

In the UK it is possible to have a beautiful and productive garden without using mains water.

The average amount of water used outdoors in the UK, which includes watering gardens and washing cars, accounts for only about six per cent of the amount of domestic water used each year. However, on hot summer days, when supplies are tightest, over 70 per cent of the water supply may be used for watering gardens. Much of this water is probably not doing plants that much good.

# Water-efficient gardening

There is much that gardeners can do to reduce the need for watering. Adding organic matter, home compost, composted bark or rotted manure at about a bucketful per square metre will boost the amount of water that soil can retain. Water efficient gardens also save labour, as there is less need to water them and mulches suppress the growth of weeds.

Choosing plants suited to the soil and site will mean that they grow good roots which can search out moisture. Mulching with organic matter such as bark chips or with other materials such as gravel or ornamental crushed glass will help to promote good root growth and reduce moisture losses from the soil.

Newly planted areas and newly laid lawns won't survive without watering if you plant them in the summer. Set out plants and lawns as early in spring as possible so that they develop good roots early. If drought strikes, these should have top priority for whatever water is available.

Lawns can survive drought very well and even if brown recover when rain returns. Gravel and other mulches, or prostrate evergreen plants such as Juniperus squamata, can be used as an alternative to lawns. Hotter, dry areas are ideal for the grey leaved, aromatic, summer-flowering shrubs, such as lavender, phlomis and artemesia. These sun lovers come from climates where the summer is intensely hot and the winters wet and often cold. Use these with plants that grow when the soil is moist between October and May. Choose crocuses, cyclamen and colchicums for autumn flowers, and daffodils and tulips for colour in the spring.

# Plants for no-watering garden

For small areas, thymes (Thymus), oreganos (Origanum), lamb's ears (Stachys), santolinas and dwarf bulbs such as crocus and tulips are colourful and need little watering or other care.

Grasses such as fountain grass (Pennisetum alopecuroides) and giant feather grass (Stipa gigantea) make bold statements and are drought tolerant. Colour can be added with drought-resistant perennials such as hardy geraniums (Geranium x oxonianum) and oriental poppy (Papaver orientale).

Rainwater is better for plants than mains water and for people on water meters it can save money. Rainwater kits fitted to downpipes allow water to be collected in water butts without overfills and floods. Water butts come in all shapes and sizes, they can be joined up and there are slim ones to fit tight spots. Trellis and climbers such as clematis provide an easy way to make water butts look attractive. Pump kits to apply water from butts can be used where it is not feasible to water by hand.

Cooled wastewater from the kitchen, baths and showers can sustain plants, but should not be used for edible varieties. Stored greywater can build up harmful bacteria so this water is best used once cooled and within a few hours.

# Watering – equipment and techniques

Good watering aims to apply enough water to replenish the soil moisture at a steady, gentle rate, without inundating the soil. You should apply water only at the stem bases beneath the foliage canopy leaving the surrounding soil dry. This reduces weed problems and makes sure all water goes to where it is needed.

# Seep or drip hoses

Water seeps slowly from these and sinks into the soil to wet the root zone (top 30cm). Unless timing is controlled, these potentially water saving devices can waste large volumes of water. Current legislation treats this equipment as hoses if connected to mains water and they are forbidden during hosepipe bans.

To know when to water, examine the soil at a depth of 30cm. If the soil feels damp there is unlikely to be any need to water, but if it is dry then watering is probably needed for some plants. Gardeners should be aware that clay feels damp even when all available water has been used and sand can feel dry even if some water is available. Only experience in matching the state of the soil to the growth rate of the plants can help gardeners fine-tune their watering.

Excess water will run to waste below the root depth, so before watering check the weather forecast and wait to see whether watering is really necessary.

### Water Supply (Water Fittings) Regulations 1999:

Hose taps in non-domestic premises must incorporate a suitable air gap.

In any premises, irrigation systems with fixed outlets not less than 150mm above the watered surface may be connected directly to the supply pipe via a backflow protection device that provides fluid category three backflow protection.

In domestic gardens, mini-irrigation systems, which do not use fertilisers or insecticides (for example a porous or seep hose), can be directly connected to the supply pipe using a type DB device (that is, a pipe interrupter with an atmospheric vent and moving element).

Garden ponds filled or supplied with mains water need to be watertight and should not have a permanent connection to the mains. Rainwater is preferred for refilling ponds.

#### Do

- 'Pond': using earth banks to retain water allows water to soak in;
- If you have to use a hose pipe, use a lance or trigger device. These control the flow, directing the water gently to where it is needed;
- Regularly weed and hoe your garden, to make sure that watering helps plants and not weeds;
- Water early in the morning or in the evening to reduce losses through evaporation.

#### Don't

- Use hosepipes directly on the soil: Large droplets and jets of water damage the soil surface;
- Frequently water lightly as it encourages shallow roots rather than deep moisture-seeking ones;
- Leave hoses trickling beside plants as the water goes straight down to below the root zone, where it is out of reach of plants.

### Further information:

RHS Drought-Resistant Gardening – Ideas: www.rhs.org.uk/advice/waterconference/index.asp

RHS Water – Advice: www.rhs.org.uk/advice/watering.asp

RHS Drought-Resistant Gardening – Advice: www.rhs.org.uk/advice/profiles1105/drought.asp

RHS Water in the Garden: www.rhs.org.uk/learning/research/gardeningmatters/ index.asp

The Dry Garden, Beth Chatto, Orion 1998.

*Drought Resistant Gardening*, The Royal Horticultural Society 1999.

*Gardening Without Water*, Charlotte Green, Search Press 1999 (HDRA).

Low Water Gardening, John Lucas, CPRE 1993.

*Plants for Dry Gardens – beating the drought*, Jane Taylors-Frances, Lincoln 1993.

Create an Oasis with Greywater, Art Ludwig 1994.