DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

# *Pest Management News*

Dr. John D. Hopkins, Professor and Extension Entomologist – Coeditor
Dr. Kelly M. Loftin, Professor and Extension Entomologist – Coeditor

**Contributors**

Dr. Tommy Butts, Assistant Professor and Extension Weed Scientist
Seth Dunlap, Mgr. Commercial Pest Control Sect., AR Agric. Dept., ASPB, Plant Industry Div.
Dr. Rebecca McPeake, Professor and Wildlife Extension Specialist
Sherrie E. Smith, Plant Pathology Instructor, Plant Health Clinic Diagnostician
Ples Spradley, Extension Pesticide Assessment Specialist

**Letter #1** **May 31, 2019**

---

## ***Spray Foam Insulation: Considerations for Homeowners***

John D. Hopkins and Seth Dunlap

If someone has an “Annual Termite Contract” with a commercial termite control company, then each year they will get a letter from their termite company that reads something like the following:

**IMPORTANT RENEWAL NOTICE**

**Your Annual Termite Contract is about to Expire!**

Your termite policy is due to be renewed in a few weeks. To help us better serve you, please notify our office of any changes, such as mailing address, change of ownership, or phone numbers.

To avoid cancellation of your policy and a reinstatement fee, please call our office and schedule your inspection before your expiration date.

Please note that any new additions that were not treated by “Your Termite Company” at the time of construction will not be covered under this termite policy.

We now have the ability to email your renewal, invoices, and inspection reports. In order to make sure we have the most current information for your account, please include your email below with your renewal.

Thank you for choosing “Your Termite Company” for all your Termite needs.

**This is the usual information included with annual termite contract renewal notices and it is advised that homeowners always renewal their termite contract or at least hire another company if desired because termite infestations and damage are a fact of life here in Arkansas.**

**For many Arkansans, there may be a second letter from “Your Termite Company” with a new concern that goes something like this:**

Dear Valued Customer,

My name is ****** and I am the Vice President of “Your Termite Company”. We are sending you this letter today because of a serious concern. After reading this notice, please feel free to contact us at any time if you have any questions.

This notice only concerns our customers that have homes with a CRAWL SPACE foundation.

If you have a crawlspace foundation and are thinking of having it encapsulated, please be aware that this will affect your termite contract. Due to the encapsulation materials blocking our line of sight to the foundation walls and piers, we cannot provide you with a thorough inspection. The best way for “Your Termite Company” to protect itself and the customer under these circumstances will be two options. 1) For “Your Termite Company” to raise your renewal rate or 2) For “Your Termite Company” to change your contract to a "No Damage Contract". If neither of these options are put into place, your contract may be in danger of being terminated. If you do decide to go forward with the encapsulating, you will need to contact our office and be prepared to sign a waiver to release “Your Termite Company” of any responsibilities on your home.

Kind Regards,

*******, VP of Operations

Information in this second letter is something new that is impacting homeowners across the country. Just what do termite companies see as a problem? In short, it is spray foam insulation. Spray polyurethane foam insulation (SPF) can provide considerable energy savings for homeowners, but termite control companies are finding that it also hides termite activity and prevents them from conducting proper termite inspections (spray foam insulation can’t be removed for inspection like fiberglass batting). As a result, termite infestation and/or conducive conditions such as moisture leaks can go undetected for a long time with considerable structural damage being the result. For this reason, termite companies are cancelling customer termite warranties, fearing liability issues that could cost them $millions. **READ YOUR CONTRACT** as termite contracts are generally written to allow firms to void warranties if a structure has been altered in a way that prevents inspections and treatments.

**Regulatory Input:** “In Arkansas Pest Control Companies are required to send a letter via certified mail 30 days prior to the anniversary date of contract informing the property owner that they are choosing not to renew the contract. If the affected property owner wants to have, another company cover the property for termite damage with a repair contract. The property owner is most likely going to have to pay another termite company to retreat, meet the minimum treating standards established in Arkansas Pest Control Regulations, and provide/pay for the modification to the understructure to allow for a visual inspection. The alternative is to forego having a damage replacement warranty and settling for a retreatment only contract where the termite company will not be responsible for damage.” – Seth Dunlap, Pest Control Program Manager for the Arkansas Agriculture Department. To find more information about the Commercial Pest Control Program click on the following link:

**https://www.agriculture.arkansas.gov/commercial-pest-control.**

What is spray polyurethane foam insulation and what is the benefit of having it applied to a home? SPF is a cellular plastic applied as a spray. When applied, the chemicals react quickly, expanding on

contact to create a foam that insulates, seals air gaps and provides a moisture barrier. When properly installed, SPF forms a continuous barrier on surfaces. It resists heat transfer and is an effective solution for reducing unwanted air infiltration through cracks, seams and joints. SPF insulation has been in the market place for 50+ years, is recognized in building codes, is legal; and performs the way it's supposed to as an insulator. Homeowners are having SPF insulation installed in their homes primarily to increase energy efficiency, improve comfort and save money on energy bills but many fail to consider the effect SPF installation may have on their ability to renew their annual termite contract.

**Spray foam insulation can hide termite activity. Termites can build mud shelter tubes near, on and through spray polyurethane foam insulation. Photo courtesy of Jim Fredericks, National Pest Management Association.**

On the down side, SPF insulation cannot be removed for termite inspections because it adheres to the surface and is rock hard. Termite control companies generally don't learn a customer has installed spray foam insulation in their crawlspaces or attics until they return for an annual termite or wood-destroying organism (WDO) inspection. After SPF installation, the areas that need to be inspected for termite mud tubes, such as the inside of the foundation wall or the sill plate where termites may come up through a hollow cinderblock, are now covered. Many termite control companies, because they cannot see what is behind spray foam insulation, are not willing to take the liability risk. Many are cancelling the termite damage warranties of customers who've had the foam installed. They are walking away from new customers who already have it in their homes and from newly constructed homes that have it built in. In addition, some are refusing to write termite/WDO inspection letters required for real estate closings if houses have SPF.

Dr. Arthur Appel, Entomologist at Auburn University, has been studying closed-cell spray foam insulation and the eastern subterranean termite. Initial findings have shown that this termite will tunnel through SPF insulation but prefers to build their mud tubes between the foam insulation and the face of the brick/concrete foundation, where separation due to adhesion failures sometimes happen. Appel also found that carpenter ants and wood-boring beetles could damage the foam. His results indicate that the foam has no insecticidal properties that affect insects tunneling through it. Additional experimentation, indicated that SPF insulation could become water logged, a condition that could be conducive for pest infestation.

Click on the link below to see a report by Atlanta's Fox5 I-Team on termites and spray foam Insulation:

**http://www.fox5atlanta.com/news/i-team/homes-ravaged-by-termites-hidden-behind-spray-foam-insulation**

---

Communications have opened to try and seek solutions to the evolving problems mentioned above. The National Pest Management Association (NPMA) and the Spray Foam Coalition (representing foam manufacturers) have met and both came away with a better understanding of how the other industry operates, as well as the challenges each faces in protecting the consumer.

Across the country, individual pest control companies are meeting with local building code officials, spray foam applicators, and new home builders. Those in the construction industry see the value of SPF insulation but they also see the value of a termite warranty when they're selling a home. In the meantime, homeowners should be aware that issues with SPF insulation exist and need to make well informed decisions for themselves.

## ***EPA Cancels Registrations of 12 Neonicotinoid Pesticides***

John D. Hopkins and Ples Spradley

On May 20, 2019, the Environmental Protection Agency (EPA) published notice in the Federal Register canceling the registrations of 12 neonicotinoid-containing pesticides. This cancelation was the result of a lawsuit settlement reached by the agency with several environmental groups. The lawsuit settlement also requires that EPA conduct a review of all neonicotinoid pesticides, so there could be more registration cancellations coming. Seven of the cancelled products listed in **Table 1** are used primarily as seed coatings, while five of the listed cancelled products are general-use insecticides.

The following is from the Federal Register / Vol. 84, No. 97 / Monday, May 20, 2019 / Notices 22841

### Product Cancellation Order for Certain Pesticide Registrations

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice.

**SUMMARY:** This notice announces EPA's order for the cancellations, voluntarily requested by the registrants and accepted by the Agency, of the products listed in Table 1 of Unit II, pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

This cancellation order follows a March 25, 2019 Federal Register Notice of Receipt of Requests from the registrants listed in Table 2 of Unit II, to voluntarily cancel these product registrations. In the March 25, 2019 notice, EPA indicated that it would issue an order implementing the cancellations, unless the Agency received substantive comments within the 30-day comment period that would merit its further review of these requests, or unless the registrants withdrew their requests. The Agency received two anonymous public comments on the notice but none merited its further review of the requests.

Further, the registrants did not withdraw their requests. Accordingly, EPA hereby issues in this notice a cancellation order granting the requested cancellations. Any distribution, sale, or use of the products subject to this cancellation order is permitted only in accordance with the terms of this order, including any existing stocks provisions.

**DATES:** The cancellations are effective May 20, 2019.

**FOR FURTHER INFORMATION CONTACT:** Christopher Green, Information Technology and Resources Management Division (7502P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001; telephone number: (703) 347-0367; email address: green.christopher@epa.gov.

**SUPPLEMENTARY INFORMATION:**

## I. General Information

### A. Does this action apply to me?

This action is directed to the public in general, and may be of interest to a wide range of stakeholders including environmental, human health, and agricultural advocates; the chemical industry; pesticide users; and members of the public interested in the sale, distribution, or use of pesticides. Since others also may be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

### B. How can I get copies of this document and other related information?

The docket for this action, identified by docket identification (ID) number EPA-HQ-OPP-2019-0091, is available at http://www.regulations.gov or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW, Washington, DC 20460-0001. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OPP Docket is (703) 305-5805. Please review the visitor instructions and additional information about the docket available at http://www.epa.gov/dockets.

## II. What action is the Agency taking?

This notice announces the cancellation, as requested by registrants, of products registered under FIFRA section 3 (7 U.S.C. 136a). These registrations are listed in sequence by registration number in Table 1 of this unit.

**Table 1 - Product Cancellations**

| Registration No. | Company No. | Product name | Active ingredients |
|---|---|---|---|
| 100-1341 | 100 | Meridian 0.20G | Thiamethoxam |
| 100-1346 | 100 | Meridian 0.14G | Thiamethoxam |
| 100-1399 | 100 | Avicta Complete Corn 500 | Azoxystrobin; Metalaxyl-M; Fludioxonil; Thiabendazole; Abamectin & Thiamethoxam |
| 100-1426 | 100 | THX_MXM_FDL_TBZ FS | Thiamethoxam; Metalaxyl-M; Fludioxonil & Thiabendazole |
| 100-1449 | 100 | Adage Deluxe | Thiamethoxam; Metalaxyl-M; Fludioxonil & Azoxystrobin |
| 100-1450 | 100 | Adage Premier | Thiamethoxam; Metalaxyl-M; Fludioxonil; Azoxystrobin & Thiabendazole |
| 264-1125 | 264 | Emesto Quantum | Clothianidin & Penflufen |

| | | | |
|---|---|---|---|
| 59639-164 | 59639 | V-10170 0.25 G GL Insecticide | Clothianidin |
| 59639-176 | 59639 | Inovate Seed Protectant | Clothianidin; Metalaxyl & Ipconazole |
| 59639-187 | 59639 | Inovate Neutral Seed Protectant | Clothianidin; Metalaxyl & Ipconazole |
| 59639-214 | 59639 | Aloft GC G Insecticide | Bifenthrin & Clothianidin |
| 72155-95 | 72155 | Flower, Rose & Shrub Care III | Clothianidin & Imidacloprid |

Table 2 of this unit includes the names and addresses of record for all registrants of the products in Table 1 of this unit, in sequence by EPA company number. This number corresponds to the first part of the EPA registration numbers of the products listed in Table 1 of this unit.

**Table 2—Registrants of Cancelled Products**

| EPA company No. | Company name and address |
|---|---|
| 100 | Syngenta Crop Protection, LLC, P.O. Box 18300, Greensboro, NC 27419-8300. |
| 264 | Bayer CropScience, LP 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. |
| 59639 | Valent U.S.A., LLC, 1600 Riviera Avenue, Suite 200, Walnut Creek, CA 94596-8025. |
| 72155 | Bayer Advanced, A Business Unit of Bayer CropScience, LP 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. |

## III. Summary of Public Comments Received and Agency Response to Comments

The Agency received two anonymous public comments on the notice, but didn't merit its further review of the requests. For this reason, the Agency does not believe that the comments submitted during the comment period merit further review or a denial of the requests for voluntary cancellation.

## IV. Cancellation Order

Pursuant to FIFRA section 6(f) (7 U.S.C. 136d(f)), EPA hereby approves the requested cancellations of the registrations identified in Table 1 of Unit II. Accordingly, the Agency hereby orders that the product registrations identified in Table 1 of Unit II, are canceled. The effective date of the cancellations that are the subject of this notice is May 20, 2019. Any distribution, sale, or use of existing stocks of the products identified in Table 1 of Unit II, in a manner inconsistent with any of the provisions for disposition of existing stocks set forth in Unit VI, will be a violation of FIFRA.

## V. What is the Agency's authority for taking this action?

Section 6(f)(1) of FIFRA (7 U.S.C. 136d(f)(1)) provides that a registrant of a pesticide product may at any time request that any of its pesticide registrations be canceled or amended to terminate one or more uses. FIFRA further provides that, before acting on the request, EPA must publish a notice of receipt of any such request in the Federal Register. Thereafter, following the public comment period, the EPA Administrator may approve such a request. The notice of receipt for this action was published for comment in the Federal Register of March 25, 2019 (84 FR 11087) (FRL-9990-87). The comment period closed on April 24, 2019.

## VI. Provisions for Disposition of Existing Stocks

Existing stocks are those stocks of registered pesticide products which are currently in the United States and which were packaged, labeled, and released for shipment prior to the

effective date of the cancellation action. The existing stocks provisions for the products subject to this order are as follows.

The registrants may continue to sell and distribute existing stocks of products listed in Table 1 of Unit II, until May 20, 2020, which is 1 year after the publication of the Cancellation Order in the Federal Register. Thereafter, the registrants are prohibited from selling or distributing products listed in Table 1, except for export in accordance with FIFRA section 17 (7 U.S.C. 136o), or proper disposal. Persons other than the registrants may sell, distribute, or use existing stocks of products listed in Table 1 of Unit II, until existing stocks are exhausted, provided that such sale, distribution, or use is consistent with the terms of the previously approved labeling on, or that accompanied, the canceled products.

**Authority: 7 U.S.C. 136 et seq.**

**Dated: May 8, 2019.**

**Delores Barber,**
**Director, Information Technology and Resources Management Division, Office of Pesticide Programs.**

**[FR Doc. 2019-10447 Filed 5-17-19; 8:45 am]**

**BILLING CODE 6560-50-P**

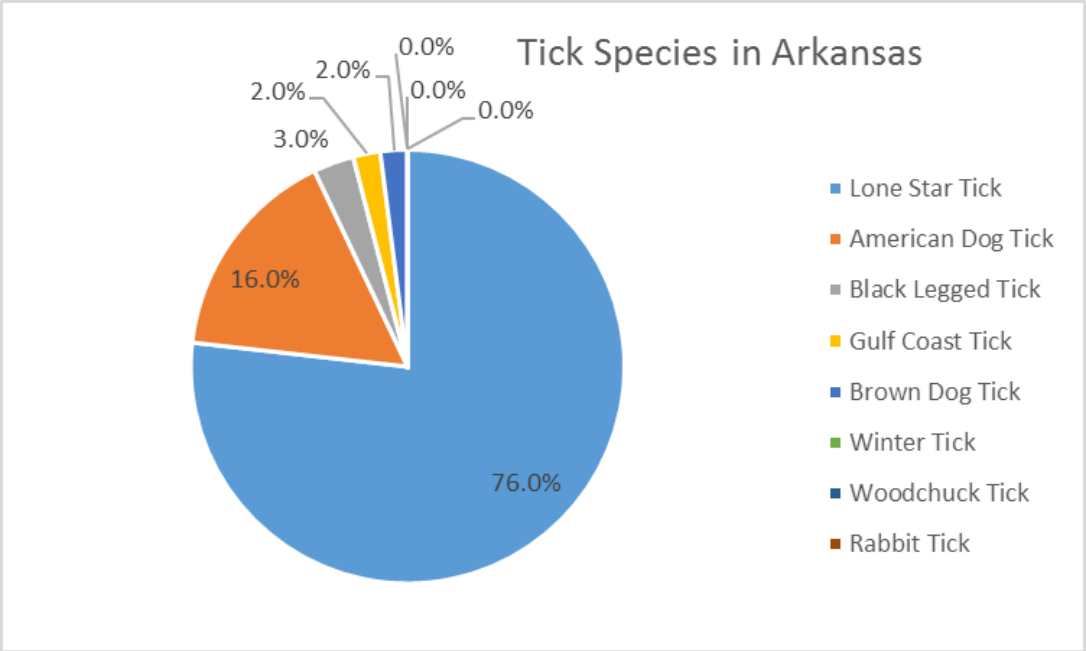
## ***Ticks Collected by Citizen Science in 2017-2018***

Kelly M. Loftin

Citizen scientists provided roughly ten thousand ticks for the Arkansas tick and tick-borne disease study. If you have not already viewed the Arkansas tick map, it is available at:

**http://gislabualr.maps.arcgis.com/apps/webappviewer/index.html?id=7846cd984bb4440795553b669c1ee31b**

Eight tick species were identified from these collections. The top two species collected were the lone star tick, *Amblyomma americanum*, taking the lead with 76% followed by the American dog tick, *Dermacentor variabilis*, comprising 16% of the total ticks collected. Tick species making up the remaining 8% were the black-legged tick, *Ixodes scapularis*, the Gulf Coast tick, *Amblyomma maculatum*, the brown dog tick, *Rhipicephalus sanguineus*, the winter tick, *Dermacentor albipictus* and the woodchuck tick, *Ixodes cookei*. The figure below provides the breakdown.




**This figure shows the species composition of ticks collected by citizen scientists in 2017 and 2018 (Image by Elizabeth Smith, University of Arkansas System Division of Agriculture).**

Lone star and to a lesser degree the American dog tick are the most commonly encountered ticks during the spring and summer. For the lone star tick, adults and nymphs are active from late winter through late spring and early summer. Later on, usually in August, a second peak in the nymphal population occurs. Larval lone star ticks are most abundant later in the summer through early fall. American dog tick adults are active from April through September, nymphs from June through September and larvae from March through July.

Most of our important tick species are three host ticks. This means that each stage (larva, nymph and adult) feeds on a different host. This is an important factor in tick-borne disease transmission because the pathogen that causes disease is usually acquired by a previous stage feeding on an infected host or from the tick's mother that had fed on an infected host. Each tick stage is fairly distinctive. The larval tick is the tiny six-legged tick known by many as the "seed" tick. The tick nymph is the stage following the larval stage and is small (but bigger than the "seed' tick) and has eight legs. The nymph is also referred to as the "yearling" tick by some folks. The adult tick is larger than the nymph, has eight legs and is the reproductive stage.

Tick host preference varies depending upon tick species and stage. For example, immature lone star ticks generally feed on small and intermediate-sized hosts (birds, rodents, coyotes, dogs, etc.) that inhabit the ground. Large host such as cattle, deer and horses generally serve as hosts for lone star adults. Host preference aside, lone star tick larva, nymphs and adults are also opportunistic feeders and will readily feed on humans and white-tailed deer. White-tailed deer and to some extent wild turkeys are considered important host for lone star ticks in woodland habitats. The increase in white-tailed deer population has resulted in the increased abundance and expansion of the lone star tick. Immature American dog ticks generally feed on small mammals and adult ticks on larger animals such as dogs, cattle, horses and humans.


**Male, female, engorged female and nymphal lone star ticks on the ear of a deer. (Photo by Mat Pound, USDA Agricultural Research Service, Bugwood.org)**

The American dog tick is considered the primary vector of Rocky Mountain Spotted Fever (RMSF) and can also transmit *Francisella tularensis*, the organism causing tularemia. Dermacentor spp. ticks are also associated with Anaplasmosis in cattle. In addition, it may cause tick paralysis. Tick paralysis can occur when the tick attaches to the base of the skull and feeds for several days. The tick is thought to release a salivary gland protein into the body that causes the paralysis. If the tick is not removed, respiratory failures can cause fatality. Normally once the tick is properly removed, recovery occurs within hours to a few days. Tick paralysis may occur in cattle, dogs and humans. However, human cases are rare and are usually occur in children when tick attachment goes unnoticed.


**American dog tick female (left) and male (right). The American dog tick is the primary vector of RMSF and one of the vectors of tularemia. (Photo by Gary Alpert, Harvard University, Bugwood.org).**

---

Human diseases potentially transmitted by the lone star tick include ehrlichiosis, southern tick-associated rash illness (STARI), tularemia, and Heartland virus. It has also been associated with spotted fever group rickettsiosis. In addition to tick-borne disease associated with bacterial pathogens, the lone star tick has been implicated in a condition called Alpha–gal allergy. Alpha-gal allergy is the delayed anaphylaxis after consuming red meat. This condition is related to serum IgE antibodies to alpha-gal (or oligosaccharide galactose-alpha-1,3-galactose, a sugar found in red meat). The first reported case of alpha-gal occurred in 2008 and since that time other cases from the U.S. have been reported, primarily from regions where the lone star tick occurs (Arkansas, Tennessee, Kentucky, Virginia, and southern Missouri).


**Lone star tick (male left, female right) is a primary vector of human ehrlichiosis, STARI, Heartland Virus, spotted fever group Rickettsia and one of the vectors of tularemia. This tick is also associated with Alpha-gal Allergy. (Photo by Mat Pound, USDA Agricultural Research Service, Bugwood.org).**

Lone star tick (male left, female right) is a primary vector of human ehrlichiosis, STARI, Heartland Virus, spotted fever group Rickettsia and one of the vectors of tularemia. This tick is also associated with Alpha-gal Allergy. (Photo by Mat Pound, USDA Agricultural Research Service, Bugwood.org)

Below are some tips to avoid tick bites and potential tick-borne disease exposure.

1. Avoid tick-infested areas when possible. Walk in the center of hiking trials. Tick-infested areas may include dense vegetation or tall grass, and the “edge” between open and forested areas.

2. Use tick repellents and apply according to label instructions. Traditional insect repellents containing DEET and/or clothing only repellents containing permethrin (Sawyer® clothing and gear insect repellant or Permanone® clothing repellent) are most commonly used. Other repellents such as Picaridin and Bio UD (2-undecanone) are effective in repelling ticks.

3. Perform routine body, pet and gear tick checks.
   a. Check yourself, your children and pets frequently for ticks.
   b. Wear light-colored clothing when in tick infested areas, as dark ticks are more easily recognized against a light background.
   c. After returning home, thoroughly inspect yourself with aid of a mirror.

---

d. Parents should check their children for ticks. Check under the arms, in and around the ears, inside the belly button, behind the knees, between the legs, around the waist and in their hair.
e. Examine gear and pets. Ticks can hitch a ride into the home on clothing, gear and pets, then attach to a person later - so carefully examine pets, coats and day packs.
f. Tumble clothes in a dryer on high heat for about an hour to kill remaining ticks.
g. Bathe or shower as soon as possible after returning from tick infested area to wash off crawling ticks and locate attached ticks.

4. Promptly remove ticks when found. If a tick is removed within a few hours after attachment, the chance of a tick transmitted pathogen is greatly reduced.
   a. Use clean, fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
   b. Pull upward with steady, even pressure. Don't twist or jerk the tick; because this can cause the mouth-parts to break off and remain in the skin.
   c. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.

5. Create a tick-safe zone in your yard.
   a. Clear tall grasses and brush around homes and at the edge of lawns.
   b. Consider placing a 3-ft wide barrier of gravel between lawns and wooded areas and around patios and play equipment. This will restrict tick migration.
   c. Mow the lawn frequently and keep leaves raked.
   d. Stack wood neatly and in a dry area to discourage rodents that ticks feed on.
   e. Keep playground equipment, decks, and patios away from wooded areas.
   f. Remove any old furniture, brush piles, or trash from the yard that may give ticks and tick hosts a place to hide.

6. Know the symptoms of tick-borne disease. If you become sick seek medical care and alert healthcare providers to any tick exposure.

7. Insecticide application and habitat modification are useful in reducing tick abundance around the home. Follow all label requirements when applying an insecticide. See below for links to MP144 "2019 Insecticide Recommendations for Arkansas" for repellents and insecticides labeled for use against ticks on animals, in residential, and recreational areas:

https://www.uaex.edu/publications/Animals.pdf

https://www.uaex.edu/publications/Recreational%20Areas.pdf#page=1

https://www.uaex.edu/publications/Recreational%20Areas.pdf#page=3

https://www.uaex.edu/publications/Home%20Lawns.pdf#page=8

Tick-borne diseases can also cause serious illness in domestic animals. Pets that come in contact with ticks can become infected with tick-borne illnesses or bring ticks into your yard or home, so maintain an effective tick control protocol on your pets and frequently inspect and remove any attached or unattached ticks from pets. Examples of tick-borne disease in pets include cytauxzoonosis (bobcat fever) in domestic cats and canine ehrlichiosis in dogs. Anaplasmosis in ruminants (spread by ticks, horse flies and contaminated needles, etc.) is also a concern for livestock producers.

---

# ***Feral Hogs: A Problem That Won't Go Away***

Becky McPeake

Surveillance is the first step in effective feral hog control. Photo by Craig Hicks, Bugwood.org.

Feral hogs are an increasing threat to natural resources, human health, and agriculture. Not only do feral hogs damage crops, pastures, and timber, they also contaminate water sources and compete with native wildlife for habitat. Following are six barriers to effective feral hog control.

Barrier 1: Feral hog population growth. Because of their high reproductive potential, feral hogs reproduce almost as quickly as they are removed. Calculating the average reproductive rate with no predation, one pregnant sow with an average litter size of six piglets of which three are gilts, which then can produce a litter in seven months, with their young produce piglets, results in 103 feral hogs from a single sow in 24 months.

Barrier 2: Mobility and adaptability. Feral hogs are very mobile and change behaviors to adapt to different circumstances. Though normally active at daytime, feral hogs will become nocturnal when encountering pressures from human activity and disturbance. They range from ten acres to thousands of acres, depending on habitat needs including food and sometimes cover availability when temperatures are high (because they have no sweat glands). Boars range widely, perhaps 15 miles or more, in search of mates. They often inhabit protective thickets near a water source where trapping and shooting are difficult.

Barrier 3: "Feral hogs are smarter than most of my friends." (This quote is from a county agent who shall remain anonymous.) Feral hogs are survivors and quickly learn to avoid humans and traps. If a couple are shot in a sounder or bachelor group, the survivors learn to avoid people. If only part of a sounder or bachelor group is trapped, the escapees typically learn to avoid traps. If a hog escapes over a fence in a corral trap, or if the trigger is set prematurely, the hog learns to avoid traps and baits. Sometimes feral hogs which learn to avoid corn baits will go to rice bran.

Barrier 4: Expensive trapping systems. The most effective trapping systems are those which are human-triggered. Hog-triggered systems, such as root sticks or trip wires, can result in fewer captures and more educated hogs (see Barrier 3 above). Cellular trapping systems are expensive investments particularly for small- to medium-sized farm operations which have limited resources for investing time and finances in high-tech feral hog trapping systems.

Barrier 5: Following trap protocols. When trapping feral hogs, landowners often are tempted to activate the gate too soon when "most" of the hogs enter the pen. Because of their reproductive potential and "intellect" (see Barriers 1 & 3 above), success is achieved only when all hogs are trapped and none remain. Capturing all 6, 10, or 30 hogs in a sounder often reflects lengthy preparation and planning before the moment the gate is triggered. The protocol requires patience, persistence, and a significant time commitment in which hog behavior and traps are monitored often

late at night for days, weeks, or months, depending on the number of feral hogs in the vicinity, how they respond to the trap, and other factors.

Barrier 6: Access to feral hog hideouts. Feral hogs are adept at finding locations where access and removal methods such as trapping, shooting or dog hunting are not permitted, whether on private or public properties.

These are probably just a few of the many barriers thwarting feral hog control efforts. An in-service training about feral hog control is being offered on June 28 at Cabe Hall at the 4-H Center. The training will attempt to address some of these barriers as you educate landowners in your county about this ongoing issue. Sign up on-line through in-service training, https://learn.uaex.edu.

## ***Ash and Maple Anthracnose***

Sherrie E. Smith

**ASH:** Susceptible cultivars of Ash are prone to Ash Anthracnose during cool, wet springs. This is a fungal disease caused by *Discula fraxinea*. The fungus overwinters on infected twigs, bud scales, and leaf litter. In the spring the spores are carried by rain and wind to newly emerging leaves and tender new twigs. Symptoms are black blotches on the leaves, leaf distortion, and small purplish-brown spots on the leaves. Premature leaf fall can be dramatic when petioles are infected. The tree will re-foliate almost immediately, but year after year of infection followed by having to produce another crop of leaves eventually weakens the tree and permits readier access for insects and other pathogens. Control begins with good sanitation. All fallen leaves and twigs should be raked up and removed. Resistant cultivars should be used when possible. Blue ash (Fraxinus quadrangulata) is very resistant. Pumpkin (F. tomentosa) and American ash (F. americana) are less susceptible than green ash (F. pennsylvanica) and Chinese ash (F. chinensis). Preventative fungicides may be applied at bud swell in the spring followed by a second application two weeks later. Products containing chlorothalonil, or copper may be used.

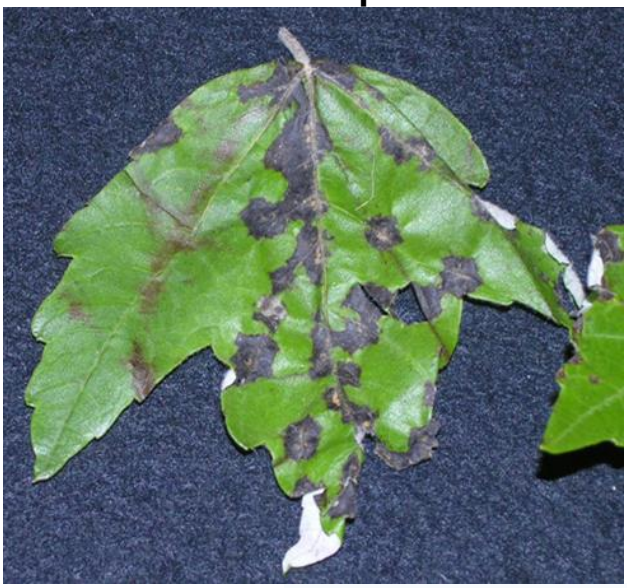
**Ash Anthracnose**-*Discula fraxinea*

**Photos by Sherrie Smith, University of Arkansas Cooperative Extension.**

---

**MAPLE:** Cool, wet weather in the spring is also favorable for outbreaks of Maple anthracnose, caused by the fungus *Gloeosporium apocryptum*. Symptoms are brown to black lesions along the veins of newly opening leaves. The lesions expand and can cover large areas of the leaves. Buds, leaves, twigs, and branches up to an inch in diameter may be killed. The infected leaves fall from the tree, causing the tree to expend additional energy to re-foliate. Yearly infections by can weaken maple trees, predisposing them to other diseases and to insects. Good sanitation is critical in anthracnose control. All fallen leaves and twigs should be raked up and removed from the planting. If the tree is small enough to make pruning practical, infected twigs should be pruned out of the canopy. A product containing chlorothalonil or mancozeb or copper may be applied at bud swell in the spring, and twice afterwards at 10-14 day intervals.

**Maple Anthracnose-***Gloeosporium apocryptum.*



Photos by Sherrie Smith, University of Arkansas Cooperative Extension.

# ***Name That Weed***

Tommy Butts

This weed is a perennial that can be found in cultivated areas, fields, pastures, roadsides, open woodlands, gardens, and waste sites. It has a large taproot system, and when mature, will form dark purple to black berries. However, don't eat any part of this plant, as it is very poisonous. This weed can be difficult to control due to its large taproot and perennial nature. Systemic herbicides such as glyphosate, 2,4-D, and dicamba are herbicidal options, while physical removal of the entire taproot system is also an option for control. The scientific name may leave you feeling patriotic, but the common name may invoke feelings of being annoyed by a younger sibling. Be the first to email Dr. Tommy Butts at btbutts@uaex.edu with the correct common name and win a prize!

# ***To The Readers***

**Please offer any suggestions for Urban or Livestock Integrated Pest Management topics (insect pests, plant diseases, weed problems, wildlife control problems) that you would like to see – *OR* – feel free to submit an article that you have prepared. Kelly and I will be glad to include it (subject to editing). Send feedback to jhopkins@uaex.edu or kloftin@uaex.edu**