



How to reduce the need to water

- Dig in or mulch with plenty of organic matter; this will help to retain moisture in the soil.
- Apply mulches when the soil is warm and moist, this will reduce water loss due to evaporation and also suppress weeds.
- Weeds compete for moisture and nutrients in the soil so weed regularly or cover soil with a weed suppressing geo-textile. The weeds, roots and all can be composted if processed correctly by drowning in water or put in a black plastic bag in the sun until they decompose. Weed seeds will only be destroyed in the hot compost process.
- Grow crops that suit your local conditions.

A greenhouse or poly-tunnel can increase the need for water significantly so water harvesting from these structures is important.

Become a member of The National Allotment Society

Membership of The National Allotment Society comes with a raft of benefits, from discounts on horticultural products through to initial legal advice and horticultural expertise. To become a member visit www.nsalg.org.uk or call **01536 266576**.

Dealing with drought

A drought is a shortage of water resulting from a period of low rainfall affecting people, agriculture, industry or the environment. Some droughts are short and intense while others are long and take time to develop. Every drought is different and there is no formal definition of a drought. Plot-holders who garden with water in mind, who reduce the need to water and harvest rainwater will have plots that withstand the stress of drought much better.

Your water company may introduce measures that will affect allotment holders, to help it manage its supplies following periods of prolonged dry weather or drought. Some customers are exempt from the restrictions or can apply to their water company to request an exemption, for example, holders of a Blue Badge. The company should use the media or other marketing campaigns to keep you informed about the following restrictions.

- **Hosepipe bans.** Your water company may introduce a hosepipe ban if it is likely to be short of water because of a drought. Your water company can prevent you from using, or restrict your use of, hosepipes and sprinklers to water your garden or allotment. You can be fined for using a hosepipe or sprinkler when a ban is in place.
- **Drought orders.** A drought order allows your water company to restrict the non-essential use of water. This includes restrictions on:
 - using hosepipes or sprinklers to water gardens, allotments, parks and recreation grounds
 - filling ornamental ponds, other than fish ponds
 - cleaning building exteriors (apart from windows)

Drought orders and emergency drought orders are granted by the *Secretary of State for the Environment, Food and Rural Affairs* in England, and by the *Welsh Assembly Government* in Wales.

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Water use on allotments



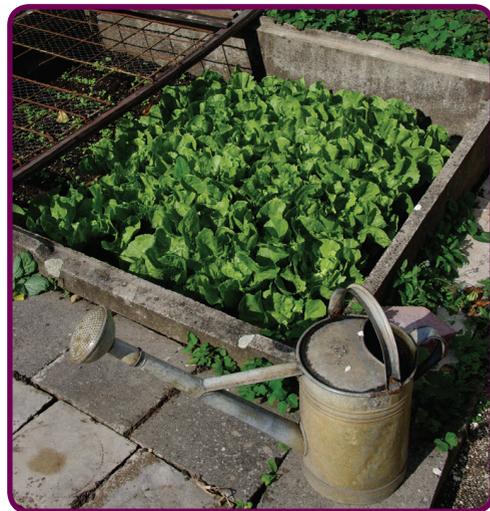
Using water in a well-informed and considerate manner can save money, ensure that you grow healthy plants that crop well and help to preserve our precious natural resources



Water is a vital ingredient for all plot-holders growing fruit, vegetables, herbs and flowers but it is a precious resource and can be a significant cost for allotment authorities. On sites with a mains water supply it should be used in a sensible and considerate manner by all and tenants should be willing to take responsibility to report leaks and other problems with the water infrastructure to their association or landlord.

Water supply regulations

Allotment sites, like any other owners or occupiers of premises with a public water supply, do have a duty to comply with the Water Supply (Water Fittings) Regulations 1999. The objectives of the regulations are to prevent waste, misuse, undue consumption and more importantly, contamination of the public drinking water. To comply with the regulations water fittings used on the premises must be of an appropriate quality and standard and suitable for the circumstances in which they are used. WRAS produce a Water Fittings and Materials Directory which can be viewed on the website www.wras.co.uk/directory.



Care must be taken to reduce the risk of contamination from the allotment to the public water supply via backflow, ingress or leaching (e.g. Hosepipes left immersed in troughs, puddles, drains or on the ground near manure). The regulations require every water system to have adequate devices to prevent back-flow and each water fitting, water point of use and appliance needs to have its own backflow risk assessment and the appropriate backflow prevention device installed.

Many sites run happily with no mains water supply, some are lucky enough to have access to spring water or have installed a bore hole; which means that unless they have a dual water supply the Water Supply (Water Fittings) Regulations 1999 do not apply to them. Information about the Private Water Supply Regulations 2010 or the Welsh PWS Regulations 2010 can be found at <http://dwi.defra.gov.uk/>

Water harvesting

The Society would like to encourage the use of water harvesting, regardless of whether the site has access to mains water. There are many benefits from this practice to both the site, in terms of reducing site costs, and to the wider environment. Rainwater collection reduces the need for chemicals to produce drinking water and the energy needed to clean and pump it around the system. It also reduces the demand on rivers and groundwater and can reduce run off and risk of flooding.

It is possible to calculate the amount of rainwater you can collect each year in a water butt connected to your shed or poly-tunnel by using the following equation.

Annual rainwater yield (Y) in m³ = P (annual precipitation) × A (collection area- shed roof or poly-tunnel footprint) × 0.8, for example a 2m × 3m (6m square) poly-tunnel in Bristol will collect $0.8m(P) \times 6(A) \times 0.8 = 3.84m^3(Y)$ or 3840 litres

The average water requirement per plot in the South West is approximately 1800 litres per year, the average around the country will vary depending upon soil conditions and local climate; even half plots will need around this amount as they tend to be intensively cultivated and may have a greenhouse or poly-tunnel.

Typically, you should expect to be able to use approximately 80% of your annual rainfall, some will be lost in storage and some rain will not generate enough runoff. Annual rainfall data for your area can be obtained from the Met Office website www.metoffice.gov.uk/public/weather/climate

Containers that store water need to be secured and safe for animals and children and half a teaspoon of cooking oil will spread a film across the top of the water that will prevent mosquitos breeding. 1000 Litre IBCs (Intermediate Bulk Container) can often be obtained second hand and used to store rainwater but will need a good clean and ideally should be painted a dark colour to reduce growth of algae.

Watering wisely

The best time to water your crops is in the evening or very early morning, using a watering can and aiming at the roots not the foliage. Water thoroughly on a weekly basis and soak the soil, rather than a little at a time. Water appropriately to the crop, see examples in table; plants also need different amounts of water at varying stages of growth and too much water can affect yield and taste.



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Many authorities do not allow hose pipe watering of crops but will allow hoses to be used to fill up water butts on plots; a hose pipe can use over 1000 litres of water in just one hour, which is more than the average household uses in an entire day. The Society does not advocate the use of sprinklers.

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| Cucurbits | Squash can survive and produce fruits from minimal watering but courgette plants need to be kept constantly moist. |
| Fruiting crops | Aubergines, cucumbers, sweet corn and tomatoes need constant water throughout their growing period. |
| Leafy vegetables and salad crops | Crops such as cabbages, chard and spinach along with salad crops need water at every stage of growth. |
| Legumes | Avoid watering peas and broad beans when young but they will need water at flowering time and about 2 weeks later. Runner beans need constant moisture but French beans can cope with dryer conditions. |
| Onions etc | Water to establish and then only in dry spells. |
| Potatoes | Water regularly from 6-10 weeks after planting when they start to produce tubers. |
| Root crops | Carrots and parsnips will split if watered irregularly, water before dry conditions develop. |
| Stem vegetables | Celery, celeriac and Florence Fennel need copious amounts of water to develop and will be damaged by drought conditions. |