<u>Garden Pesticides – April 2017</u>

Changes in the pesticide regulations, have led to the withdrawal of many garden pesticides. Some have been withdrawn for safety reasons but many more for commercial reasons. The garden market is often 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. Choosing good quality plants, resistant varieties, maintaining good hygiene and helping the plant to strengthen its natural defences by optimising watering and feeding regimes are also key. Encouraging natural enemies and introducing Biological controls are also becoming increasingly important. The RHS lists suppliers of biological controls for the gardener on its website: https://www.rhs.org.uk/advice/pdfs/biological-control-suppliers. It is important to remember that biological controls are living organisms so greater care (as instructed on the label) is required in their handling, storage and application to get the best results.

Pesticides still have their place but should only be used as a last resort if no other less harmful way to control the problem can be found. The following active ingredients are still approved for garden use as of 13 April 2017. To check if a product is currently approved go to https://secure.pesticides.gov.uk/garden/prodsearch.asp

If you would like any further information on pesticides or alternative control measures please contact the States Analyst Laboratory on 707612.

NB When using Pesticides: ALWAYS READ THE LABEL: USE PESTICIDES SAFELY. To protect pollinator insects do not spray plants in flower.

Fungicides.

Chemical Name	Group	Example of Trade Name	Mode of Action	Crops	Diseases controlled
Copper oxychloride*	M1	Bayer Fruit & Vegetable Disease Control	Contact & preventative	Table Grapes & Wine Grapes only	Downy mildew.
Myclobutanil **& Cypermethrin (Insecticide)	3	Bayer Multirose 2 Westland Rose Rescue Doff Rose Shield	Systemic, protective, & curative.	Ornamentals	Powdery mildew, blackspot, rust, scab, Pestalotiopsis.
Tebuconazole	3	Bayer Fungus Fighter Concentrate	Systemic, protective, curative & eradicant	Roses & Ornamentals	Broad spectrum including Leaf Spots, Rust, Powdery mildew, Blackspot, Box Blight.

				(Phytotoxic to some Fuchsia varieties)	
Tebuconazole + Trifloxystrobin	3+11	Bayer Fungus Fighter Plus Bayer Mulitrose Disease Control	Systemic, protective, curative & eradicant	Roses & Ornamentals (Phytotoxic to some Fuchsia varieties)	Very Broad spectrum including Leaf spots, Rust, Powdery mildew, Blackspot, Box Blight, Pestalotiopsis.
Trifloxystrobin	11	Bayer Lawn Disease Control	Protectant, translaminar & some curative.	lawns	Fusarium Patch, Red Thread
Triticonazole	3	Scotts Fungus Clear Ultra	Systemic	Ornamentals (Phytotoxic to some Fuchsia varieties)	Blackspot, Powdery mildew, rust, leaf spot, Conifer Blight, Pestalotiopsis.
Triticonazole + Acetamiprid (insecticide)	3	Scotts Roseclear Ultra Scotts Roseclear Ultra Gun	Systemic	Ornamentals (Phytotoxic to some Fuchsia varieties)	Blackspot, Powdery mildew, rust, leaf spot, Conifer Blight, Pestalotiopsis.
Urea/Foliar Lattice/ surfactants	Physical action	SB Plant Invigorator Westland Resolva Natural Power Bug & Mildew	Physical	Ornamentals + Edibles	Powdery Mildew

^{*}Copper oxychloride is only available for use on wine and table grapes until 12 July 2019.

Reducing Pesticide Resistance

Numbers in the Group column indicate the fungicide group for each product. Where possible select products from different groups to reduce the risk of the fungus developing resistance. Due to the reduced number of fungicide products there are only 3 major groups available to gardeners. A fungus resistant to one group will be resistant to other fungicides in the same group. For example, a powdery mildew resistant to a fungicide based on Myclobutanil will also be resistant to fungicides based on triticonazole.

^{**} Myclobutanil only available as formulations with the insecticide Cypermethrin.

Insecticides/Molluscicides

Chemical Name	Group	Example of Trade Name	Mode of Action	Crops	Pests
Acetamiprid	4A	***Bug Clear Ultra Vine Weevil Killer (Drench)		Ornamentals.	***As a drench for vine weevil grubs. Sprays control aphids, whitefly, scale
		Bug Clear Ultra (Spray) RoseClear for Bugs		Fruit & Vegetables (see BugClear Ultra)	insects, mealybugs and thrips and can also be used against red spider mite, lily beetle and caterpillars. Bug Clear Ultra has approvals for certain fruit & Veg - apple (outdoor), aubergine (protected), cherry (outdoor), lettuce (outdoor), lettuce (protected), pear (outdoor), pepper (protected), plum (outdoor), potato (outdoor), tomato (protected) – ALWAYS CHECK THE LABEL.
Cypermethrin	3	Vitax Py Bug Killer Doff Ultra All in One Bug Spray	Contact & stomach poison. Some residual activity	Some Brassicas, potato & ornamentals. (Check the Label)	Broad spectrum insecticide used for flies, bugs, beetles, aphids and caterpillars.
Cypermethrin + Myclobutanil (Fungicide)	3	Bayer Multirose 2 Westland Rose Rescue Doff Rose Shield	Contact & stomach poison. Some residual activity	Roses & Ornamentals	General pest and disease control
Deltamethrin	3	Bayer Provado Ultimate Bug Killer. Baby Bio Houseplant Bug Killer	Fast acting contact & stomach poison. Some residual activity	Ornamentals, Fruit & Veg as per label.	General pest control including aphids, whitefly, caterpillars, codling moth, plum moth, tortrix moths, raspberry beetle, flea beetles, weevils, sawfly larvae, apple and pear suckers, leafhoppers, capsid bugs, scale insects, thrips and mealybugs

Deltamethrin + Tebuconazole (Fungicide)	3	Multirose Concentrate 2	Fast acting contact & stomach poison. Some residual activity	Ornamentals	General pest and disease control
Fatty acids	N/A	Bayer Bug Free Doff Universal Bug Killer	Physical	Fruit, Veg & ornamentals as per label.	Useful against greenfly, blackfly, whitefly, red spider mites and scale insect.
Fatty acids + Pyrethrins	3	Lodi - Bio Pro Multi-Purpose Bug Killer Doff – Lorbex Indoor Bug Killer	Contact, non- persistent.	Ornamentals, Fruit and veg	Aphid, caterpillar, beetles, bugs, whitefly, red spider mites, thrips and scale insect.
Ferric phosphate	N/A	Bayer Garden Slug Killer Doff Super Slug Killer B&Q Advanced Slug Killer	Feeding disruption once ingested.	Ornamentals+ Edibles	Slugs+ snails
Lamba- Cyhalothrin	3	Westland Resolva Bug Killer Westland Plant Rescue Fruit & Veg Bug Killer	Contact & stomach poison. Some residual & repellent activity	Wide range of Edibles+ Ornamentals as per label	General pest control including aphids, capsid bug, thrips, whitefly, beetles, caterpillars, pea moth, pea and bean weevil, sawflies, leaf curling midges, carrot fly adults and some other pests
Metaldehyde	N/A	Bayer Ultimate Slug & Snail Killer Doff Slug Killer Blue Mini Pellets Westland Eraza	Contact & stomach poison. Dehydrates by causing over production of slime	Edibles+ Non edibles (around)	Slugs+ snails NB: Dangerous to pets
Plant Oils / Rapeseed Oil	N/A	Scotts- Bug Clear All Purpose Spray Scotts – Bug Clear Fruit & Veg.	Physical	All Edibles & Non Edibles	General pest control – aphid, Scale, Mealy Bug, Red Spider Mite. Do not use on sensitive plants such as Cyclamen, Poinsettia, African Violet, Kalanchoe, Ferns, Ivy and open blooms.
Pyrethrins	3	Pyrol Bug & Larvae Killer Growing Success Advanced Bug Killer	Contact, non- persistent.	All Edibles & Non Edibles	General pest control including caterpillars, sawfly larvae, asparagus beetle, thrips. Also some activity against mites.

Pyrethrins & Rapeseed Oil	3	Scotts - Botanico Bugclear Spray. Scotts BugClear Ecomax	Contact. Physical, non- persistent	Ornamentals and some fruit & Veg as per label	General pest control including caterpillars, sawfly larvae, asparagus beetle, thrips. Also some activity against mites.
Thiacloprid	4A	Bayer -Baby Bio Houseplant Insecticide Bayer - Provado Ultimate Bug Killer Bayer - Provado Vine Weevil Killer 2	Systemic, contact, stomach poison.	Houseplants Ornamentals Check label for Fruit & Veg use.	Aphids, whitefly, scale, mealybug, thrip, vine weevil
Thiacloprid & methiocarb	4A & 1A	Bayer – Provado Ultimate Bug Killer (Aerosol)	Systemic, contact, stomach poison	Containerised ornamental garden plants only,	Approval expires 17/08/2018. Broad spectrum insect and mite control. Greenfly, Blackfly, Whitefly, Lily Beetle, Mealybug, Scale Insect, Red Spider Mite, Thrips, Leafhopper.
Urea/Foliar Lattice	Physical action	SB Plant Invigorator	Physical	All Edibles & Non Edibles	Aphids, whitefly, mealybug, scale, red spider mite, woolly aphid, Bay Sucker

Reducing pesticide resistance

Numbers in the Group column indicate the chemical group for each product. Select products from different chemical groups to reduce the risk of pest resistance. A pest resistant to one group will be resistant to all members of the group. For example, an aphid resistant to products based on acetamiprid will also be resistant to products based on thiacloprid.

Products without group numbers are less likely to induce pest resistance.

Useful links

Bayer CropScience Limited: http://www.bayergarden.co.uk/Products

The Scotts Company (UK) Limited: https://www.lovethegarden.com/products/pests-disease

Westland Horticulture Limited: http://www.gardenhealth.com/pests-diseases

Stan Brouard group: http://sbproducts.co.uk/