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Houseplant Pest Management

There are many ways to prevent and manage houseplant pests. The type of pest, the number and size of plants infested, the severity of the infestation, and the inclination of the owner to use specific methods are all factors in management.

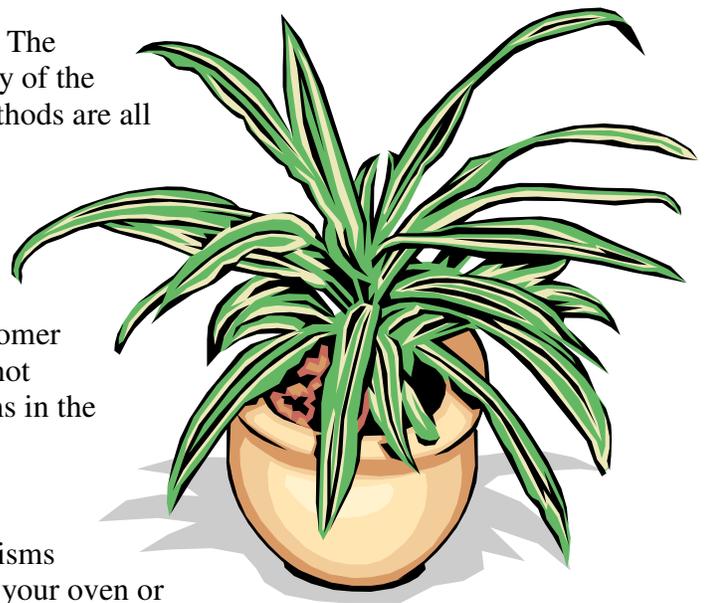
When new plants are brought home, isolate them from other houseplants. This quarantine should last about one month in order to prevent the spread of pests to other nearby plants in your home. It will allow observation (monitoring) of the newcomer for the development of insect populations or diseases that are not initially apparent. Established plants that develop pest problems in the home should be isolated from others until they regain health.

Always use sterilized potting soil or potting mix for growing houseplants. Soil pests such as fungus gnats and disease organisms may be present in garden soil. You can sterilize potting soil in your oven or microwave; but beware, this may cause unpleasant odors.

Use pesticides as a last resort. Many pesticides available for use on houseplants are formulated in ready-to-use pressurized cans or as pump sprays. Make sure the product you choose is labeled for use indoors and on your specific houseplant. Other formulations may cause injury or death of the plant. Most fungicides labeled for use on houseplants must be applied outdoors. Check the label carefully.

Houseplant Insects

Insect populations are much easier to manage if caught early when there are relatively few individuals present. Many insects and mites can reproduce quickly; some can complete a generation in a week or so. Pay special attention to the undersides of leaves. This is where most insects on houseplants are found. If the plant is heavily infested, consider discarding it.



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Insect	Description	Damage	Management
Aphids	Small, green, yellow, red, gray or black insects; sometimes winged; found crawling on stems and leaf undersides.	Insects suck juices from plants; growth is stunted. Plant may yellow and die. Aphids secrete honeydew which may grow sooty mold; may transmit virus	Wash plant or spray with insecticidal soap. Repeat sprays as often needed.
Mealybugs	Tiny crawling insects that form a white cottony mass over their bodies; found on stems, leaves and stem joints.	Insects suck juices from plants; growth is stunted. Plant may yellow and die. Mealybugs secrete honeydew which may grow sooty mold.	Remove by hand. Spray with insecticidal soap. Discard heavily infested plants.
Scale	Tiny, flat, oval-shaped, hard-shelled insects; look like brown or gray clam shells stuck to leaves and stems; adults do not move. Spread by microscopic immature crawlers.	Scales suck juices from plants; cause yellowing and browning; death of plant over time.	Remove infested plant parts if practical. Spray with insecticidal soap or horticultural oil. Discard heavily infested plants.
Spider mites	Microscopic arachnids; look for fine webs on leaf undersides and between stems; shake leaves over a sheet of white paper and watch for moving reddish brown spots.	Mites suck juices from plant; cause leaves and stems to become speckled with yellow. Plants become weak and stunted. Mites move easily from plant to plant.	Spray with insecticidal soap. Repeat sprays are usually needed. Discard heavily infested plants.
Whiteflies	Adults are small, white winged insects. Immature insects are scale-like. Both are found on leaf undersides; adults fly when disturbed.	Insects suck juices from plants; growth is stunted. Plant may yellow and die. Whiteflies secrete honeydew which may grow sooty mold.	Remove by hand. Spray with insecticidal soap. Repeat sprays (weekly) are necessary. Discard heavily infested plants.
Fungus gnats	Adults are small black flies that are often attracted to lights; immature insects are small white maggots that live in soil.	Immatures usually feed on decaying organic matter in soil but can damage plant roots. Adults are a nuisance.	Keep soil on the dry side to discourage gnats. Drench soil with <i>Bti</i> (Gnatrol) to manage the immature stage; alternatively, drench with beneficial nematodes (<i>Steinernema</i> species.) Yellow sticky traps will capture adults.
Springtails	Small insects that jump when disturbed.	Usually feed on algae, fungi, and decaying plant tissue; may chew on healthy plant parts.	Repot plant in sterile soil.
Thrips	Small, spindle-shaped insects; adults have feathery wings, immatures do not. Run or fly rapidly if disturbed. Thrips are often difficult to detect since they hide in leaf and flower buds.	Leaves and flowers become stippled and distorted; leaf tips curl, wither, or die. Brown or black scars may become visible.	Insecticidal soap may be used on exposed thrips. Since thrips often hide in places that are out of reach, it may be preferable to discard the plant.

Houseplant Diseases

Houseplants are resistant to most foliar fungal diseases as long as the leaves are kept dry. Powdery mildew is the notable exception. This disease can prosper in the home environment even if leaves are not splashed with water. Spacing plants to allow for better air circulation will reduce the chance of disease. Prune or thin plants, if necessary, to maintain proper air flow.

Disease	Description & Damage	Management
Powdery mildew	White or grey powder-like fungus on leaves, stems, or flower buds; thrives under humid, shaded conditions. Plants will decline over time.	Increase air circulation around the plant. Remove badly infected plant parts and dead leaves. Spray with bicarbonate-based fungicide such as Armicarb or Remedy according to label directions. Repeat sprays may be needed.
Leaf spots	May be caused by bacteria or fungi; often looks water soaked; spots may have a yellow or red halo. Leaves wither and die; plants decline.	Remove infected leaves. Improve air circulation around plants. Keep water off plant leaves and flowers. Discard severely infected plants.
Root and stem rot	Caused by fungi or bacteria; brown spots or soft spots appear, especially near soil line. Leaves may turn yellow, wilt and drop.	Avoid overwatering; use sterile potting mix. Remove infected plant parts.
Gray mold (Botrytis)	Caused by a fungus that grows on dead or dying leaf or flower tissue. May attack flowers or leaf tips and gradually move up to the leaf stem.	Avoid overwatering; keep leaves and flowers dry; improve air circulation. Use sterile potting mix. Remove infected plant parts. If disease is severe, spray with a fungicide labeled for this purpose. Do not use these fungicides indoors.
Edema	Blister like eruptions with tan, corky centers, usually on leaf undersides. Leaf may yellow and fall. Caused by excessive moisture.	Avoid overwatering.
Salt damage	A white crust forms on the soil surface around the edge of the pot. This is an accumulation of salt from fertilizer and minerals in water. Leaf tips and edges turn brown; entire leaf may die.	Remove salt build-up as it appears. Flush soil with water occasionally. Repot in fresh soil if build-up is very heavy.
Leaf scorch	Tips and margins of leaves turn brown; the remainder of the leaf usually stays green.	Brown tips are often caused by dry air, excessive heat, or pot bound roots.

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The information on pest management for New York State contained in this publication is dated January 2007. The user is responsible for obtaining the most up-to-date pest management information. Contact any Cornell Cooperative Extension county office or PMEP (<http://pmep.cce.cornell.edu/>), the Cornell Cooperative Extension pesticide information web site. The information herein is no substitute for pesticide labeling. The user is solely responsible for reading and following manufacturer's labeling and instructions.