



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

GARDEN INFORMATION SERIES



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GARDEN INFORMATION

HOUSEHOLD ANTS AND THEIR CONTROL



HOUSEHOLD ANTS AND THEIR CONTROL

Ants are common pests in and around homes where they can find food, water, and places to nest. They can be a nuisance or a serious problem when they contaminate food or damage structures and surrounding landscape. Some ants even "cultivate" and protect plant pests, such as aphids, scales, and mealybugs, increasing the damage these pests cause. Some ants can inflict painful stings. About 200 kinds of ants exist in California, but only a few are pests.

Ants are social insects that live in colonies. They locate food by random searching. When an ant finds food, it may carry some back to the nest, leaving a scent trail that other ants can follow back to the food source. Many types of ants transport honeydew – a sugary liquid produced by aphids, scales, and mealybugs.

IDENTIFICATION

The most common ant that invades households is the small (3/32-1/8 inch long), brown Argentine ant (Fig. 1). These ants form long trails from their nests to favored food sources, such as syrup, honey, fruits, and other sweets.

The odorous house ant (Fig. 2) ranks second to the Argentine ant as a household pest and is about the same size. These ants are dark brown to black and produce a strong coconutlike odor when crushed. They also follow distinct trails.

Pharaoh ants (Fig. 3) are problems in the household because of their preference for sweets, grease, meat, and fat. They are yellowish or light brown to reddish and smaller than the Argentine or odorous house ant.

The Southern fire ant (Fig. 4) and California harvester ant (Fig. 5) are mainly outdoor species, sometimes common in residential areas. Both can sting, the latter being very painful. The fire ant has a yellowish to reddish head and upper body and a dark abdomen. They range in size from 1/16-1/4 inch long. The California harvester ant is large (1/4-5/16 inch long), reddish brown, and prefers to nest in sandy soil. There are several other species of harvester ants in California, which vary in color and are also capable of stinging.

Several species of carpenter ants (Fig. 6) in California invade houses and cause structural damage when they tunnel into wood. They can be very large, ranging in size from 3/16-5/8 inch long. Unlike termites, carpenter ants do not eat wood; they make tunnels solely for their nests.

CONTROL

The three general methods of ant control are baiting, spraying, and nonchemical prevention. To be effective, ant control must be based on an understanding of what ants like to eat and where they prefer to nest. Food preferences are an important factor in choosing an attractive bait, and it is also important to understand how ants make nests in order to locate the colony. Unfortunately, many of the ant baits and sprays registered for homeowners are not always effective.

Baiting should be the first line of defense, because it targets the entire colony. Baits are formulated as solids or liquids and applied in stations or, in the case of granules, by broadcasting them. To be effective and safe, baits should be placed where ants are trailing or along edges where they prefer to travel, but always only in areas inaccessible to small children and pets.

To achieve wide distribution of the bait so the entire colony will be killed, the bait ingredients must be slow acting. Some examples of toxicants used in ant baits are hydramethylnon, boric acid, and fipronil. Hydramethylnon breaks down in sunlight, so if it is broadcasted in granular form it should be applied in the evening. Boric acid is most effective at concen-

trations of 1% or lower. Fipronil is a new class of toxicant that is effective against ants at ultra-low doses.

Many of the common household ant pests, such as Argentine ants, odorous house ants, and carpenter ants, have a "sweet-tooth," so baits containing sugar as an attractant can be very effective. In the case of the Argentine ants, sweet baits are highly attractive year-round. Protein baits are more attractive in the spring when the colony is producing new offspring. Offering a small quantity of each kind of bait and observing which the ants prefer is a good way to determine what to use. Examples of brand name products that use sugars as attractants are Terro and Grant's Ant Stakes. Combat ant baits are protein-based.

Fire ants, Pharaoh ants, and harvester ants are attracted to oil-based products like Amdro. However, because food preferences may change over the short term or seasonally, a good "rule-of-thumb" is to offer the ants a little bit of each to determine which ones they prefer. New products are continually being developed, so be open to testing these as well. The goal is to find a bait that the ants will readily collect and feed on, and ultimately take back to the colony. Most baits take several days to be distributed so be patient.

If ants are still active after several days, and they are no longer feeding on the bait, it is probably time to consider the second line of defense, sprays. Application of sprays should only occur following an initial baiting program so that the active bait ingredient can be carried into the nest. Several days between baiting and the application of other chemicals are most effective. Residual insecticides, such as Diazinon or Dursban, can be applied to nests and trails, and a perimeter spray will prevent re-entry into the structure, particularly if the outside nest cannot be located. Foraging trails, trunks of trees where ants are foraging, and nesting sites should be sprayed when completing a perimeter treatment.

In the case of Argentine ants, fire ants and harvester ants, the insecticide can be sprayed directly on their nests in the ground. Odorous house ants, Pharaoh ants and carpenter ants will nest in structures so it is sometimes very difficult to determine where the nest is. One way to find the nest is to feed the ants, using pieces of insect or a drop of sugar water, and then follow them. After collecting the insect or drinking the sugar water, they will head directly back to their nest. Because ants are cryptic by nature, their trails are sometimes

difficult to find. But, with a little patience and a lot of determination, both the nest and trails can be located. Since carpenter ants are primarily nocturnal, inspecting at night is the best time for trailing this species.

After the treatment with baits and sprays, there are nonchemical measures, which can significantly add to the overall success of your ant control program. Trimming back vegetation in contact with the house eliminates potential nesting sites, and caulking holes will help to prevent entry. Ants prefer to trail along structural guidelines, such as wires and pipes, and frequently use these elements to enter and travel within a structure to their destination. Sealing off these entry points is an effective non-chemical control strategy. Tanglefoot or Stickem applied as a barrier around trees or shrubs will cut off the ants from a food source (honeydew) and thereby increase the consumption of baits.

Ask your nursery or garden center professional for additional information and assistance about controlling ants.

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