UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

ANT CONTROL FOR HOMEOWNERS

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Ants are the most frequent and persistent pests encountered around homes and buildings. Besides being a nuisance, ants contaminate food, build unsightly mounds on our property, and cause structural damage by hollowing out wood for nesting. Species such as fire ants inflict painful stings, which can be life-threatening to hypersensitive individuals.

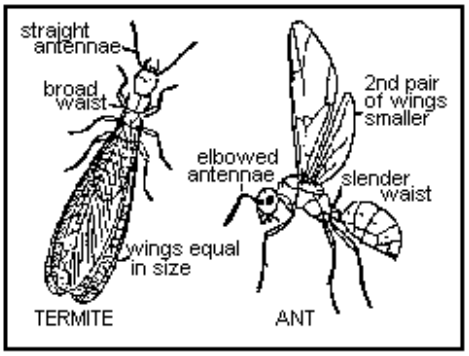
To most householders, all ants look pretty much alike. In truth, dozens of different species occur around homes and buildings, each having unique characteristics which may influence the method of control. In Kentucky, the most common house-invading ants include pavement ants, carpenter ants, acrobat ants, pharaoh ants, and odorous house ants. The latter species has become a particular nuisance in recent years, and will be discussed later on in detail. Knowing which ant(s) you have often requires the help of an entomologist or knowledgeable pest control firm. Collecting a few of the non-winged worker ants in a plastic bag or vial will help with subsequent identification.

Dealing with ants can be very frustrating. This publication will help you control them, or at least know when it's time to call a professional. Recommendations pertain to all structure-invading ants found in Kentucky except carpenter ants, which are discussed in a separate publication (see *Entfact-603, Carpenter Ants*).

Ant Characteristics

Ants are social insects which live together in cooperative, intermingling colonies. The colonies may range in size from hundreds to millions of individuals, depending on the species. Within each colony are different types of individuals, each with a specific function. All ant colonies contain one or more queens, whose primary role is to lay eggs. The eggs hatch into white, grub-like larvae that later transform into adult "worker" ants. The workers feed and care for the queens and developing brood, and are the ones seen foraging for food and water, often at great distances from the colony. Ants lay down invisible odor trails, which the workers follow between food and the nest. In many species, the trail of ants is distinct enough to be followed back to the nesting location, or to where the ants are entering from outdoors.

At certain times of the year, ant colonies produce large numbers of winged individuals known as swarmers. These winged ants emerge from the nest to mate and establish new colonies. When a swarm of ants emerges inside a home, it's an indication that a nest is present within the structure. Fortunately, the success rate for swarmers establishing new colonies inside buildings is low. Nonetheless, an exodus of winged ants emerging indoors can be disturbing and often mistaken for termites.



How to tell winged termites from ants

Winged ants can be distinguished from termites by comparing certain features. Ants have a narrow (pinched) waist similar to wasps, whereas termites are virtually the same width from end to end. Ants and termites each have four wings; however, on ants the front wings are longer than the hind wings while on termites all four wings are of equal size and length. Finally, the antennae of ants are bent or "elbowed" whereas termite antennae are straight.

Ants build their nests in many different locations both inside and outside of buildings. Species nesting inside, or foraging indoors for food or moisture, tend to be the most challenging to control.

Ant Management

The mistake most people make when attempting to control ants is only spraying the ones they see. This approach usually fails because the ants seen foraging over exposed surfaces is only a small portion of the colony. Typically, there will be thousands of additional ants including one or more egg-laying queens hidden somewhere in a nest. Eliminating queens and other colony members within nests is often the key to effective ant control.

Ants Nesting Indoors

Buildings contain many favorable hiding and nesting sites for ants. Preferred sites include spaces behind walls, cabinets, and appliances; behind window and door frames; and beneath floors and concrete slabs. Most of these areas are hidden, making it difficult to determine their precise location. When the location of the nest cannot be determined or is inaccessible, insecticide baits often are a good option, especially for homeowners.

The advantage in using baits is that foraging ants take the insecticide back to the nest and feed it to the queen(s) and other colony members. As a result, the entire colony often is destroyed. Most baits sold to homeowners come pre-packaged with the insecticide and food attractant confined within a plastic, child-resistant container.

Some of the more effective ant baits, sold in grocery and hardware stores, are Combat® Quick Kill Formula bait stations and Combat® Ant Killing Gel; Raid Ant Bait II, and Terro® Ant Killer II. Place the baits next to wherever ants are seen, preferably beside ant "trails" (invisible odor trails which worker ants follow between food and the nest). Do not spray other insecticides or cleaning agents around the bait stations as this will deter ants from feeding on the bait. Initially, you should see an increase in the number of ants around the bait station -- DO NOT SPRAY THEM. This indicates that the ants are feeding on the bait and transporting the insecticide back to the nest. Ant activity often will subside in a matter of days as the number of ants in the colony declines. Continue to place additional baits wherever ants are seen.

Ants are rather finicky in their food preferences and may alter them throughout the year. If one bait product isn't attractive or doesn't seem to be working, try another. Optimal results usually require a sustained period of feeding, not just a brief visitation by a few ants. Professional pest control firms have a wider selection of bait products to choose from (e.g., Advance™, Maxforce®), and can usually provide relief when homeowner efforts are unsuccessful. Professionals also have a larger arsenal of sprays and insecticide dusts which can be effective against ants, including Termidor®, Phantom®, Demand®, Talstar™, and Suspend®.

Ants Nesting Outdoors

Ants noticed inside the home may actually be nesting outdoors in the yard. Try to trace the ants back to the point where they are entering from outside. This may be along a window sill, beneath an entrance door, or where the exterior siding meets the foundation wall. Ants usually prefer to trail along lines and edges. When tracing ant trails indoors or outdoors, pay particular attention to cracks, seams, and edges created by baseboards, the tack strip beneath perimeter edges of carpeting, mortar joints, the foundation- siding interface, etc. Nests often will be located in the ground, marked by a mound or anthill. Other times, the nests will be concealed under mulch, gravel, stones, landscaping timbers, pavement, or beneath the grass edge adjoining the foundation wall of the building. Some kinds of ants prefer to nest behind exterior siding or wood trim that has been damaged by moisture. While it takes patience to locate an ant colony outdoors, results will be more rapid and permanent than if you only spray where ants are seen trailing. One way to entice ants to reveal the location of their hidden nest(s) outdoors or indoors, is to place small dabs of honey or jelly on an index card, etc., next to where ants are observed. After the ants have fed, they will head back to the nest.

When a below-ground nest is discovered, the colony often can be eliminated by spraying or drenching the nest location with a liquid insecticide such as carbaryl (Sevin), or a pyrethroid insecticide such as Spectracide Triazicide®, Ortho Home Defense System®, or Bayer Advanced® Lawn & Garden Multi-Insect Killer. Large colonies will require greater amounts of liquid to move the insecticide throughout the network of underground galleries within the nest (using a bucket to apply the diluted insecticide is an effective method). Follow label directions for treating ant mounds, paying attention to precautions for mixing and application. Another effective and convenient way to control some species of outdoor and indoor-nesting ants is with a granular bait product, such as Combat® Ant Killing Granules. Sprinkle the bait in small amounts beside outdoor ant mounds, along pavement cracks, and other areas where ants are nesting or trailing.

Ant entry into homes can be reduced by caulking around door thresholds, windows, and openings where utility pipes and wires enter buildings. Ant entry can further be reduced by spraying one of the above-mentioned liquid insecticides around the outside perimeter of the building. Consider applying a 2 -to 6-foot swath along the ground adjacent to the foundation, and a 2-to 3-foot band up the foundation wall. Also treat ant trails and points of entry into the home, such as around doors and where utility pipes and wires enter from outside.

In Kentucky, spraying or applying granular insecticides to the entire yard is not recommended, and will seldom, if ever, solve an ant infestation indoors. Whole-yard treatments also eliminate beneficial ants, which help to keep other damaging pests of lawns and gardens in check.

Odorous House Ants

The odorous house ant has become the most common and difficult ant species to control in Kentucky, and

throughout much of the United States. The ant is small (1/8-inch), darkish, and forms distinct trails along outdoor and indoor surfaces. It is often mistaken for the pavement ant, which can readily be controlled with most baits. The most accurate diagnostic difference, visible under magnification, is the absence of a noticeable node or "bump" along the constricted area between thorax and abdomen of the odorous house ant. Pavement ants have two obvious nodes, and fine grooves or striations along the head and thorax. Pavement ants also are more likely to displace bits of soil from their typical nesting location under sidewalks, driveways and other paved areas. Odorous house ants emit what's been described as a rotten coconut or pine scent when crushed with a finger and sniffed.

Odorous house ants will nest in virtually every imaginable location. They commonly nest outdoors under pavement, stones, mulch, woodpiles, flower pots, and house siding, foraging indoors for food and moisture. Nests also occur indoors within wall cavities, appliances, potted plants, etc., especially near sources of moisture. The nests tend to be mobile; colonies relocate fast and often in response to changes in weather and disturbance. Odorous house ant colonies tend to have numerous, egg-laying queens and the primary colonies may split into smaller ones for no apparent reason. Ants foraging indoors feed on all manner of foods, ranging from the trash can to the cereal bowl.

This particular ant is difficult to control, especially by householders. The better baits to try are often syrupy ones, such as Combat® Ant Killing Gel or Terro® Ant Killer II. As with all ants, activity indoors can sometimes be reduced by removing ready access to food and moisture (water leaks, spillage, trash cans, pet food dishes, etc). Temporary relief can sometimes be had by wiping away the invisible odor trails with a kitchen cleanser or mild detergent. Do not disturb foraging trails, however, if you are using a bait. Caulking obvious ant entry points also may be helpful, along with trimming back shrubs and limbs touching the building. In nature, this ant feeds extensively on plant nectar and honeydew excreted by plant-sucking insects such as aphids.

When odorous house ants are the problem, homeowners may be better off calling a professional, although they, too, are challenged by this ant. Some products used by professionals (e.g., Termidor®/Phantom® sprays, certain baits) can be effective, but are not available to the general public.

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