Human Health Benefits

Physical & Mental Health and Relief from Stress

"Hospital patients who were provided with an outdoor view of nature recovered more quickly than patients whose rooms viewed a hospital wing."
***University of California**, Riverside Turfgrass Research Program*

"Two surveys of parents of children with Attention-Deficit/Hyperactivity Disorder have shown that performing activities in green settings can reduce the symptoms of AD/HD."

Faber Taylor, A., Kuo, F.E. & Sullivan, W.C. (2001). "Coping with ADD: The Surprising Connection to Green Play Settings" Environment and Behavior, 33(1), 54-77. and **Kuo, F.E. and Faber Taylor, A.,** (2004). "A Potential Natural Treatment for AD/HD: Evidence from a national study." American Journal of Public Health, 94 (9), 1580-1586

Reduced Pest & Allergy Related Problems

"Exposure to a number of serious human diseases is facilitated by insects . . . a closely mowed lawn around residences offers a less favorable habitat for unwanted nuisance insects and disease vectors."
(**Cloppton and Gold,** 1993)

Turfgrass also minimizes allergy-related pollens that cause human discomfort and potentially serious health concerns to susceptible individuals. Common allergies such as tree pollens, dust mites and molds are prevalent in everyday life. Regularly mowed turfgrass does not produce seed and therefore minimizes the likelihood of some allergy-related problems that are more likely with tall grasses and other plants.

Noise Abatement, Heat & Glare Reduction and Productivity

In their 2002 newsletter the University of California, Riverside Turfgrass Research Program, carried the headline, *"Turf Protects the Environment, Benefits Health"*. They reported that psychologists who studied "people-plant" interactions quantify their results by testing blood pressure and heart rate to document the health benefits of "nearby nature" (turf and mixed landscapes and natural settings).

Economic & Community Benefits

Improved Property Value

"While many kinds of home improvement add value to a home, only landscaping appreciates over time. So like a fine wine, good landscaping matures and grows in value, adding dollars to a property's bottom line long after the contractor leaves the site."

"Landscape Plant Material, Size, and Design Sophistication Increase Perceived Home Value." Behe, B., et al. Department of Horticulture, Michigan State University, Journal of Environmental Horticulture, 2005.

Fire Barrier

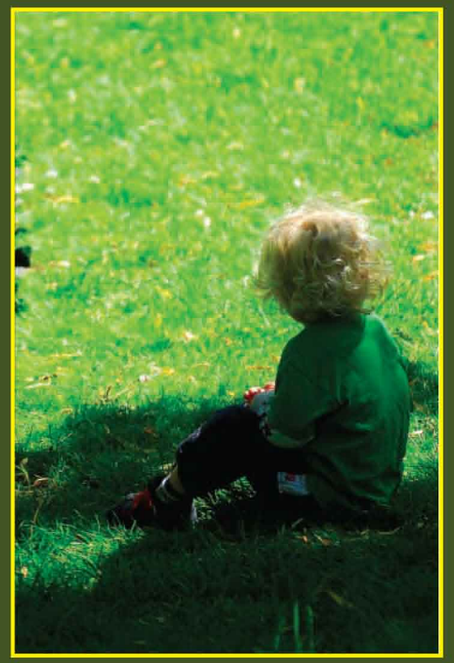
In January 2005 a new California state law became effective that extended the defensible space clearance around homes and structures from 30 feet to 100 feet. Proper clearance to 100 feet dramatically increases the chance of a house surviving a wildfire and provides a firefighter safety zone.

Visual Appeal & Community Pride

Comfortable Living Space Recreation & Social Harmony

Turfgrass Lawn Guide

Benefits of Turfgrass

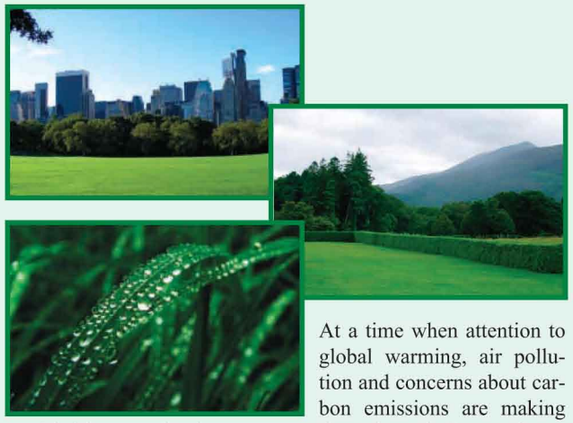


Environmental
Human Health
Economic
Community

The Lawn Institute

Benefits of Turfgrass

Environmental Benefits



At a time when attention to global warming, air pollution and concerns about carbon emissions are making worldwide news; it's important to take a closer look at turfgrass and the many environmental, health, economic and community benefits it has to offer.

"The strategic use of turfgrass is the most sensible and economically feasible approach to countering the greenhouse effect in urban areas."

Dr. Thomas L. Watschke
Pennsylvania State University
"The Environmental Benefits of Turfgrass and Their Impact on the Greenhouse Effect"

Soil Erosion Control

"Turfgrasses are relatively inexpensive, durable groundcovers that protect our valuable, nonrewable soil resource from water and wind erosion."

Dr. James B. Beard
Professor Emeritus
Texas A&M University
Council of Agricultural Science & Technology
January 2006

Storm Water Runoff Reduction, Ground Water Recharge and Soil Restoration

"One of the key mechanisms by which turfgrasses preserve water is their superior capability to trap and hold runoff, which results in more water infiltrating through the soil turfgrass ecosystem."

Dr. James B. Beard
Professor Emeritus
Texas A&M University
Council of Agricultural Science & Technology
January 2006

"Although the roots of turfgrass generally aren't as deep as the roots of prairie plants, they have a higher plant density which affects infiltration and decreases water runoff and increases percolation."

Dr. John Stier
Horticulture Professor
University of Wisconsin (Madison) June 2007

"An extremely important function of turfgrasses is soil improvement through organic matter additions derived from the turnover of roots and other plant tissues."

Dr. James B. Beard
Professor Emeritus
Texas A&M University

Dust & Air Pollution Control

Graphic: **University of Minnesota**
Sustainable Urban Landscape Information Series

"Turfgrasses trap an estimated 12 million tons of dust and dirt released annually into the atmosphere."

Dr. Thomas L. Watschke
Pennsylvania State University

Carbon Retention & Storage

"Nearly a ton of carbon per acre per year is stored in the soil of golf course fairways and greens."
Ron Follett of Agricultural Research Service (ARS) Soil-Plant Nutrient Research Unit in Fort Collins, CO., and **Yaling Qian** , Colorado State University

"Lawns are a carbon sink. If people recycle grass clippings, leaving them to decompose on their lawn, the U.S. lawn area could store up to 37 billion pounds of carbon each year."

Cristina Milesi
NASA Ames Research Center- 2006

Oxygen Production

"55 square feet of turfgrass provides enough oxygen for one person for an entire day."
Dr. Thomas L. Watschke
Pennsylvania State University

Cooling Effect

"The front lawns on a block of eight average homes have the cooling effect of 70 tons of air conditioning!"
Maryland Turfgrass Survey
1996 - An Economic Value Study

Heat Dissipation

"Turfgrass plays an important part in controlling our climate. Grassed surfaces reduce temperature extremes by absorbing the sun's heat during the day and releasing it slowly in the evening, thus moderating temperature.

Grass plants absorb some solar radiation to fuel the photosynthesis process. Roughly 50% of the sun's heat striking the turf may be eliminated through this transpirational cooling process."

Maryland Turfgrass Survey
1996 - An Economic Value Study

Wild Life Habitat

"Typically, 1.7 times more area on a golf course is used for natural habitat than is used for golf."
Dr. James B. Beard
Texas A&M University
Dr. Robert L. Green
University of California - Riverside
"The Role of Turfgrasses in Environmental Protection and Their Benefits to Humans"

Ponds, lakes and wetlands are very desirable features as used in parks and golf courses because they create aquatic habitats, as well as diversity in visual landscape. A study of golf courses and parks in Cincinnati, Ohio has shown conclusively that perching songbirds, which include more than half of all bird species, benefit from golf courses, even to the extent that golf courses may be described as bird sanctuaries.