

flood recovery

Don Burke, plus Annette McFarlane in Qld, Elizabeth Swane in NSW, and Sarah Guest in Vic have lots of tips for flood-affected gardeners.

After the devastating floods throughout Eastern Australia, many gardeners won't have any plants left and will have to start from scratch; the lucky ones will have saved some plants but lost plenty as well. Sadly, some families have to face the loss of loved ones and their properties have been ruined and their dreams shattered, so the garden is probably the last thing on many people's minds right now. It's a long road back, so we have compiled some post-flood gardening tips to help you get started on the way to recovery.

safety tips

Contamination

Soil and silt contamination from sewage overflow and fuel from cars, machinery and chemicals, raises huge concerns. During the floods lawns and soils in particular are very dangerous to people and plants. Floodwaters contain disease

organisms such as *Giardia*, *Cryptosporidium*, *E. coli*, *Salmonella*, etc. These organisms rapidly die as the plants' foliage and soil dry out. Two days of sunshine (aka solarisation) of soils and/or leaves should kill off these diseases. The key to safety nonetheless, is the Geoffrey principle: clean hands. So:

- wear rubber gloves when handling contaminated soil, plants, etc
- wash dirty hands
- avoid oral contact with soil and dirt
- don't smoke or eat while working in the garden
- if you splash your face (or ears) wash immediately with disinfectant soap and gargle with antiseptic mouthwash
- don't work in thongs or bare feet
- children or elderly people are most at risk
- cover all scratches and wounds with waterproof bandages.

We strongly recommend that at-risk people be protected by spraying a 1% household bleach solution on all dirty surfaces including plant foliage in the garden. Use one part household bleach to roughly 100 parts of clean water. Household bleach poses no risk to people, plants or pets at this strength. In an emergency, a slurp of bleach to a bucketful of water is perfectly effective and safe.

Vegies

All leafy vegies and summer crops like tomatoes, cucumbers, pumpkins and capsicums should be pulled up and put in the rubbish. Many vegies will probably have rotted off due to the high humidity or been torn out by floodwater. Remove vegies which are remaining and compost them. Solarisation (sunlight exposure) will decontaminate them.



Wash dirty hands after working.



Water tanks need to be emptied and cleaned.

tank water

FLOODED RAINWATER TANKS will be contaminated. This water should not be used for drinking and tanks will need to be emptied. Use a 10% solution of household bleach (one part bleach to nine of water) to wash out the tank. If you can't get at the insides of the tank to spray with the bleach, add a litre of neat bleach from the container per 50 litres of dirty tank water and leave it to work for 12 hours prior to draining the tank. Then rinse out the tank thoroughly with clean tap water. Your local council may be able to test your newly-collected tank water prior to using it, just to be sure it is now safe.

pots & raised beds

If you have doubts about your vegie patch's soil, grow some crops in pots or raised beds or a new no-dig bed.

- With leafy salad vegies in short (and/or expensive) supply, grow fast-growing, tasty Asian greens such as bok choy or choy sum.
- Some potted parsley, sorrel, chives, basil or perennial herbs will add variety and flavour to what's available from the local vegie markets.
- Sow seeds or seedlings of quick-growing cherry tomatoes, rocket, egg-plants and zucchini in raised beds or pots.
- Annette McFarlane says Qld gardeners should try growing prolific tropical vegies like water spinach (kang kong) and Surinam spinach. These love the humidity and grow rapidly.



shrubs

Hose down foliage and clean off mud and muck, and get the plant back to its normal business of photosynthesis again. If the mud won't wash off, try adding a wetting agent such as Wettasoil to the water and then

wiping the leaves with a cloth. Prune off any damaged or broken branches which can let in diseases.

Stand up plants which have been pushed horizontal by floodwaters, stabilise them with rocks or a stake and wait to see if they survive.

Older, established plants such as roses and camellias which survived drought may amaze us with their ability to survive floods too.

Annette McFarlane in Qld says that many soft, shallow-rooted understorey plants, such as coleus and salvia, and favourites like hibiscus and gardenias might not be able to be saved. A big plus is all these grow well from cuttings, so people in non-flood-affected areas can strike up new ones to share with others. (Label your cuttings if you know the variety name.)

Sarah Guest in Vic says try to remove wet debris from the trunks of shrubs and trees. Collar rot will be common if soggy stuff is allowed to remain in close contact with them. Citrus are susceptible.

USEFUL PRODUCTS: an application of Yates Anti-Rot may keep fungal root problems at bay in various shrubs and other plants, including natives. Seasol or any similar seaweed product may also help plants to cope with stress and get their roots growing again, but don't use fertilisers until you see genuine signs of recovery, such as new, leafy growth. However, remember that investing in a new plant later on, instead of wasting the purchase price of various products on saving a sick plant, might be a better way to spend your stretched financial resources.



If parsley is in short supply, grow your own.

Photos by Brent Wilson

citrus tips Apply Yates Anti-Rot to help trees falling victim to fungal diseases like root rot. Clear away all mulch and debris from citrus trunks, to prevent collar rot, but do apply some mulch or aged cow manure around the root zone. Water on a liquid seaweed product such as Seasol, to help disease resistance, but hold off on the fertiliser until next spring.



trees

PRUNE BACK DAMAGED BRANCHES but don't take on more lopping than you can safely cope with. If you do the job yourself, cut off a large branch in several small stages, not in one big hit. And don't work alone. Avoid ladders on wet soil – use a long-handled lopper. After cutting off a branch, don't leave a stub at the trunk; cut the branch back to the raised 'collar' where the branch leaves the trunk.

TREE EXPERTS: it's not cheap, but think about hiring a qualified arborist to do the dangerous work of tree-lopping for you. The arborist can also do an assessment of tree health in your garden while on site.

Qualified arborists are listed at www.qaa.net.au and www.naaa.net.au (02) 4739 4339. Anyone who does this work for you should be members of an Arborist Association, have suitable professional qualifications and carry full insurance. *Tip:* if a tree needs to be removed, request to keep the mulch on-site.

Beware of unqualified, uninsured tree loppers who will probably quote ridiculously cheap rates to cut down trees for you, as sometimes they will leave you with a damaged roof and expensive log removal.

soil rehab

Do not walk on or work wet soil. Wait until it has had four or five dry, sunny days before you begin working it. However, exposed roots of all plants should be covered over immediately to prevent root death. You only have to cover them with 2-3cm of soil to save them. Do not fertilise until three or four weeks after the ground has been repaired.

If the surface soil and mulch is gone, you will need to rehabilitate it. We recommend that you don't purchase new soil, but rather purchase coarse river sand and bulk compost. A layer of 5cm (or more) of each should be put on top of your remaining soil or subsoil and dug well in. To calculate amounts: a bed or area that is 10m long by 2m wide needs (10x2 divided by 20) cubic metres of each – ie, 1 cubic metre of sand and 1 cubic metre of compost.

If you have been left with alluvial soil on top of your existing soil assess it carefully. If the layer is less than 2cm thick, it can be forked into your soil or you can cover it with mulch and leave the rest to worms etc to do. Do clear alluvial soil back 10cm from the trunks of plants.

If the layer is over 2cm, consider removing it. Alluvial soils tend not to develop soil structure and thus can be poorly aerated and can kill plant roots. In any case, aerating the soil is very important. Plunge a fork into the soil every 3-5cm to create air holes. Perhaps you could rent a power aerator. Adding clay breaker or gypsum is also a good idea.

FERTILISING

Wait for three to four weeks after soil repair. Then use a water-soluble fertiliser such as Thrive, Nitrosol or Miracle Gro. Supplementation with complete trace elements is a good idea if your fertiliser lacks them.

SCIENTIFIC SOIL TESTING

If you're worried about contamination of your soil you can have it scientifically tested. Contact Sydney Environmental Soil Laboratory, www.sesl.com.au or phone (02) 9980 6554 to find out how to go about collecting and sending soil samples for testing. As a rough guide to costs, an average test rate is around \$200 and to test for heavy metals is an extra \$55.



lawns

Most flood-affected lawns are covered in a layer of mud. Depending on how thick that is, the lawn (if it's still there) will probably poke its way up through the mud. Once you get some growth, mow it but keep the blades high to encourage root growth.

Aeration (ie, going over it with the tines of a garden fork, pushing them in and down to allow air to penetrate) and an application of a seaweed formulation such as Seasol will stimulate the roots. Don't fertilise the lawn yet. Wait until you see signs of active growth. Watch for weeds in bare patches and remove them.



Aerate your lawn with a garden fork.

melioidosis

This is a pneumonia-like bacterium. The disease lives in the soil mostly in tropical areas. Water brings the disease organism to the surface. People with weakened immune systems are particularly at risk. The organism will survive long after the floodwaters have cleared, so the safety precautions outlined on page 80 are very important: basic cleanliness, clean hands, face, and showering. For more information visit www.health.qld.gov.au



Vegie Comp entrants the Farquhar family at 'Katrina' station in Central Qld sent us this photo of the aftermath, after the waters fell.



Donate your labour



Take divisions



Strike cuttings

how can you help?

IF YOU'RE NOT AFFECTED BY FLOODS yourself, as well as making a financial donation, you can help out as a gardener, try striking up some cuttings or dividing clumps of plants, says Sarah Guest. Get organised and start taking some cuttings, nurture them until they are ready to plant and give them to flood-ravaged gardeners. Most popular hedging plants, plus hydrangeas, fuchsias and pelargoniums are quick to take root. Take plenty of cuttings, pot up those that strike and hand them out.

annette's website

A great source of info for Queenslanders is Annette McFarlane's website, found at www.annettemcfarlane.com.au

Rochester spirit

Your article on taking cuttings (February 2011 issue) couldn't have come at a better time. My mother-in-law in Rochester is just one of the many people who have had their gardens ruined by floods. She is a widow and a very keen gardener. I suggested to her that through the churches in Rochy, they have regular morning teas for the elderly residents to come along and have a chat and swap cuttings to help rebuild each other's lives and gardens. Most people have had something survive in the garden, and if the community spirit we have seen in Rochy over the last two weeks is anything to go by, they'll have beautiful gardens back before they know it! One more thing: how can you get off the thick mud from the floodwater that dries and sticks like glue on plants? Hosing doesn't seem to do it and anything stronger will break the plants

**Maryanne Ryan,
Tocumwal, NSW**

Maryanne, you are another of the Flood Heroes: what a wonderful idea to strike some cuttings for your Queensland friends with damaged gardens. We have mentioned that a horticultural wetting agent such as Wettasoil will help clean leaves: mix it with water and use a sponge or cloth to wipe down the leaves after a preliminary hosing. It's still a long job, though.



People all over the world are astonished by the avalanche of Aussie Heroes who came to the rescue of their fellow Aussies as the floods receded. This was a defining moment of mateship in Australian history. Pictured here, NSW landscape contractors loaded their Bobcats and earth-moving equipment onto their trucks and formed a rescue convoy travelling 1000 km to help the people of Toowoomba, Grantham and Murphy's Creek in Qld. From left to right: Matthew and Barry Stubbs BNS Landscapes; Glenn Simpson, Simpson Landscapes; Jamie Lawson, Endeavour Foundation; Vossy (a volunteer); Ralph Kent, Aspect Landscaping and Contracting. Not pictured is Grant Truscott of Auscape. All are members of the Landscape Contractors Association NSW and ACT, www.lca.nsw.com.au

saving roses

Don, my wife has a few roses that are now under about 1200mm of floodwater. They have a couple of branches out of the water but are mostly submerged, and they may be that way for up to two weeks more. Are they recoverable or is it a lost cause?

Nev Houghton, Rockhampton, Qld

Nev, roses are miracle plants. As soon as the soil is dry enough to work (three to five days after the waters recede), aerate the soil with a garden fork. Push the fork 20cm (eight inches) into the soil and lift it out again. Do this gently all over the rose bed then leave the soil for up to a week to dry out. We are sending you a lottery ticket as well. Hopefully something will work for you.

