

Mail order suppliers of biological control for home gardeners

RHS Gardening Advice
July 2020



How and what to order

Suppliers will usually provide advice on suitable products. When contacting firms, describe:

- the size of the greenhouse or area to be treated
- main type of plants grown
- the problem and its extent
- growing conditions (an image can be useful)

These factors will determine the quantity of predators, parasites (parasitoids) or nematode product required.

The different biological controls are usually compatible with each other and may be introduced either singly or in combination as required by the problem. Better control is sometimes achieved by a number of introductions over a period of several weeks, rather than a single introduction, especially with parasitoids. Biological controls are incompatible with most synthetic pesticides and these should be avoided for at least six weeks prior to introduction.

Biological controls can sometimes be ordered or purchased through garden centres but most are supplied by mail order: being living animals

with limited lifespans, most cannot be stocked in retail outlets.

The **supplier's instructions** regarding release and subsequent care of the predators or parasites **must be followed carefully**. Most products should be used immediately upon receipt. Application instructions for nematode products should be followed.



Nematode formulations available at some plant centres and other retail outlets

Two brands of nematode biological controls are available from some plant centres in formulations that have a longer shelf life. These control are available for ant, slug, fungus gnat, vine weevil larvae, chafer grubs and leatherjackets. These either come as sachets Neudorff brand (Nb suppliers list) or encapsulated formulations NemaKnights™ brand (Nk in suppliers list), the later will be available from April 2020.

The firms listed below can supply, subject to availability, the biological controls below. The list is based on that supplied by the companies listed. In most cases the brand names of products have not been listed.


Pests and the available biological control options

Pest(s)	Biological Control	Suppliers
Ants	Ant nest nematode – <i>Steinernema feltiae</i>	1, 2, 4, 5, 7, Nb, Nk
Aphids (various species)	a) Aphid parasitoids* – <i>Aphidius</i> , <i>Praon</i> or <i>Aphelinus</i> c) Lacewing larvae – <i>Chrysoperla carnea</i> d) Two-spot ladybird – <i>Adalia bipunctata</i> e) Rove beetle – <i>Atheta coriaria</i> f) Hoverfly larvae – <i>Sphaerophoria rueppellii</i>	1, 2, 3, 4, 5, 6, 7 1, 3, 4, 5, 1, 3, 4, 5, 6, 7 3, 5 3
Carrot fly	a) [Spring] <i>S. feltiae</i> nematode b) [Summer] <i>S. carpocapsae</i> nematode	3, 4, 5, 6, 7, 8, 9 3, 4, 5, 6, 7, 9

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Pest(s)	Biological Control	Suppliers
Caterpillars (including cutworms and box tree caterpillar)	a) Nemasys Fruit and veg nematodes containing <i>S. feltiae</i> and <i>S. carpocapsae</i> b) Box tree caterpillar killer – <i>S. carpocapsae</i>	1, 4, 3, 5, 6, 7, 9 3, 9
Chafer grubs in lawns	Chafer grub nematode – <i>Heterorhabditis bacteriophora</i>	All
Citrus red spider mite (<i>Panonychus citri</i>)	Citrus spider mite predator – <i>Amblyseius</i> species	3, 4, 5
Diaspid scales (Glasshouse)	Ladybird – <i>Chilocorus nigritus</i>	2, 3
Fuchsia gall mite	Predatory mite <i>Amblyseius andersonii</i>	4
Fungus gnats/sciarid flies	a) Fungus gnat mite – <i>Hypoaspis miles</i> b) Fungus gnat nematode – <i>S. feltiae</i> c) Mighty Mite – <i>Macrocheles robustulus</i> d) Rove beetle – <i>Atheta coriaria</i>	2, 4, 5, 6 2, 3, 4, 5, 7, 8, 9, Nk 3, 6 3, 5
Glasshouse mealybugs (<i>Pseudococcus</i> and <i>Planococcus</i> spp.)	a) Mealybug ladybird – <i>Cryptolaemus montrouzieri</i> b) Mealybug parasites* – <i>Leptomastix</i> & <i>Leptomastidea</i> sp., combined with <i>Cryptolaemus</i> c) Mealybug parasites* – <i>Leptomastix</i> & <i>Anagyrus</i> sp. d) Lacewing larvae – <i>Chrysoperla carnea</i>	1, 2, 4, 5, 6, 7 3 2, 3 4, 5
Glasshouse red (two spotted) spider mite (<i>Tetranychus urticae</i>)	a) Predatory mites – <i>Amblyseius</i> species b) Glasshouse red spider mite predator – <i>Phytoseiulus persimilis</i> c) Glasshouse red spider predatory midge – <i>Feltiella acarisuga</i> c) Rove beetle – <i>Atheta coriaria</i>	1, 3, 4, 5, 6, 7 1, 2, 3, 4, 5, 6, 7 5 5
Glasshouse whitefly (<i>Trialeurodes vaporariorum</i>)	Glasshouse whitefly parasitoid – <i>Encarsia formosa</i>	1, 2, 3, 4, 5, 6, 7
Chrysanthemum leafminer (<i>Chromatomyia syngenesiae</i>)	Leafminer nematode – <i>S. feltiae</i>	9
Leatherjackets	a) Leatherjacket nematode – <i>S. feltiae</i> b) Leatherjacket nematode – <i>S. carpocapsae</i>	All 3, 9
Slugs	Slug nematode – <i>Phasmarhabditis hermaphrodita</i>	1, 2, 3, 4, 5, 6, 7, 8, Nd, Nk
Scale – soft (<i>Coccus hesperidum</i>) & hemispherical (<i>Saisettia coffeae</i>)	Nematode – <i>S. feltiae</i>	1, 4, 5, 7
Tarsonemid mite	Predatory mite – <i>Amblyseius cucumeris</i>	2, 3, 4, 5, 6
Thrips (various species)	a) Predatory mite – <i>Amblyseius</i> species b) Predatory mite – <i>Hypoaspis</i> species c) Mighty Mite – <i>Macrocheles robustulus</i> d) Nemasys Fruit and veg nematodes containing <i>S. feltiae</i> & <i>S. carpocapsae</i>	1, 2, 3, 4, 5, 3, 4, 5, 3, 5, 6 3, 4, 5, 6, 7, 9
Vine weevil larvae (<i>Otiorhynchus sulcatus</i>)	a) Vine weevil nematode – <i>S. kraussei</i> b) Vine weevil nematode – <i>H. megidis</i> c) Vine weevil nematode – <i>H. bacteriophora</i> d) Combined vine weevil nematodes – <i>H. bacteriophora</i> & <i>S. feltiae</i> e) Combined vine weevil (encapsulated) <i>S. kraussei</i> & <i>S. feltiae</i>	All 5 1, 9 9 Nk
Vine weevil adults	Adult Vine Weevil trap (contains <i>Steinernema carpocapsae</i>)	4, 5, 6, 7, 8, 9
Various vegetable pests	Mixed nematodes 'Fruit and Vegetable Protection'	4, 5, 6, 7, 8, 9
Wireworm	Nematode – <i>H. bacteriophora</i>	4, 5, 9

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Suppliers/Distributors

Company	Address	Contact	Website
1. Agralan Ltd	The Old Brickyard, Ashton Keynes, Swindon, Wiltshire SN6 6QR	T: 01285 860015 E: sales@agralan.co.uk	agralan.co.uk
2. Defenders (marketed by WyeBugs)	WyeBugs, Occupation Road, Wye, Ashford, Kent TN25 5EN	T: 01233 813130 E: help@defenders.co.uk	defenders.co.uk
3. Dragonfli Ltd	Unit 4 Rippers Court, Sible Hedingham, Halstead, Essex CO9 3P	T: 01376 563322 E: sales@dragonfli.co.uk	dragonfli.co.uk
4. Green Gardener	B12 Base Business Park, Rendlesham Suffolk IP12 2TW	T: 01493 750061 E: jon@greengardener.co.uk	greengardener.co.uk
5. Ladybird Plantcare	Vantage Point, Brighton, East Sussex BN1 4GU	T: 01825 724621 E: plantcare@ladybirdplantcare.co.uk	ladybirdplantcare.co.uk
6. Organic Gardening Catalogue	Long Road, Paignton, Devon TQ4 7SX	T: 0844 967 0330 E: enquiries@organiccatalogue.com	organiccatalogue.com
7. Pippa Greenwood	99 Wey Hill, Haslemere, Surrey GU27 1HT	E: info@pippagreenwood.com	pippagreenwood.com
8. Simply seed	Moor Lane, Gotham, Nottingham NG11 0LH	T: 0115 7270606 E: help@simplyseed.co.uk	simplyseed.co.uk
9. Bionema	Room Number 009, Institute of Life Science, 1 Singleton Park, Swansea University, Swansea SA2 8PP	T: 01792 606916 E: info@bionema.com	bionema.com

Formulations of nematodes available in some plant centres and other retail outlets

Nd. Neudorff	DLF Seeds Ltd Thorn Farm, Evesham Road, Inkberrow, Worcestershire WR7 4LJ	T: 01386 791113 E: info@johnsonslawnseed.co.uk	www.dlf.co.uk
Nk. NemaKnights™	Decco Ltd, Votec House, Hambridge Lane, Newbury, Berkshire RG14 5TN		www.decco.co.uk

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