ANTS

Minnesota Department of Agriculture • Integrated Pest Management Fact Sheet Series

AUTHOR: Jeffrey Hahn, University of Minnesota Extension Service

SUBJECT: Ant Management in Schools

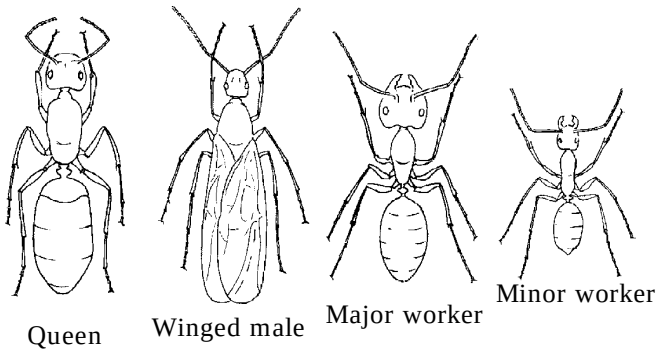
Importance

Ants are common insects in and around schools. They are pests when they infest and contaminate food products. Ants can be a nuisance just by their presence, especially if they occur in large numbers.

Identification

There are 11 species of ants that may be found in Minnesota schools. They vary in size - from 1/20 inch long to 1/2 inch long; and in color - from yellowish to reddish to brown or black. All ants have a narrowed area between the thorax and abdomen called the petiole. The petiole has either one or two nodes (bumps) which is important in ant identification. In Minnesota, the most common ants in schools are pavement ants, cornfield ants, pharaoh ants, and field ants.

Typical ant castes



Figures from U of MN Extension Service

Biology

Ants are social insects that live in nests. Some ants build nests in soil, either in the open, producing characteristic mounds; or under objects, such as stones, sidewalks, or slab construction. Other ants nest in buildings behind moldings, baseboards, under countertops, and in similar spaces. Yet other ants nest in decaying or moisture-damaged wood.

Ants feed on many different types of food, including starches, meats, fats, insects, and sweets. Many ants also feed on honeydew, a sweet liquid produced by aphids and scale insects. Some ants eat a wide variety of foods, while others have a narrower range of preferred foods. Even within a particular ant species, dietary needs of a nest may change during the year.

Ants have four stages in their life cycle: egg, larva, pupa, and adult. Queens lay eggs, which turn into legless grub-like larvae. After pupating, ants mature into adults. Adults are divided into three castes: queens, males, and workers. Workers of some species may be found in different sizes, termed major and minor workers.

Nearly all ants produce winged males and queens. These reproductives swarm (i.e. fly) from their nest to mate. A particular species will swarm and mate during a specific time of the year. After mating, the females seek a proper site to begin new nests. Although annoying, winged ants are harmless. However, their presence inside a building does indicate an indoor ant nest.

Prevention & Nonchemical Management

The first step in ant pest management is identification. Knowing what species of ant is present is important to determine the nesting site, food preference, and the best method of control. If the species cannot be determined from available resources, contact an expert for identification.

Exclusion, sanitation, and physical removal are crucial in preventing and reducing ant infestations in school buildings.

- Seal cracks and spaces along the buildings' exterior that allow ants to enter.
- Cut back plants around the outside of buildings so they do not come in contact with structures.

- Store food, including candy, snacks, and pet food used in classrooms, in insect-proof containers made of plastic, metal, or glass with tight-fitting covers.

- Take garbage out regularly in closed plastic bags; vacuum and sweep regularly to remove food.

- Clean all kitchen surfaces regularly; wash dishes, pans, and utensils soon after they are used; rinse recyclable containers before storage.

- Vacuum winged ants and small numbers of workers that are found inside. After collecting ants in this way, vacuum up some cornstarch in order to suffocate the ants in the bag.

Insecticidal Management

- Before buying and again before using any pesticide product, read the label carefully. Be sure the product you intend to use is labeled for the particular site you wish to apply it. The label is the final authority on how you may legally use any pesticide.

- Exclude ants from outside nests with an insecticide application (e.g. permethrin or bifenthrin) around the exterior of the building. It may be necessary to spot treat just part of the foundation if ants are only a problem on one side. Re-treatments may be necessary.

- If you can determine where an outside nest is, treat it with an insecticide (e.g. permethrin or deltamethrin). Drenching the nest with liquid is most effective.

- Baits (e.g. fipronil, hydramethylnon, borax [sodium octaborate tetrahydrate], or boric acid) are available for many ant species. They use much less insecticide than other application methods and can be delivered to very precise sites. The workers take the bait back to the nest, eventually killing the queen(s). However, baits are slow acting and need time to work.

- Do not spray insecticides when using baits.

- One type of bait will not control all ants. It is important to understand the dietary requirements of a particular ant to use the most appropriate bait. Because of the variable food habits of some ants, the same bait may not always be effective throughout the year.

- When ants, such as pavement ants, nest beneath concrete slab construction, the only practical control may be to bait the workers.

- The only effective method for controlling pharaoh ants is baiting. This is because spraying insecticides will usually cause a pharaoh ant colony to split and form new colonies, making the problem worse.

- When the nest is concealed, such as behind a wall, it may be necessary to drill small holes and apply an insecticidal dust, such as boric acid.

- Spraying foraging ants is generally not suggested for schools. The effect of spraying is only temporary and has very little, if any, impact on the nest.

- If at any time you wish to seek professional help or an ant problem becomes too difficult to manage, contact a pest control service. They have the training and experience to effectively deal with ant problems.

To obtain additional copies of this publication, contact the Minnesota Department of Agriculture at 651-296-7673.

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