



AVOIDING HARMFUL CHEMICALS – ORGANIC SOLUTIONS

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WHY?

The Soil Association encourages farms to sustain the health of soils, ecosystems, animals and people – an approach that seems to concur with God's call for us to be good stewards of creation. <https://www.soilassociation.org/take-action/organic-living/what-is-organic/>

Ever since Rachel Carson wrote *Silent Spring* back in 1962, we have been aware that pesticides may not just kill the desired pest, but they also affect the insects, birds and mammals which predate them further up the food chain. Well-known examples are hedgehogs eating poisoned slugs, and bees inadvertently collecting pesticides with pollen and poisoning their whole colony. Whilst the worst of these have been legislated against in the UK and Europe, the rules vary across the world and are often changing. Your church may wish to consider investigating further and campaigning around such issues.

In our churchyards, we can support wildlife by focusing on soil health and biodiversity whilst avoiding harmful chemicals found in most pesticides, weedkillers and synthetic fertilisers.

HOW?

PESTICIDES

The main way to control pests organically is to encourage their predators and to be patient whilst waiting for them to arrive! Hand picking, water spraying, physical barriers and companion planting are all worth the effort too: <https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/animal-deterrents/organic-pest-control/>

Aphids and slugs are common, difficult to deal with, pests.



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There are over 500 types of sap-sucking aphids in the UK. They love the fresh new growth on plants like broad beans and cherries, and tasty rose buds. This in itself does not normally kill the plant, but the associated moulds and risk of virus transmission are bigger problems. To control without chemicals, try the following:

- Plant pollen-rich plants to encourage ladybirds, hoverflies and other predatory insects which will come and have a feast. Aphids are important in the diet of house sparrows too, so providing nesting and shelter for birds helps control aphids.
- Companion planting with pungent plants nearby such as sage or nasturtiums can help deter them.
- In the short term you can spray off with water, pinch the succulent tops off the broad beans or use an organic pesticide.
- Did you know that ants actually 'farm' aphids as they feed on their sweet honeydew (a more delicate name for their 'poo')? Ants running up and down a plant is a sure sign there are aphids there: <https://www.gardenersworld.com/how-to/solve-problems/aphids/>

Slugs and snails are usually top of the most hated list in gardens; the principle of encouraging predators such as frogs, toads, hedgehogs, slowworms and thrushes is the most sustainable way of controlling them. There are lots of ideas of how to deter them from particular plants such as using coffee grounds, clean egg shells or grit as mulches or putting copper tape around a pot. You can decide for yourself whether they are effective or not! Biological controls, which are nematodes you water into the soil every 6 weeks, are available by mail order. These tiny worms penetrate slugs, infecting and killing them: <https://www.gardenersworld.com/how-to/solve-problems/slugs/>

Of course, many pests are the food sources of wildlife we want to encourage, or the larval phase of a beautiful butterfly or moth. Let's learn to enjoy a bit of damage and instead remember the benefits the pests bring: <https://www.gardenorganic.org.uk/pests-and-diseases>



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HERBICIDES

Whilst some herbicides are selective and only affect the plants they touch, others are indiscriminate and kill everything. Many of these are residual, with the product being taken right down to the roots of the plant and staying in the soil for up to 12 months, so it's impossible to plant anything else there. These products are often marketed with words like 'pathclear'. Unfortunately, some of the chemical often then also ends up in water courses and damages fish and other wildlife, so think carefully before you use any chemical herbicides, even to keep your paths looking pristine.

When gardening organically, often the 'weeds' are exactly the thing we want to retain to encourage our native wildlife. So perhaps rename them 'native wildflowers' and become happy to accommodate them?

Hand weeding and hoeing are centuries-old techniques for removing unwanted plants, and are very therapeutic activities, creating a pause in our day and easily combined with praying, thanking God for his creation or chatting to others. To keep paths clear, you could consider careful use of boiling water and flame weeding as alternatives. The RHS and 'Garden Organic' offer advice on non-chemical control of weeds: <https://www.rhs.org.uk/advice/profile?pid=343>
<https://www.gardenorganic.org.uk/weed-management>

FERTILISERS

Chemical fertilisers give a short-term boost to plants whilst the regular addition of compost will feed the soil, and create a root environment in which plants thrive. Organic fertilisers, such as blood fish and bone, seaweed, and animal manure tend to be slow release and are long term solutions for a healthy soil. If you use the latter, be sure it's well-rotted before applying. It's also fun to make 'compost tea' (out of comfrey or nettles) which can give your flowering plants a nutrient rich boost.

RHS advice on how to use organic matter to improve your soil: <https://www.rhs.org.uk/advice/profile?PID=865>

How to make comfrey tea: <https://www.gardenorganic.org.uk/comfrey>



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LONGER READS & OTHER RESOURCES

There is an enormous amount of information on the subject of organic gardening available through a variety of books, podcasts and websites.

Garden Organic was founded as the Henry Doubleday Research Association, named after the 19th-century Quaker who brought comfrey to the UK. It has masses of useful information on its website about how to grow organically: <https://www.gardenorganic.org.uk/> or listen to its podcast: <https://www.gardenorganic.org.uk/podcast>

- RHS advice on organic gardening: <https://www.rhs.org.uk/advice/profile?pid=822>
- <https://www.gardenersworld.com/how-to/grow-plants/how-to-switch-to-organic-gardening/>
- <https://www.wildlifetrusts.org/actions/how-make-your-garden-chemical-free-zone>

Pam Martin, from one of our Gold Eco Churches, has written further about the importance of biodiversity and soil. (See separate paper)

BOOKS

The Wildlife Gardener by Kate Bradbury, Kyle Books, 2013 has lots of ideas about managing a piece of ground organically for the benefit of birds, bees and butterflies.

Silent Spring by Rachel Carson, Houghton Mifflin. Written in 1962, this book highlighted the negative impact of using synthetic pesticides 'at the time.' As a direct result, DDT (an insecticide developed in the 1940s) was banned in the US. Many other pesticide bans have followed around the world.