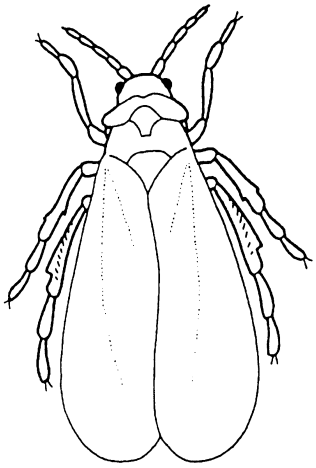
PLANT PROTECTION SERVICES

Plant Clinic

Common Garden Pests and Diseases



and their Control

January, 2011

Common Garden Diseases and their Control

Recent changes in the pesticide regulations, has lead to the withdrawal of many garden pesticides. Some have been withdrawn for safety reasons but many more for commercial reasons. The garden market is too small to justify the expensive tests necessary to get government approval. Prevention and organic controls are therefore becoming more important now that fewer pesticides are available.

NB When using Pesticides ALWAYS READ THE LABEL: USE PESTICIDES SAFELY

Botrytis (Grey Mould)

Description: Grey fluffy mould on leaves, stems, fruit and flowers.
Common hosts: A wide host range especially soft fruits, flowers and young plants.
Prevention: This disease is favoured by cool wet conditions. Plants that are weak or are under stress are liable to infection so maintaining a balanced nutrition and avoiding over or under watering is important. Disease control in protected plants can be improved by increasing aeration and plant spacing. Botrytis often starts on wounds so avoid damaging plants.
Organic Control: Hygiene is important, as there is no reliable control. Remove and destroy diseased plant material, as soon as it is seen to prevent the spread of spores.
Chemical controls: There are no effective fungicides currently available. Some control maybe achieved with Copper or Sulphur.

Canker (Nectria galligena)

Description: Bark shrinks and cracks, often in concentric rings. Peals away from the wood. Wounds with gnarled edges may completely encircle branch or trunk and kill it.
Common hosts: Apples, Pears
Prevention: This disease is encouraged by poorly drained, heavy soil, so prepare the area well before planting.
Control: In established trees prune off affected branches ensuring a clean cut. In severe cases spray with a copper fungicide
Chemical control: see Fungicide Chart at back of leaflet.

Damping off Diseases (Pythium + Phytophthora)

Description: These are common diseases of seedlings leading to germination failures or seedling collapse.
Common hosts: Most plant seedlings
Prevention: Clean all pots and trays and use good quality seed compost for optimum results. Water sparingly to avoid wet conditions which favours the disease complex. Sow seed thinly or germinate in pots. Give maximum light and adequate ventilation. Only handle seed leaves when pricking out. Do not handle the stem as this can cause damage.
Control: Use available seed treatments. Remove affected plants and surrounding compost as soon as disease is seen, to prevent further spread.
Chemical control: see Fungicide Chart at back of leaflet.

Galls

Brassica Club Root

Description: Club Root of Brassicas results in swollen roots.

Common hosts: Brassicas.

Prevention: Either rotate Brassicas around the garden, liming the soil to keep the pH between 6.5 –7 or use one specific area that has been heavily limed to pH 8+ as Brassicas can tolerate these high pH values. Lime annually to maintain pH. Remove all debris from previous crops but do not put in the compost heap. Hygiene is important as spores can spread on tools and boots.

Control: No organic treatment. Check seed catalogues and select resistant varieties.

Chemical controls: see Fungicide Chart at back of leaflet.

Leaf galls

Description: Curled thickened leaves pale green – pink/white on Azaleas and large pale green-white galls on the leaves or buds of Camellia. Thick pink distorted leaves on Cherry, Pear, Peach, Nectarine and Alder.

Common hosts: Alder, Azalea, Camellia, Cherry, Nectarine, Peach, and Pear

Prevention: Peach leaf Curl (*Taphrina deformans*) is worse in cold wet springs so avoid planting in cool damp area of garden.

Control: No effective chemical available for galls on Azalea and Camellia (*Exobasidium spp*.) so remove the galls as soon as you see them and burn.

Bordeaux mixture in winter or early spring as buds are swelling and again in autumn can give some control of Peach Leaf Curl. (*Taphrina spp*.)

Chemical controls: see Fungicide Chart at back of leaflet.

Leaf spots

Description: There are various leaf spotting fungi on a wide range of plants

Common hosts: Brassica Ring Spot, Lavatera Leaf Spot, Pestalotiopsis of Conifers, Rose Black Spot, and Willow Leaf Spot.

Prevention: Brassica Ring Spot is encouraged by cool moist weather. Rotate crops and remove all leaf debris. Rose Black Spot is encouraged by warm wet seasons especially on bushes growing on badly drained soils. Gather up and burn fallen leaves to reduce the disease inoculum. Put a mulch of dry grass clippings around the base of the bush to prevent spores rising from the soil.

Organic Control: Sulphur for Rose Black Spot.

Chemical controls: see Fungicide Chart at back of leaflet.

Mildews

Downy Mildews.

Description: A granular white growth usually on the underside of leaves. Downy mildews are usually host specific. Potato Blight is related to Downy Mildews and should be treated in a similar way.

Common hosts: Brassicas, Hebes, Lettuces, Onions, Pansies, Potatoes, Stocks, and Wallflowers.

Prevention: This disease is favoured by cool wet conditions. Select resistant varieties where possible and avoid overcrowding plants. Under glass do not water too late in the evening or keep plants too wet and ensure there is adequate ventilation. Outside, rotate the crops, and do not plant out vegetables too early in the year, as it is worse when plants are growing slowly.

Organic Control: Hygiene is important so remove and destroy affected leaves. Treat with copper fungicides such as Bordeaux Mixture.
Chemical controls: see Fungicide Chart at back of leaflet.

Powdery Mildews
Description: A superficial white powdery growth on leaves, calyces and fruit. Generally host specific i.e. Rose mildew will not affect Apples and vice versa
Common Hosts: Apple, Carnations, Cineraria, Clematis, Cucumber, Delphiniums, Gooseberry, Larkspur, Grapevines, Roses, Strawberries and Tomato.
Prevention: This disease likes dry warm conditions during the day with moisture at night. Use resistant varieties where possible. Avoid putting fruit beds in damp shady conditions. Prune gooseberries etc. to allow air to circulate. Avoid lush growth, which is caused by excess of Nitrogen; however, use a balanced fertiliser, as poor nutrition also encourages the disease. Remove debris and weeds from around plants. Ensure adequate ventilation in glasshouses during the summer.
Organic Control: Remove and destroy diseased parts. Dilute soap preparations/fatty acids are often useful. Use a few drops in a gallon of water. The old remedy of Baking Soda is quite effective, 1.5 oz/4pts or 20g/litre for Gooseberry Mildew. Bordeaux Mixture and Sulphur can also be used.
Chemical control: See Fungicide Chart at back of leaflet.

Rusts
Description: Yellow, brown or white (for Chrysanthemum) pustules commonly found on the underside of leaves. Rusts are highly specific to their host.
Common hosts: Carnations, Chrysanthemum, Fuchsias, Iris, Mint, Pelargoniums, Rose, Sweet Williams and Willows,
Prevention: Avoid excess Nitrogen and maintain good Potassium levels. Remove affected plant material, dead leaves and destroy. Remove weeds especially if they belong to the same family as the cultivated plants.
Organic Control: Spray with Bordeaux mixture
Chemical controls: see Fungicide Chart at back of leaflet.

ALERT NOTICE
Ramorum Dieback (Sudden Oak Death)

We would like your cooperation in identifying any possible outbreaks of this disease locally. In the US it is causing the death of a number of native oaks and other woodland species. In Europe it is mainly confined to nursery stock although some trees have been infected in the UK.
The symptoms are variable between species and even within host species. The most likely host is rhododendron where you can get die-back of the shoots, blackened leaf petioles and a brown leaf tipping with characteristic diffuse margins bordering healthy green tissue.
There are several other hosts including Camellia, Viburnum, Leucothoe, Arbutus, Syringa and Kalmia where leaf tipping is a common symptom.
If you suspect Ramorum Dieback we would appreciate samples for confirmation. Post or bring samples to the Plant Clinic at Raymond Falla House. Control of this disease on nursery stock could prevent damage to our native trees.

Common Garden Pests and their Control

Ants

Description: These insects cause very little direct damage to plants, however, their nests can undermine plants and cause them to dry out and die. They may be troublesome in lawns by leaving mounds of dry soil. They also 'milk' aphids, mealybugs or scale insects and protect them from natural predators and parasites.
Common hosts: Ornamental and other plants.
Organic control: Ants are also garden predators, which feed on grubs, and caterpillars so do not control unless there is a problem. Grease bands will prevent them protecting aphids etc. Derris will also control ants. Boiling water can be used away from plants. Predatory beetles, lizards and birds should be encouraged.
Chemical controls: see Insecticide Chart at back of leaflet.

Aphids

Description: Green, brown, black or pink insects present on leaves or flowering stems. Can cause leaf distortions and induce sooty mould development on sugary exudates. Aphids also transmit many common viruses.
Common hosts: Beans, Blackcurrants, Chrysanthemums, Lupins, Peppers, Pot Plants, Roses and other plants.
Prevention: Plant flowers to encourage predators and parasites; avoid feeding excess nitrogen as soft growth encourages aphids. Grease bands on trees discourage ants that 'farm' aphids, protecting them from predators and parasites.
Organic Control: Sometimes strong jets of water solve the problem, or use sprays of soft soaps or fatty acids. Encourage natural predators such as ladybirds, hoverflies, lacewings, parasitic wasps and small birds such as wrens, warblers and flycatchers. Parasitic wasps and some other natural predators can be purchased to put into glasshouses.
Chemical controls: see Insecticide Chart at back of leaflet.
Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Woolly Aphid

Description: A common local problem seen mainly on Apple trees. These small brown aphids cover themselves in characteristic white woolly wax and infest stems and branches. Such infested plants often develop the typical irregular swellings on the twigs and branches, which can be invaded by other pathogens, e.g. Canker. The pest overwinters in cracks in the bark. Left unchecked numbers will increase annually and trees will fail to perform.
Common hosts: Apple, Crab Apple, Cotoneaster, Hawthorn, Pyracantha and Sorbus.
Prevention: Encourage natural predators such as spiders, predatory beetles, predatory bugs, small birds (e.g. Wren, Warblers and Flycatchers) and many more.
Organic Control: Rub off with methylated spirit. Cut out and destroy affected branches. Strong jets of water sometimes solve the problem, or use sprays of soft soaps or fatty acids.
Chemical control. A winter wash every third year will help to reduce over wintering of the pest. Note all tar-based products have been withdrawn and more environmentally friendly products are now available but they may prove less effective. Frequent sprays based on soap solutions will keep the pest in check.

Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Caterpillars (Butterflies and Moths)

Description: Caterpillars are larvae of moths and butterflies and over 50 species are common garden pests, affecting all plant parts including roots, foliage, fruit and flowers. Some live in the soil (cutworms) whereas others produce webbing, which they use to draw leaves together (Tortrix). See also Brown-tail Moth

Common hosts: Most garden plants

Prevention: Scatter cabbages around the vegetable garden so it makes it difficult for the female Cabbage White butterflies to find the plants. Remove unwanted and heavily infested Brassica plants from the garden. Crush the eggs or larvae when they are seen. Winter pruning can remove over wintering eggs from some species and fruit trees can be protected from the winter moth by placing grease bands around the trunk in October to catch the females as they climb the tree.

Control: Pheromone traps are available for Codling Moth and Tomato Moth. Encourage natural predators into the garden e.g. parasitic wasp such as Ichneumon flies, birds, spiders, anthocorid bugs, ground beetles and hover-flies. Bacillus thuringiensis is a microbial spray that kills small caterpillars.

Chemical controls: see Insecticide Chart at back of leaflet. .

Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Brown Tail Moth

Description: The caterpillar of this attractive white moth can defoliate large areas of vegetation and the microscopic hairs on each caterpillar can cause serious skin irritations. The caterpillars are dark brown with two characteristic orange worts on their backs. Typically the caterpillars construct white tents on exposed branches of their hosts to aid winter survival. In spring they emerge to feed firstly near their nests but later at greater distances as food sources become scarce. It is at this stage that people are at most risk from the hairs. Less sophisticated spring tents may be visible during March and April when they are feeding.

Common hosts: Apple, Blackthorn, Bramble, Cotoneaster, Elm, Oak, Pear, and Rowan.

Prevention: Cut out and burn tents over the winter between November and late February when the caterpillars are resident.

Chemical Control: Spraying with a Pyrethrin based insecticide can be very successful if timed correctly, either in August/September when young caterpillars are feeding or in March when they emerge onto the outside of the tents for 2 weeks prior to further feeding.

Chafers

Description: The larvae of at least 5 species of Chafer beetle live in soil and attack roots of cultivated plants. The larvae are soft bodied, C-shaped and up to 40mm long with a distinct brown head and white body. The adults are large beetles e.g. Maybug. Most damage is caused to grass lawns where in severe infestations the grass will die out in patches over the winter. Crows, Magpies and Gulls cause further damage by ripping up the turf to get at the grubs.

Common hosts: Grass lawns, ornamentals and vegetables.

Prevention: Usually a problem in newly converted lawn. Cultivation will rapidly eliminate the problem.
Organic Control: In lawns use a heavy roller in late spring/early summer to crush the pupae and emerging adults, which are just beneath the surface. Nematode preparations are now available but are only effective when the soil is moist or wet. If you have irrigation it would be prudent to use this prior to the nematode application.
Chemical controls: A new and effective insecticide is available (see Chart at back of leaflet).

Flea Beetle

Description: These are small shiny beetles which when disturbed jump like fleas from the plant. There are several species but two are most common causing damage to Crucifers and Fuchsias respectively. The Turnip Beetle is 3mm long and feeds on young Brassica seedlings, causing a typical shot hole effect of the leaves. The Large Blue Flea Beetle (up to 5mm long) is more specific, feeding mainly on Fuchsias
Common hosts: Turnip Flea Beetle – Alyssum, Cabbage, Stocks, Swedes, Turnips and. Wallflower. Large Blue Flea Beetle – Fuchsia and Willow herbs
Prevention: Water plants well in dry weather. Clear plant debris in winter as this is where flea Beetles hibernate. Use floating mulches to protect the early sowings of Brassicas. Encourage birds and other predators.
Organic Control: Hold a greased board or a yellow sticky trap over infested plants whilst moving them – this catches the beetles when they hop off.
Chemical controls: see Insecticide Chart at back of leaflet.
Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Leatherjackets

Description: These are the legless larvae of the Crane Fly or Daddy-long-legs. They are grey brown in colour and up to 5cm in length. They live mainly in the soil where they feed on roots and stems. High populations can cause yellow patches in lawns and severe losses of young plants and seedlings. In very wet weather when the soil is waterlogged they are often found in large numbers on patios.
Common hosts: Grass and young plants/seedlings.
Prevention: This is mainly a problem of old grass areas, which are now being cultivated.
Organic Control: Cultivation and removal of weeds will eventually alleviate the problem. If lawns are watered and the area covered with polythene over night, the grubs come to the surface and can be swept up the next morning, as can the ones on the patio.
Chemical controls: Slug pellets can be useful and are most effective applied during periods of heavy dews when the pests come to the soil surface to feed. The new chafer bug treatment will also control this pest.

Mealybug

Description: White fluffy colonies on leaves, stems, buds or fruit causing plants to become sticky and colonised with sooty moulds.
Common hosts: Cacti, Fuchsia, Palms, Pot Plants, and Vines.
Prevention: Avoid introducing infested material. Check and wash pots and trays, which may harbour the pest.

Organic Control: Can be brushed of with soapy water or methylated spirit. In Glasshouses, introduce *Cryptolaemus montrouzieri* (a ladybird) and other natural predators and parasites are available.
Chemical controls: see Insecticide Chart at back of leaflet. Better control is achieved by removing the wax from the pest with a dilute soapy spray before the pesticide application.
Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Mites

Description: There are numerous mites that can invade plants causing various symptoms. The most common is the Two-spotted or Glasshouse Red Spider Mite. Look out for severe leaf speckling and webbing. Other mites can cause distortion or blistering.
Common hosts: Currants, Cyclamen, Fruit Trees, Peppers, Pot Plants, Strawberries, and Tomatoes.
Prevention: Two-spotted or Glasshouse Red Spider Mite - if possible wash down the glasshouse in winter, and remove debris as this will remove some of the over wintering population. Mites like hot dry conditions and also attack stressed plants so spray foliage on hot days to increase humidity and ensure good growing conditions. Pear Leaf Blister Mites – pick off affected leaves. Fruit Tree Spider Mites - avoid using pesticides and encourage natural predators to establish.
Organic Control: The predatory mite *Phytoseiulus persimilis* can be introduced under glass to control the Glasshouse Red Spider Mite and spraying with soft soap or Fatty acids will also give some control. Fruit Tree Red Spider Mite spot spray with soft soap or fatty acids.
Chemical controls: see Insecticide Chart at back of leaflet.
Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging or introducing natural enemies.

Potato Cyst Nematode

Description: Frequent cropping of Potatoes or Tomatoes in soil can encourage the build-up of this serious nematode pest. Plants, which are infested by the pest, are often stunted with yellow or brown foliage and the roots typically have numerous yellow, white or brown cysts. Severe infestations can result in patches of dead plants.
Common hosts: Potatoes and Tomatoes.
Prevention: Avoid importing the problem and avoid moving soil around the garden. Rotate your crops around to discourage build up. Check the roots at lifting for signs of the pest. If PCN is suspected bring a soil sample to the Plant Pathology Laboratory where we can check soil for cysts and give advice on what action should be taken.
Organic Control: First Early crops often escape serious damage on infested land as temperatures are too cold for pest activity. If you suspect the problem then do not grow susceptible varieties like King Edward, Romano, Wilja or Maris Bard but try Maris Piper, Pentland Javelin, Rocket, Cara or Sante. Grow tomatoes out of infested soil (grow bags).
Chemical controls: There are no chemical controls available for the amateur.

Sawflies

Description: The adult Sawfly is an inconspicuous insect that feeds mainly on pollen. The larvae resemble caterpillars and can cause serious damage through voracious feeding on leaves. There are many different species but the most common in gardens is the Gooseberry Sawfly, which can strip a bush in just a few days.

Common hosts: Apple, Cherries, Gooseberry, Pears, Plums, Poplar, Rose and Willow.

Prevention: Remove leaf debris from around the base of infested bushes and encourage birds.

Organic Control: Pick off infested leaves and fruits. Encourage predators including birds, beetles, spiders and social wasps.

Chemical controls: see Insecticide Chart at back of leaflet.

Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Scales

Description: White, yellow or brown waxy scales on leaves of a wide range of plants both under greenhouse conditions and outdoors. The adults remain anchored to the foliage imbibing sap and exuding honeydew, resulting in sticky leaves with extensive sooty mould. The young crawlers can move great distances in search of new plants.

Common hosts: Brown Soft Scale is common on Camellia, Citrus, Ferns, Ficus and Pot Plants. Other species can infest other ornamentals and woody plants such as Apples, Currants and Hawthorns.

Prevention: Avoid importing infested material into the garden or glasshouse.

Organic Control: Can be brushed off the leaves of plants with soapy water or methylated spirits. In Glasshouses, *Cryptolaemus montrouzieri* (a ladybird) and other natural predators and parasites are available. Outside predators such as birds, Anthocorid bugs and beetles should be encouraged.

Chemical controls: see Insecticide Chart at back of leaflet.

Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Slugs & Snails

Description: Slugs and Snails feed on foliage and other parts of plants leaving large holes in leaves, stems and tubers.

Common hosts: Many types of plants and seedlings but especially Delphiniums, Hostas and vegetables such as Potato.

Prevention: avoid using unrotted mulches, or polythene mulches. Improve drainage and soil structure. Weeds attract slugs so remove them in most cases. Put coarse scratchy materials around plants e.g. broken eggshells or grit, ash, sand, soot, lime. Also use resistant varieties if available.

Organic Control: Slug pubs and night-time patrols with a torch to collect them will help. Encourage natural predators such as Carabid beetles, Hedgehogs, Shrews and birds such as Blackbirds, Thrushes, Robins and Starlings. Biological control products (nematodes) are also available.

Chemical controls: see Insecticide Chart at back of leaflet. A more environmentally friendly pellet is now available (based on ferric phosphate).

Thrips (Thunderflies)

Description: These tiny yellow or black flies are only 3-4mm long and feed on leaves and flowers. They cause a silvery speckling and sometimes distortion. They can also transmit viruses. Thrips can be blown long distances by the wind and adults can over winter in the soil. In the past couple of years the Glasshose Thrip has caused significant damage to Viburnum species, in particular, V. tinus.
Common hosts: Beans, Brassicas, Carnations, Chrysanthemums, Gladioli, Onions, Peas, Roses, Tomatoes, and other flowers and vegetables.
Prevention: These are more of a problem on plants stressed by hot, dry conditions so try to avoid these situations.
Organic Control: Insecticidal soaps.
Chemical controls: see Insecticide Chart at back of leaflet.

Vine Weevil

Description: The feeding effects of adult beetles can be seen as notching of the leaves. More serious damage is caused by the larvae, which can chew plant roots and girdle the stem base. The larvae are cream coloured with a brown head and often assume a 'C' shape when disturbed.
Common hosts: Azalea, Cyclamen, Rhododendron, Strawberries and many other shrubs and ornamentals.
Prevention: Avoid importing infested material into the garden or glasshouse and throw out any infested plants. As the adults cannot fly grease bands can be used as barriers to prevent them climbing up staging or entering the glasshouse. Standing the legs of staging in pots of soapy water is also effective. .
Organic Control: Treat susceptible plants in September with nematode preparations (e.g. Nemasys, Larvanem, Fitagrub, Biosafe) to control the new hatch of larvae. May treatments can also be beneficial too in serious outbreaks. Encouraging birds and ground beetles should also help.
Chemical controls: see Insecticide Chart at back of leaflet. Compost containing the new chemical Imidacloprid can be used to prevent infestations in ornamentals and pot plants. Existing outbreaks can be dealt with by drenching the roots with preparations of the chemical. **NB Do not use on edible plants**.

Whitefly

Description: Evident as small scales on the underside of leaves with the white tiny moth-like adults present on the younger foliage. Sooty mould development may indicate Whitefly activity.
Common hosts: Field Brassicas, Fuchsias, Gerberas, Pot Plants and Tomatoes.
Prevention: Glasshouse Whitefly - Position Yellow Sticky Traps above the plants to mop up some of the adults. Cabbage Whitefly –. Remove old plants as soon as possible and try to break the cycle. Floating mulches will help with this pest and Cabbage Root Fly
Organic Control: Glasshouse Whitefly - Introduce *Encarsia formosa* on to protected crops to control the scales and control the adults by applying frequent sprays of dilute soft soap solutions or fatty acids to the top of the plants. Companion planting with French marigolds (*Tagetes*) or Nasturtiums is claimed to be beneficial. Cabbage Whitefly –. Remove badly infested leaves. Encourage natural enemies by interplanting with flowers especially *Umbelliferae* and *Compositae.*

Chemical controls: see Insecticide Chart at back of leaflet. **NB** The common Glasshouse Whitefly is resistant to most pesticides but the Cabbage Whitefly can be controlled with sprays.
Do Not Spray during Flowering and keep insecticide sprays to a minimum if encouraging natural enemies.

Elaeagnus Leaf Sucker

Description: Heavy infestations of this pest can lead to leaf drop and dis-back. The leaf sucker is specific to Elaeagnus but the different species differ in their reaction to the pest with *E. augustifolia* and *E. multiflora* resistant. The adults cause little damage and can be seen on the upper leaf surfaces: when disturbed they hop or fly off. The larval stages or nymphs are on the underside of the leaves and it is these which cause the damage through intensive feeding on the plant sap. Excess sap is excreted as a white 'honey dew' which makes the leaves sticky and encourages the 'sooty moulds' to develop leading to blackened leaves.
Common Hosts: Elaeagnus species, particularly *E. glabra*, *E. macrophylla*, *E. cuprea*, *E. oldhamii* and *E. x ebbingei*.
Organic Control: Natural predation and parasitism occurs in late summer and autumn resulting in a significant population crash. Using organic preparations based on fatty acids or soaps in the early part of the year to contain the pest will allow the beneficial insects to build up to control the leaf sucker later in the year.
Chemical Control: Products based on Pyrethrin will give effective control but may reduce the natural build up of beneficial insects.

Fuchsia Gall Mite

Description: This minute mite invades the growing tips of fuchsias causing sever swelling and deformation of the leaves and flowers. The galled tissue as it ages turns red. In just one season the vigour of the plant can be seriously reduced and over several years this may cause the death of susceptible varieties. The pest is carried by pollinating insects and is also dispersed by the wind. The pest is easily carried on clothes and pruning knives.
Common hosts: Fortunately the only host of this devastating pest is the fuchsia.
Prevention: Do not accept cutting material from local plants because the pest is widespread.
Control: The mite is extremely difficult to control because of the lack of suitable pesticides and beneficial insects. A product based on Abamectin is now available and will give some control. Extreme action is required: prune all infested plants back to ground level, bag all infested material and burn or compost thoroughly.

Rosemary Leaf Beetle

Description: The adult beetle is 8mm long with metallic green and purple stripes. The grubs are greyish white with five darker longitudinal lines; fully grown larvae are 5-8mm long. The 2mm long sausage-shaped eggs are laid on the underside of the leaves. The pest can cause significant defoliation.
Common hosts: Rosemary, lavender, thyme, sage and Russian sage.
Organic control: Hand pick the adults and larvae.
Chemical control: See the Insecticide Chart at the back of the leaflet. Apply pesticides in late summer/early autumn or in the spring when the adults and larvae are active on the plants.

Amateur Pesticides

Insecticides/Molluscicides

Chemical Name	**Trade Name**	**Crops**	**Pests Controlled**
Abamectin + Thiamethoxam	Plant Rescue Bug Killer Ornamental Plants RTU	Ornamentals	Mites, flea beetles, leaf miner, thrip
Acetamiprid	Bug Clear Ultra Bug Clear Ultra Vine Weevil Killer	Ornamentals	Aphids, whitefly Vine weevil
Aluminium sulphate	Doff Slug Attack	Ornamentals	Slugs and snails
Deltamethrin	Greenfly Killer Ultimate Fruit &Veg Bug Killer (RTU or concentrate)	Ornamentals + Veg	General Insecticide
Deltamethrin + Tebuconazole	Multirose Concentrate 2	Ornamentals	General pest and disease control
Fatty acids	Numerous Formulations	Ornamentals + Fruit & Veg	General insecticide
Fatty acids + Sulphur	Nature's Answer Fungicide & Insect Killer	Ornamentals	General insecticide + powdery mildew
Ferric phosphate	Growing Success Advanced Slug Killer Doff Super Slug Killer Bayer Natria Slug & Snail Control Bayer Organic Slug Bait Slug Death XL	Ornamentals + Edibles	Slugs
Imidacloprid	Provado Lawn Grub Killer	Lawns	Chafer grubs/L'jackets
Imidacloprid + Methiocarb	Provado Ultimate Bug Killer -aerosol Provado Ultimate Bug Killer Concentrate	Ornamentals Ornamentals + Edibles	Aphids, whitefly, leaf miner, leaf hopper, thrip As above
Lambda-	Plant Rescue Fruit	Ornamentals,	General pest control

Cyhalothrin	and Vegetable Conccentrate and RTU	Fruit and Veg	
Metaldehyde	Various Slug Pellets	Ornamentals + Edibles	Slugs
Pyrethrins	Various products	Ornamentals + Edibles	Aphids, caterpillars, thrips, whitefly, flea beetles
Thiacloprid	Baby Bio Houseplant Insecticide Provado Ultimate Bug Killer RTU Provado Vine Weevil Killer 2 Multirose Bug Killer	Houseplants Some products suitable for fruit and veg (check label)	Aphids, whitefly, scale, mealybug, thrip As above Vine Weevil
Thiamethoxam	Plant Rescue Bug Killer Ornamental Plants Concentrate	Ornamentals	General insecticide
Urea/Foliar Lattice	SB Plant Invigorator	Ornamentals and Edible crops	Aphids, whitefly, mealybug, scale, red spider mite

Fungicides

Chemical Name	Trade Name	Crops	Pests Controlled
Copper	Bordeaux Mixture	Ornamentals + Edibles	Blight, downy mildew
Copper oxychloride	Fruit & Vegetable Disease Control	Ornamentals + Edibles	Blight, downy mildew, peach leaf curl, bacterial diseases, cane spot
Difenconazole	Plant Rescue Fungus Killer (concentrate & RTU)	Ornamentals, Fruit and Veg	General disease control
Myclobutanil	Fungus Fighter Disease Control Fungus Clear 2 Systhane Fungus Fighter Multirose Concentrate Systemic Fungus Control	Ornamentals + some fruit	Powdery mildew, blackspot, rust, scab
Sulphur	Various products	Fruit, Veg & Ornamentals	Powdery mildew
Trifloxystrobin	Lawn Disease Control	Lawns	Fusarium patch, red thread
Triticonazole	Fungus Clear Ultra	Ornamentals	Powdery mildew, rust, leafspot
Triticonazole + Acetamiprid	Roseclear Ultra Roseclear Ultra Gun	Ornamentals	General pest and disease control