



## PLANET-FRIENDLY PEST BUSTING

Simple solutions guided and powered by nature herself are at the heart of **John Walker's** eco-friendly approach to pest control



I tempt hoverflies into my greenhouse with some pots of calendula 'Nova' stood near the open door

**M**y efforts at pest control are easy, lazy and effective. They're a simple, slow-cook approach, cost next to nothing and cause not a jot of pollution. On top of that they're natural, self-renewing and downright beautiful to boot.

In contrast, recent months have seen the gardening world humming with interest, anger and argument over on-every-shelf garden pest controls that are also 'easy' and effective. But they are also unnatural, complex, expensive to buy, energy- and resource-intensive and are causing widespread pollution of our natural world. Nor do they win any beauty contests.

These modern synthetic chemicals, known as neonicotinoids, are neurotoxins which zap the brains of insects. Science has linked these new insecticides, alongside other factors, to the decline of

bees as well as other pollinators who are the crucial first link in our increasingly fragile 'food chain'. Gardeners need pollinators just as much as growers and farmers do, but there's no need for them to become collateral damage in our efforts to keep 'pests' in check.

### Pots of temptation

On the warm, sunny late April day I began writing this article, I shifted my own earth-friendly pest control efforts up a notch. I cracked open my greenhouse door and moved some potted plants next to it. Within half an hour a lone adult hoverfly (along with some other, tiny insects) was feeding on one of the shimmering orange blooms that had unfurled in the sunshine. As it sped off into the greenhouse my fingers crossed.

My approach to keeping on top of pests started out last October when I sowed a pot of home-



Manufacturing pesticides uses energy, raw materials (usually oil) and causes environmental pollution



I don't want to poison the food supply of the lizards and other wildlife in my garden





Welsh poppies next to my greenhouse help to lure in hoverflies and other beneficial insects

saved calendula (or pot marigold) seed in my unheated greenhouse. Once the seedlings were growing strongly I pricked out three to a 20cm (8in) pot of home-made, peat-free compost. I kept them thirsty, nipping off any fading leaves, but that was it. They flopped during sub-zero spells but grew on steadily, eventually proffering a few blooms by late April (normally they start in March or earlier). By the time you read this, they will be a riot of blooms. Some I'll keep going inside the greenhouse, while others will be planted in my garden.

The crossed fingers worked. A few days after I'd begun luring adult hoverflies into my greenhouse, I found their pale, pill-shaped eggs dotted on the leaf undersides of the strawberries I'm growing in pots

for early fruits; their soft, cosseted new leaves and flower clusters are irresistible to aphids. Luckily, the snot-like larvae of hoverflies eat aphids, so as soon as the eggs had hatched – and I'd dotted my last 'i' – they went into action.

### Give not take

My calendulas don't take much from the natural world. I save my own seeds (zero packaging), I grow plants in my own peat-free compost (zero habitat damage and no 'compost miles'), in my unheated greenhouse using rainwater (zero burning of fossil fuels for energy), and even the pots were rescued from a garden centre skip. There's not a whiff of pollution involved, plus I get stuff for composting.

What calendulas and other

## WHY 'NEONICS' POLLUTE



I let these cabbage white caterpillars do their own thing, rather than turn them into a polluted meal for something else

Neonicotinoids (or 'neonics') are systemic pesticides: they invade the entire fabric of a plant, from root hair to shoot tip, coursing around its system like an antibiotic flows around your veins. When a pest sucks sap or chews a leaf, it gets a fatal dose of chemical and dies. The trouble for any non-pest insects is that the chemical gets into the flowers too, where it's found in pollen and nectar. If a bee visits the flower of a treated plant it either gets a direct hit of neonicotinoid itself, or it takes it back to its colony in foraged pollen/nectar, to feed its offspring. And it's not just bees: butterflies, hoverflies, moths and any other wild insects which inhabit our gardens can be unwittingly poisoned.

The big problem with neonicotinoids is that their effects are cumulative. Although it's unlikely a bee or other pollinator will be killed on the spot, scientific research shows that insects become disorientated by supping even minute traces. Each time they visit another chemically-polluted flower, the damage to their brains deepens. Eventually they can't find their way home. There are other problems too: some neonicotinoids can persist in the soil for several years, where they affect creatures such as earthworms, and they can build up in aquatic ecosystems. They can also be taken up by new plants growing in polluted soil and even weeds can become tainted and pass on a toxic tippie. There is growing evidence that birds are being affected by neonicotinoid pollution. Seed-eating birds can be directly affected by eating treated seeds sown in fields, while insect/caterpillar-eaters unknowingly consume doses of pesticide by eating polluted prey.

At the end of April the European Commission voted for a ban on three neonicotinoids widely used in agriculture on crops visited by insects. One, imidacloprid, has already been voluntarily withdrawn by many UK garden retailers. Others, such as thiacloprid, are still widely available.

**\*For a list of garden pest control products containing neonicotinoids visit [www.pan-uk.org](http://www.pan-uk.org)**



# Organic gardening

hoverfly-magnets give us is an attractive way of curtailing pests that doesn't poison bees, other insects or anything that might eat them. I have common lizards scurrying all around my garden. They eat small insects, spiders, grasshoppers and even earthworms. If I start using pesticides such as neonicotinoids, which pollute plants from top to toe, and then an insect visits that plant, it gets a hit of chemical. There's every chance I'll be passing on a poisoned meal to any wildlife that shares my garden with me.

## On and on and on

Perhaps the best bit about my lazy, low-input pest control is that once it is up and running, it keeps on going – indefinitely. Some of the best flowers for attracting bug-eating insects are also prolific self-seeders; once you've got them, you will never be without them.

To charge your soil with self-seeders all you need do is grow as many insect-attracting flowers as you can (see my list), let them produce their pods or seedheads and leave them to scatter their seeds everywhere. Each type of plant will find its own preferred niche; in my garden, self-sown borage prefers soil that's bare in spring, while Welsh poppies stick to the cracks in my slate walls.

Once you've got this renewable, pollution-free and nature-powered approach to keeping a lid on pests rolling, it will go on and on. You might never need to buy seed again, it's guaranteed to be pretty, and you can forget about causing any collateral damage.



Tall, airy and insect-attracting *Verbena bonariensis* will grow happily among sweetcorn

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## Beauty and the beasts

An adult hoverfly sitting motionless on a calendula (left) is a beguiling sight, but who would think it started out life as a larvae resembling a lump of snot (right)! When adult hoverflies detect the presence of

aphids on plants, they quietly set about laying their tiny, capsule-shaped eggs near them. Watching them is mesmerising (and more fun than spraying insecticides). After a few days the eggs hatch into tiny, lolling

lumps which can eat around 50 aphids a day. These two hoverfly larvae are hunting for food among the shiny brown bodies of dead aphids which have been hollowed-out by the larvae of tiny parasitoid wasps.



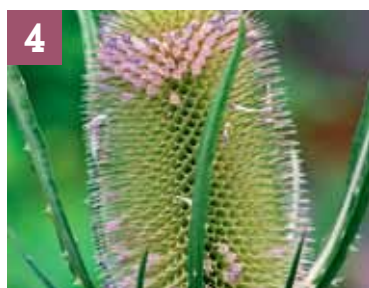
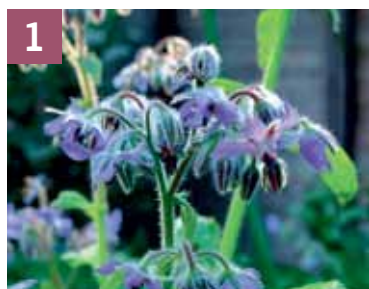


## Balancing act

Using nature's own pest controls works differently to the 'scorched earth' pesticide approach. This isn't all-or-nothing, where pests are wiped out, only to return in greater numbers. This is all about achieving balance. You can only have predators doing their work if you have some pests, too. What hoverflies and other pest-eaters such as ladybirds, lacewings and tiny parasitoid wasps do is help stop pest populations, especially aphids, from rocketing out of control.

## Stay single

Simple, single flowers are always the most attractive to pest-eating insects. Always check variety descriptions and pictures in catalogues and on seed packets. Double or semi-double blooms don't have much to offer predators because they have had their pollen-bearing stamens and nectaries bred out of them. The most irresistible calendulas for beneficial insects have a distinct, often dark 'eye' surrounded by a ring of petals. The same goes for dahlias, which are much-loved by bees, butterflies and hoverflies.



## JOHN'S TOP 10 FLOWERS TO LURE BENEFICIAL INSECTS

- 1: Borage**  
Non-stop flowers throughout summer and a self-seeder that flowers on and on and on. Latin name: *Borago officinalis*
- 2: Pot marigold 'Nova'**  
My number one insect-pulling flower and a prolific self-seeder. Latin name: *Calendula officinalis*
- 3: Dahlia 'Mignon Mixed'**  
Single-flowered bedding dahlias which can be forgiven their gaudiness for their sheer insect magnetism.
- 4: Teasel**  
Insects feast on the tall blooms in summer then birds feed on the autumn seeds. Latin name: *Dipsacus fullonum*
- 5: Fennel**  
The flat yellow flower heads are a firm favourite with adult hoverflies. Latin name: *Foeniculum vulgare*
- 6: Sunflower**  
For maximum nectar and pollen potential avoid 'pollen free' varieties. Latin name: *Helianthus annuus*
- 7: Poached egg plant**  
Self-seeder that be grown in an unheated greenhouse for early spring flowers. Latin name: *Limnanthes douglasii*
- 8: Welsh poppy**  
Grows in nooks and crannies in walls, producing pear drop-scented blooms that bumblebees adore. Latin name: *Meconopsis cambrica*
- 9: Phacelia**  
A green manure worth sowing for its blue flowers alone, which last for many weeks. Latin name: *Phacelia tanacetifolia*
- 10: Verbena**  
A tall, spindly grower that you can plant among your sweetcorn. Latin name: *Verbena bonariensis*

