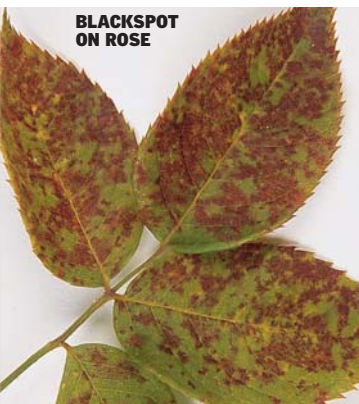


Diseases

BLACKSPOT: is a fungal disease most prevalent in wet weather as it is spread by water droplets. If left untreated, susceptible plants can lose their leaves. **Symptoms:** black patches appear on rose leaves and stems. Leaves fall prematurely. **Control:** remove infected and fallen leaves promptly and regularly. Hard prune infected bushes in spring and burn the prunings. Spray with penconazole, flutriafol or myclobutanil, alternated with mancozeb, a protectant to prevent the fungus from developing resistance to the fungicides.

MILDEW: is caused by a range of closely related fungal species. Some mildews can spread to cultivated plants from closely related weed hosts, so weed control is an important part of disease limitation. Many garden plants are affected, both woody and herbaceous, particularly apple trees, roses, sweet peas and those growing in containers. Vegetable foliage is also prone, including beetroot, parsnip and spinach. **Symptoms:** a dry whitish powder - coating leaves, shoot tips and often flowers - is especially visible in summer. Other symptoms include stunted and distorted growth, and reduced flowering. **Control:** susceptibility to the disease can be reduced as follows:

- keep plants well watered, so they are not dry at the roots.
- mulch to preserve soil moisture.
- improve air-flow around plants to reduce humidity. Prune woody plants such as roses to establish an open branch structure. Avoid overcrowding smaller plants and thin vegetable crops to recommended spacing.
- avoid high-nitrogen fertilisers, as these encourage soft sappy growth that is more easily colonised by fungi.
- ensure plants are in their ideal position. For example, a sun-lover will struggle in shade and be at greater risk of infection.
- check catalogues and grow resistant varieties where possible.
- prune out infected areas as soon as seen. Collect and destroy all infected debris and prunings.
- For roses and other ornamental plants, use fungicides myclobutanil, penconazole, flutriafol or sulphur.
- For other plants, check the labels carefully before choosing, as pesticides can only legally be used on the range of plants specified on the label. Sometimes the label will also list certain cultivars that can be damaged by the application of a specific fungicide, for example sulphur dusts may damage certain gooseberry and apple cultivars.



BLACKSPOT ON ROSE



MILDEW ON SWEET PEA

Tools

WHAT YOU'LL NEED

General garden tools
Sprayer
Suitable biological or chemical control (ask for advice)

•For more information:
www.rhs.org.uk/advice
www.plantforlife.info

HTA

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- *PlantforLife* - visit www.plantforlife.info



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THE EASY GUIDE TO PESTS & DISEASES



Photography: Tim Sandall/*The Garden*, Nigel Cattlin/FLPA

Made from at least 50% recycled paper; the remainder is from certified forests

PEST & DISEASE CONTROL

Pest or disease control relies in the first instance on the use of good gardening techniques and many attacks can be kept under control and to an acceptable level with due care to the following:

- Good planting preparation
- Good plant feeding
- Correct pruning
- General garden hygiene
- Leaving an air space of at least 5cm behind supports for plants grown on walls or fences.
- That wherever possible the growing area is kept open and good air circulation is allowed to flow.

By ensuring these points are followed, plants will be encouraged to grow well and produce natural enzymes in their leaves that naturally control many pest or disease attacks. The main aim should be to break the life cycle of the pest or disease, so stopping the possibility of reinfestation.

METHODS

BIOLOGICAL CONTROL: Many outbreaks of pests can be controlled by introducing a live predator that will attack the pests without damaging the plants. Biological control works particularly well in the protected environment of a greenhouse or conservatory, and can go a long way in reducing the severity of an attack. Suitable predators are usually supplied by mail order but some garden centres stock them. Ask at your garden centre or nursery, or visit www.rhs.org.uk/advice/biocontrol.asp

CHEMICAL & MECHANICAL

CONTROL: There is a wide range of chemical and mechanical controls for serious pest and disease infestations, sold as insecticides, fungicides and herbicides. They can give safe and effective results if used properly, but they are also harmful to the environment so should only be used as a last resort and must be stored safely.

SAFE USE: Always read the instructions and apply in the manner stated. Wear gloves if possible and always wash your hands after using chemicals. Keep all chemicals out of the reach of children and animals.



PESTS



APHIDS: feed on the leaves, stems and flowers of ornamental plants, vegetables and fruits. They are also known as greenfly or blackfly, but the insects can be pink, cream or mottled. Broad beans and elder bushes are prone to blackfly attack. **Symptoms:** sap-feeding insects infesting plants, especially on shoot tips, flower buds and leaf undersides. The foliage may be sticky with honeydew that aphids excrete and a black sooty mould often develops on the honeydew. **Control:** pick aphids off plants by hand and nip out affected shoot tips as soon as aphids are seen. Natural enemies of aphids are ladybirds, parasitic wasps and larvae of lacewing and hoverfly (shown above). Spray plants with pyrethrum, rotenone, fatty acids, plant and fish oils or plant extracts. For higher levels of control use bifenthrin or imidacloprid.



RED SPIDER MITE: are mainly a problem in greenhouses or for house plants. **Symptoms:** pale mottling on the leaves and, in bad infestations, fine webs around the leaf and shoot tips. **Control:** keep the air humid by damping down greenhouses, spraying plants with water and placing houseplants on damp pea gravel. Destroy affected leaves and shoots. Predatory mite *Phytoseiulus persimilis* feeds on the eggs or spray with bifenthrin. **WHITEFLY:** mainly affect greenhouse plants, especially fuchsias and tomatoes, and brassicas outdoors in summer and autumn. **Symptoms:** clouds of small, white-winged insects fly up from the leaf undersides when touched. Leaves become sticky and have black sooty mould. **Control:** use biological control, yellow sticky traps or spray with bifenthrin, plant extracts, plant oils or fatty acids.

VINE WEEVIL: grubs attack the roots of almost any young plant and are also fond of the tubers of begonia and cyclamen. Plants in pots are particularly at risk. **Symptoms:** plants turn yellow and wilt, by which time it is probably too late to save them. **Control:** pick off and destroy any newly hatched adult vine weevils – use a torch to find them at night and look for notches bitten out of the sides of leaves. Sprinkle a thick layer of grit around plants at risk and don't leave old compost lying around in pots and baskets. To kill the grubs in containers, water pathogenic nematode *Heterorhabditis megidis* into the potting compost or apply a pesticide that contains imidacloprid. This is available as a slow-release formulation pre-mixed with a peat compost, sold as Levington Plant Protection Compost.



SLUGS & SNAILS: will attack any soft, lush plant. Hostas are a favourite, although hairy plants are usually fairly safe. **Symptoms:** slugs tend to attack plants close to the ground and eat all parts of the leaves and even tubers underground. Snails climb, so look for slime trails and nibbled leaves, even on plants in pots. **Control:** place barriers such as prickly leaves or really sharp grit around plants, or a ring of petroleum jelly around the top of pots is effective particularly with hostas. Collect slugs and snails by hand and dispose of them. A nematode *Phasmarhabditis hermaphrodita* works specifically against slugs and is simply watered on to the ground. Use slug pellets sparingly. You can also try beer traps, with a jam jar part filled with beer sunk into the soil near vulnerable plants, and empty it regularly.



GREENHOUSES & CONSERVATORIES

Pests and disease can thrive in a greenhouse or conservatory, but risks will be reduced if the following points are considered and practised.

- Keep vents and doors open whenever possible throughout the year.
- Maintain a humid atmosphere.
- Store pots, tools and other materials elsewhere.
- Carry out gardening operations such as potting up away from the greenhouse or conservatory.
- Wash all pots and trays used for a second or subsequent time.
- Only use potting composts once, and never use garden soil as both can carry the eggs and spores or pests and diseases.

- Each winter, wash down the inside of the greenhouse with a household disinfectant.
- Keep an ever-watchful eye for the first signs of pest or disease attack and remove any affected plants from the greenhouse to deal with the problem.
- Remove and destroy any dead leaves and flowers once seen.
- Do not allow plants to dry out or overwater them, particularly in the winter months.

