

CARING FOR YOUR PLANTS & SOIL

A VERY SIMPLE GUIDE



- Soil health
 - Feeding your soil to maintain its ecosystem
 - Protecting your soil's structure
- Basic plant care
 - Watering
 - Pruning

This guide relates to planting in garden soil, including raised beds.

For container gardens, a separate guide is available.

FEEDING YOUR SOIL

USE ORGANIC MATTER (1)

The soil in your garden should be a thriving ecosystem.

A healthy soil should contain a large microorganism population, producing everything that your plants need to thrive, alongside CO₂, water and light.

Your soil microorganisms need to be fed with a regular supply of organic matter.

If your soil microorganism population is low, the rate of breakdown into plant nutrients may be slow at first. As you feed the population and it grows, the breakdown rate will increase.

Soil testing can help determine what your soil needs.

FEEDING YOUR SOIL

USE ORGANIC MATTER (2)

Apply a mulch of organic matter

As well as feeding your soil population, a layer of mulch is a physical barrier which protects your soil and plants in other ways:

It slows the rate of evaporation of soil water. This is particularly useful in hot weather, and if you're irrigating your plants.

It insulates soil temperature - but if you apply it to soil in colder temperatures, the soil will warm more slowly.

It inhibits weed germination, protecting your plants from competition for water and soil nutrients.

Avoid contact with leaves and stems

Mulches (like synthetic fertilisers) can cause scorch or rot if they come into contact with leaves or stems. Mulch around the plant, avoiding its crown and letting air circulate around it.

FEEDING YOUR SOIL

USE ORGANIC MATTER (3)

Sources of organic matter:

Homemade compost or council compost - These are excellent organic mulches. Shop-bought compost offers comparatively little nutrition.

Organic liquid feeds - Seaweed and comfrey teas can be used e.g. every 6 to 8 weeks during the growing season. The RHS website has plenty of information.

Well-rotted manure - Cheap and nutritious. Particularly great for roses. If it is well rotted, the smell shouldn't be too strong. Avoid raw manure due to harmful bacteria (as well as the smell!). Overuse can cause environmental damage e.g. water pollution and eutrophication. Soil testing can help determine when fertilising is needed.

Bonemeal & fish meal - Highly nutritious but avoid if there are foxes in your area.

Bark - Attractive, organic and easily available but breaks down more slowly.

FEEDING YOUR SOIL

WEEDS & "GREEN MANURES"

Use weeds to your advantage

You don't need to hand-weed your soil. Instead, feed your soil by hoeing in the weeds. The weeds then become food for your population of soil microorganisms. They'll increase in number and continue to produce (almost) everything your plants need.

Timing

Plenty of plants regarded as weeds have attractive flowers. You may want them to bloom. Hoe in the plant before the flowers set seed, or they'll add new weed seeds to your soil.

"Green manure" crops

Seeds of "green manure" crops can be sown directly into the ground in autumn, left to germinate and grow, and hoed in before setting seed, like weeds.

Phacelia tanacetifolia is a great green manure crop to try. Its blue flowers attract pollinating insects and birds which feed on them. Legumes, such as clover or vetch, are useful green manures as they help add nitrogen to your soil.

FEEDING YOUR SOIL

AVOID SYNTHETIC FEEDS (1)

Synthetically-fed plants are weaker plants.

Shop-bought synthetic fertilisers make plants look healthy at first. They bring on rapid leafy growth. It explains why they're still so widely used.

In truth, this rapid growth tends to be weak growth. If feeding stops, the plant may not survive on the remaining soil nutrients. It may decline or die. Organic growth may be slower, but is steadier and results in a healthier, more resilient plant.

Vulnerability to pests and disease

As well as growing rapidly, synthetically-fed plants become unnaturally rich in sugary sap.

These extra-sweet plants are hugely attractive to aphids and other sap-sucking pests, which attack in greater numbers. Their piercing mouth parts injure delicate plant tissues, creating an easy route of entry for disease-causing fungal spores or bacteria, whether waterborne (found in raindrops) or airborne and present in our gardens all the time.

FEEDING YOUR SOIL

AVOID SYNTHETIC FEEDS (2)

Longer-term damage to your garden soil

Synthetic feeds provide some of the nutrients your plants need, hence the sudden growth.

They kill the soil microorganisms that would provide the rest.

The chemicals don't disappear. They remain in the soil, preventing the microorganism population from re-establishing. Plants are deprived of the nutrients a healthy soil population would produce.

Wider environmental damage

Rain or irrigation causes the chemicals to leach through the soil. They eventually reach waterways, where they build up and cause wider environmental damage through eutrophication.

Overuse of rich organic fertilisers, such as manure, has similar negative effects.

SOIL STRUCTURE

MAINTAINING A CRUMB STRUCTURE

Healthy topsoil has a crumb-like structure, holding enough air and water for your plants, but enabling excess water to drain. To maintain this healthy structure:

Don't leave soil bare. Mulch bare patches to prevent soil erosion and soil "capping" which can occur when raindrops hit bare soil. Or grow more plants!

Avoid stepping on the soil. Soil can easily become compacted. It then becomes harder for water to percolate. Compaction also crushes out air, leaving plant roots and soil bacteria deprived of oxygen.

Avoid digging unless soil is badly compacted (which can happen more readily with clay). Digging in some bulky organic matter, such as leaf mould, can help with aeration and drainage.

Mild compaction can be alleviated by feeding the soil with a layer of organic matter and letting earthworms and soil organisms do their work. As the soil microorganism population builds up, the rate of breakdown will increase.

BASIC PLANT CARE

WATERING

New plantings

It's vital to water new plantings. Even trees. This allows soil to settle in close contact with the roots, giving them access to water and soil nutrients, so they can grow in their new environment. If plants are not watered soon after planting, the roots may dry out and the plant may suffer or die.

The first two years

New plantings need regular watering during the first two years, after taking into account the conditions - temperature, rainfall and soil moisture. Use your fingers to feel for soil moisture- if the first two to three inches are dry, it's time to water.

During the first year, you might aim to water two or three times a week. Less watering might be needed in year two -perhaps once or twice a week.

After two years

If they've been planted in a suitable place, established plants shouldn't need irrigation. Even wilting can be a temporary defence mechanism and the plant can recover when temperatures drop or rain falls. You'll get to know your plants. They'll be more resilient without irrigation, as the roots will be encouraged to grow towards moisture lower down the soil profile. It makes sense if you remember that wild plants are never irrigated.

Container-grown plants need a different approach since soil water isn't available to them. Take a look at my guide for care of container-grown plants.

BASIC PLANT CARE

WATERING

How and when to water

Water at the base of the plant. Soak the soil to encourage roots to grow downwards rather than outwards.

Try not to wet the leaves. If you do, try to leave time for them to dry before nightfall, as some plant diseases spread in humid conditions.

In warmer conditions, water early morning or in the evening. Avoid times when the sun is at its highest, as this is the peak time for evaporation.

Water butts

Rainwater stored in water butts often contains pathogens such as phytophthora. Seedlings and new plantings will be more susceptible to disease caused by these pathogens.

Drainage

Don't let soil become waterlogged / saturated. It's ok for the top inch of soil to become relatively dry. Overwatering or soil saturation can cause yellowing of leaves, mushy stems and root rot.

BASIC PLANT CARE

PRUNING

Pruning for plant health

You might cut foliage or flowers to bring indoors, or prune a plant to achieve a desired shape. But pruning excess branches or stems is also a way to promote air circulation around your plants, helping to protect them from disease.

Timing

Prune in dry conditions. Cutting in wet conditions leaves plant tissues more vulnerable to invasion by airborne and water-borne pathogens such as fungal spores.

Shrubs or hedges should not be pruned at times when birds may be nesting in them.

Use sharp, clean secateurs or snips

Sharp tools minimise damage to plant tissues, letting them heal quickly and protect themselves from spores etc.

Clean and dry your tools after use to avoid spread of fungal spores or bacteria between plants.

Think of a beautiful garden you've visited. What made it feel so special?

You can have that feeling in your own home. Plants, great materials and imaginative design make all the difference.

Get in touch to start making memories in your own beautiful garden.



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