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The Myth of Xeriscaping
“Use of drought-tolerant plants reduces residential water consumption”

The Myth

With summer approaching and the prospect of water shortages looming, many of us are searching for alternatives to water-hungry lawns and annuals. In areas where arid summers are typical, the search often leads to xeriscaping, or landscaping with drought-tolerant trees and shrubs (xeriphytes). Not only do these landscapes survive with significantly less irrigation, they harmonize with the natural landscape. It is a pleasure to see these more environmentally appropriate landscapes replace the turf-and-petunia gardens so prevalent in the southwestern U.S. In addition to their drought tolerance, native xeriphytes offer habitat to native mammals, birds, insects, and reptiles. What could possibly be wrong with this picture?

The Reality

By definition, xeriphytes are adapted to drought; this does not mean that they don't like water. In fact, xeriphytes are particularly adept at taking up and storing water when it's available. One study demonstrated that mesquites – a staple of xeric landscapes – use more water than oaks under optimal conditions. The more water the plant stores, the more it can grow; new leaves appear and succulence increases. Many of these xeriphytic plants shift to a more energy-efficient form of photosynthesis if water is not limiting. We've all seen how well cacti and euphorbs grow in a greenhouse or home environment, but under natural conditions growth is much reduced. During the transition from moist to dry conditions, xeriphytic species often shed their leaves to reduce moisture loss and enter dormancy. Drought tolerant species can tolerate drought...but they grow slowly under droughty conditions and often are less aesthetically pleasing.

What this means in terms of water management is that xeriphytic landscapes can induce residents to use more water than they would with traditional landscapes. A study in Arizona several years ago demonstrated that homeowners understood the ecological principles behind xeriscaping, but their desire to have an aesthetically pleasing landscape translated to increased irrigation. Ironically, those homeowners most concerned about water shortages and conservation used more water than their neighbors with traditional landscapes!

For “water-wise” landscapes to be truly effective in conserving water, homeowners and other landscape managers need to develop a different philosophy of landscape aesthetics. No plant will grow vigorously without adequate moisture, but drought-tolerant species will survive prolonged droughts. We need to be able to accept the bad – the leaf shedding and reduced growth – with the good.

The Bottom Line

- Any newly-installed tree or shrub, drought tolerant or otherwise, requires adequate irrigation to establish a sufficient root system.
- Established, drought-tolerant trees and shrubs can survive with less water than typical landscape plants.
- If water is available, many drought-tolerant species use more water than typical landscape plants.
- A drought-tolerant, water-conserving landscape is not going to grow as quickly or vigorously as the same landscape under increased irrigation.

For more information, please visit Dr. Chalker-Scott's web page at <http://www.theinformedgardener.com>.