

# WASPS/BEES

## Minnesota Department of Agriculture • Integrated Pest Management Fact Sheet Series

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SUBJECT: Wasp and Bee Management Around Schools

### Importance

Although both wasps and bees are beneficial insects, they may be pests because they can sting. Wasps and bumble bees can pull their stinger out and potentially sting many times. Honey bees sting just once, leaving their stingers hooked in the skin. Most people experience intense, short-lived local reactions to wasp and bee stings, although a few may experience more serious allergic reactions. Wasps and bees may nest near or in buildings or areas of human activity, increasing the chance for stings. Some wasps (yellowjackets) are more likely to scavenge for food and drinks during late summer and fall, which also increases the risk of stings.

### Identification

Although all stinging insects are sometimes referred to as 'bees', wasps cause the most problems for people. Wasps appear smoothed-skinned and shiny. Some are slender with long legs (paper wasps). Others are more stout and are either black and yellow or black and white (yellowjackets and baldfaced hornets). Bees are fuzzy and more robust in appearance, particularly bumble bees. Honey bees are golden brown and black while bumble bees are black and yellow.

↓ Honey bee



← Yellowjackets from nest in wall void

Baldfaced hornet nest in tree ↓

Baldfaced hornet queen in spring ←



Photos by Jeffrey Hahn

### Biology

Wasps are predators, feeding insects and other arthropods to their young. Bees feed on nectar and pollen from flowers.

Wasps build nests out of a papery material. Yellowjackets and baldfaced hornets construct layers of combs surrounded by an outer envelope. Paper wasps construct only one comb without any protective envelope. Wasps may nest in the ground, in trees and shrubs, under horizontal surfaces such as eaves, and in buildings where they occupy wall voids and similar spaces.

Bees build combs made of wax. Honey bee colonies are mostly in manufactured hives although they do occasionally nest in cavities in large trees, voids in building walls, or other protected areas. Bumble bees use abandoned mice burrows, cavities in buildings, and other locations to make their nests.

Wasp and bumble bee colonies live for just one season. The old queen and workers die in the fall, when temperatures reach freezing. Newly produced queens survive winter in protected sites outside the nest. The following spring, they search for sites to construct new nests. Old nests are not reused. Honey bee colonies are perennial, surviving more than one year in the same nest location.

### Wasp and Bee Management

Some types of wasp or bee problems are easy to control for school personnel. For more challenging cases, consider hiring an experienced pest control service. Nests are best dealt with during late evening when wasps and bees are less active and foraging workers have returned to the nest. Wasps and bees generally will not attack as long as they are not physically threatened. However, use caution as wasps and bees will protect their nest. Wear protective clothing, such as a bee veil and a bee suit to protect against stings.

## Prevention & Nonchemical Management

- Use trash containers with tight lids. Keep containers emptied on a regular basis. Clean the inside of containers regularly to remove food residue.
- If a nest (wasp or bumble bee) does not pose a threat to students and staff, wait and allow freezing temperatures to kill the colony.
- If an individual wasp or bee accidentally enters a school building, capture and release it outside or kill it with a fly swatter.
- Never use gasoline or fuel oil in ground nests as this will contaminate the environment. Instead, pour a sudsy soap (dish or laundry soap) and water solution into the entrance. Plug the hole with dirt after all wasps or bumble bees have been killed.
- Seal the nest entrance in a wall void to prevent new nests once you are sure all wasps or bees are dead. Sealing it while wasps or bees are still alive can force them indoors.
- Vacuum nests in wall voids or in an area where insecticides can not be used. This should be done by a professional pest control operator.
- Physically remove an exposed wasp nest. Cover it with a large, heavy, plastic bag at night and seal it shut. Cut the nest from the tree and freeze it or let the bag sit in the sun. Use caution to avoid stings.

## 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.
- For exposed nests, e.g. in trees or the outside of buildings, apply a ready-to-use aerosol 'wasp and hornet spray' into the entrance of the nest. Repeat the treatment in several days if live wasps are still present.
- For nests in the ground, apply an insecticide (such as permethrin or deltamethrin.). If live wasps or bumble bees are still present after a few days, repeat the treatment. Plug the hole with dirt after all wasps or bumble bees have been killed.

- Apply a dust (such as boric acid, bendiocarb [Ficam], or deltamethrin) to hidden nests in wall voids. An aerosol insecticide would not be effective if the nest is not near the entrance. An aerosol insecticide application may force workers indoors.
- Remove and destroy honey bee combs found inside buildings. Never eat honey or wax from colonies that have been treated with an insecticide.

## Stings

Very rarely, a person may suffer a life-threatening, systemic allergic reaction to a bee or wasp sting, which can cause anaphylactic shock (fainting, difficulty breathing, swelling, and blockage in the throat) within minutes of being stung. If these symptoms are observed, seek immediate medical attention.

A lesser allergic reaction may include hives or rash, swelling in an area away from the sting site, headache, minor respiratory symptoms, and stomach upset. These allergic reactions are not life-threatening and may be readily treated with an antihistamine.

Most people only have intense, short-lived, local reactions to wasp and bee stings. Symptoms may range from burning, itching, redness, and tenderness to massive swelling and itching that may last up to a week. You can relieve these symptoms with ice or a commercial topical ointment. If you are stung by a honey bee, the first thing you should do is remove the stinger with a fingernail, credit card, or similar object as soon as possible.

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