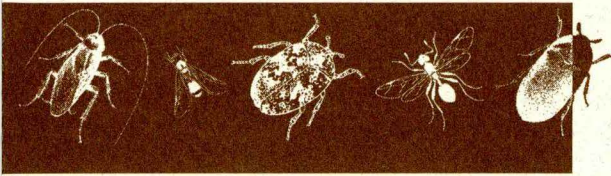


AUG 15 1995



Household Insect Pest Management

Many different kinds of insect pests may occur inside our homes. Some are permanent occupants obtaining food and shelter and others are temporary invaders that wander in by accident. Many are only a minor nuisance while some may cause more serious problems such as contaminating food, spreading disease, biting or producing other irritation, and damaging fabrics, furniture, or the house structure.

While this pamphlet recommends actions homeowners can take on their own to manage common pests in the home, it may be more practical and efficient to hire a professional pest control operator to solve your pest problems. If you chose to hire a pest control service, shop around and talk to several companies before making a decision. Decide ahead of time if you want scheduled, monthly treatment or service only as needed or requested.



Alternatives to using insecticides in the home

The following actions are nonchemical pest controls that may reduce your need to use insecticides. While these vary greatly in their effectiveness, a combination of tactics used with an understanding of the pest will usually be successful.

Exclusion techniques include the various measures that prevent pest entry. Seal gaps, cracks, and other openings in the foundation or around windows and doors through which invaders such as boxelder bugs, millipedes, and crickets can enter.

Sanitation both outdoors and indoors limits the ability of pests to feed, breed, or hide. Regular and thorough vacuuming will directly reduce populations of some pests. Keeping kitchen clean of overripe fruits, spilled food, and garbage will reduce the incidence of pantry pests and cockroaches. Dry clean clothes before storage and store

cereal products in the refrigerator, freezer, or in glass or heavy plastic containers to prevent problems.

Structural modification can eliminate or disrupt areas where pests hide. For example, caulking cracks and crevices can reduce cockroach hiding places.

Mechanical controls are among the oldest and simplest controls. Fly swatters and rolled newspapers are still useful tools. Sometimes, the only needed control is to sweep or pick up and discard the occasional invader.

A variety of traps made for specific insects are available. The most common are sticky cards or boxes intended for cockroaches or fleas. Traps are useful for early detection and continuous monitoring of infestations but they generally do not eliminate pests unless the population is very small or confined to a small area.

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Pest

Nonchemical controls

Insecticides (see p. 6)

cockroaches

Clean to remove all possible food sources.

Eliminate dripping faucets and leaking water pipes to remove water sources.

See also *Cockroaches and Their Control*, IC-406

Residual spray or dust—apply to cracks, crevices, and hiding places.

Bait—apply according to manufacturer's directions.

ants

Eliminate food sources as practical.

Exclude by sealing cracks, gaps, or other opening to the outside.

Residual spray or dust—locate and treat ant nesting sites; OR apply small quantities to cracks and edges in areas where ants are most commonly seen.

▲ carpenter ants

Sanitation indoors is of little direct benefit since carpenter ants feed mostly on dead insects. Remove dead or rotted wood from near the house.

Replace rotted or moisture-damaged wood and repair leaks.

See also *Carpenter Ants and Their Control*, IC-411

Indoor nests are in walls, joists, or rafters; outdoor nests are in trees, stumps, or landscape timbers. Use residual spray or dust as under "Ants."

Baits are not effective against carpenter ants.

▲ sweet ants

Eliminate food such as sweets, honey, etc.

Use residual spray as under "Ants." Baits are effective.

▲ grease ants

Eliminate food such as grease, meats, etc.

Baits that contain a grease attractant are effective. Make baits attractive by mixing 2 or 3 drops of oil, shortening, or peanut butter with several drops of commercial bait.

stored food pests

▲ Indian meal moth

▲ flour beetles

Locate and eliminate infested materials by inspecting suspect items; cereal products, chocolate, nuts, dried fruit, bird seed, dry pet food.

Thoroughly vacuum and clean cupboards or storage area.

Chemical control is not recommended.

fleas

Simultaneously control fleas on infested hosts and within the infested premises.

Remove, burn, or wash infested pet bedding. Thoroughly vacuum rugs and upholstered furniture.

Traps and daily vacuuming will remove large numbers of fleas but do not usually eliminate a heavy infestation.

Treat pet as directed by veterinarian or pet product supply store.

Residual insecticide—use light, uniform application to areas frequented by pets or where fleas are seen.

Best results are achieved when using a product that combines an insect growth regulator (methoprene or fenoxycarb) with an adult flea control.

Pest

carpet beetles and larder beetle

Discard or clean infested woolens, feathers, furs, hides, etc. Most carpet and larder beetles originate from dead insects that have accumulated inside walls or attics and sanitation may not be practical.

accidental invaders

- ▲ Boxelder bugs
- ▲ attic flies
- ▲ clover mites
- ▲ crickets
- ▲ millipedes
- ▲ spiders

Exclude by sealing cracks, gaps, or other openings to the outside.

Remove vegetation and debris from next to the house that serves as hiding place or breeding site.

Vacuum or sweep up and discard occasional invaders already inside.

fruit flies

Fruit need not be present. Locate and eliminate moist, fermenting organic matter where flies can reproduce; common source is a slow-moving or seldom-used drain (sink, bathtub, shower, or floor drain) with a layer of slime on the inside of the pipe.

Clean with a stiff brush, wooden stick, or stream of high pressure water or slowly pour boiling water down the insides of the drain pipe to "sterilize."

wasps, hornets, yellowjackets

Spray or dust treatment is recommended.

Nonchemical controls

Insecticides (see p. 6)

Residual spray or dust—apply small quantities to cracks and edges in areas where beetles or larvae are most commonly seen.

Residual spray—indoor treatments have little if any benefit. Outdoor treatment of breeding or congregating sites or barrier sprays on and along the foundation can reduce invasion. Under severe conditions it may be necessary to spray the entire lawn rather than a small strip adjacent to the foundation. Lawn and garden insecticide concentrates are appropriate outdoors only.

Boxelder bugs: spray massing bugs on house siding with soapy water (5 tablespoons liquid detergent per gallon water). Repeat frequently.

Attic flies: spray around windows and under eaves in mid- to late September.

Clover mites: treat lawn at first sign of migration.

Sprays can eliminate only the few adult flies that are present at the time of treatment. Insecticides are not recommended.

Treat nests at night when all of the wasps are at the nest and the chances of being stung are lower.

Treat nests in walls or ground with dust or spray. Do not plug a nest opening in a wall until all wasp activity has stopped.

For wasp nests above ground (hornets and paper wasps) use a "wasp and hornet" aerosol spray specifically made for this purpose.

Repeat in 2 or 3 days if necessary.

Pest

Nonchemical controls

Insecticides (see p. 6)

termites

When termites are found or suspected in or near the house, obtain whole-house inspections by at least 3 local, reputable pest control firms. Do not panic or rush into treating your house. Take your time to get complete information and select a company that you are confident will do a thorough and careful job.

See also *Selecting a Termite Control Service*, Pm-1496.

Treatment by professionals using special application equipment is recommended.

Until termite baits become available in the second half of the decade, control (both prevention and cure) is limited to chemical treatment of the soil adjacent to the house ("chemical barrier").

Do-it-yourself treatment by homeowners is not recommended.

Insecticide application techniques

Insecticides should be used only as a last resort and as a complement to nonchemical controls.

Household insecticide liquid sprays come in an aerosol can or a trigger pump spray applicator. Liquid sprays are easy to use and apply.

Dust insecticides such as boric acid are a very fine powder that must be evenly spread in a thin layer or injected into voids and insect hiding places to be effective. Some dust products come in plastic squeeze bottles that also function as the applicator. Small hand dusters are sometimes available in hardware stores or you may substitute an empty, dry plastic squeeze bottle that has a small spout or opening

(for example, detergent bottles). Dusts sprinkled into the general area to be treated may be gently moved into position with a dry paint brush. Dusts leave visible deposits that may be considered unsightly unless care and patience are used to do a tidy application.

Spray and dust insecticides are most effective when carefully applied to cracks, crevices, and other pest hiding areas. All efforts to apply insecticides into concealed areas where pests hide make the application more effective, and also lessen insecticide exposure to people and pets.

Bait insecticides contain a food or other attractant plus an active ingredient. Baits

must be carefully placed so the insects (ants, for example) will encounter the bait. Sanitation is important when using baits; too much available food lessens the attractiveness of the bait. Be sure to use the amount of bait recommended by the manufacturer.

Pesticide safety

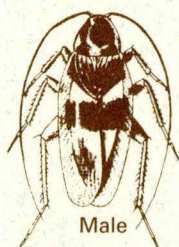
Read and follow pesticide label directions carefully. Store pesticides only in the original container and out of reach of children and pets. Apply dusts and baits only in areas that are inaccessible to children and pets. Keep children and pets out of sprayed areas until the spray has dried and the room aired. Do not use insecticides in any way that might contaminate food or food handling surfaces.

Common Household Insect Pests

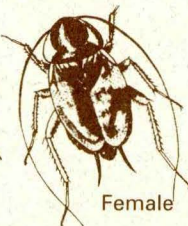
Household dwellers



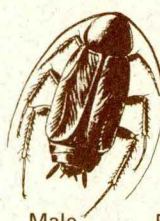
German cockroach
1/2 inch



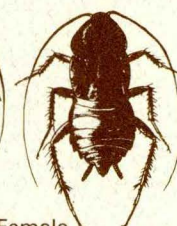
Male
Brownbanded cockroach
1/2 to 5/8 inch



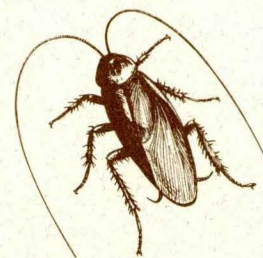
Female



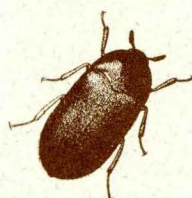
Male
Oriental cockroach
1 to 1 1/4 inch



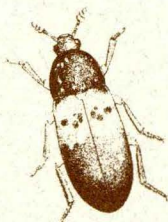
Female



American cockroach
1 1/2 to 2 inches



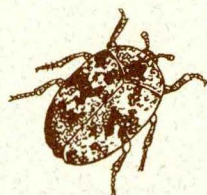
Black carpet beetle
3/16 inch



Larder beetle
3/8 inch



Cat flea
1/8 inch



Varied carpet beetle
1/8 inch

Structural pests



Carpenter ant
1/4 to 3/4 inch



Termite
3/8 inch



Stored food pests



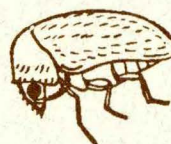
adult
Indian meal moth
adult 1/2 to 5/8 inch
larva 1/2 inch



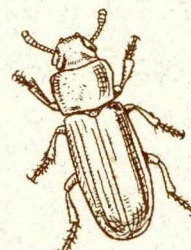
larva



Sawtoothed grain beetle
1/8 inch



Cigarette beetle
1/8 inch



Red flour beetle
1/8 inch

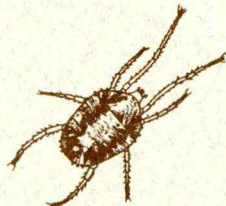
Accidental invaders



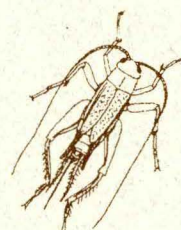
Boxelder bug
1/2 inch



Millipede
1 inch



Clover mite
1/32 inch



Field cricket
1/2 to 1 inch



Yellowjacket wasp
1/2 to 5/8 inch

continued from page 1

Insecticides for homeowners

The only insecticide products homeowners should use indoors are ready-to-use sprays, dusts, or baits specifically marketed for home use. Ready-to-use products are applied directly as they come from the container or packaging with no further mixing, dilution, or modification.

There are no insecticide concentrates a homeowner should use indoors by mixing with water in a sprayer. Do not use lawn and garden liquid concentrate insecticides inside the home. Read and follow label directions.

Types of insecticides

Residual insecticides persist for several hours to several weeks after they are applied and are used for crawling insects and household residents such as ants, cockroaches, and fleas.

Nonresidual insecticides are effective only during the time of treatment. They are applied as a space spray (fog) to control exposed flying and crawling insects or they may be used directly on individual pests.

Examples of residual insecticides include sprays with names such as "ant and roach killer" and "home pest insect control," dusts containing boric acid, diatomaceous earth or silica gel and baits for ants, cockroaches, and crickets.

Nonresidual insecticide sprays usually have names such as "flying insect killer" or "household insect killer."

Many products contain a mixture of more than one type of insecticide to control both flying and crawling insects.

A relatively new kind of residual insecticide is known as an insect growth regulator

(IGR). An IGR acts like the naturally occurring hormones found inside insects to prevent susceptible insects from growing, developing normally or reproducing. IGR's are commonly used to control immature fleas and cockroaches. Growth regulators are slow-acting but effective in the long run and nontoxic to humans and pets.

"Bombs"—also known as total release aerosol sprays—discharge the entire contents of the container in a single application. They may contain either a residual or nonresidual ingredient. "Bombs" are generally not effective on crawling insects, but have some effectiveness against fleas if the fog is directed into covered hiding places such as under sofas and tables.

Prepared by Donald Lewis,
Iowa State University Extension
entomologist.

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File: Pest Management 4-1

...and justice for all

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