

# Water use and sustainable allotmenteering



## THE COST OF WASTED WATER

Given the continuing Government cuts to Councils' finances, the Council & *idverde* are under pressure to reduce this ever growing deficit. Ideally the cost of water would be neutral. As long as the service is costing more to run than it receives in revenue there will be pressure to increase allotment water rates. Reducing unnecessary water usage is therefore beneficial from a budget perspective, as well as having sustainability benefits for the wider environment and community. How often do you see a leaking tap or a hose that has been left on? Report leaks to *idverde* or your site rep straight away to prevent literally throwing thousands of pounds down the drain.



## REPORTING LEAKS

If you spot a leaking tap or notice a leak somewhere report it to the site rep immediately. If you can't find the site rep, report it to *idverde* as soon as you get home. The best way to do this is to email [✉ slwpallotments@idverde.co.uk](mailto:slwpallotments@idverde.co.uk) with the words **WATER LEAK** in the subject line.



## SPRINKLERS AND HOSES

Using sprinklers and hoses to water your plot is not against the rules, but this is a massive waste of water. In our opinion, hoses should only really be used to fill water butts, and watering should be done by hand with a watering can.





## WATERING CANS

Please use a watering can as this prevents evaporation and watering weeds. When you water with a hose you are sprinkling the whole surface. If this is done in the middle of the day, especially on hot days, a large amount of what you water will evaporate straight away anyway. Never use a hose in the middle of the day. If you really must use a hose, do so at dusk. Avoid daily sprinkles as this encourages shallow rooting and formation of soil crusts. When you water indiscriminately with a hose, you are also watering weeds. You will notice that you germinate all the weed seeds in-between the rows, and then help those weeds to grow. You are making more work for yourself. The more indiscriminately you water the more weeding you'll need to do in a week or two.



## WATER BUTTS AND TROUGHS

Fill watering cans from a water butt or trough. This means you can direct your water to the actual crop you are growing, and starve the weeds in between rows. Watering by hand (with watering cans) also gets you up close and personal with your plants, this helps you observe their health and notice if any attention is required or if any pests and diseases are present. You will notice this earlier if you are closer to the plants.



## PLANT HEALTH

Do you actually need to water? Learn to recognise signs of plant health and of drought stress. A little stress encourages the plant to grow a strong root system, reducing future drought stress. A plant that is watered too much can also grow leggy and weak. It is less able to defend itself from pests. It's better to encourage strong and healthy plants.



## HARVESTING WATER

We should all be harvesting water. Not only is collecting rain water free, it is also free from chemicals. The water that comes from the tap is chlorinated. So bear in mind that you are spraying chlorine on your plots when you water with a hose directly. Chlorine will adversely affect the natural biology of the soil. It will kill lots of the bacteria in the soil which do essential jobs in creating a healthy biome on your plot. If you grow organically, watering with chlorine will be detrimental to your success.



## SHEDS

Those of us that have sheds have no excuse for not fitting some guttering and collecting water in a butt. Most people do, but there are still sheds which are not collecting water. It doesn't have to be pretty or cost a lot of money.



## SWALES

A swale is a shallow level trench on contour, meaning that the bottom of the swale is the same altitude all along its length. This is important because the function of the swale is to pacify and hold water, and not to transport water. As it rains, the swale fills and begins to seep into the soil. Water is held long enough in the swale for it to seep into the soil below the crop. It stops run off and delivers water to roots.

Swales are a fancy name for what is basically a shallow trench for catching water as it flows downhill. Many of our plots are on slopes, and water, including rain water can run downhill away from where it is needed. A shallow trench stops run off, catches the water and allows it to seep slowly to the plant roots where it is needed. Scraping a shallow trench just on the uphill side of your row of vegetables will mean more water getting delivered to the roots of your crops. Scrape furrows between rows of crops, and shallow wells around larger individual plants (a draw hoe is ideal for this).





## MULCHING

A mulch is just a covering of matter to protect the surface of the soil. It conserves water by stopping evaporation. It also protects the top centimetre of soil. Nature does not like bare soil, and nature quickly covers bare soil whenever possible. For a start the sun's UV rays are harmful to the bacteria and organisms that live in the top centimetre of soil and kills them off. These organisms are essential for a healthy functioning soil. You will notice that any bare soil becomes very dry, dusty and dead after a few weeks of being exposed to the sun. A healthy soil is protected from UV and kept damp by mulch. If you inspect soil which has been under mulch you will find it fluffy and healthy and full of worms.

Mulch moderates soil temperature, thus promoting greater root development. Roots prefer to be cool in summer and warm in winter. This is possible under a year-round blanket of mulch.

Mulching prevents compaction by reducing soil crusting during natural rainfall or irrigation. Falling drops of water can pound the upper 1/4 inch of soil into a tight, brick-like mass that retards necessary air and water movement to the root zone.

Most weed seeds require light to germinate so a thick mulch layer shades them and reduces weed problems by 90 percent or more. Any plant material that is free of weed seed and not diseased is suitable for mulch. Weed-free hay or straw, leaves, grass clippings, compost, etc., are all great. Fresh grass clippings are fine for use around well-established plants, but cure them for a week or so before placing them around young seedlings

Mulching is a top priority for a healthy garden. It does so much work that it's hard to oversell the importance. Proper mulch maintains the integrity of the soil beneath it, protecting the earth from drying out under the sun and/or washing away when the rains come and/or blowing away in the wind. It creates water retention, with mulched gardens credited with requiring as little as ten percent of the watering that other gardens do! Mulching prevents weeds, provides habitats for useful insects and microorganisms, and moderates soil temperatures. The right type even feeds the soil as it decomposes. In other words, it's a good idea.

- A barrier to weeds – to kill or suppress existing weeds, and to prevent seed from germinating and colonising
- To prevent soil erosion by wind and rain
- To reduce water evaporation from the soil
- To clear an area of lawn or weeds, ready for cultivation
- To add organic matter





## CONSERVE WATER AND STOP EVAPORATION

Mulch can be made from many things, but the easiest to use is and most plentifully available are the wood chippings that are frequently deposited at allotment sites by tree surgeons. Now there is one thing to be careful of. If wood chippings are actually dug into the soil then they will take Nitrogen from the soil as part of their decomposition. This means they will take Nitrogen that your plants need. So it is important not to actually dig in a mulch made from wood chippings. It should be placed on the surface and pulled back to make way for seeds or seedlings. Mulch will also suppress weeds. Mulched beds hardly need digging at all, and nutrients and feed can be placed on the surface for worms to work into the soil. If you do need to dig a bed that has been mulched, then scrape back the mulch prior to digging and then push it back on top after. Eventually the mulch will break down into great compost, and then you do not need to worry about it at all.



## PLASTIC WATER BOTTLES

Plastic bottles can be used for some interesting mini greenhouse techniques, including self-watering mechanisms.

Lot of us use plastic bottles as mini cloches, but how many think of using them upside down, partly buried next to crops, in order to direct water straight to the root? This works especially well with thirsty plants like tomatoes. They can also be used to 'drip' water plants, by leaving the top on the bottle and making some holes in it. You can experiment, but I have found that just using them to make sure all the water from a watering can gets right down to the roots is worthwhile in itself. Grow vegetables with 10 times less water with "Solar Drip Irrigation." This is a clever idea which eliminates completely the evaporation losses. The water in the bottle gradually evaporates during the day; it condenses on the larger bottle and drips down to the soil. A few of these in between plants will make sure you have a moist soil even on the hottest days. Together with a layer of mulch you will have a system that can use up to 90% less water than spraying with a hose for the same amount of crop!

Keep experimenting, do some Googling for 'Permaculture techniques for water savings' to get inspired. With a concerted effort I think it will be possible to radically reduce our water bill. That will be especially good for us, as it means we will be able to keep our rents low. But it is also good for our wider downland environment which suffers from water shortages anyway.





# How to deal with plot waste?



Whether you are starting out with an allotment for the first time or looking for new ways to deal with the waste produced from your plot, we have put together some helpful ideas below. Finding ways to recycle and compost more of our waste has never been more important.

# WHAT TO DO WITH ... BRANCHES AND TWIGS?

## 1

### DEAD HEDGING

This is a barrier made from branches, foliage and saplings that have been cut down. Throughout the year when you are pruning trees and shrubs or digging up saplings, this waste can be used to make a dead hedge on the boundary of your plot. They are also an excellent habitat for wildlife, encouraging species such as beetles and amphibians that will reduce the number of pests, including slugs and aphids, on your plot. It also avoids having to transport large amounts of material to the refuse centre, reducing your carbon footprint.

Don't forget you can continue to add to your dead hedge over the years with more material as it rots down.



## 2

### COMPOSTING

The RHS provides a good guide on basic composting along with a video on exactly what to do. They also provide this Masterclass in composting with lots of tips, which you can download for free.

There are plenty of tutorials online with step-by-step guides on building your own wooden compost bin. Here is a video from GrowVeg about [using old pallets to create your compost bin](#) or alternatively new/reclaimed wood with a tutorial and list of all materials need from [Good Housekeeping](#).

It's worth looking online at websites such as Freecycle, Preloved and Gumtree, where people often give compost bins away for free if you are able to collect.





# 3

## DIY NATURAL PLANT SUPPORTS

Use shrub clipping and branches from tree pruning to create your own natural (and free!) supports for vegetables. These are ideal for growing vegetables such as beans (longest branches) and for keeping herbs and cut flowers from encroaching onto the paths around your plot (short flexible clippings).

To create long supports for vegetables, choose straight branches and trim off all the side branches and twigs to the main stem. You will need around 6 – 8 to create a wigwam or as many as you can fit into your bed to create an A-frame or X-frame. They can also be used for a couple of years before they need replacing.



## WHAT TO DO WITH ... WEEDS?

# 1

## WEED SOUP

Fill a bucket with water and continue to add weeds not suitable for your compost. Make sure to cover with a lid to aid the decomposition process and ensure that the weeds stay submerged. Over time they will rot down into a 'weed soup' and this is also a quicker method than traditional composting for tough weeds such as brambles. Once the weeds have rotted you can siphon off the rich liquid fertiliser to use as food for your crops or, alternatively, add it to your compost. If you have lots of weeds water butts also work well for this and you can siphon off the liquid soup using the tap.





## 2

### HOT COMPOSTING

This is a method of composting where material is kept heated to speed up the decomposition process with the aid of microbial activity. You can read all about it in this [Guardian article](#) and it is possible to recreate a hot compost at your own plot without the need for an expensive kit.



## 3

### SPLIT COMPOST

If you have space on your plot for multiple compost bins then you can separate these for different purposes. One compost can be kept for just weeds, so you effectively use this to rot them down and never use the rotted material on your plot (to avoid the spread of seed). The other composts can be used for whatever you need, a general green waste one and vegetable waste one to create rich compost material.



## 4

### COUNCIL GARDEN BIN

Finally we would suggest taking any diseased material home with you to put in your Council Garden Bin, if you have one.

Acceptable garden waste: grass and hedge clippings, leaves, twigs and sticks, old plants and weeds, branches up to 22cm (8 inches) diameter, windfalls e.g. fallen apples.

Unacceptable garden waste: bricks, rubble, soil and turf, plant pots and polystyrene plant containers, animal waste and animal bedding, general garden rubbish and tools, old garden waste sacks or other plastic sacks, anything that won't compost.



# WHAT TO DO WITH ... VEGETABLE, FRUIT AND HERB WASTE?

## 1

### WORMERY

A Wormery is great but it does take up to a year to get established and therefore requires patience. Once it gets going you will be able to produce the richest natural fertiliser for your plot with very little effort. It might be easier to keep your wormery in a sheltered spot of your garden or porch (or shed during winter). It's even possible to keep them in the house, which is where I keep mine. This way you can keep a regular eye on your worms and feed them kitchen vegetable scraps, which are their favourite.



You can keep a wormery indoors as it does not smell at all. Initially there could be some problems with a few fruit flies but this can be solved by putting newspaper on the top of the vegetable material in the wormery and this prevents the flies laying their eggs directly on the food waste. The worms also prefer it because it gives them more protection when feeding out of the soil.

#### Top tips for keeping a wormery:

1. Make sure your wormery is kept at a regular temperate, worms out of the soil are more vulnerable to temperature changes
2. Do not add too much food, especially at the start. Be prepared to wait up to a year before your first compost and 'liquid gold' is ready for use. Don't add any mouldy food and remove anything that does go mouldy because the worms don't want to eat it.
3. Avoid adding onions, citrus fruits or anything else too acidic or spicy.
4. Make sure the wormery does not get too wet or the worms will suffocate. Wormeries should come with a tap to siphon off the fertiliser water.
5. Although the worms prefer vegetable kitchen scraps they can eat some weeds. Adding problematic weeds such as bindweed, which can't be composted could be a good solution to this once the wormery is established.

The RHS has lots of tips on starting a wormery, as do the main retailers of wormeries in the UK: Original Organics, The Organic Catalogue, Gardening Works and Wiggly Wiggles.

## 2

### COMPOSTING

See notes above about this.

# WHAT TO DO WITH ... PLASTIC BAGS (FROM COMPOST/MANURE)?

We would first recommend you start creating your own compost (see notes above) so that in 6 months to two years you will have your own continuous supply and no longer need to buy it in bags.

To reduce plastic from composting bags you could organise with a group of other plot holders for a larger delivery of compost brought in a builder's bulk bag and use a wheel barrow to transport it to your plot.



For existing plastic bags these can be reused for hot composting (see notes above) or suppressing weeds. You can suppress weeds that grow around crops or put over beds during winter by laying them on the soil and keeping in place with stones or bricks.

## FINDING SECOND HAND TOOLS AND SHEDS

You can avoid the cost of buying new tools and a shed for your plot by sourcing secondhand from your local area. To find items people are looking to give away try websites such as Freecycle, Preloved and Gumtree. Spring and summer are the best times to look for these adverts.





# WHAT TO DO WITH ... PLASTIC POTS?

Non-black plant pots can be recycled in your home recycling collection if your local authorities also accept plastic pots, tubs and trays. Some garden centres also offer take back schemes. Pots that are recycled can be turned into very useful items, read about what [A Short Walk](#) can do with them.

Alternatively you can offer them to fellow plot holders (leave on bench at main entrance at Hertford Avenue in front of Trading Shed), neighbours or give them away for free on sites such as Freecycle.



It's good practice to try and not collect too many plant pots in the first place and when you are growing seeds there are alternatives that can be used such as newspaper and cardboard. The Eden Project have a tutorial on how to create these using newspaper. If you plan to make lots of these seedling pots you might want to invest in a 'Paper Potter'.

You can also buy fibre plant pots, which rot down in the soil quickly, alternatively there are biodegradable plant pots made from natural plant fibres which last around 5 years and take around 9-18 months to break down in a compost.

If you have any ideas on how to recycle waste from your plot please get in touch: [slwpallotments@idverde.co.uk](mailto:slwpallotments@idverde.co.uk)

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