

Bug Bombs—Dangerous and Not Always Effective

Insecticide foggers, also known as total release foggers or “bug bombs” (Figure 1), are popular products widely available in many retail nurseries and garden centers as well as drug stores, supermarkets, and convenience stores. These easy-to-use products may seem to provide an easy way to kill a lot of bugs fast and may be viewed as more convenient and cheaper than hiring a pest management professional. But do they work?

Are Foggers Effective?

Foggers can be used effectively to kill pests that are flying around or resting on surfaces, like flies, but there are better long-term and more effective ways to manage these pests. Unfortunately, foggers are rarely effective for control of crawling insects like cockroaches, fleas, and bed bugs that can easily hide in crevices or beneath household items, escaping direct exposure. For best results, the active ingredients in these products must make contact with the pests. Insects that spend most of their time hiding will not be significantly affected by insect foggers. Even a small piece of fabric may be enough to protect bed bugs from the pesticide fog created by these products.

Since foggers leave a toxic residue on treated surfaces, users might see a few dead roaches after application, but many active ingredients in foggers are known

to be repellent and may even drive pests deeper into wall voids and other hard-to-reach locations, sometimes even spreading them to other rooms. Pesticide resistance is another reason that insect foggers may not work. Many insect foggers contain pyrethrin or pyrethroid insecticides and some populations of household pests are known to be resistant to these pesticides.

Improper Use Can Cause Injuries

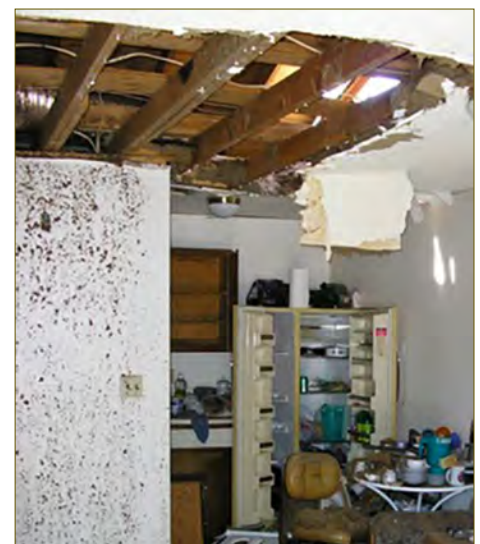
Fogger labels list the size of the space they are intended to treat but according to the Center for Disease Control (CDC), overuse of foggers is common. Not only does overuse increase insecticide residue and exposure risk in the area, but the propellant used in foggers is flammable! Explosions can occur if pilot lights are not extinguished before use as instructed by the label (Figure 2).

Foggers can also make people sick if they're exposed. In studies by the CDC, the most commonly reported symptoms after exposure were cough, upper respiratory pain or irritation, difficulty breathing, vomiting, nausea, and abdominal pain or cramping. Most of the time, the symptoms were mild and didn't require medical treatment, but there are reports of more serious injuries and people have even died from injuries related to foggers. According to these studies, injuries frequently happen when



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Figure 1. Many brands of total release foggers or “bug bombs” are available to consumers.



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Figure 2. Damage from an explosion caused by misuse of foggers.

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Unwanted Indoor Critters? There's a *Pest Notes* for that!

While we continue to spend more time than usual indoors, you may have noticed a few unexpected (and perhaps unwanted) co-occupants like ants, cockroaches, or mice. Luckily, UC IPM has a series of fact sheets called *Pest Notes* to help you identify and manage hundreds of different pests in and around the home, only a portion of which might come indoors.

Any room in the home can attract and harbor indoor pests including kitchens, pantries, bathrooms, closets, storage areas, or other living spaces. Prevent and reduce indoor pest problems by cleaning and decluttering indoor spaces. This removes access to food, water, and shelter for pests such as ants, carpet beetles, rodents, and pantry insects. Find out where the pests are entering your home and prevent them from getting in. Keep reading for tips that will help limit potential infestations.

Kitchen and Pantries

Kitchens and pantries can provide abundant food and water for pests such as cockroaches, ants, meal moths, and pantry beetles (Figure 1). Be sure to wipe down countertops regularly, clean up grease deposits near cooking surfaces, clean off pantry shelves, and keep stored food in tightly sealed containers to reduce or eliminate these food sources for pests. Also, clean up spilled food and wash dirty dishes daily. Mop and vacuum floors to remove food and debris. Use sticky traps or pheromone traps to monitor and detect insects such as cockroaches and pantry pests and to help manage flying pests such as house flies and vinegar flies.

Living Spaces and Closets

In living rooms, bedrooms, and closets, vacuum floors (especially along baseboards) and beneath furniture to reduce or prevent infestations of carpet beetles (Figure 2), clothes moths, fleas, bed bugs, and other pests. Reduce clutter to remove hiding places and make pest infestations easier to spot. Launder bedding, blankets, cushion covers and other washable articles to kill clothes moths,



Figure 1. Confused flour beetle infesting stored grain.

bed bugs, and carpet beetles. For bed bug or head lice infestations, be sure to wash and dry bedding and infested items at the hottest setting the fabric will permit. If items infested with head lice cannot be laundered, place them in a plastic bag and freeze for 48 hours.

Storage Areas

Garages, basements, attics, and other storage spaces can also attract unwanted pests. When possible, seal cracks and openings in foundations and around doors, windows, pipes, wires, and vents to reduce access to these areas by rats, mice, or raccoons. Use snap traps to control rats and mice indoors. Organize belongings in airtight containers such as plastic bins to keep out carpet beetles, mice, and silverfish. Store bins off the floor and away from walls to reduce clutter in storage areas.

Houseplants

Houseplants may be attacked by pests that are typically found outdoors including scale insects, mites, mealybugs, whiteflies, or fungus gnats. However, indoor management of these pests can differ from methods recommended for outdoor plants. Houseplant leaves and stems can be washed with water to remove soft bodied insects and mites. Use sticky traps to reduce fungus gnat populations by trapping adult gnats and adjust your watering. Pesticides such as insecticidal soap or horticultural oil may help control some of these pests but be sure products are labeled for indoor use on the houseplant species and against the pest you have identified. See the



Figure 2. Furniture carpet beetle larva infesting feathers.

recently published *Pest Notes: Household Problems* at ipm.ucanr.edu/PMG/PESTNOTES/pn74172.html for more information.

Use IPM for Pest Problems

Wherever you may find pests in the home, use integrated pest management (IPM) to solve your specific pest problem. The combination of science-based methods suggested above will help exclude and manage pests so you can reduce any undesired co-occupants.

Found a spider? Before you squish it, remember that spiders are predators which are beneficial and help control other pests around the home. If you are comfortable, let the spider be or capture and release it outside. See this video on how to do it: youtu.be/eUEcFamxrf0.

Another visitor you might spot is a house centipede, but these invertebrates are also beneficial and do not damage plants or household items.

You can find much more information about all the pests mentioned in this article in the UC IPM *Pest Notes* publications located in the Household Pests section online at ipm.ucanr.edu/PMG/menu.house.html.

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Revised *Pest Notes*

What do you think about our newsletter?
Your feedback is appreciated!
<https://bit.ly/32CYJqt>



Houseplant Problems

If your houseplant is looking unhealthy, our new publication *Pest Notes: Houseplant Problems* can help you find out what may be wrong. Authored by UCCE Environmental Horticulturalists Dennis

Pittenger and Donald Hodel, this new resource can help you narrow down the cause of a plant problem and decide what actions to take.

ipm.ucanr.edu/PMG/PESTNOTES/pn74172.html



Itching and Infestation: What's Attacking Me?

Unexplained itching can be stressful to those experiencing it. In UC IPM's *Pest Notes: Itching and Infestation: What's Attacking Me?* UC Davis entomologists Lynn Kimsey, Robert Kimsey, and Eric Mussen

updated the publication to include information about the causes of itching sensations and an extensive reference section.

ipm.ucanr.edu/PMG/PESTNOTES/pn7433.html



Pokeweed

American pokeweed is a large weedy shrub native to the eastern U.S. but spreading in parts of California. This weed has increasingly been seen in backyard gardens and home landscapes. All parts of the plant, including the glossy purple-black berries, are poisonous to humans.

For details about identification and management of American pokeweed, see the new *Pest Notes: Pokeweed*, authored by UC Cooperative Extension advisor Scott Oneto.

ipm.ucanr.edu/PMG/PESTNOTES/pn74173.html



Sooty Mold

Sooty mold is a black fungal growth that looks like a layer of soot covering the leaves of a plant or a sidewalk. The aptly named disease is common in gardens and landscapes, appearing wherever a large infestation of plant-sucking

insects are found. The key to reducing this sticky sooty mold is management of honeydew-producing insects and ants. See *Pest Notes: Sooty Mold*, updated by Karey Windbiel-Rojas and Belinda Messenger-Sikes of the UC Statewide IPM Program for tips.

ipm.ucanr.edu/PMG/PESTNOTES/pn74108.html



Spiders

Whether you are curious as to what kind of spider you found or are looking for ways to get rid of them, you can find answers in the newly revised *Pest Notes: Spiders*. Author Richard S. Vetter, UC Riverside arachnologist and a world-renowned expert on spiders, has added more details about biology and identification of the diverse spiders in California, including new high quality images.

ipm.ucanr.edu/PMG/PESTNOTES/pn7442.html

Visit UC IPM's *Pest Notes* web page for these and many more titles.
ipm.ucanr.edu/PMG/PESTNOTES

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users don't read the instructions on the label. People can be also be exposed to the insecticide if they don't leave the premises after releasing the trigger on the product or return to their homes too early.

The labels of these products also instruct users to clean all exposed surfaces after use since these products leave pesticide residues. Failure to follow these instructions can lead to health hazards. The pesticide residues can be irritating, especially to occupants with asthma or other respiratory ailments.

For Safety, Follow the Label

If your customer decides to purchase foggers, stress the importance of reading and strictly following the instructions on the product label. Customers need to know the size of the room they're

treating before they come to the store so they know how many foggers to buy. However, if they have not done that, instruct the customer to measure the size of the area they are treating before they begin fogging. More pesticide is not better; more can be dangerous.

For more information and safety precautions, see the US EPA website at www.epa.gov/safepestcontrol/safety-precautions-total-release-foggers.

The National Pesticide Information Center also lists considerations and limitations when using foggers, along with several other resources for more useful information at npic.orst.edu/ingred/ptype/fogger.html.

There are many effective ways to manage insect pests in the home. You can learn tips to share with your customers at the

UC IPM website at ipm.ucanr.edu/homegarden. You can also direct your customers there to find practical, effective methods for controlling common household pests, without exposing themselves or the other occupants of their home to pesticides.

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WHAT IS IPM? Integrated Pest Management (IPM) programs focus on long-term prevention of pests or their damage through a combination of techniques including resistant plant varieties, biological control, physical or mechanical control, and modification of gardening and home maintenance practices to reduce conditions favorable for pests. Pesticides are part of IPM programs but are used only when needed. Products are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.



Pests in the Urban Landscape Blog

Check out the UC IPM urban pest management blog!
Get timely information about pests in and around homes, gardens, landscapes, and structures in California.

ucanr.edu/blogs/ucipmurbanpests

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For more information about managing pests, contact your University of California Cooperative Extension office, or visit the UC IPM website at ipm.ucanr.edu.

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Always read and carefully follow all precautions and safety instructions provided on the pesticide container label, as well as any other regulations regarding the use of pesticides. Not following label directions, even if they conflict with information provided herein, is a violation of state and federal law. No endorsements of named products are intended, nor is criticism implied of products not mentioned.