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**GREENER GARDENING**  
Your Guide to Chemical-Free Affordable Gardening





# Greener Gardening



Trees absorb carbon dioxide, plants provide food and habitats for wildlife.

Using natural products and fewer chemicals is more beneficial.

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**Biophilia, according to a theory of the biologist E. O. Wilson is an innate and genetically determined affinity of human beings with the natural world. Scientists have also found that getting your hands dirty in the garden is good for mental wellbeing. So if you are at your happiest pottering in the garden, please read this guide to help you make green choices that benefit the environment, as well as your mental health.**

Gardening benefits the environment in various different ways: trees absorb carbon dioxide, plants provide food and habitats for wildlife, and growing vegetables reduces our carbon footprint.

However, how you garden is more important. Using natural products and fewer chemicals is beneficial. This introductory guide will help you get started.

Many of us rely on pesticides to kill garden pests and insects, herbicides to keep weeds at bay

and fertilisers to improve the nutrient quality of the soil. Shop-bought chemicals such as these have an enduring impact on the bio cycle. Pesticides and herbicides can get into the food chain, working their way through insects, birds and rodents.

It is easy to fall into a pattern of purchasing well-known brands or old favourites of pesticides and herbicides. Despite the hazardous symbols on the packaging, we tend to liberally use these without researching and trialling more environmentally considerate

alternatives.

Fertilisers often wash off the soil in rain and can cause local pollution. Many garden fertilisers cause fast but soft growth. As a result, plants are more susceptible to damage by wind and rain and attack by pests such as slugs, which thrive on new soft growth. Natural fertilisers will stimulate growth that is more measured and will often help plants to develop immunity to attack from pests and disease.



# Garden Pests



More natural alternative products are easily available including products containing nematodes (microscopic worms) which quickly kill slugs.



A beer trap, which is essentially a plastic container filled with beer, is very effective and lures these pests to an intoxicating death.



Other natural deterrents that slugs and snails do not like to cross include crushed eggshells, coffee grinds, pine needles, straw, sawdust and shredded bark.



Creating a barrier also deters these pests, so you could try using copper piping or tape to surround plants.

**Slugs and snails are ranked by most gardeners as the number one pest. To combat slugs effectively, you need to employ a variety of control mechanisms. Slug pellets, widely available in garden centres can be harmful to pets, frogs, hedgehogs and birds, which, of course, are nature's defence against slugs. Slug pellets can also kill insects and earthworms. More eco-friendly versions are available but, over time, immunity builds up and they become useless.**

More natural alternatives are easily available, including products containing nematodes (microscopic worms) which quickly kill slugs. This liquid product, which is spread using a watering can be very effective in early summer when there is a lot of new growth to attack.

Homemade remedies are also very effective. A beer trap, which is essentially a plastic container filled with beer, will lure these pests to an intoxicating death. Sour milk also does the trick!

Creating a barrier will deter these pests, so you could try using copper piping to surround plants. Copper will give an electrical charge to any snail or slug that tries to cross it. Copper tape can also be used, but it is an expensive option.

Other natural deterrents that slugs and snails do not like to cross include crushed eggshells, coffee grinds, pine needles, straw, sawdust and shredded bark.

Slugs will hide out in bricks, wood, in cracks and under pots and will mainly rest during the day. When you find a slug, check under that spot for their eggs and young ones. If slugs are causing extensive damage,

consider going out with a torch just after dusk when they come out to feed, and search the areas where you know damage is occurring. Damp, mild evenings are particularly good.

Some plants such as Hostas and salad vegetables are prone to attack from snails and slugs. So, when purchasing new stock for your garden, be sure to ask for assistance about this at the garden centre. Growing sensitive plants in containers may help and it is easier to create a barrier around the container to further protect the plants.



# Insects and Bugs



Ladybirds and hover flies are the first line of defence against aphids like greenfly and blackfly.



... and a Bug Hotel helps retain ladybirds over the winter season.



Homemade sprays, such as garlic or chilli pepper can be used to kill or deter pests.

**Insects and bugs are of concern to many gardeners and it is easy to resort to a pesticide to prevent damage to plants. Even for truly voracious insects, an organic alternative to pesticides such as soap and water spray, or attracting natural predators like native ladybirds into your garden will be very effective.**

Ladybirds and hover flies are the first line of defence against aphids such as greenfly and blackfly. Attracting more ladybirds can be done by building a bug hotel from bamboo canes and twigs. This helps retain ladybirds over the winter season. Safe hideaways can be hard for wildlife to find in some gardens, and what better use for all your garden waste and miscellaneous items?

Build your bug hotel well and it could shelter anything from hedgehogs to

toads, solitary bees to bumblebees, and ladybirds to woodlice.

You can build your bug hotel at any time of year, but you may find you have most natural materials such as straw, dry grass and hollow plant stems in autumn. If you are unsure what to do, a quick internet search of bug hotels will show you step-by-step how to create a wonderful haven for wildlife.

Aphids will often congregate on new shoots in early summer. Where there is a small infestation concentrated on the buds and new growth, you can try to gently and carefully rub these off and most plants will recover quickly. Heavy infestations can be sprayed with soapy water. Remember to use eco-friendly washing up liquid as it contains natural ingredients. Organic gardeners practice sacrificial planting and companion planting to control

insects and bugs effectively. You can research these methods in the library or on the internet.

Birds are also effective as pest controllers – just watch garden favourites like robins picking off exposed bugs when you are digging over vegetable and flowerbeds. In fact, digging over beds is in itself a very effective tool at combatting garden bugs and is particularly worthwhile where root pests have been observed or where brassicas have been grown.

Vine weevil is an insect that can feed on a wide range of ornamental plants and fruits, especially those grown in containers. The adults will eat leaves while the grubs will eat roots. It thrives in well-drained soils and, where present, can decimate certain plants including primulas, fuchsias and heucharas. You can purchase nematode remedies similar to those

for slugs and these are very effective.

If your passion is growing vegetables rather than flowers, then bugs such as cut worms, wire worms, carrot fly, chafer grubs, caterpillars, leather jackets and many more can build up over time. The best defence is good rotation of the vegetable crops using a three or four year cycle.

Barriers around carrots will protect against carrot fly, which travels close to the ground. Nets over brassicas protect against cabbage white butterfly (and pigeons!)

If you do need to spray, try a solution of homemade garlic, chilli pepper or tomato leaf spray. You will find many ideas on the internet, using the search title "organic pest control."



# Weeds



20cm of bark mulch will keep 99% of weeds from growing.



The earlier in the season you start to weed the better. March is ideal!

The best way to remove weeds, without resorting to herbicides, is to pull them manually.



Weed fabrics help to keep weeds down.

**The best way to get rid of weeds without resorting to herbicides is, of course, to pull them by hand or by using tools like a trowel, a hoe or an oscillating hoe. An old blunt knife is a great tool for removing weeds in tight spaces, such as between paving. Annual weeds with fibrous roots can be pulled out, while weeds such as dandelion and dock should always be taken out with a tool to ensure the taproot is removed.**

Annual roots, which have not produced seed, can be composted,

while those with taproots should not be composted, as the root can survive the process and start into life again. A great tip is to soak all weeds in a bucket of water for a few days before adding to the compost heap or bin.

The earlier in the season you start to weed the better, as this will prevent many weeds producing seeds and spreading. This means getting started in March when the first growth is occurring. During the summer months, be vigilant for any weeds coming into flower and remove them immediately to prevent seed

production.

Weed fabrics help to keep weeds down. They work best when used under a gravelled, hard landscaped area or to cover areas between shrubs where plants will be in situ over a long time. Leftover carpet is useful for paths and can be hidden by covering with bark mulch.

Weeding can be tedious and time consuming, so a handy way to cut back on this is to use bark mulch in beds and on paths. 20cm of bark mulch will keep 99% of weeds from growing. The few that do appear can

quickly and easily be pulled by hand. Mulch should be spread in the spring and autumn and topped up twice a year.

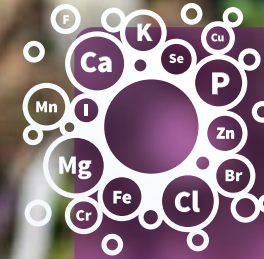
As well as keeping weeds at bay, mulch retains moisture in the summer, improves soil structure in soils that are either too wet or too dry, and add nutrients to the soil.

You could also rethink your attitude to weeds; a more relaxed approach to gardening that doesn't fixate on tidiness and manicuring can be very visually appealing, as well as improving biodiversity.



# Compost

Homemade compost is full of nutrients and is an excellent alternative to store-bought fertilisers.



Compost is rich in microorganisms and micro-nutrients, which help plants to fend off pests and disease.

**Adding compost to soil is important in order to improve or maintain the nutrient quality of the soil. Homemade compost or compost sourced locally has many benefits and reduces our dependence on chemicals such as fertilisers and pesticides.**

Compost improves all soil types. If the soil is clay-like, the compost will open it up providing aeration and drainage. For dry and sandy soils it binds the soil and helps to retain moisture. Plants grown in composted soil will develop better roots and will, as a result, be stronger and more resistant to attack from pests

and disease. Compost is rich in microorganisms and micronutrients, which help plants to fend off pests and disease.

## Compost can be used:

- **For mulching – as a layer in the autumn/winter on raised beds;**
- **Digging into the vegetable garden in autumn/winter;**
- **With soil as a potting mix;**
- **Making a compost tea for watering plants;**
- **Adding to the soil when planting;**
- **For top dressing lawns.**

## Which composts are best?

Homemade compost is full of nutrients and is an excellent alternative to store-bought fertilisers. All living matter can be composted; it is a natural process of decomposition that turns organic materials into a dark, crumbly and earthy-smelling material. A third of all household waste is organic matter, such as vegetable and fruit peelings, tea, coffee grounds and eggshells, which are all suitable for composting.

**The Stop Food Waste Programme** provides extensive information, advice and support

about composting and different compost processes including worm composting. You can access these resources here: <https://stopfoodwaste.ie/resources/composting>

Some local authorities accepting garden waste at Civic Amenity Sites also supply mulch and compost free to householders. You can check out whether your local authority does this by enquiring at your local civic amenity site or by checking the Council's website.

Remember, if you are buying compost from a garden centre, choose a peat-free Irish brand.



# Fertilisers & Manure

You can enquire from local farmers or equestrian centres about getting manure.



Seaweed is an excellent fertiliser and used extensively by market gardeners in coastal areas to grow potatoes and carrots.



Horse manure should be left to age for several months before applying it to the garden.



Spent coffee grounds can be added directly to the soil. Although coffee is acidic, the spent grounds are close to neutral.

## Fertilisers

**Fertilisers promote growth and are extensively used for flowers and vegetables. The best fertilisers to use are non-chemical as these usually contain a better range of nutrients and minerals so they will produce healthier and more solid growth.**

## Manure

**Manure is widely available and can be acquired, even if you live in a city. Horse manure is regularly used in gardening but manure from cattle works well too. You can enquire from local farmers or equestrian centres about getting manure – many will provide it free of charge. Horse manure should be left to age for several months before applying it to the garden. Just leave it in a heap until you are ready to use it.**

Remember manure is nitrogen-rich, so be careful where you store and spread it, do not let it get into local streams or waterways. Also avoid direct contact with plants and mix it thoroughly with soil before applying it.

An alternative to raw manure is chicken manure pellets. These are available at all garden centres and are very nutrient rich. These pellets are dry and easier to handle than raw manure – but always wear gloves!

Seaweed is also an excellent fertiliser and is used extensively by market gardeners in coastal areas to grow potatoes and carrots. You will find liquid and dried versions in garden centres but you can also make your own by collecting seaweed from the shoreline. Never remove seaweed attached to a rock. Collected seaweed should be

washed to remove excess salt – an easy way to do this is by leaving it out in the rain. Then you can dig the seaweed into the soil, use it as a mulch or add it to your compost heap.

Traditionally, both nettles and comfrey have been used to make liquid fertilisers, as these plants are very rich in nitrogen. Simply cut down the nettle or comfrey and place it in a bucket of water for several weeks. As the plants break down in the water, they release nutrients. The water can be diluted and used as a liquid feed. Gardeners find that this type of fertiliser is very fast-acting as the nutrients are dissolved and easily absorbed by the plants.

Coffee grinds also act as a fertiliser. Spent coffee grounds can be added directly to the soil. Although coffee is acidic, the spent grounds are close to

neutral. Many households have coffee grounds, so it is a great idea to target the plants that need a lot of feeding, such as roses, clematis or tomatoes. Some coffee shops are happy to give away spent grounds, so if you have a larger quantity these can be used on the lawn if spread thinly. Rain and worms will quickly ensure the grinds disappear down into the soil.

Bone or fishmeal is also another organic fertiliser and is made from the waste materials of the fish and meat processing industries. This type of fertiliser has a good range of nutrients, with high levels of calcium and low levels of nitrogen. It can be spread around the garden or used at the stage of putting new plants into the ground. Wear gloves, keep pets away when it is freshly spread and never spread near ruminant animals.



# Lawn Care

Even a modest reduction in lawn mowing frequency can bring a host of environmental benefits

**Lawn care accounts for the biggest use of both fertilisers and weed killers in the garden. Feed and weed combinations are widely used along with moss herbicides. Many gardeners also resort to using spray lawn weed killers for targeting weeds like dandelions, adding to the overall quantity of chemicals used to maintain and enhance the lawn. Good lawn management can help to maintain healthy grass without the need for chemicals.**

However if we want to be truly green gardeners, we need to reflect on how often we cut the grass. Many studies have been conducted and all agree that even a modest reduction in lawn mowing frequency can bring a host of environmental benefits such as

increased pollinators, increased plant diversity and reduced greenhouse gas emissions. At the same time, a longer, healthier lawn makes it more resistant to pests, weeds, and drought events.

Regular lawn mowing favours grasses which grow from the base of the plant, and low growing species like dandelion and clover. Other species that have their growing tips or flowering stems regularly removed by mowing cannot compete. Allowing plant diversity in urban lawns to increase has the knock-on effect of increasing the diversity of other organisms such as pollinators and herbivores. Where suitable, you could consider a wildflower lawn instead of the traditional mown green. You can easily adopt your current lawn by using no fertilisers or weed killers,

mowing less often and at a higher blade height to allow daisies, clover and buttercups to flourish.

In addition, cutting the grass and removing the clippings depletes nutrients over time. If leaving the grass long is not an option, you could consider *Grass Cycling*, which means the gardener leaves the clippings on the lawn. Nutrients will return to the soil as the grass breaks down and over time the soil structure will improve and the lawn will be less susceptible to drought. *Grass cycling* is only effective if the lawn is cut regularly to avoid excessive accumulations of clippings.

Excessive moss in the lawn is common and is usually caused by bad drainage or too much shade. If drainage is the issue, use sand spread liberally and



A higher blade height will allow daisies, clover and buttercups to flourish.



Use sand, spread liberally, and use a fork to create drainage.



Allowing plant diversity increases the diversity of pollinators and herbivores.

Check out [www.pollinators.ie](http://www.pollinators.ie) for pollinator friendly lawn care.

use a fork to create drainage holes. This process will drag sand further down and improve soil structure.

Many gardeners will undertake an annual scarification of the lawn, normally done in the autumn. Scarification involves raking over the lawn to remove moss. Although it is very hard work, this process is particularly effective for moss in shaded areas.

In general, if your lawn is very shaded, it may be worth considering whether you need to carefully prune back trees and large shrubs to let more light in or alternatively remove some of the grass and replace with ground cover plants that are better adapted to living under tree cover.



# Plant Choice



Before you buy plants take a little time to research which cultivar will suit your garden. A cultivar is a plant variety produced by selective breeding.



Strong smelling plants such as herbs, garlic and French marigolds mask the smell of plants attractive to pests.



Some flowering plants such as borage will work by attracting predator insects such as hoverflies, which will then target aphids.

**It is easy to get distracted when choosing plants for your garden. We all know we eat with our eyes and this statement is true for gardening as well. When choosing and buying plants it is important not just to base the decision on what is attractive but, more importantly, you need to think about the soil condition, light and shade. If you put the wrong plant in the wrong place, it will never thrive and as a result will be more susceptible to plants and diseases.**

Some plants are loved by slugs and snails and therefore will require a lot of maintenance. If you really want this

plant, choose a good location, such as the edge of a border where you can keep an eye out for any damage.

Before you buy, research cultivars. A cultivar is a plant variety that has been produced in cultivation by selective breeding. Choosing the right cultivar is particularly important with fruit and vegetables, as a lot of breeding has been undertaken to produce different varieties, all with different types of qualities in relation to pests and disease.

It can be worth paying more for a plant that you know will thrive better and need less maintenance in the end.

Don't forget to ask advice at the garden centre; knowledgeable staff will be able to talk you through the different varieties – and what pests or diseases they are susceptible to.

Companion planting can be a very effective method of deterring pests. Strong-smelling plants such as herbs, garlic and French marigolds mask the smell of plants attractive to pests. Planting carrots between rows of onions also works this way. Nasturtium plants in the vegetable patch will keep the cabbage white butterfly away from the brassicas. Do not forget to eat the leaves and flowers of the nasturtium – their

peppery taste works well in a salad! Some flowering plants such as borage will work by attracting predator insects such as hoverflies, which will then target aphids.

All fruit and vegetables have preferred soil types so it is important to know more about the composition of the soil. In some cases, deficiencies can be corrected e.g. by adding garden lime. Again, advice is readily available at all garden centres or by doing an internet search.

Native species will naturally do well, are great for biodiversity and look wonderful in an Irish garden.



# Rain Water Harvesting

**In Ireland, we are not as water conscious as other countries, simply because it rains so much! For most household, garden water use is a small fraction of the overall annual water use of the household.**

However, it is always a good idea to try to harvest rainwater for your gardening needs. Barrels and butts are readily available in all garden centres or hardware stores. Here are some top tips:

1. Rainwater is better for your plants than tap water as it contains all the nutrients needed without added chlorine.
2. If we get a hot 'BBQ summer,' having a water butt can be a real lifeline to keep your garden looking good.
3. When considering which water butt to get, think about how much water you want to save and where in the garden it will go. Slim-line ones are great for small gardens.
4. Water butts are connected to your home's downpipe, which in turn is connected to the guttering via a rainwater diverter, so you may have to install or move a downpipe to make room for your water butt. This could also be a good time to sort out any guttering problems and clear them.
5. You will need your water butt to be raised off the ground, so you can access the tap, so think about positioning on a wall or building/ buying a stand for it to go on.
6. Your water butt will come with a lid, which should be kept on to keep debris and animals out.
7. A note of warning: water butts can be a breeding ground for Legionella bacteria, which can lead to Legionnaire's Disease, (a kind of pneumonia). The L. pneumonophila bacteria is known to multiply in standing water between temperatures of 20°C to 45°C.
8. To make sure your water butt is safe, it is recommended that you empty and scrub it out once a year.
9. Water butts are a breeding ground for mosquitoes, so remember to protect yourself with insect repellent during the summer months.

# Paints and Preservatives

**Garden furniture, fences, sheds and decking require maintenance to prolong their life as well as ensuring they look well in the garden.**

Maintenance extends their life and ultimately prevents waste, as they will not need replacing. Wood that is in regular contact with the soil needs particular attention, like raised bed edges, fences and decking post ends.

When purchasing paint and wood preservatives, look for those that are water based and that contain natural ingredients like linseed oil.

Again, staff at the DIY store or garden centre are very knowledgeable and will help you to find the right product to suit the task. Remember, avoid special offers – only buy what you need – and follow the product guidelines for correct usage.

## Every Action Matters Protecting Ireland's biodiversity



**The UN Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released the most comprehensive triage ever undertaken on global ecology in May 2019. It told us in stark and unqualified terms that our land, freshwaters and oceans – and the species that live in, on and under them – are not healthy.**

Ecosystems and biodiversity are as important to human society as vital organs are to humans.

The National Biodiversity Data Centre is constantly monitoring changes to Ireland's biodiversity and is actively engaging with citizens to make small changes to how we live,

in order to protect and enhance species that are under threat. Log on to read more about their work on the All-Ireland Pollinator Plan, Invasive species and national biodiversity indicators.

Here you will also find lots of information, and help play a positive role:

[www.biodiversityireland.ie](http://www.biodiversityireland.ie)





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