

## Termite Control: Answers for Homeowners

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Entfact-604

The University of Kentucky's Entomology Department receives many calls about termites. Subterranean (soil-dwelling) termites are serious pests of buildings and usually warrant attention by a professional. Termite control can be confusing, however, and homeowners often have many questions. Some of the most common inquiries are answered below.

*NOTE: Answers provided in this publication are based on conditions in Kentucky, with relevance throughout much of the USA. Nonetheless, termites and treatments sometimes vary with locale, so you may also want to consult your local cooperative extension service about specific recommendations for your area.*

### Q: Why worry about termites?

A: Termites cause billions of dollars in damage each year in the U.S. They primarily feed on wood, but also damage paper, books, insulation, and even swimming pool liners and filtration systems. Termites can injure living trees and shrubs, but more often are a secondary invader of woody plants already in decline. While termites may infest buildings at any time, they are particularly relevant when buying or selling a home since a termite inspection/infestation report is normally a condition of sale. Besides the monetary impact, thousands of winged termites emerging inside one's home are an emotionally trying experience — not to mention the thought of termites silently feasting on one's largest investment.



Fig. 1: Termites are capable of inflicting costly damage.

### Q: Why are infestations often discovered in the spring?

A: Spring typically is when large numbers of winged termites, known as "swarmers," emerge inside homes. In nature, termites swarm to disperse and start new colonies. Triggered by warmer temperatures and rainfall, the winged termites emerge from the colony and fly into the air. The swarmers then drop to the ground, shed their wings, pair off with a mate, and attempt to begin new colonies in the soil. Termite swarmers emerging inside a home are incapable of damaging wood and only live for about a day. Removal can be accomplished with a broom or vacuum.



Fig. 2: Winged termites emerging indoors are a telltale sign of infestation.

**Q: How will I know if my home is infested?**

A: Discovering winged termites indoors almost always indicates an infestation warranting treatment. Since the swarmers are attracted to light, they often are seen around windows and doors. People often confuse winged termites with ants, which tend to swarm at the same time of year. Termites have straight antennae, a uniformly thickened waist, and wings of equal size. Conversely, ants have elbowed antennae, constricted waists, and forewings that are longer than the hind wings.

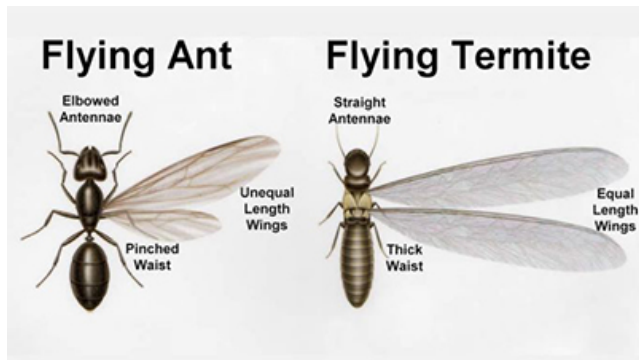


Fig. 3: Termite swarmers are often confused with winged ants.

Swarms of termites emerging from tree stumps, woodpiles, etc. out in the yard are not necessarily cause for concern, and do not automatically mean the house is infested. On the other hand, if swarmers are emerging next to the foundation or from abutting porches or patios, there's a good chance the home is infested as well.

Other signs of infestation are earthen “mud” tubes extending over foundation walls, support piers, sill plates, floor joists, etc. The mud tubes are typically about the diameter of a pencil, but sometimes can be thicker. Termites construct the tubes for shelter as they travel between their underground colonies and the structure. To help determine if an infestation is active, the tubes may be broken open and checked for the presence of small, creamy-white worker termites. If a tube happens to be vacant, it does not necessarily mean that the infestation is inactive; termites often abandon sections of tube while foraging elsewhere in the structure.



Fig. 4: Mud tunnels are another common indicator of termites.



Fig. 5: Termite colonies contain many ‘workers’ that consume wood and smaller numbers of ‘soldiers’ (center) with jaws modified for defense.

Termite-damaged wood is hollowed out along the grain, with bits of dried mud or soil lining the feeding galleries. Wood damaged by moisture or other types of insects (e.g., carpenter ants) will not have this appearance. Occasionally termites also bore tiny holes through drywall or plaster, accompanied by bits of soil around the margin. Rippled or sunken traces behind wall coverings can also be indicative of termites tunneling underneath.



Fig. 6: Termite-damaged wood has soil lining the feeding galleries.

Oftentimes there will be no clear indication of infestation. Termites are cryptic creatures and infestations can go undetected for years, hidden behind walls, floor coverings, insulation, and other obstructions. Termite feeding and damage can even progress undetected in exposed wood because the outer surface usually remains intact. Confirmation of termites often requires the keen eye of a professional -- however, even the most experienced inspector can overlook signs that are hidden.



Fig. 7: Termites are cryptic. This damage was discovered when a vacuum head broke through a baseboard.

### **Q: Can I treat the house myself?**

A: It's best not to for home infestations. Ridding a home of termites requires special skills. A knowledge of building construction is needed to identify critical areas where termites are likely to

enter. Many of these potential points of entry are hidden and difficult to access. Termite control also utilizes specialized equipment such as powerful masonry drills, large-capacity spray tanks, and long metal rods for injecting soil. A typical treatment may involve hundreds of gallons of a liquid pesticide, known as a termiticide, injected into the ground along the foundation, beneath concrete slabs, and within foundation walls.

In short, termite treatment is a job for professionals. A possible exception might be if a mailbox post or other small wooden object not attached to the house was infested. "Do-it-yourself" products, sold to homeowners at retail stores or bought over the internet, will seldom eradicate an existing termite problem.

### **Q: How do I choose a termite company? Why is there such variance in price?**

A: These are complex questions. The company should be licensed by the Department of Agriculture or agency responsible for regulating termite control in your state. Membership in their state pest control association and/or National Pest Management Association suggest the company is an established firm with access to technical and training information needed to do the job correctly. As with any service, references are very helpful. Consider calling at least a few companies. Requesting inspections and estimates from more than one will help verify the existence of a termite infestation and allow you to compare services.

Companies offer different types of treatment methods and warranties. If termites happen to return, most will retreat the affected area(s) at no additional charge. Some companies also will repair damage occurring after their treatment, although dating onset of termite damage is a hard thing to determine. In some cases, no warranty will be offered if wells, drainage systems, sub-slab heat ducts, or inaccessible crawl spaces make it impossible to treat in accordance with industry standards.

Take your time when selecting a company. Termites damage wood slowly; the amount of damage caused by taking an additional day, week, or month to make an informed decision generally is inconsequential. Avoid firms that try to pressure you into signing a contract immediately with specials or scare tactics. The overall quality of the job depends less on the sales person than the individual who ultimately does the work. A safe and effective termite treatment requires an experienced technician, not someone hired a few weeks ago.

**Q: Which treatment method is most effective?**

A: There are two general categories of termite treatment — liquids and baits. Liquid termiticides have been around for many decades. Their purpose is to provide a long-lasting “barrier” in the soil that prevents termites from entering and infesting buildings. In most cases, termites already within the building die off as well, since they cannot return to the soil for supplemental moisture. Most former liquid termiticides were repellent rather than lethal to termites foraging in the soil. Current products such as Termidor® /Taurus® (fipronil), Premise® (imidacloprid), and Altriset® (chlorantraniliprole), are non-repellent and termites tunneling into treated areas are killed. Such products are usually more reliable controlling infestations in the first attempt.



Fig. 8: Two treatment options for termites: liquid application (left), baiting (right)

The other treatment category is baiting. Termite baits consist of cellulose-based food combined

with a slow-acting substance lethal to termites. The baits are installed below ground out in the yard in cylindrical plastic stations. Other types of bait stations are sometimes additionally installed indoors over active mud tubes. Foraging termites eat the bait and share it with their nest mates, resulting in a gradual decline in termite numbers. On some properties, baits may constitute the only form of treatment; on others, they may be supplemented with liquid applications to areas where termites are observed.

Regardless of which approach is used, it's important to have an experienced technician, backed by a reliable pest control firm.

**Q: Does the whole house need treatment, or can they just treat where they see termites?**

A: Subterranean termite colonies may contain many thousands of individuals foraging in numerous directions. For this reason, localized "spot" treatments are usually a gamble except in cases of warranty-related retreatment. Most reputable pest control firms will not warrant spot treatments, since it is likely that termites will eventually find other points of entry into the building.

Many companies do offer what are termed "perimeter" applications, using a liquid product such as Termidor®. Typically, this involves treatment around the entire exterior of the home, and spot treating any infested or high-risk interior areas. Due to the reliability of such treatments, most companies also offer a warranty in the event termites return. Such warranties usually stipulate that the company will return and retreat the affected area(s) at no additional charge provided the annual renewal is maintained. It is a bit of a gamble to purchase any termite treatment without an ongoing service agreement.

**Q: How long will the treatment last?**

A: All liquid termiticides are supposed to control termites for at least five years when applied according to label directions. The duration of control on any given home will depend on several factors,

including: which termiticide product was used, thoroughness of application, area of the country, local environmental conditions, and density of termites on the property. If termites swarm and continue to infest the structure the year following treatment, it is not from degradation of the termiticide — but rather, because the pests have found an untreated gap in the chemical barrier.

**Q: Will the chemicals harm my family or pets?**

A: Termiticides are tested extensively for adverse effects on health. Before a product can be used, numerous studies are conducted by the manufacturer and independently evaluated by the U.S. Environmental Protection Agency. Based on current knowledge, registered termiticides pose no significant hazard to humans, pets, or the environment when applied according to label directions. Despite the negligible health risk from a properly performed termite treatment, those with lingering concerns should consult their physician. Most of the newer liquid products have essentially no odor. People who remain apprehensive may want to consider having their home treated with baits.

**Q: Have I been "cheated" if termites continue to infest my home after treatment?**

A: Not necessarily. Unlike other services such as plumbing or electrical work, termite control involves living creatures. Even the best treatments performed by knowledgeable pest control firms may fail at times, when termites find their way through untreated gaps in the soil. While the intent is to establish a continuous, impenetrable chemical barrier, this is hard to achieve in actual practice. In the case of baits, it may take weeks or months for termites to find the belowground installations and months more to achieve control.

The key is to hire a reputable pest control firm employing experienced, conscientious technicians.

Companies will return and retreat affected area(s) at no additional charge provided the customer purchases and maintains their warranty.



Fig. 9: Termite inspections and treatments are best accomplished by professionals.

Termite prevention and control are complex subjects. For more information, see our other entomology extension publications, *Entfact 605: Protecting your Home Against Termites*, and *Entfact 639: Termite Baits: A Guide for Homeowners*.

Revised: 9/13/2018

CAUTION: The use of some products may not be legal in your state or country. Please check with your local county agent or regulatory official before using any pesticide mentioned in this publication. ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR SAFE USE OF ANY PESTICIDE.

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