer Services (VDACS) provided commercial and private

businesses, homeowners and farming operations the opportunity to dispose of unwanted or unused pesticides on August 31, 2020. During the collection event at Southside Virginia Community College's truck driving school location on highway 58, 5,669 pounds of pesticides were collected. In the region, the program collected 61,701 pounds of pesticides over the course of two weeks.

The pesticide collection program rotates to a different region, annually, every five years. The south east region was up for collection this year (noted on the map in orange). The next opportunity to participate in this program is in 2023 (noted in blue on the map) when it will be held in Brunswick, Nottoway and other counties in that region. If you were not able to participate in this year's local collection event and can securely store and hold pesticides for disposal until 2023, we will notify you of Brunswick and Nottoway's collection dates and locations. Thank you to all who participated this year!



WHAT'S THAT WEED?

Sara Rutherford



Horseweed (Mares tail)- *Erigeron canadensis*

Horseweed is a winter or summer annual and a member of the asteraceae family. In the winter annual cycle, horseweed germinates in the fall and overwinters as a basal rosette (pictured far left). The following spring, the rosette bolts (middle picture), reaching 1.5 to 6 feet in height. While most populations of horseweed in the region emerge in the fall, significant spring emergence can occur under certain conditions. Spring germinating horseweed does not form a rosette. Crushed leaves and stems emit a carrot-like odor. Leaves contain herpene, an irritant to the nostrils of horses. It may cause skin irritations in some people. This plant is also an alternate host to several plant pathogens i.e. aster yellows, tobacco mosaic virus, and tobacco ring spot virus.

- For help with weed identification or for control options, please contact Sara at the Greensville-Emporia extension office.

Upcoming Programs

All program dates and formats are subject to change

VCE Ag Today Webinars are streamed live Thursdays at 9:00am via the Hanover Extension office's Facebook page and Zoom. Recordings of previous webinars can be accessed at <https://bit.ly/vceagtodayvideos> on YouTube. Past topics include weed management, corn and soybean fertility, cover crops, etc.

November 18 - Household Well Water Testing: Kit pick up November 16th and 17th from 8:00am to 5:00pm at the extension office in Emporia. November 18th is the sample kit drop off date from 7:30am-9:00am. You must pre-register by November 9, 2020. Kits are \$60.00 each. Please see additional important details on page 4. Call the extension office for more information or to register: 434-348-4223.

December 12- Master Gardener Holiday Wreath Workshop from 1:00pm - 3:00pm at the Greensville/Emporia Extension office. The cost is \$20.00 per wreath. Take-home wreath kits are also available at this price. Step-by-step instructions and a recorded video will be available to assist those participating at home. Space limited to 10 in-person participants. Registration and payment are required in advance by December 2nd. Send in/drop off payments, cash or check only, at the Greensville/Emporia extension office by the registration deadline.

January 7, 2021- Private Pesticide Applicator Recertification course from 1:00pm to 4:00pm at the Greensville/Emporia Extension office; 105 Oak St. Emporia, VA 23847. You must pre-register this year by calling 434-348-4223 or emailing Sara at srutherford@vt.edu. If you have accumulated recertification credits, and your license expires December 31, 2020, you will receive your new license in the mail after January 1, 2021. If you're license expires December 31, 2020 and you have not accumulated recertification credits, VDACS has sent a notification letter to the mailing address you have on file with them. We are asking only those whose licenses expire Dec. 31, 2020, and have not accumulated recertification credit, to register for the Greensville/Emporia course due to limited seating with COVID-19 restrictions. Visit <https://vdacs.virginia.gov> to check on the status of your license at any time.

Organic vs. Conventional (synthetic) Pesticides Tim McCoy, Daniel Frank & Dana Beegle (editor)

As part of an Integrated Pest Management (IPM) strategy, choosing a pesticide to control a pest (whether it is a weed, plant pathogen, insect, or vertebrate pest) may be the most appropriate option. When using pesticides, always choose a product that will solve your problem, yet pose the fewest risks to your health, and the health of non-target species and the environment.

In recent years, organic pesticides have become a popular alternative to conventional (aka, synthetic) pesticides. However, there is often confusion surrounding the terms "organic" and "synthetic," and more confusion about their safety and efficacy. This publication attempts to clarify some of the information surrounding organic and synthetic pesticides. Knowing their similarities and differences will prepare you to choose the best management solution for your pest problem.

Organic pesticides are generally considered to be pesticides derived from naturally occurring sources such as minerals, plants, or animals. These chemicals are broken down relatively quickly by weather or soil microbes. Examples of organic pesticides include diatomaceous earth (fossilized water microbes), neem oil (a tree oil extract), or pyrethrins (an extract from chrysanthemums).

A broader definition of an organic pesticide, is "a pesticide approved by the USDA for use in organic agriculture." The USDA makes distinctions about what can be used in organic farming based largely on whether the compound is synthetic or non-synthetic. The USDA defines synthetic as "a substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources." Synthetic pesticides are often referred to as conventional pesticides. Some synthetically produced pesticides meet the criteria for use in organic agriculture. For example, copper sulfate and paracetic acid can be used for plant disease control.

Regardless of whether a pesticide is organic or synthetic, it can still be dangerously toxic in certain doses. The Environmental Protection Agency uses signal words to indicate how acutely toxic a pesticide is to humans through different exposure routes (oral, dermal [skin], inhalation, and eye).

DANGER - highly toxic (sometimes labeled as **poison** with skull and crossbones)

WARNING - moderately toxic

CAUTION - slightly toxic or nontoxic

While organic pesticides are typically viewed as safer alternatives to synthetic pesticides, this is not always the case. It is essential that you read the label to determine the toxicity of each pesticide you use. Follow all label directions to protect yourself and the environment.

Some organic pesticides carry the highest toxicity signal word, DANGER. For example, lime-sulfur solution, an effective fungicide, carries the DANGER signal word. This organic pesticide should be used with extreme caution.

Conversely, simply because a pesticide is synthetic does not mean it is highly toxic. For example, the fungicide Armada 50 WDG, carries a CAUTION label on the product.

(Continued on page 4)

Facts about Red Imported Fire Ants

ERIC DAY- ENTOMOLOGIST, VIRGINIA TECH



Photo: texasmonthly.com

Red imported fire ant (RIFA) colonies can be found throughout the southeastern United States from Texas through Florida, extending as far north as Oklahoma, Tennessee, and Virginia. A single red imported fire ant colony contains hundreds to thousands of polymorphic workers. (Fire ant workers are polymorphic, meaning that they can be a wide range of sizes, typically 1/16"-1/4".) Workers and queen ants have a shiny reddish-brown head and thorax. The gaster (the last rear segment) is black. The male fire ant swarmer are completely black. Colonies also contain eggs, larvae, and pupae, as well as male and

female reproductives. The fire ant colony has either one egg-laying queen (monogyne) or multiple egg-laying queens (polygyne). These queens no longer have wings.

However, the colonies may also contain many winged, unmated females and males. You can distinguish RIFA from other North American ant species by using a microscope to verify the following characteristics. First, each antenna has ten segments (starting at the head). The last two segments will be larger than the others, forming a two-segmented club. The pedicel (the skinny "waist" connecting the front of the body to the gaster) has two segments. Finally, the tip of the gaster has a sharp stinger that is easily visible with the aid of a microscope. (See photo in upper left corner of the article.)

For all practical purposes, the implementation of the quarantine means that the U.S. Department of Agriculture will no longer be responsible for controlling fire ant colonies within the quarantine areas. Greenville, Southampton, Isle of Wight, Brunswick and Mecklenburg counties were quarantined in December of 2019. Therefore, it is important for citizens within the quarantine areas to become familiar with the risks associated with fire ants, and to learn how to properly control infestations.

Fire ants have spread within the United States both on their own and through human assistance. By far the most effective method of RIFA dispersal has been human transport. RIFA spread naturally via annual mating flights where male and female reproductives fly out of the nest, then mate and the new queens go off to start colonies of their own. Fire ants can also spread by "budding." Budding is a process where one or more queens and a group of workers will move out of the parent colony and form a single or several new colonies in a nearby location. In areas that experience flooding, RIFA will form rafts of workers, with the queen and brood placed safely on the top of the raft. The entire colony will then float off to a new location.

In addition to humans, small mammals and reptiles, fire ants also pose a threat to young or debilitated livestock that may not be able to escape fire ant worker attack. Calves born in the field may be stung repeatedly or even blinded by RIFA stings before they are able to stand up. The presence of fire ants in a field may also disrupt foraging livestock. Cows and horses can easily be stung in the mouth while attempting to graze in pastures where fire ant mounds are present.

- For homeowners, the products to the right, Extinguish, Amdro and One-Shot are just a few examples of fire ant baits on the market. For online purchases, make sure products are registered for use in Virginia. And remember, the label is the law. Failure to comply with the label is failure to obey state pesticide use laws. Commercial products are named in this publication for informational purposes only. Virginia Cooperative Extension does not endorse these products and does not intend discrimination against other products which also may be suitable.

(Pesticide label photos are from each manufacturer's website)

Excerpts taken from VCE publication 444-284. Visit www.pubs.ext.vt.edu to view the entire document



Upcoming Programs

& Reminders

* VSU's College of Agriculture offers many educational programs, online webinars, Facebook live events, workshops and field days when possible. To find out more, visit: <https://ext.vsu.edu/calendar>

* There is a \$50.00 fee for all returned checks.

* If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in extension activities, please contact the Greensville- Emporia extension office, (434) 348-4223, during the business hours of 8:00 a.m. and 5:00p.m. to discuss accommodations at least 5 days prior to the event. *TDD number is (800) 828-1120.



The health of your soil is important! Routine soil sampling is encouraged for lawns, ornamental and vegetable gardens, row crops, specialty crops and pastures. Soil sample boxes and forms can be picked up at the Greensville/Emporia extension office Monday through Friday from 8:00am to 5:00pm.

Pesticides

The point to remember is that organic does not mean "safe," just as synthetic does not mean "dangerous." Read the label to determine the hazards of each product you use. Choose the pesticide that best meets your needs.

Growers often choose organic pesticides because they are less "persistent" than some synthetic alternatives. This means that organic pesticides typically break down in the environment, leaving no residual activity after a relatively short time. While this can be desirable, it may require that you apply the pesticide more frequently to get the desired control. This can result in a greater total volume of pesticide being applied than if you used a more persistent product.

Because organic pesticides are less persistent and can be more selective than synthetics, applicators often need to know more about the target pest if they want to control it successfully. Accurate pest identification and knowledge of the pest lifecycle is crucial when using organic pesticides.

Synthetic pesticides are often less expensive than an organic solution for a pest problem. While some synthetic pesticides are relatively short-lived in the environment, many are more persistent than organics. This can lead to longer periods of protection and less frequent and lower volumes of pesticide applied, saving time and money.

Some synthetics (e.g., pyrethroid insecticides) as well as some organic pesticides, are broad-spectrum and may harm beneficial insects like pollinators, predators, and parasitoids. This can lead to secondary explosions of other pests, making further control measures necessary.

Choosing between organic and synthetic conventional pesticides is rarely straightforward. Both types of pesticides have benefits and limitations. You must weigh these pros and cons to determine which type of pesticide best suits your pest management goals. Understanding this information will also help you to use a product appropriately and with successful results.

~ Excerpts taken from VCE Pub ENTO-384NP (2020) from www.pubs.ext.vt.edu

Well Water Testing- COVID-19 Edition

Participation is voluntary and confidential. Water samples collected by participating homeowners will be analyzed for 14 parameters, including bacteria, metals, nitrate and hardness at a cost of \$60.00 per kit. However, if your well is in Sussex, Southampton or Greensville counties, the Chowan Basin Soil and Water Conservation District has generously sponsored a limited number of free kits, one per household, to verified residents. These sponsored kits are available on a first come, first served basis. Once the sponsored kits are spoken for, all other kits will be the regular price of \$60.00 each.

Results and water system care and maintenance information will be sent to each participant either by email or mail, and a pre-recorded video presentation will be made available to help explain the summary results and recommendations to address problems. If you do not have an email address, we will mail your results and are available by phone to answer your questions. All information is kept strictly confidential. Please contact Sara Rutherford or Sammi Kent at (434) 348-4223 or email Sara at srutherford@vt.edu to register! For more information about the Virginia Household Water Quality Program, and to access resources relevant to private water systems, please visit www.wellwater.bse.vt.edu.

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