

Pest Management News

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Insect-Proofing Your Home

John D. Hopkins

Most people are annoyed when lady beetles, boxelder bugs, crickets, various stinkbugs, or spiders invade their homes this time of year in an attempt to escape the cooler weather outside. The first thing most people think of when trying to prevent a pest problem is, "WHICH INSECTICIDE DO I SPRAY?" There are other things that should be done, however, to help prevent the pest problem that may even eliminate the need for an insecticide application. Insect-proofing your home is the **BEST** way to prevent unwanted pest invaders at this time of year. Some pest-proofing guidelines to follow to stop these invaders include:



Outdoors, try to eliminate entryways used by pests:

1. Inspect and repair all caulking around windows, doors, attic vents, and utility openings. Expanding foam products can be helpful.
2. Inspect and repair weather stripping around doors and windows.
3. Repair all window, door, and vent screens.
4. Repair loose siding or foundation cracks that may act as an entry point.
5. Copper gauze may be used for holes that are too large for caulking or may require air movement through the opening (weep holes of brick veneer). Steel wool is not recommended if conditions for rust exist.
6. The use of residual insecticides labeled for perimeter application can also provide a barrier to prevent pest entry.

Indoors, try to eliminate areas that can harbor insects or serve as food or moisture sources:

1. Seal indoor cracks and crevices to eliminate harborage sites.
 - This will reduce the need for repeated pesticide applications to these areas.
 - It also forces hiding insects to relocate and increases their likelihood of exposure to other management strategies.
2. Eliminate any plumbing leaks or other sources of moisture that provide an essential resource to the invaders.
3. Make sure food is stored properly and garbage cans have tight-fitting lids.

If the above-listed maintenance and sanitation guidelines are carried out, pests will be discouraged or prevented from invading in the first place.

However, if nuisance pests do get inside:

In large numbers:

1. They can be vacuumed up, and the vacuum bag can be discarded outside.
2. Line vacuum hose with a stocking and insects will be conveniently bagged.
3. **NO INSECTICIDE RECOMMENDED!** Many insects will die in inaccessible places, making cleanup impossible; and these dead insects will serve as a food source for other pest insects, like dermestid beetles.

In low numbers, or individually:

1. Pests can be swept up and removed, or
2. Treated with an over the counter aerosol insecticide and removed.
3. Over-the-counter residual insecticides labeled for "crack and crevice" and/or "surface treatment" may also provide relief (low numbers only).

Finally, insect-proofing – or preventing nuisance pests from gaining entry in the first place – is the BEST control strategy against insects trying to invade your home to escape the cooling weather.

The Hazards of Bug Bombs

John D. Hopkins

Total release foggers (TRFs), sometimes referred to as "bug bombs," are common, widely available devices used by the general public to control household insect pests. These pesticide products are designed to release their entire contents when activated and will fill an area with microdroplets of a non-residual contact insecticide. They are often used in homes and workplaces to kill cockroaches, fleas, and flying insects. Most TRFs contain pyrethroid, pyrethrin, or both as active ingredients. One misconception about TRFs is that they can be used to fumigate an area. Fumigants are gaseous pesticides that completely fill an area and control pests through intoxication or suffocation. Fumigants, being a gas, will also penetrate hidden areas and provide control of some pests that are not directly exposed. TRFs release a fine aerosol, not a gas; and as a result will only control pests that are exposed and directly contacted by the microdroplets released from the container.

Because TRFs also contain flammable propellants, improper use may cause a fire or explosion. There are precautions that users of TRFs can take to reduce the associated hazards.

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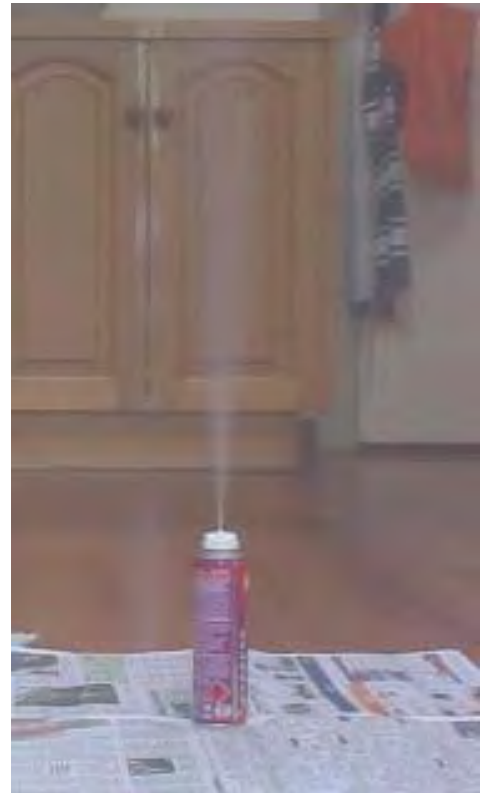
Practice Pest Prevention First: The most effective way to reduce or eliminate pest problems and risks posed by pesticides is to first prevent these pests from entering your home. Around the home, these measures include removing sources of food and water (such as leaky pipes) and destroying pest shelters and breeding sites (such as litter and plant debris).

Follow Appropriate Safety Precautions: When nonchemical prevention measures are less than effective in providing the desired level of pest control, you may choose to use a chemical pesticide. One type of product is the total release fogger. While this and other products can be effective under the proper circumstances, they can pose real risks to your home and family if used improperly. Before using a total release fogger in your home or building, please read and follow the safety tips and common-sense precautions below.

Do Not Use More Foggers Than Necessary. Many accidents involving total-release foggers have occurred when homeowners release an excessive amount of fogging material, leading to a high buildup of flammable vapors. Generally, one 6-ounce fogger should be sufficient for an average-sized home. Smaller-sized foggers are available for apartments and other small housing units. More precisely, use no more than one ounce of product per 1,000 cubic feet of living area. Foggers should not be used in small, enclosed places, like closets, cabinets, and under counters or tables.

To calculate the total volume of a living area: multiply the height, width, and length of each room, and then add the room volumes together. For example, an 8-foot by 10-foot by 10-foot room has a volume of 800 cubic feet.

Keep Foggers Away From Ignition Sources. Accidents are most likely to occur if more than the recommended number of foggers are used, and the aerosol cloud generated comes into direct contact with an ignition source such as a flame, pilot light, or spark from an electrical appliance which cycles on and off (e.g. refrigerator or air conditioner). A TRF should never be activated unless it is at least six feet or further from all ignition sources. If you need assistance with extinguishing pilot lights, please contact your local gas utility or management company.



Take Other Common-Sense Precautions:

- Use no more than one fogger per room, keeping in mind that no more than one ounce of product per 1,000 cubic feet should be used.
- Extinguish all ignition sources such as pilot lights, or place fogger at least six feet away from such sources.
- Remove all children, pets, toys, and uncovered food from treated area.
- Read the label and follow directions carefully. All current labels contain the following wording:

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- ✓ The “Physical and Chemical Hazards” section of the label contains a graphic symbol depicting fire, and now reads: This product contains a highly flammable ingredient. It may cause a fire or explosion if not used properly. Follow the "Directions for Use" on this label very carefully.
 - ✓ The “Directions for Use” section of the label now reads: DO NOT use more than one fogger per room. DO NOT use in small, enclosed spaces such as closets, cabinets, or under counters or tables. DO NOT use in a room 5-feet by 5-feet or smaller; instead, allow fog to enter from other rooms. Turn off ALL ignition sources such as pilot lights (shut off gas valves), other open flames, or running electrical appliances that cycle off and on (i.e., refrigerators, thermostats, etc.). Call your gas utility or management company if you need assistance with your pilot lights.
- Properly ventilate the treated area after releasing foggers.
 - Keep the product away from children, such as in a locked cabinet or shed.
 - Teach children not to touch pesticide products and other household chemicals.
 - Keep the telephone number of your local poison control center or the toll-free number (1-800-222-1222) for the National Poison Control Hotline handy.

To reduce the risk for acute, usually temporary health effects to users and bystanders:

- The area to be treated must be vacated prior to TRF discharge.
- Reentry into the treated space should not be attempted before the time interval specified on the label has elapsed.
- Use only the directed number of TRFs for the space being treated.
- Notify all bystanders or others that are nearby to prevent accidental exposure.

Rhizoctonia Large Patch of Zoysia

Stephen R. Vann

Large patch of zoysiagrass is an infectious disease caused by a fungus. It typically occurs in the fall and spring as circular, discolored patches that expand over time. The disease finds cool temperatures and wet conditions favorable, and may be especially severe in poorly drained and over fertilized turf. Generally, patches begin to appear in early to mid-October in Arkansas as temperatures cool and zoysiagrass slows growth before going into winter dormancy.

Patches start as circular, discolored areas. Symptoms are most visible in the fall and spring. At times, the borders of the patches will be orange or pink in color, which indicates that the disease is active (**FIG. 1**). The orange border consists of newly infected plants where the lower leaves are just starting to die as the fungus invades and kills the leaf sheath below the blades. The fungus causes damage to the grass shoots, but not the roots, thus individual plants often recover, beginning in the center of the affected “patch.” This recovery gives the patch area a “smoke ring” appearance.

The dead-looking centers of the patches will appear thin and sunken and may be invaded by weeds. Patches vary in size and shape, but tend to



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be circular and may range from 6 inches to 20 feet in diameter. Disease progress slows as temperatures rise during the spring, and the patches gradually become filled in by new growth during the summer. If not controlled, patches will tend to return each fall and spring in the same places. This fact is useful for disease diagnosis.

Rhizoctonia large patch disease of zoysiagrass and bermudagrass is caused by a fungus similar to the Rhizoctonia fungus that causes brown patch disease of cool-season grasses (bentgrass, tall fescue, etc.) in Arkansas. The fungus that attacks zoysiagrass and bermudagrass, however, grows best at cooler temperatures and thus is more active during fall, winter and spring than the brown patch fungus, which tends to be more active in hotter temperatures. The large patch fungus survives hot weather in infected leaf sheaths and in infested thatch.

The large patch fungus becomes active in early fall as temperatures cool and zoysiagrass slows growth in preparation for winter dormancy. Infection and disease development probably starts from mid-September to early October in Arkansas (depending on location), and continues for as long as temperatures are consistently above 50°F and conditions are moist. The disease resumes rapid development in the spring when conditions become favorable again, but slows when temperatures consistently reach the mid-80s, usually in May. The disease progresses outward in all directions from the initial point of infection, killing leaf sheaths and leaves, and creating a roughly circular dead or declining patch. Once the disease is suppressed by high temperatures, stolons will form new shoots, and the patch will start to recover and eventually disappear during the summer. The disease is more severe on zoysiagrass that has been mowed at less than one-inch height. Because the fungus can survive during the summer in thatch, anything that moves this material will scatter the fungus to adjacent areas. Mowing, aerating and sod transplanting all can move the fungus to new areas, creating multiple patches (**FIG. 2**).



Rhizoctonia large patch disease is made worse by close mowing, overwatering and early- or late-season nitrogen applications. Successful disease management depends on several factors: (1) Improve drainage to avoid soil saturation. (2) Do not overwater the grass, especially in the fall or spring. (3) Mow as tall as is practical. (4) Bag and remove clippings from affected areas, as they may spread the disease. (5) Do not mow when grass is wet. (6) Do not apply nitrogen fertilizer to zoysiagrass or bermudagrass in early spring. Wait until warm weather has slowed large patch development (usually May or June). Refer to Extension Fact Sheet **FSA7527** for fertilizer schedules. For areas with a known large patch problem, apply a fungicide between September 20 and October 10 before patch development. For difficult situations, apply a fungicide to suppress spring symptoms again between March 10 and April 10, just as zoysiagrass breaks dormancy. Fungicide applications after patches start to develop are much less effective than preventive applications.

Since there are no effective fungicides packaged and sold for homeowner use, homeowners should consider contacting a professional lawn service about applying one of the commercial fungicides at

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the proper times. As with all turfgrass diseases, an accurate disease diagnosis is necessary before initiating a management program.

Mystery Worms

Becky McPeake

What's that worm? It's a question that doesn't come up often in ordinary conversations, and there are few experts specializing in worm identification. There has been one worm which has caused Extension professionals to do some digging around. The "mystery worm" in the photograph is a species of land planarian.

Land planarians are soft, flattened worms from about one to 20 inches long and less than one-fifth of an inch wide. The heads of many land planarians are hammer-shaped or tapered to a blunt point. Their colors range from greenish-gray to brown with distinctive narrow stripes. They prey on earthworms, and have been reported to eradicate entire earthworm populations on farms. This makes them a nuisance in earthworm rearing beds. Land planarians are considered harmless in greenhouses, however, as they do not consume plants.



Land planarians have been found commonly in American greenhouses since 1901, although their native home is believed to be Indochina. Their widespread occurrence has been attributed to horticultural practices and dispersion of potted plants. For more information, see http://creatures.ifas.ufl.edu/misc/land_planarians.htm.

Name That Weed

Bob Scott

This newsletter's featured weed is an herbaceous annual plant native to much of North America. It was formerly cultivated by Native Americans in the eastern United States, and specifically near modern day Illinois for its edible seed. The edible parts contain 32 percent protein and 45 percent oil, according to Pulitzer Prize-winning author Jared Diamond.

Diamond notes, however, that much like its close relative, ragweed, our weed possesses many objectionable qualities, including being a severe allergen and possessing "strong odor objectionable to some people ... handling it can cause skin irritation." Diamond believes the weed was abandoned as more pleasant alternatives (like corn) became available – it had long disappeared as a crop by the time Europeans arrived in the Americas.

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In Arkansas the weed is found primarily along ditch banks and disturbed areas. Weed scientists often receive e-mails from someone asking what it is. Photos follow below:



Be the first to e-mail Bob with the CORRECT common name at bscott@uaex.edu 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.

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