Horticulture Learn & Grow
www.extension.uiuc.edu/champaign

Landscaping

Using Greywater in the Landscape

You won't find any vacation brochures about greywater rafting. There isn't any level 5 greywater. Greywater is not nearly that exciting because it's waste water from showers, bathtubs, dishwashers, washing machines and sinks. It's basically any household water other than toilet water. About 65% of domestic wastewater is greywater. That can translate into as much as 40 gallons per person per day. For a family of 4 that's about 5,000 gallons of greywater a month which just about fills a backyard swimming pool.

What is in the greywater varies with its source, but may include bacteria, foam, hair, grease, soaps, detergents, oils and food particles. Sounds gross I know but many times the water is quite clean. Just think of how many gallons we use just waiting to get that perfect temperature for our showers.

When hot dry conditions occur our thoughts may go to all the fresh water or just slightly "used" water that goes down the drain. While greywater doesn't need extensive treatment before it can be used for landscape watering, some precautions should be kept in mind.

- Apply greywater directly to soil not onto plants. Subsurface application is even better.
- Use greywater within 24 hours of collecting it. Do not store it for long periods.
- Avoid using greywater on edible crops especially root crops such as carrots which may be eaten uncooked. Even better use greywater only on ornamentals.
- Use compost and mulch to help decompose contaminants.
- Do not use greywater on acid loving plants such as rhododendrons and blueberries. Greywater tends to be alkaline.
- Disperse greywater over a large area and rotate with fresh water to avoid buildup of sodium salts. One recommendation from the University of Massachusetts is to apply no more than one half gallon of grey water per square foot of soil.
- Do not put greywater into toilet tank.
- Use garden friendly soaps. Most hand and dish soaps and shampoos will not damage plants at low concentrations. Laundry detergents should be free of sodium, boron, borax, chlorine and phosphates. Liquid detergents are generally better than powdered. Avoid laundry soaps with bleaches or softeners.
- Washing machine greywater should not be used if laundry includes diapers or oily rags.
- With greywater from the kitchen sink, avoid using the water if you have washed a lot of greasy pans or if the water contains a lot of food particles.
- Do not use water from automatic dishwashers. It tends to have more sodium, bleach and borax and has a very high pH that can harm plants.
- Use on established plants, not on new transplants.
- Do not use on indoor plants or outdoor plants in small containers.

Written by
Sandra Mason
Extension Educator
Horticulture

UNIVERSITY OF ILLINOIS
EXTENSION
Champaign County
801 N. Country Fair Dr.
Champaign, IL 61821
PHONE:
217.333.7672
FAX:
217.333.7683

In arid regions of the U.S. some people have their plumbing systems set up to reuse greywater for landscape irrigation. Recovering greywater for reuse is not as easy for us. It usually means a bucket brigade or a good old fashioned dish pan to collect rinse water. If you decide to change your home plumbing to allow access to grey water, check with your local health department and a licensed plumber before making any changes.

Tips for Successful Watering

As a general rule garden plants need about an inch of water a week, but that depends on soil type, plant species, and if the plants are well established. Clay soils tend to stay wet longer, but are harder to rewet once they turn to pottery. Anything planted this year and any trees or shrubs planted over the last two years need extra water. New plantings and containers often need water daily. Even plants listed as drought tolerant will need extra water if newly planted. Vegetables and fruit plantings need water especially during fruiting.

Generally new trees purchased as balled and burlapped should be watered with one gallon of water per diameter inch of trunk every 5-7days if rain is not adequate. For example a 2-inch diameter tree should be given 2 gallons. Trees and shrubs purchased in containers will need to be watered more often, perhaps daily, depending on temperature and wind. Established trees (more than 3 years in present location) should be watered once a month during dry periods. Apply water at the dripline, not at trunk.

With lawns it depends on whether you want the lawn to stay green or just alive. Cool season grasses such as Kentucky bluegrass naturally go dormant when it gets hot and dry. Once they are dormant, it's best to leave them there during hot dry periods. Cycling between green-up and dormancy drains plant reserves. A dormant lawn may not look as nice, but is less prone to insect attacks. The lawn greens once cooler, wetter weather returns.

The common question is how much water is enough to keep the lawn alive? Applying at least 1/3 inch of water every 3 weeks should be enough to maintain moisture in the crowns and roots for turf to survive. Use empty tuna fish cans in area covered by sprinklers to determine how long the sprinklers need to run. Remember to mow lawns higher in summer between 2.5 to 3.5 inches and avoid applying nitrogen fertilizer during hot, dry conditions. Limit traffic on a dormant lawn. Water in morning to reduce disease problems and lessen water loss due to evaporation.

Use soaker hoses to efficiently water landscape plantings. Check soil after half hour of soaking to determine proper watering period. An inch of water will wet an average of 6-15 inches of soil, depending on soil type.

Use 3-4 inches of wood chip mulch around trees and landscape plantings to conserve moisture and reduce soil temperatures. Consider plants such as many native prairie plants that once established will tolerate drought periods.

June 21, 2007