

## Common Soil Problems

1. Water repellency. At the end of summer; this problem is at its worst. The hot weather can dry out the top layers of soil where the microbial life is, and nutrient recycling and water holding just isn't happening. Water will pool on top of the soil. Often, when the rains start, people are dismayed to find when digging in their soil that the moisture hasn't penetrated below the top few millimetres. In our sandy soil, this is a very common problem.

The solution

In the short term, use a good quality soil wetting agent to help get water into the soil profile. However this method isn't permanent, and you'll need to repeat applications every 12 months. Incorporating water holding material is the key to longer lasting benefits. Clay is extremely beneficial to add to sandy soil - the clay permanently improves the soil's structure, enabling it to be re-wet even if it does dry out. There are a number of clay products on the market - and all have their place. The two main types are bentonite & kaolinite clays. Both Sand Remedy and Cassies Clay are endorsed by the WA water corporation and help your garden use less water. The other fantastic product that will help with water repellency is Charlie Charcoal. Charcoal by its nature is highly absorbent, and is a permanent source of carbon in your soil - hugely beneficial for microbes and for nutrient holding, and as a bonus - it has a very low pH, so if you struggle with high alkalinity (as do many people along the coast) - this is the perfect product to use. Charlie & Cassie work so well together in your garden that we would say it's a match made in heaven!!

2. Lack of organic matter - "gutless sand". The frustration is real! People top up soils regularly with compost and manure - only to find that it disappears!

The solution

Unfortunately - the disappearing act is performed by billions of bacteria in the soil, consuming the organic matter. However, in doing so, they do enable the nutrition in the material to become available to your plants. So it's kind of a good thing they're doing! Also - a small amount of what is left behind is humus - organic matter in a very stable and long lasting form. The problem is, it does take years to build up humus to a useful level. So as gardeners, there's not much we can do besides continuing to top up garden beds with organic matter and building the soil. It's said it takes about 7 years to turn pure sand into something decent. Tree loppers' mulch (woodchips) layered down thickly (10 - 20cms) on the surface of your garden will turn your sand into lovely, dark soil in a few years - more quickly when there's more water available to help with decomposition. As a bonus, a really thick layer of mulch like this will help against weeds, too.

3. Pests. Slaters, snails, aphids, slugs, caterpillars, grasshoppers, thrip, whitefly, scale, ants... I'm sure there's plenty more to add to the list!

The solution.

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Biodiversity is key, as many insect pests have their natural predators, so trying to get to the stage where we can encourage and support their activity is very important. The problem is many sprays will knock things out of balance. Take away the food source (pests) and you'll get less predatory insects in the first place. It's a tough decision. How much damage can you accept? Is it worth sacrificing some plants this year in the hope that predatory insects will be in greater numbers next year?

So is there a solution? Not a straightforward one for those that want to be truly organic in their garden. Insect netting, barriers, traps and opting for the most targeted but the least harmful treatment to other insects would be our recommendation. Encourage birds, lizards, frogs by providing habitat and they will be your helpers to an extent. Be prepared to thoroughly investigate pest damage (night time garden visits with a torch if necessary) in order to correctly identify the culprit before deciding on the most effective treatment.

4. Weeds.

The solution.

Another constant battleground for gardeners is the appearance of weeds. Whether it's invasive lawn grass infiltrating a garden bed or seasonal weeds that seem to come from nowhere - we've all got them growing where they're not wanted. I'm afraid you already know the answer to this problem. Either you spray or you don't. As gardeners some people choose not to use glyphosate. But it is good that there are now a number of certified organic weed killers on the market and flame weeders might also be worth investigating, but apart from that it comes down to manual labour to remove by hand. There's also options to solarise areas with plastic sheeting, and also heavy mulching (with cardboard or newspaper layered on top of the weeds).

5. Space (lack of) In our typically smaller lots, space is a premium for growing. Given our higher density living, there's also more walls, fences etc. that can mean it is very difficult to find a growing area that gets enough sun (in winter) or isn't baking hot with reflected heat (in summer).

The solution.

Creative thinking! If it's edibles you want to grow, you might find growing veggies, herbs and even dwarf fruit trees in containers is the best option. You might find there are only some crops and some seasons that enable you to grow.

If you really want to develop your green thumb and don't have the space - check out your local community garden. These are springing up all over the place, and getting your own plot to grow on is inexpensive.

6. Lack of time & lack of knowledge

The solution

We're all time poor these days so - just like exercise (but probably more enjoyable) - we need to find a way to slot a little time regularly into our lives to check in on the garden. A quick walk around with your morning cup of coffee, or a late afternoon visit with a glass of wine are good ways to sort out your thoughts and to observe what is happening. As far as lack of knowledge goes - gardening is a lifelong journey. Nobody ever knows everything - and if they DO - it's probably totally irrelevant in YOUR garden as opposed to what they do in theirs. So relax! Join a garden club, community garden, attend workshops, read. Connect with other gardening friends and share your knowledge. You probably know more than you think.