

GREYWATER FACT SHEET 4

KEEPING YOUR PLANTS AND SOIL
HEALTHY WITH GREYWATER

Reuse of greywater for irrigation on single household properties has the potential to not only save significant amounts of potable (drinking) water, but also to save on the application of fertilisers to gardens and lawns.

ACHIEVING THE RIGHT BALANCE

The level of greywater reuse in the garden needs to be balanced with the amount of water, solids and nutrients that the plants and soil in your garden can absorb. If excess greywater is applied:

- Excess nutrients may run-off or leach through the soil to enter waterways, contributing to algal blooms and other water quality problems
- Soils and plants may become waterlogged and inhibit plant growth
- Soils can become physically clogged with organic and suspended material or damaged by salts in the greywater
- Greywater may contribute to rising watertables and subsequent salinity problems in some urban areas already impacted by urban salinity.

When using greywater on your garden or lawn, you will need to consider the type of household detergents, soaps, or other chemicals you use. Many contain ingredients that could detrimentally affect your plants and soil. The following tips will help to ensure that greywater is used safely.

CHOOSE 'FRIENDLY' DETERGENTS AND CLEANERS

Laundry Detergents

Salt is included in washing powders as filler. There is generally less salt in concentrated powders, and even less in liquids. Minimising the salt content of your greywater is important to prevent soil salinity.

Washing detergents also include phosphorus and nitrogen, which are nutrients necessary for plant growth, so greywater can be substituted for fertiliser and provide phosphorus and nitrogen to your garden and lawn.

The typical nutrient loads that are applied to the soil by irrigating with greywater are very similar to those that are applied by following the directions on common fertiliser packages. The reuse of greywater, therefore, has the potential to significantly reduce the need for fertiliser application on gardens and lawns. The application of nutrients through the irrigation process is also preferred, as the nutrients will be applied more gradually and will reduce the risk of nutrients being washed away during wet weather events.

However, too much phosphorus in greywater can be toxic to some plants, most notably native Australian plants. If your garden has native plants you should try to minimise the phosphorus content of your greywater by choosing a laundry detergent that is low in phosphorus.



- **Do** choose a liquid or concentrated powder washing detergent.
- **Do** Choose a washing detergent that is low in phosphorus and salts.

The salts, nitrogen and phosphorus content of various washing detergents available in Australia can be found at www.lanfaxlabs.com.au.

Soaps

Fats in greywater generated from soaps and fabric softeners can make soil water-repellent.

- The soil will benefit from an application of a soil rewetting agent every six months.

Bleaches and Disinfectants

Bleaches (such as hair dyes and nappy wash), disinfectants (including eucalyptus and tea tree oil) and germicides can detrimentally affect the health of soils by killing soil organisms.

- **Don't** reuse greywater when using cleaning chemicals in the bathroom or laundry, or when using hair dye, disinfectants, germicides or other chemicals, instead, divert the water to the sewer.

MAKING REGULAR CHECKS

In addition to the above tips, you can also undertake regular checks to ensure that the use of greywater is not damaging the health of your soil, lawn and plants. Signs of unhealthy soil, lawn and plants include:

- Damp and boggy ground hours after irrigation;
- Surface ponding and run-off of irrigated water;
- Poor vegetation growth;
- Excessive vegetative growth with reduced fruit;
- Evidence of pests and diseases on plants;
- Unusual odours;
- Clumping of soil; or
- Fine sheet of clay covering surface.

If any of the above signs are identified you should reassess the amount of greywater you are using for irrigation and check that your irrigation distribution system is working correctly.

ADDITIONAL RESOURCES

Further detailed information on greywater reuse is available in the following fact sheets:

Greywater Brochure: How can greywater be used?

Greywater Fact Sheet 1: Greywater diversion devices – Dos and Don'ts

Greywater Fact Sheet 2: Choosing the right greywater system for your needs

Greywater Fact Sheet 3: Irrigating with greywater

Greywater Fact Sheet 5: Maintenance of greywater treatment systems and diversion devices

The full Greywater Reuse Guidelines and these fact sheets can be downloaded from the Water For Life website: www.waterforlife.nsw.gov.au

