

Trees Are Good, Grass Is Better

By TURF RESOURCE CENTER

Did you know?

- To a greater extent than trees, turfgrass acts as an agent to purify contaminants and control soil erosion.¹
- Lawns are very efficient oxygen producers. They are about three times more effective than trees. And, their season to produce oxygen is much longer than trees.²
- Another almost counter-intuitive assertion comes from Ron Barnett of American Plant Food, who states that turf produces more oxygen per square foot than "anything else" and replacing it with a patio or a single tree would be a net loss to air quality.³
- A typical 18-hole golf course produces enough oxygen to support 4,000 to 7,000 people. That means a state like Georgia for example, with its 430 golf courses, produces enough oxygen for more than 1 million people.⁴
- While carbon sequestration exists on tees, it was not nearly as much as occurs on the fairways and greens, and the researchers are still investigating the reasons for this difference.⁵
- A University of Manchester study has calculated that a mere 10 percent increase in the amount of green space in built-up centers would reduce urban surface temperatures by as much as 4°C (7.2°F). This 4°C (7.2°F) drop in temperature, which is equivalent to the average predicted rise through global warming by the 2080s, is caused by the cooling effect of water as it evaporates into the air from leaves and vegetation through a process called transpiration.⁶

"As the concern about global warming continues to escalate, local municipalities, state agencies and governments across the globe are attempting to address environmental concerns with the best of intentions. But some of their decisions, though well intended, may actually create unpleasant consequences in the not to distant future," according to Turf Resource Center.

An example of how some of these programs have evolved is evident by the "Cash for Grass" program introduced by the Victor Valley Water District in Victorville, California. In their effort to encourage water conservation they now offer incentives to homeowners who actually convert their natural turf-



grass to artificial turf.⁷ Of course, there are other numerous programs in different parts of the country that offer varied incentives to remove turf and replace it with native plants or plants considered more drought tolerant. In some cases trees are often encouraged but the use of turfgrass is discouraged. Could there be environmental consequences to such decisions? Why do some government decision makers view trees as being sacred and yet perceive grass as being bad? Perhaps it's as much a matter of misinformation as it is education according to the Turf Resource Center.

Dr. Sylvan Addink, a Certified Professional Agronomist, offered the following comment as part of his executive summary for - *Trees Are Sacred, Grass Is Bad, Why?* "History is dotted with examples of worthy causes which have been promoted by the use of questionable scientific data and assumptions. Unfortunately, the errors are often uncovered after it is too late to correct the environmental problems which occur. In many urban water conservation programs there is a perceived difference in the benefits and costs of trees versus grasses. Trees are promoted while all types of grasses are restricted or targeted for removal. This perception is not fully based upon scientific fact but upon impressions and assumptions such as those we get when we see irrigation water running down the gutter in front of our homes each morning."

1. Anderson, K. M. (2004, June). An Investigation into What Planning Departments and Water Authorities Can Learn from Eleven Communities' Waterwise Landscaping Ordinances. Degree of Master of Community and Regional Planning, Department of Planning, Public Policy & Management, University of Oregon.
2. <http://www.gardenersnet.com/index.htm>.
3. http://www.gardenrant.com/my_weblog/2006/07/hot_gardening_n.html
4. http://www.georgiaag.com/did_you_know.htm.
5. Ron Follett of ARS' Soil-Plant-Nutrient Research Unit in Fort Collins, Colo., and Yaling Qian of CSU studied 16 soil records from golf courses in the Denver area, some of which go back 45 years. They found that carbon sequestration lasts for up to 31 years in fairways and 45 years in greens, after which the rates slow or become negligible.
6. Dr. Roland Ennos, biomechanics expert, Manchester Faculty of Life Sciences; Professor John Handley and Dr. Susannah Gill in the School of Environment and Development, University of Manchester as published in the journal "Built Environment (June 2007)
7. Victorville Daily Press, Victorville, CA (June 2007) and Victor Valley Water District website - <http://www.vvwater.org/conservation/cfg.htm>