Use Resources Responsibly

Reduce, reuse and recycle is an important part of organic growing. This efficient use of materials and energy helps to maintain the natural environment and conserve resources. Where possible, the organic grower uses natural resources, such as wood and plant material, and sources them locally, to reduce their energy footprint.

If there is a need for a non-natural resource, such as plastic, then consider the following:

- **Can I buy a plant-based product instead?**
- **Is it sturdy enough so it can be repaired or reused?** Plastic pots, compost bins and wheelbarrows are good examples of this.
- **How do I dispose of it at the end of its life?**

Sometimes it is a positive challenge to be an organic grower, one where you can use your consumer power, particularly at garden centres, to encourage organic practices. There are also some organisations which promote careful use of resources in manufacturing. Look out for the *Made Aware* standard, for instance, promoted by LOFA (Leisure and Outdoor Furniture Association). It endorses businesses that seek ways to improve the environmental and ethical impact of their products.

All resources are finite. Waste should be avoided. For instance, the capture of rain water is invaluable, instead of using precious mains water. Indeed, some natural resources should *not* be used, like woodland leaf litter, either because they are scarce, or because they are important within their natural habitat.

In this section we look at the organic principles on the use of:

- **Water**
- **Energy**
- **Wood**
- **Plastic**
- **Growing containers**

Water

BEST ORGANIC PRACTICE

- **Collect as much rainwater as possible.** By not using mains water, you can reduce your personal water footprint significantly.
- **Grow drought tolerant plants** if your soil is light and free draining.
- **Maximise the water holding capacity** of soil by adding organic matter (see **Soil Improvers** on p. 10).
- **Mulch (cover) the soil** to reduce water loss, using organic materials (see **Mulches**, p. 36).
- **Keep digging to a minimum,** to prevent moisture loss and avoid disrupting the rich soil life.
- **Sow or transplant just before rain is forecast,** rather than just before a spell of dry weather.
- **Careful watering,** means using water only to get plants established. Shrubs, trees and perennials rarely need watering.
- **Apply water to the soil rather than foliage.** If water hits the leaves of the plant before the soil, much can be lost (and wasted) through evaporation. Water that is directed into the soil will penetrate straight to the roots. It is therefore better to use a drip irrigation system rather than a sprinkler.
- **Do not mow in very dry conditions.** Leaving the grass a little longer helps preserve moisture in the soil. Most lawns will recover after a temporary drought.
- **Allow weeds such as clover and yarrow to grow in a lawn;** they are less susceptible to drought, and will stay green in dry weather.
- **Apply water in the evening or at night** to minimise losses through evaporation.
- **Fill newly-created ponds with rainwater,** and be careful during construction to prevent leaking membranes.

ACCEPTABLE, FOR OCCASIONAL USE

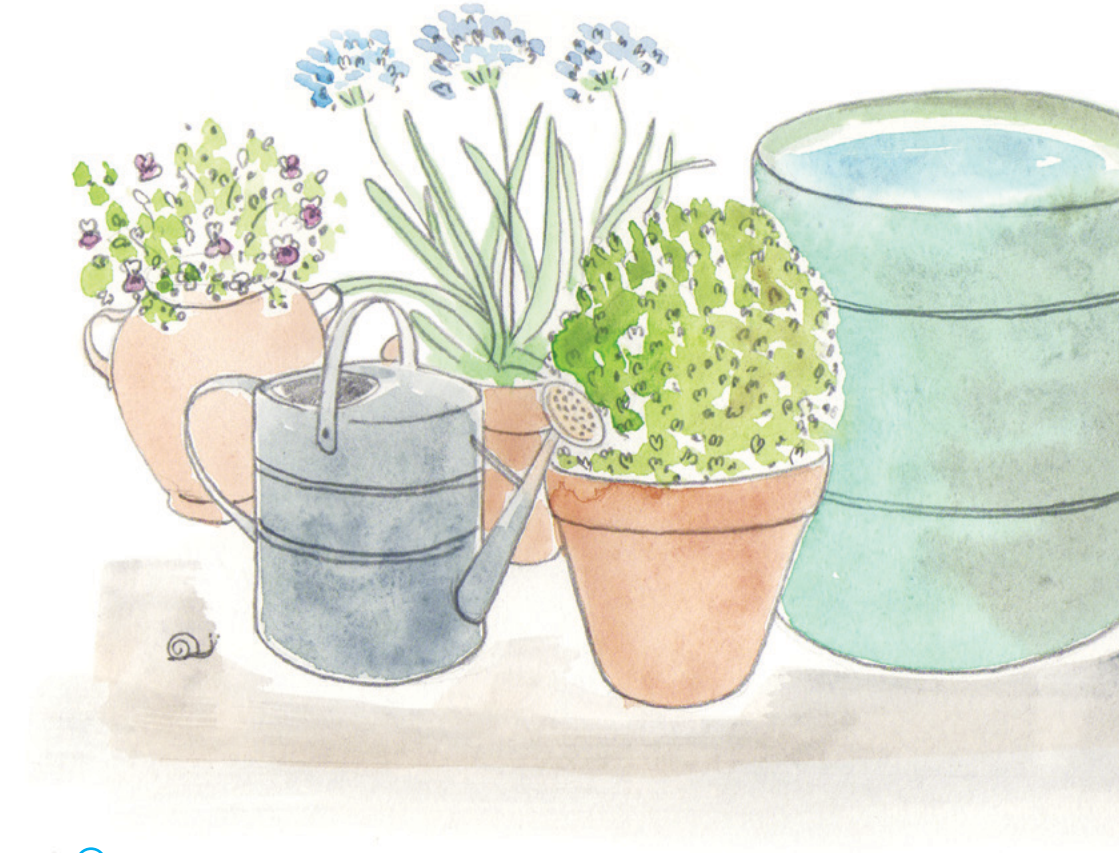
- **Use 'grey' water, from baths, sinks and showers, to water non-food plants.** This is a useful way of recycling water, but excessive soap and detergent could build up in the soil.
- **Commercially available fibrous mats.** Used in container growing to hold water. Reusable.

NOT ACCEPTABLE IN ORGANIC GROWING

- **Wasteful use of water,** such as lawn sprinklers. Lawns will nearly always recover from a period of drought.

FOR ADVICE ON:

1. How to manage your soil, go to www.gardenorganic.org.uk/managing-your-soil
2. How to grow an organic lawn, go to www.gardenorganic.org.uk/organic-lawn
3. Creating a garden pond, go to www.gardenorganic.org.uk/creating-pond



Energy

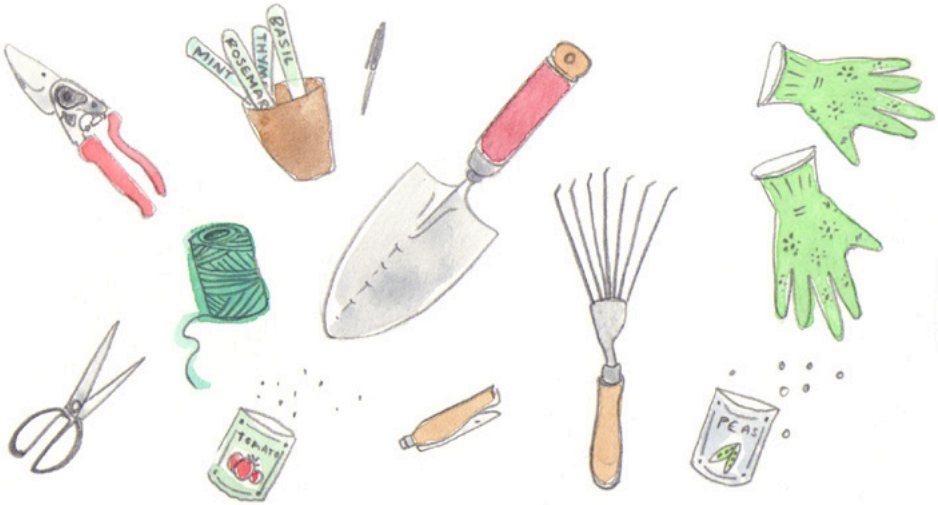
Organic principles encourage careful use of energy – whether it is the use of power tools, heating or machines. Where possible you should use sustainable energy sources – such as solar or water power, and be mindful of 'embedded' energy in a product's manufacture, packaging and transportation.

BEST ORGANIC PRACTICE

- **Use manual, rather than powered, tools** e.g. push lawnmower, shears, lawn rake.
- **Buy second hand, or sturdy, long lasting tools** and recycle and repair tools where possible.
- **Use solar energy** for lighting garden paths and sheds, running water pumps, and greenhouse ventilation.
- **For climate control in the greenhouse** use manually controlled vents, insulate, and use a lean-to back wall to store solar heat. Grow plants that suit the season to reduce requirement for heating. If you can access sufficient manure, use it in a **hotbed** for raising seedlings.
- **For stakes and supports,** use woody growth from the garden.

ALSO ACCEPTABLE

- **Use fleece** to protect plants in greenhouse or cold frame from frost.
- **For any heating** use ground source heating systems or solar hot water panels.
- **Use A++ appliances** such as fridges, when needing to store produce.



ACCEPTABLE, FOR OCCASIONAL USE

- **Petrol and electrically powered tools** only until they can be replaced by alternatives. Where possible share their use with other growers.
- **Plant-based oils** where engine or lubricant oils are needed as they are fully biodegradable. However, they are often made from monoculture plant sources which are damaging to the environment.
- **Gas, electricity and other fuels** from non-renewable sources to heat greenhouses and equipment. Only use when essential and with care to minimise losses.

NOT ACCEPTABLE IN ORGANIC GROWING

- **Inefficient and wasteful use of fossil fuels** such as patio heaters.

Wood

Wood has many uses for the gardener: to build sheds, fences, compost bins, support structures, bed-edging or garden furniture, or to make attractive containers. Check the source of the wood. Is it local, sustainable, or reclaimed? There are few wood preservative treatments for use in an organic garden (see **Appendix 4** on p. 56). To minimise the need for them, choose the most appropriate timber for its use. Hard woods will resist rot longer than soft woods. Use a metal 'foot' for timber stakes.

BEST ORGANIC PRACTICE

- **Your own supply** – for stakes and plant support, use wood cut from your own garden or allotment.
- **Careful wood choice** – choose species of wood more resistant to rotting.
- **Minimise replacement** – accept that the wood will rot eventually, and replace it as necessary.

ALSO ACCEPTABLE

- **Organically grown timber,** preferably local.
- **Sustainably sourced wood** that has been bought in, preferably from local sustainable sources.
- **New timber from sustainable sources,** with an accredited mark to prove it. These include Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC) or the Soil Association (SA) woodmark. UK or European produced timber is preferable, as it has lower transport miles.
- **Reused, second-hand/reclaimed timber.** However, it can be difficult to know if it has been treated with preservatives, other than linseed oil.
- **Reuse scaffolding boards** for raised beds. Make sure they have not been treated with creosote or other preservatives.
- **Use linseed oil** for treating wood.

ACCEPTABLE, FOR OCCASIONAL USE

- **Synthetic 'wood' alternatives,** made from recycled materials such as plastics (see **Plastics**).
- **Wood that has had treatment that doesn't include chrome and arsenic.** There are more environmentally sound treatments available, either as preservatives or paints. Check online for their availability, and see **Appendix 4** on p. 56.

NOT ACCEPTABLE IN ORGANIC GROWING

- **Wood from unsustainable forests,** particularly from tropical regions. Forests absorb the planet's carbons, helping to offset global warming. Virgin tropical rainforests are increasingly rare and need to be preserved.
- **Wood treated with creosote,** such as old railway sleepers. Made from tar and other chemicals, creosote is potentially carcinogenic, and can leach out into the soil and water.
- **New and reused wood treated with copper chrome arsenic** pressure treatment.

Plastic

In principle, organic growing involves using non-renewable resources, such as plastic, as little as possible. And its use should have minimal impact on the environment. However, any gardener will encounter plastic at some stage – from pots to polytunnel, wheelbarrows and watering cans. The longevity of plastic as a medium can be an advantage (plastic tools, such as wheelbarrows, require minimal replacement and maximum reuse) and there are arguments for using recycled plastics, as they keep the plastic out of landfill, where they rarely decompose.

Ideally, you should try to *reduce* the amount you use, always *reuse* it if possible, and check that it can be *recycled*.

BEST ORGANIC PRACTICE

- **No use of plastic.**

ALSO ACCEPTABLE

- **Plastic-like material, that is completely biodegradable,** and has been produced from plant substances.

Explanations of **highlighted** words can be found in the Glossary on page 50

ACCEPTABLE, FOR OCCASIONAL USE

- **Reuse of plastic containers for growing in,** especially those made from recycled plastic, this includes plant pots. Food and drink containers, sacks and crates can all be used as containers so long as they are certified as 'safe' i.e do not leach chemicals. (See Appendix 3, **Plastics You Can Plant In** on p. 55)
- **Use of plastic sheets for mulch,** provided their use is not permanent. (See **Weed Management**, p. 36)
- **Use of plastic netting or mesh** as a barrier for pests.

NOT ACCEPTABLE IN ORGANIC GROWING

- **Styrene,** used in meat and bakery trays and styrofoam containers. This is a potential carcinogen. Also polystyrene chips.

Growing Containers

Many of us grow vegetables and flowers in containers – from hanging baskets to balcony boxes. Where possible, make your own growing mix (see **Growing Mixes** on p. 14). Here are the guidelines for container construction, following the organic principles of sustainability (reduce, reuse and recycle).

BEST ORGANIC PRACTICE

- **Homemade paper pots,** and wooden trays (see back for sourcing wood).
- **Hanging basket liners made from recycled, biodegradable materials** such as moss from your lawn, long grass cuttings (hay), or a pure wool garment.

ALSO ACCEPTABLE

- **Reused plastic** pots and trays, preferably from recycled plastic, clay pots.
- **Reused wooden** trays and boxes, made from sustainably sourced and certified wood.
- **Commercially available biodegradable** hanging basket liners.
- **Commercially available pots and containers made from paper, plant wastes and other biodegradable material,** excluding peat.

NOT ACCEPTABLE IN ORGANIC GROWING

- **Tyres,** unless lined first. It is thought that tyres will leach various toxic chemicals into the soil as they degrade when in contact with sun and water.
- **Styrene,** used in meat and bakery trays and styrofoam containers. This is a potential carcinogen. Also polystyrene chips.
- **Pots made from peat.** See **Peat** on p. 15.
- **Moss gathered from the wild** for hanging basket liners.