

Pest Management News

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Letter #1

May 31, 2016

Mosquitoes and Emerging Diseases of Concern

John D. Hopkins and Kelly M. Loftin

Zika virus (<http://www.cdc.gov/zika/>) is currently the mosquito vectored virus that is getting all the news coverage. However, we should not forget about some of the other viral diseases that command our attention. Last fall, the National Pest Management Association (NPMA) conducted a survey* of American adults about their knowledge of mosquito diseases in the U.S. and bite prevention practices. Survey results indicated that many Americans (78%) were aware of the prevalence of West Nile Virus (WNV) in the U.S. However, less than 10% were aware of two other mosquito-borne diseases present in the country, chikungunya and dengue. Despite the public's general awareness of mosquito-transmitted disease, only about half of the population uses mosquito repellent, and even fewer implement other crucial prevention methods.

***Survey methodology** - The NPMA survey was conducted online within the United States by Harris Poll on behalf of the NPMA from July 22-24, 2015, among 2,024 adults, ages 18 and older. This online survey is not based on a probability sample, and therefore no estimate of theoretical sampling error can be calculated.

WNV (<http://www.cdc.gov/westnile>) is the most common mosquito-borne viral disease transmitted in the U.S.

West Nile Virus Disease Cases** and Presumptive Viremic Blood Donors in Arkansas, 2015 (as of January 12, 2016)					
State	Neuroinvasive Disease Cases†	Non- neuroinvasive Disease Cases	Total Cases	Deaths	Presumptive viremic blood donors‡
Arkansas	16	2	18	2	0

**Includes confirmed and probable cases. CDC Data

†Includes cases reported as meningitis, encephalitis, or acute flaccid paralysis.

‡Presumptive viremic blood donors (PVDs) are people who had no symptoms at the time of donating blood through a blood collection agency, but whose blood tested positive when screened for the presence of West Nile virus. Some PVDs develop symptoms after donation.

Besides WNV, there are other relatively new mosquito-borne viral diseases transmitted within the country and/or diagnosed in travelers who become infected while abroad. This threat of new viruses being brought into the U.S. and transmitted is real, as evidenced in 2014 when the U.S. Centers for Disease Control and Prevention (CDC) recorded the first-ever cases of mosquitoes spreading chikungunya within the continental U.S. (<http://www.cdc.gov/chikungunya/>). Prior to 2006, chikungunya virus disease was rarely identified in U.S. travelers. From 2006 through 2013, studies identified an average of 28 people per year in the United States with positive tests for recent

chikungunya virus infection (Range 5 to 65 per year). All were travelers visiting or returning to the United States from affected areas in Asia, Africa, or the Indian Ocean. In late 2013, the first local transmission of chikungunya virus in the Americas was identified in Caribbean countries and territories. Local transmission means that mosquitoes in the area have been infected with the virus and are spreading it to people. Beginning in 2014, chikungunya virus disease cases were reported among U.S. travelers returning from affected areas in the Americas and local transmission was identified in Florida, Puerto Rico, and the U.S. Virgin Islands.

Dengue (<http://www.cdc.gov/dengue/>), another mosquito-borne viral disease, has emerged as a worldwide problem only since the 1950s. Although dengue rarely occurs in the continental U.S., it is endemic in Puerto Rico and in many popular tourist destinations in Latin America, Southeast Asia and the Pacific islands. Dengue cases reached historically high levels in 2010 in parts of southern Florida, and in the US territories of Puerto Rico and the US Virgin Islands.

While protecting yourself from mosquito bites is always a good idea, at this time, the chance of local transmission of chikungunya, dengue, or zika from a mosquito bite here in Arkansas is very remote. Now, back to protecting yourself from mosquito bites.

According to the NPMA survey of our knowledge on mosquito bite prevention techniques:

- 59 percent of Americans use mosquito repellent to protect themselves and family members from mosquitoes
- 42 percent install screens on windows and doors
- 41 percent remove and clean up areas of standing water around properties
- 23 percent avoid extended periods of time outdoors
- women (36 percent) are more likely than men (26 percent) to avoid going out during peak mosquito hours of dusk and dawn

When it comes to managing mosquitoes and preventing bites, remember the 4 D's.

- **DRAIN** - Drain all standing water. Check rain water collection systems (hopefully you have screening to block mosquitoes on your rainwater system), dishes under flower pots, pet dishes, buckets, tree holes and low lying areas in the yard. If you have areas of standing water that it is not possible to drain, try using mosquito dunks (active ingredient *Bacillus thuringiensis* var. *israelensis*).
- **DUSK & DAWN** – Many mosquitoes are most active during dusk and dawn, so try to avoid being outside during the peak times. However, the mosquitoes that vector the zika virus, chikungunya virus, and the dengue virus are daytime biters.
- **DRESS** - Dress in light-colored clothing with long sleeves and long pants.
- **DEET** - Wear some type of insect repellent. DEET is a common insect repellent for mosquitoes and works very well, but there are other options. Other active ingredients to look for are picaridin or oil of lemon eucalyptus.

University of Arkansas System, Division of Agriculture, Cooperative Extension Service MOSQUITO related publications can be accessed online by clicking on the following links

FSA7059	Mosquito Control Around the Home and in Communities
FSA7060	Developing a Community Mosquito Abatement Program
MP484	Arthropod Pests of Equines (color)
AG1163	Mosquito Life Cycle (color)
AG1164	Avoiding the Super Mosquito: What You Need to Know About Insecticide Resistance in Mosquitoes (color)
AG1165	Residential Mosquito Control and Beneficial Insects (color)
AG1166	The Best Way to Control Mosquitoes: Integrated Mosquito Management Explained (color)

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Five More Counties Added to the Imported Fire Ant Quarantine

John D. Hopkins and Kelly M. Loftin

Most of you have already seen this information but, just in case you haven't: **Conway, Crittenden, Phillips, Pope, and Scott** Counties have been added to the State and Federal Imported Fire Ant Quarantine as administered by the Arkansas State Plant Board (ASPB) and USDA APHIS PPQ. Details can be seen below in the correspondence received from the ASPB:



Terry Walker
Director

ARKANSAS
STATE PLANT
BOARD

P.O. Box 1069 • Little Rock, Arkansas 72203
www.plantboard.org
Phone (501) 225-1598
Fax (501) 225-3590

TO: Interested Parties

April 26, 2016

FROM: Paul Shell

SUBJECT: Imported Fire Ant Quarantine Additions

The Arkansas State Plant Board, along with USDA APHIS PPQ maintains quarantine on Imported Fire Ants (IFA). The quarantine covers potted plants with growing media (including nursery stock), grass sod, hay, straw, and used dirt moving equipment.

The Plant Board conducts border surveys in the areas just beyond the quarantine area every year. Based on these surveys, a county or a portion of a county is added when we feel that the area is infested with fire ants. Areas outside of the quarantine may have isolated populations of fire ants and not be included in the quarantine.

After discovering extensive IFA populations throughout these counties, the Plant Board and USDA have included the following counties into the IFA Quarantine: Conway, Crittenden, Phillips, Pope, and Scott.

If you have a nursery or sod farm in one of these counties, and ship potted plants or grass sod outside of the quarantine, those products will need to be treated to exclude fire ants, and documented that you have treated. The Plant Board and USDA maintain Compliance Agreements in order for companies to move their products from the quarantine to outside of the quarantine. These agreements stipulate options that must be met in order to move those products. A shield-shaped stamp is issued to every compliance agreement holder. The stamp needs to be affixed to an invoice or container when moving these products outside of the quarantine. The compliance agreement also requires that records be maintained on any chemical applications used for compliance agreement shipments.

Even if no shipments are leaving the quarantine, it is good business practice to keep your premises free of fire ants if the public is in contact with your location or products.

I have included a new map of Arkansas showing quarantined counties, and a fact sheet on fire ants and movement of regulated articles outside of the quarantine.

Please contact me or your Plant Board inspector if you want us to lead you through the compliance agreement process. If you have any questions, please call or write me, and I will do my best answer anything.

Sincerely,

A handwritten signature in cursive script, appearing to read "Paul Shell".

Paul Shell
Plant Inspection and Quarantine Program Manager
Arkansas State Plant Board
Paul.shell@aspb.ar.gov

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IMPORTED FIRE ANT BASICS

Since their arrival from South America in the 1930's, imported fire ants (IFA) have been steadily marching northward. Fire ants have a powerful sting and can harm people and animals, and can cause damage to electrical equipment. Like many other exotic invasive species, they can quickly exploit their new environment and replace native ant populations. The ants have wings during their reproductive phase and can fly up to a few miles, depending on the winds. However, they are usually spread through artificial means by movement of infested articles, including potted plants, ball and burlap plants, grass sod, hay, straw, pine straw, soil and mulch.

Most of the Southeastern United States including the southern half of Arkansas is under a quarantine for movement of IFA regulated materials. Consult the enclosed IFA map for the areas under the quarantine. Whenever plants (with soil), grass sod, hay, straw, mulch, or dirt-moving equipment leave the quarantine area they must be free of fire ants. The quarantine applies to the following:

- Nurseries in the quarantine area shipping plants with soil outside the quarantine area.
- Landscapers and nurseries picking up plants in the quarantine area and bringing them outside of the quarantine area.
- Landscapers and nurseries within the quarantine area that are moving plants from the quarantine area for landscaping jobs outside of the quarantine area.
- Grass sod growers in the quarantine area shipping sod outside the quarantine area.
- Landscapers bringing sod from the quarantine area to outside the quarantine area.
- Baled hay and straw which is shipped from the quarantine area to outside the quarantine area.

USDA Animal Plant Health Inspection Service – Plant Protection and Quarantine (APHIS-PPQ) and the Arkansas State Plant Board maintain IFA Compliance Agreements which deal with businesses moving regulated products outside the quarantine. Nurseries, sod farms, landscape contractors, and hay/straw producers that are under a compliance agreement consent to treat their plants with an insecticide labeled for IFA before they ship their plants or sod, or they agree to certify that their business and stock are free of fire ants. The compliance agreement usually has several treatment options and outlines the appropriate chemicals and concentrations to use. Hay and straw producers under a compliance agreement consent to handling and storage of their hay/straw in an approved manner to prevent movement of their hay/straw. There is no chemical treatment for fire ants in hay and straw. Products which fall under compliance agreements should have a USDA quarantine stamp on the invoice. This shield-shaped stamp is issued when a business enters a compliance agreement and has a number which is unique to the business.

Any business violating the quarantine, either by violating a compliance agreement, or moving an untreated regulated product outside of the quarantine can be subject to a state or federal fine. Depending on the severity of the violation these fines can reach several thousand dollars.

Please contact us if you feel that your business needs to be placed under a compliance agreement, or if you want more information on fire ants.

Paul Shell – Plant Inspection and Quarantine Manager
paul.shell@aspb.ar.gov 501 225 1598

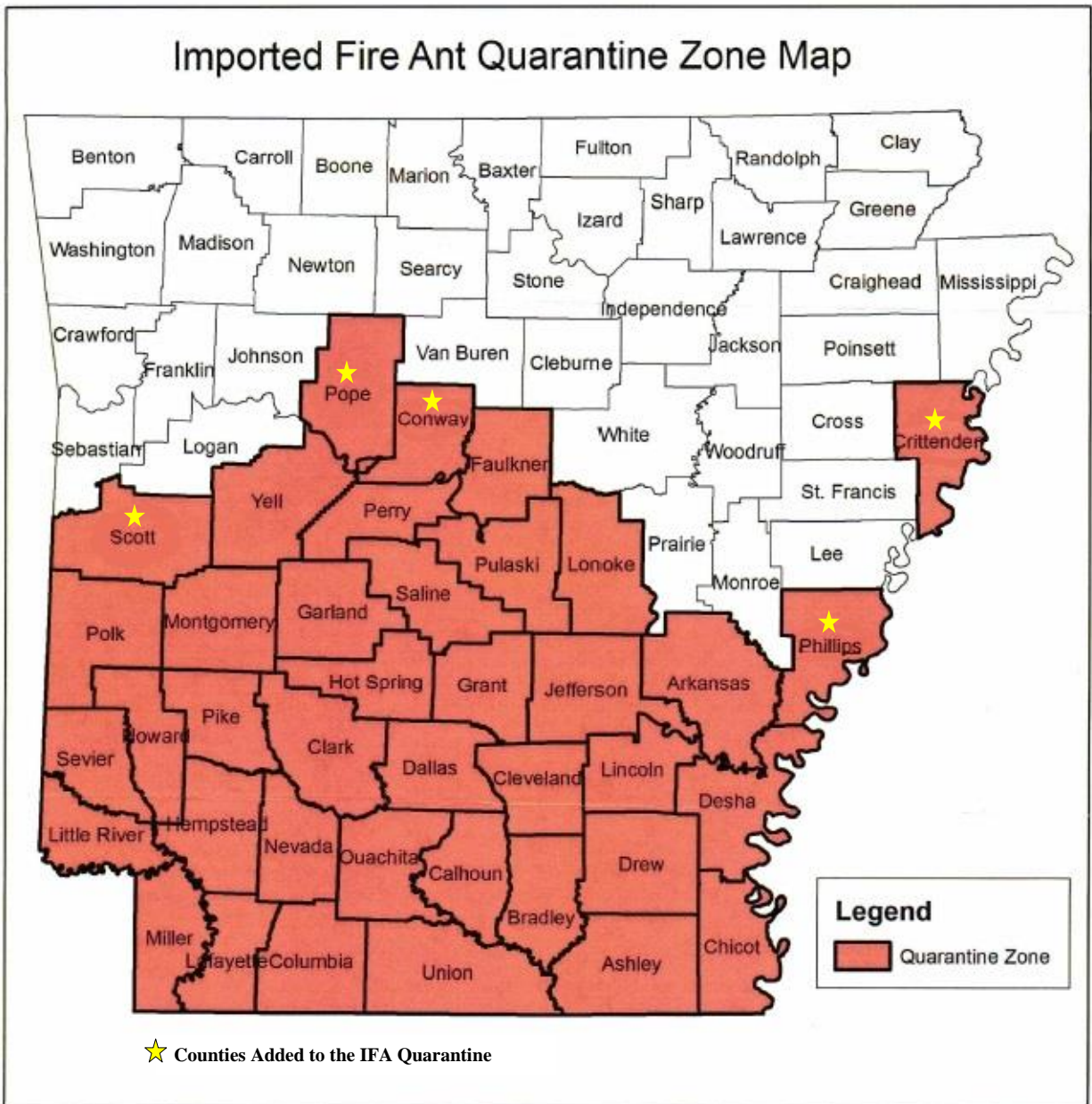
Additional Support Material

- [Environmental Documents](#)
- [Potential Range of IFA](#) (PDF, 1 Mb)
- [Quarantine Treatments for Nursery Stock, Grass Sod, and Related Materials - 2015](#) (PDF; 891 Kb)
- [IFA Quarantine Q&A For Nursery and Sod Growers, May 2013](#) (115 PDF)
- [Industry Alert for Baled Hay Producers, Sellers, and Buyers-2012](#) (PDF; 49 Kb)
- [Gulfport-Biloxi IFA Annual Reports](#)

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Personal Repellent Options

Kelly M. Loftin and John D. Hopkins

With rains and summer temperatures, exposure to biting ticks and mosquitoes is upon us. When we are outdoors working or recreating in tick or mosquito infested areas we should remember to use our insect repellent. We have several more effective repellent options than we have had in the past which can lead to some confusion and a few questions. Which repellent active ingredient should I use? What concentration should I use? When and how should I use repellents?

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In general, repellents containing between 10 and 50% active ingredient provide an acceptable level of repellency and duration. For most repellents, concentrations less than 10% last only about one to two hours and concentrations greater than 50% do not show a great increase in protection time. The most common and effective repellents for mosquitoes contain either DEET, picaridin, IR 3535 or oil of lemon eucalyptus. For mosquitoes and depending upon concentration, DEET provides 2-8 hours protection, picaridin – 2-8 hours protection, IR 3535 – 4-8 hours protection and oil of lemon eucalyptus up to 6 hours protection.

When and how should you use a repellent? The answer is obvious, when you notice mosquitoes flying around or you are in tick infested areas. Remember, more does not mean better when applying repellents. Thorough coverage is important but that does not mean drenching yourself, so follow application directions. Repellents should be reapplied according to label and/or when mosquitoes begin trying to bite again. The label usually provides a good guide as to when reapplication is necessary. Environmental conditions (moisture or rain) and sweating may reduce the effective protection period of some repellents. Always follow the label directions found on the repellent and pay special attention to the label directions when applying repellents to young children.

Although many of the skin repellent formulations can be used on clothing. Clothing-only repellents usually provide better protection when in areas with an abundance of ticks and mosquitoes. The most common clothing-only repellents contain permethrin as the active ingredient. Repel Permanone® and Sawyer® Permethrin Clothing, Gear and Tent repellents are among the common clothing repellents. When properly applied most clothing repellents remain effective after multiple washings. Some clothing such as that available from Insect Shield®, already have the permethrin impregnated in the fabric. Always follow label directions when applying clothing-only repellents.

Face Flies Again

Kelly Loftin

Over the last month or so we have been seeing face flies, *Musca autumnalis* on cattle and horses in north Arkansas and at levels requiring treatment. Their appearance this year was several weeks earlier than we saw in 2015. Normally in Arkansas, face flies do not reach the abundance to cause



Common skin and clothing repellents.

economic concerns every year. The period of peak abundance also varies significantly from year to year. Face fly abundance can spike as early as late May or June or as late as the early August.

In general, face flies are more of a concern in the northern half of Arkansas compared to the south. These flies are economically important as an annoyance to cattle and horses. When face fly abundance is high, grazing may be disrupted resulting in weight and milk production losses. In addition, they can be mechanical vectors of *Moraxella bovis*, a principal cause of pinkeye and are implicated in the transmission of the eyeworm (*Thelazia* sp.) in cattle.

Face flies are found primarily on the face, neck and head of cattle and horses. Unlike the horn flies (*Haematobia irritans*) that feed on blood, face flies are non-blood feeders similar to house flies (*Musca domestica*). Instead of blood feeding, they feed using their sponging mouthparts on mucous secretions found around the eyes, nose, mouth and wounds. Nearly all face flies that are found on the animal are female. This is because the females feed on the animal to acquire the protein rich secretions necessary for egg production. Male face flies primarily feed on nectar. Only about 4% of the face fly population is on the animal at any given time. In appearance, face flies are very similar to house flies except about 20% larger. Adult activity begins in early spring and ends in late autumn.

In many ways, the face fly life cycle is like the horn fly life cycle. One key similarity to the horn fly, is that the face fly will only lay eggs in fresh cattle manure. It take about 6 to 12 days, for a newly deposited egg to become a fully mature larva (maggot). Fully mature larvae transform into pupae under manure pats. Then, from 6 to 11 days later, an adult fly emerges from the pupa. During optimum conditions, it takes from 12 to 23 days for an egg to develop into an adult fly. Unlike horn flies that overwinter as pupae in the soil, face flies overwinter as adults in protected



Face flies feeding on eye secretions around the eyes of a calf. Photo by Clemson University CES.



Face flies (~30) feeding around the eye of a horse.

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areas such as barns, outbuildings, lofts and attics. During warm spells in winter months, face flies can become household pests as they become active from brief warm-ups. During the winter of 2015-2016, I observed face flies in several households in north Arkansas.

When an average of ten flies per face occur in the herd, economic loss can occur. When monitoring face flies, count the number of flies on the face of 10-15 animals. If average number per animal begins to approach ten flies per face, treatment is warranted. Face flies can be difficult to control for three reasons. First, they are primarily found on the animal's face, which is an area that is often difficult to treat. Second, only a very small percentage of the population is found on the host at any given time. Last, face flies are intermittent feeders, spending very little time on the animal. With that in mind and when using traditional insecticides, frequent application is often necessary. In the northeastern U.S., dairy producers may install automated face misters/sprayers at the milking barn exit to apply pyrethrins and sometimes pyrethroid insecticides to the cow's face. Fortunately for us, our populations do not normally reach this extreme abundance. In terms of self-treatment, forced-use back rubbers equipped with fly flips charged with a pyrethroid such as permethrin or an organophosphate such as coumaphos are effective. Paired dust bags will also provide control when hung properly. Some of the insecticide impregnated ear tags cattle can provide control while others only reduce the population. Generally, ear tags containing pyrethroids are more effective than organophosphates or macrocyclic lactones when applied to both ears. Because face flies only develop in cattle manure, feed-through larvicides/IGRs (insect growth regulators) such as ClariFly® will prevent new flies from emerging. However, proximity to untreated herds and the longer flight range of face flies should be considered. Products registered for use against insect pests of cattle are listed in the 2016 Insecticide Recommendations for Arkansas (<http://www.uaex.edu/publications/mp-144.aspx>).

Because horses are companion animals, economic thresholds are not established. The horse pictured above definitely needs relief from the face flies (the picture was taken after she rubbed off her fly mask). Two effective control options for horses include the use of fly masks and wiping on synergized permethrin pour-on. For example, pour-on products such as Permethrin CDC, Buzz Off Pour-on and Martin's Fly Ban Pour-on wiped on the face are effective (avoiding wiping it into the eyes). Roll-on insecticides (such as Endure Roll-On for Horses, Flysect Face Repellent Roll-On and others) also provide relief. Products registered for use against insect pests of horses are listed in the 2016 Insecticide Recommendations for Arkansas (<http://www.uaex.edu/publications/mp-144.aspx>).

Tolfenpro Insecticide Ear Tag Voluntarily Recalled

Kelly Loftin

As you probably know, Bayer Animal Health voluntarily recalled its new Tolfenpro insecticide ear tag earlier this year. Bayer recalled the tag based on early reports of eye irritation in some cattle. At this time, Bayer is investigating potential causes of the eye irritation. Currently, it is unknown when the Tolfenpro ear tag will reenter the market. For more information about the recall go to:


<http://www.bayerlivestock.com/show.aspx/voluntary-recall-tolfenpro>.

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The Tolfenpro insecticide ear tag represented a new class of insecticide to enter the ear tag market. It contained tolfenpyrad which is in the pyrazole insecticide class. This tag would have provided a new insecticide class to use in insecticide ear tag rotation. With the recent recall we are now back to three insecticide classes – organophosphates, pyrethroids and macrocyclic lactones. For more information on insecticide impregnated ear tags and other insecticides for horn fly control on beef cattle go to the 2016 Insecticide Recommendations for Arkansas (MP 144) at: <http://www.uaex.edu/publications/pdf/mp144/b-animals-beef-cattle.pdf>.



Tolfenpro® Insecticide Ear Tag Recall

What Is Happening with Tolfenpro® Insecticide Ear Tag?
 Out of an abundance of caution, Bayer Animal Health is initiating a voluntary product recall for Tolfenpro Insecticide Ear Tags. As a distributor or seller of Tolfenpro, Bayer has provided some answers for questions you may encounter from your customers or clients during this recall. Please contact your local Bayer sales representative for more detailed information.

Q: Why is Tolfenpro being recalled?
A: Bayer has decided to voluntarily issue a recall of Tolfenpro based on early reports of some cattle experiencing eye irritation that may be linked to the product. We understand the livelihoods of ranchers depend on the health and safety of cattle. Bayer made the choice to issue the voluntary recall and take appropriate corrective measures.

When using insecticide impregnated ear tags always remember to rotate insecticide classes from year to year and delay application until the horn fly population approaches the threshold of 200 flies per animal. Ear tags should always be removed when the population declines in the fall or when the efficacy fails. Other methods such as forced-use self-treatment devices (dust bags and back rubbers) pour-on insecticides, passive traps and in some cases insecticide growth regulators and larvicides will provide effective horn fly control. For more information on controlling horn flies on cattle go to “Controlling Horn Flies on Cattle” at:



Close-up of horn flies on wither of bull.

<http://www.uaex.edu/publications/PDF/FSA-7031.pdf>

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Onion White Rot

Sherrie Smith

White rot, caused by *Sclerotium cepivorum*, is a destructive, widespread disease of onion and garlic crops. All members of the *Allium* family are susceptible, including chives, shallots, leeks, onion, and garlic. Infected plants are usually stunted with yellowed foliage. White fluffy mycelial growth on the stem plate extends around the base of the bulb, moving up the bulb and inward through the storage leaves, causing a soft rot. Small, black, poppy seed-sized sclerotia form in the dying tissues. The sclerotia can remain dormant in the soil for many years until the roots of host plants begin to grow nearby. Sclerotia then germinate, and the mycelia typically grow up to several inches through the soil to attack the roots and bulb of the plant. However, sclerotia have been known to cause bulb decay when located as deep as 12 inches below the bulbs. Sclerotia can be spread throughout a planting area by flood water, equipment, or on plant material. This is a very difficult disease to control. Fungicides provide only marginal control when inoculum levels are high, and conditions are conducive for disease development. Rovral 75WG and Folicur 3.6F are labeled for use in commercial fields. Wider spacing between plants can slow the spread of White rot. Homeowners with small plots may consider replacing the soil altogether. Soil solarization may have some benefits. The area to be solarized should be raked clean, thoroughly wetted, and clear plastic placed over the area. The plastic should be left in place for 4-6 weeks. Warm season flooding of the soil has been found to greatly reduce the number of sclerotia as this is a cool season pathogen. Boots and tools should be cleaned to prevent accidentally moving the pathogen to new areas. Gardeners who grow onions in infected soils have less infection generally by planting seed instead of onion sets. This is because the seedlings have a smaller root mass, thus fewer chemical signals, at the time temperatures are optimal for disease development.

Onion White Rot - *Sclerotium cepivorum*



Photos by Sherrie Smith University of Arkansas Cooperative Extension

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Frogs and Toads: Creatures of the Night

Becky McPeake

A creature as seemingly benign as a frog or toad can become a pest. Just as a weed is a plant in the wrong place, a wildlife pest is a critter, or an overabundance of critters, in the wrong place. Problems associated with frogs and toads primarily concern large numbers of these amphibians congregating on porches or parking lots at night. Occasionally, some folks, presumably urbanites who move into rural areas, take issue with their loud mating calls. While many rural residents enjoy hearing melodious frog calls as a rite of spring, these same vocalizations drive others to distraction.

Although there is no easy solution for quieting amorous frogs and toads (other than a set of ear plugs), following are some suggestions for dealing with plagues of herps appearing nightly on porches or parking areas.



This green tree frog is searching for insects on a front porch. Photo courtesy Joseph LaForest, University of Georgia, Bugwood.org.

1. Turn off all porch lights, night lights, pole lights, automatic lights, or any lighting which attracts insects to the vicinity of the porch or parking area at night.
2. If light is needed, replace the bulb. Most LED lights emit almost no ultraviolet light and are only slightly attractive to insects. Yellowish, pinkish, or orange colored bulbs are thought to be less attractive to insects. Avoid bulbs emitting blue or ultraviolet light, as these are most attractive to insects.
3. Keep window shades closed at night on the side of the house where the porch is located. Use dark, light-absorbent shades to prevent light from shining through.
4. Apply insect sprays or repellents to the porch. Follow the label for insect control.
5. Install a bug-zapper to reduce the number of insects, but keep in mind such devices attract only a portion of the insects. A bug-zapper is non-selective and will also kill beneficial insects which prey upon undesirable insects.
6. Remove open water sources from around the house. Keep pond shorelines or backyard pools free of vegetation to minimize cover for frogs and allow predators access.
7. Prune or remove shrubs and other vegetation where frogs and toads may hide.
8. Apply or spray a high concentration of a salt solution or vinegar on pavement to sting their feet. Note that direct application to plants or runoff could kill vegetation and soil. One source suggested mixing two pounds of salt to three gallons of water, which will leave a salt residue on a paved surface. Note that this repellent has not been tested scientifically.
9. Depending on the circumstance, hand capture and release frogs and toads at another location. Use a flashlight or headlamp to locate them by the reflection of their eyes. Place in a bucket and release near suitable habitat away from residential areas. Do not keep frogs captive very long – their skin may dry.

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Try several of these actions to improve results. Focus on removing or reducing insects, which is their main attraction. Remove hiding places to make abundant frogs and toads more vulnerable to snakes and other predators. Note that it is illegal to poison wildlife including frogs and toads in Arkansas.

Frogs and toads are considered nongame with the exception of bullfrogs. Bullfrogs can be taken using hands, hand nets, hook-and-line, gig, spear, or bow-and-arrow, with a fishing license. Check the Arkansas Game and Fish Commission's website (www.agfc.com) or ask your local wildlife officer about the season dates and additional regulations.

Name That Weed

Bob Scott

This month's plant is truly a weed. This summer annual grass plant infests yards, rice fields, and soybean fields and anywhere else it can find a foothold. It emerges early in the spring in comparison to other summer annuals, thus providing a hint to its common name. It has a distinctive purple color at its base when it first emerges, a large seed that can usually be found clinging to the seedling plant after it is pulled up as shown in the photo. This weed has hairless leaves which tend to remain erect, and a fringed membranous ligule. Hairs will be present on the margins of the leaf sheath and it can be easily confused with browntop millet (*Urochloa ramosa*) and large crabgrass (*Digitaria sanguinalis*). It is distinguished from browntop millet by its ability to root at the nodes and a distinctive constriction near the end of the leaf blade. This leaf constriction resembles an area of a leaf that was folded over to form a crease. Our weed has a fringed membranous ligule and hairless leaves, large crabgrass exhibits a large, flat, membranous ligule and dense hairs on the upper surface of leaf blades. Recently it was moved to the genus *Urochloa*, but if you've been around a while you would know it by another genus. Be the first to email me at bscott@uaex.edu (do not hit reply or reply all) with the correct answer and win a prize.



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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

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