

TURFGRASS BENEFITS

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The following article is adapted from a presentation on Turfgrass Benefits given at the 1992 Iowa Turfgrass Conference.

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Over the past several years, lawns and lawn care have taken a lot of bashing for their perceived negative environmental impacts. Those concerns include the use of fertilizers and pesticides and their potential impact on the environment, perceived poor adaptation of our turfgrasses to this area—we should be using “better adapted” native grasses—and perceived excessive inputs to maintain a healthy green lawn. While inappropriate and sometimes careless lawn care practices can create environmental problems, the turfgrass community does provide many benefits. These are beginning to be borne out and documented through various research studies.

Even though we may not stop and ponder how that lawn area in front of our house or the golf course down the street or the grassy areas of the park where our kids play influence our quality of life, the turfgrass community does have a variety of positive impacts. Turfgrass benefits can be broken up largely into three major areas of benefits. They are environmental modification, economic and aesthetic benefits. The following article will review several of the major turfgrass benefits associated with these different areas.

ENVIRONMENTAL MODIFICATION

Environmental modification can be broken down into modifications which occur above ground and those occurring or influencing processes which occur below ground. To begin, we will look at several of the beneficial effects of turfgrasses on the above ground environment.

During the process of photosynthesis, turfgrass plants absorb carbon dioxide and in the presence of water and sunlight energy combine these into organic compounds used for growth. Oxygen is the by-product of this process and is released back to the atmosphere. It has been reported that 25 square feet of healthy turf is all that is required to meet the oxygen needs of one person for one day.

In addition to absorbing some of the solar radiation, grass plants scatter light and radiation. Grasses cool themselves and the surrounding area through evapotranspiration. Evapotranspiration is the water lost through the grass plant to the atmosphere and evaporation of moisture from both plant and soil surfaces. Each individual grass blade can serve as an evaporative cooler. It has been reported that an acre of turf during a summer day will lose about 2,400 gallons of water through this process. Other reports indicate that roughly 50% of the sun's heat may be eliminated by transpirational cooling, that is water loss through the grass plant itself. Thus our turfgrasses provide a form of natural air conditioning for our environment.

Excessive weed growth and algae blooms are undesirable water quality traits for aesthetic as well as recreational use of our water resources. However, the presence of lawns surrounding or adjacent to water resources are often accused of contributing inordinately to the demise of water resources.

A dense turfgrass cover can significantly reduce or nearly eliminate runoff from a site. In fact, research has borne this out and shown that a dense turfgrass cover can reduce runoff to nearly 0. The turfgrass cover slows the rate of flow over the surface allowing much greater chance for the water to infiltrate into the soil. As will be discussed later, this same turf cover, through improving the surface soil structure, can actually improve the rate of water infiltration into the soil.

Other environmental modifications occurring above ground include noise reduction, glare reduction, improved air quality, fire retardation and rodent reduction around a home. Reports suggest that grasses as well as other landscape materials can reduce noise levels by as much as 20 to 30 percent. This can be especially beneficial in the more urban areas where noise levels are increasing and the need to soften that noise is more important. Also, the soft, green surface of a well-maintained lawn significantly reduces glare compared to the bright and shiny building materials, vehicles, other paved surfaces and signage. Air quality is improved by the entrapment of dust particles as well as the stabilizing of the surface soil to prevent soil particles from being carried up into the atmosphere by winds. Dust and smoke particles trapped by the grass leaves are moved from the leaf surface down to the soil by condensation, rain or irrigation. These materials then become part of the dynamic turf/soil environment. Reports suggest that maintaining lawn areas around buildings creates a buffer zone or fire break that will not sustain a fire like that of dense woody vegetation. Also, lawns mowed at about two inches are not a safe home for many small animals. As they move out of the lawn areas into taller cover, rodent movement into the house or building may also be reduced.

In addition to the above ground benefits of our turfgrasses, they also provide an array of benefits to the soil below ground. Turfgrass roots penetrate into the soil and hold soil particles against wind and water erosion. Grass plants have a very dense, fibrous root system which allows them to bind soil more effectively than many other plants. These roots also loosen the soil and, through their being sloughed off, they, along with other dead and decaying grass plant parts, contribute to soil organic matter accumulation. This in turn contributes to the improved infiltration and filtering effects of the turf system. In fact, some areas are using effluent water for irrigation of turf areas to “clean-up” the water as well as meet plant water requirements. It has been reported that a healthy turf stand can absorb rainfall six times more effectively than a wheat field and 4 times more effectively than a hay field.

Other soil modifying effects include: improvement of soil biodegradation processes, encouragement of healthy soil building processes, improvement of overall soil structure and improvement of overall turf competitiveness. These processes all ultimately effect the aboveground portions as well, resulting in a healthy turfstand providing maximum benefit to the site.

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ECONOMIC BENEFITS

In addition to the benefits of above and below ground environmental modifications, turfgrasses and lawn areas also provide various forms of direct economic benefits to both the individual and community. One of the more important economic benefits is the added value to a business or residential site. It has been reported that a healthy, well-maintained lawn can add as much as 15% to a homesite's value. Or, another way of looking at it is that the recovery value for lawns and landscape investments is 100% to 200%. One report indicates that a well-maintained landscape adds 6% to commercial property, which also plays a role in helping sell the property.

As was mentioned earlier, controlling runoff into our lake systems helps slow down the process of eutrophication as well as decreasing the number and intensity of algal blooms. Turf plays a significant role in preventing run-off, consequently reducing clean-up costs which are often borne by the lake association residents and/or tax-payers generally. Thus, there are some indirect economic and improved water quality benefits associated with maintained lawn and turf areas.

Other turfgrass economic benefits include increased employment opportunities and creation of jobs, generation of tax revenue and generation of recreation revenue which may be used in the community or is donated to local and national charities. Well-maintained turf athletic fields provide a greater cushion effect for athletes, potentially reducing the number of injuries and costs associated with their recovery. The establishment of turfgrasses can be accomplished almost instantly through the use of sodding. Consequently, the environmental benefits and economic benefits begin almost immediately once the sod is installed. Once established, most lawn areas do not require intensive management to be healthy and competitive thus reducing resource inputs to that site.

63rd GCSAA Conference

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Collier Township, Pennsylvania, received the award. The next awards to be handed out were for the chapter publications produced by GCSAA-affiliated chapters. Also announced during the awards ceremony were winners of the GCSAA's second Turfgrass Students Essay Contest.

Now came the highlight of the evening, the keynote speaker Terry Bradshaw. Terry gave an inspirational, motivating, humorous and family-oriented talk. Listening to Terry and watching him act out the roles of being a quarterback, being a color analyst and, most of all, being a family man was inspiring. Terry suggested that the priorities we keep and how we keep them are important goals in our lives.

On Friday the concurrent sessions took place. Among the most widely-attended session was the session with Jay Feldman, coordinator of the National Coalition Against the Misuse of Pesticides, Victor Kimm of the EPA and John Stossel of ABC-TV's 20/20. During the course of the debate, sounds of dissatisfaction were heard among the crowd of more than 1,000 who had gathered to hear these talks. After this spirited debate was another full afternoon to take in several topics

AESTHETIC BENEFITS

Aesthetic benefits are also important, not only to the community but the individual as well. It should not be considered some sort of misaligned desire on the part of an individual to establish and care for a nice lawn area on their property. After all, a person's gardening desire to grow a bountiful vegetable or flower garden is no more or less appropriate than an individual's desire to have a nice lawn.

Trees and shrubs provide the green vertical dimension in landscapes. Lawns provide the carpet on which these plantings lie. A well-maintained lawn creates an inviting view for passers-by and supplies the perfect backdrop for other landscape elements. The grassy areas confer coherence to the landscape by pulling the design together. Through mowing, lawns can be maintained at relatively uniform heights. This is often viewed as adding a sense of harmony to the landscape setting.

Lawns and landscapes also contribute to what might be termed therapeutic value to humans. That sense of having some nature around often has a somewhat settling effect on an individual's outlook and attitude. This may also contribute to physiological well-being through stress reduction and relaxation. In addition, lawn care practices help promote good health by providing opportunities for exercise such as walking, bending and lifting. The softer, resilient cushioning attributes of turf allows outside activities to be safer and more enjoyable. With the advent of various nature enhancement programs becoming available to golf courses, users of golf courses can enjoy an enriched natural environment while also enjoying their game of golf. This hopefully will involve even more people, young and old, who may use the opportunity to play a round of golf as an *excuse* to take a "nature retreat" at the same time.

As such, we have many things to be positive about our turfgrasses and turfgrass management practices to counter the many different "turf bashing" perceptions that are around us. Being responsible turf managers and sensitive to environmental concerns when caring for our turf areas will go a long way toward building a positive image for turf and the turf industry.

via the concurrent sessions.

With the opening of the trade show scheduled for Saturday morning — and remembering just how big it really is — a thought comes to mind — good walking shoes. Walking the entire trade show in one day probably will qualify as an Olympic event in the near future, but, for now, look at it as a chance to ask the serious questions to the manufacturer of either new equipment or to see what is on the horizon in the forms of new plant protectants. This year a lot of credit should go to Steve Garske, Dan Miller and John Wiley for organizing the hospitality night at the Hotel Royal Sonesta I even heard that they had ordered the weather for the evening. The food and the people in attendance at the open air courtyard lent to a very special evening. About 200 members attended this function.

Sunday morning at the Hilton, the delegates' caucus took place to decide who the MGCSA would support for the upcoming GCSAA election. Rick Fredericksen, CGCS, of Woodhill C.C., and Jim Nicol, CGCS, of Bunker Hills G.C. were the representatives sent to the election. Adding input to the meeting were Bill Johnson of Edina C.C. and Tom Fischer, CGCS, of Edinburgh G.C.. Joining the meeting was Paul McGinnis, CGCS, of Union Hills C.C., Sun City, Ariz. —Dale Wysocki, Editor