

ARTIFICIAL VS NATURAL TURF



Office 319-842-2165

Fax: 319-842-2173

www.bgsod.com

www.facebook.com/bluegrassenterprises



Separating Myths from Facts

While artificial turf has made improvements, artificial turf manufacturers continue attempts to simulate the exceptional playing surface that only natural grass provides. No matter what you call it - Artificial Turf, Synthetic Turf, Plastic Grass - it is a fact that artificial surfaces lack most of the benefits provided by natural turfgrass. Many athletes, coaches, parents and spectators take for granted the significant benefits of natural grass.

Modern Natural Grass fields have also made many improvements in recent years. Natural grass fields of yesterday that were often muddy, rough or simply unplayable have been replaced with modern turfgrass varieties developed for greater durability, even under heavy traffic conditions, and with significantly better drainage systems.

Choosing the best playing surface for our children and athletes should not be taken lightly. Anyone interested in a sustainable future should be fully informed about the benefits of natural turfgrass to our ecosystem and concerned about the potential negative impact of using synthetic surfaces. As you turn this page over, you'll find information published by the Turfgrass Resource Center and Turfgrass Producers International that we feel is important for people to know when deciding what is their best choice for their playing surfaces.

ARTIFICIAL VS NATURAL TURF

Advantages of Artificial Turf:

Can withstand heavy use, even during or immediately after a rainstorm

Disadvantages of Artificial Turf:

Dangerous to Players - Temperature

Artificial Turf is hot... DANGEROUSLY hot. In a Brigham Young University study, they found that the temperature of synthetic turf averaged 37°F higher than asphalt and 86.5°F higher than natural grass. A University of Missouri study found similar results. The hottest surface temperature observed in the BYU study for artificial turf was 200°F. They also found that when the temperature raised to 122°F it takes less than 10 minutes to cause injury to the skin.

You CANNOT lower the temperature of artificial turf for longer periods simply by watering it. The same BYU study found that watering an artificial turf surface can temporarily lower the temperature significantly but that the temperature rebuilds to dangerous temperatures within 20 minutes.

Dangerous to Players - Joint Injuries

In his published study "Synthetic Turf Playing Fields, Present Unique Dangers," Brad Fresenburg of the University of Missouri explains that many injuries are due to greater levels of torque, velocity and traction found in conjunction with artificial turf. After performing tests on Missouri's own Faurot Field showing that potential pressure on joints and bones is increased from "the inability of a fully planted cleat-wearing foot to divot or twist out, an action that releases force."

The NFL Players Association repeatedly renounces synthetic turf in its biannual polls because of its tendency to aggravate injury.

Dangerous to Players - Toxic Chemicals

Crumb rubber is used in the base below the surface of the artificial turf carpet - "Inhalation of components of tire rubber or dust particles from tire rubber can be irritating to the respiratory system and can exacerbate asthma." - Dr. Joseph P. Sullivan in an assessment of Environmental Toxicity and Potential Contaminations from Artificial Turf using Shredded or Crumb Rubber.

Perhaps the most frightening observation noted by Dr. Sullivan is the potential for mutation or cancer causing effects when people are exposed to used rubber tire particles. He notes that the exposure of human cells in lab cultures to rubber dust has proven to be toxic, and that not one but three chemicals used in tire production proved positive in tests for mutagenicity, meaning they have the potential to cause human cancer.

Two stadiums were closed in New Jersey in 2008 by the recommendation of the New Jersey Department of Health after it found high levels of lead in the stadium's nylon-fiber artificial turf. The non-profit organization, Environment and Human Health, Inc, as well as state legislators in California, New York, New Jersey and Minnesota have called for a moratorium on synthetic surfaces. The U.S. Consumer Product Safety Commission is investigating potential hazards from lead in artificial turf sports fields.

Expense

Synthetic Turf - Please note that synthetic fields need to be replaced every 8-10 years - a cost of \$500,000+ each time (this does not include the cost of removal and disposal of the previous surface). Typical Installation Cost: \$850,000 - \$1,000,000

Sand Based Natural Grass Field - These fields are the proven performance standard for a good athletic field. A sand based field will require a uniform size and structure (medium sand, semi-angular) of sand particles. The sand percentage will be 95-99% with 1.0 to 2.5% organics. It has very little silt or very fine sand. This field will drain at approximately 10 inches or greater per hour and have good resistance to compaction. Typical Installation Cost: \$250,000 - \$350,000

Factoring in Maintenance Costs - We would be remiss if we didn't factor in ongoing maintenance costs to each of these types of fields. Maintaining a natural grass field will generally (not always) require a higher cost. However, once you factor your initial costs and replacement costs back in, you'll find that synthetic turf is still more expensive. The SportsTurf Managers Association has published a 19 page guide that is a good beginning for a general comparative study. Here is what they found:

Synthetic Turf w/ infill	\$7.80 - \$10.75 per square foot
Natural Grass w/ sand and drainage	\$6.50 - \$7.95 per square foot
Natural Grass w/ sand cap	\$3.50 - \$5.25 per square foot
Natural Grass w/ native soils	\$2.50 - \$5.25 per square foot
Natural Grass w/ on-site native soil ...	less than \$1 per square foot

It changes the game

The Scottish Premier League banned synthetic pitches for competition matches. The UEFA (Union of European Football Associations) ordered that the 2008 European Champions League final must take place on natural grass.

Dangerous for the environment.

Unlike natural grass, artificial turf does not produce oxygen. And, disposing of artificial turf after it becomes worn out will fill up landfills with slow decaying and harmful materials.

Advantages of Natural Grass:

Natural Grass can withstand heavy use, even during or immediately after a rainstorm, given a properly installed drainage system and use of top turfgrass varieties.

Natural Grass is great for the environment.

Gallaudet University found that a 2.25 square meter turfgrass area supplies enough oxygen for one person for one day.

Natural grasses absorb pollutants from the air. Progress has been made in upgrading our air quality but recently the levels of nitrogen oxide, sulfur dioxide and particulate matter are increasing. Plants absorb gaseous pollutants into their leaves and assimilate them, helping to clean the air and create oxygen.

Players prefer it.

Of the 1,511 active players who responded to a 2006 survey conducted by the NFL of their own players, almost 75% responded that they preferred playing on a natural grass surface.

27 of the 30 MLB stadiums have natural grass.

Its a natural air conditioner - On a hot summer day, lawns will be 30 degrees cooler than asphalt and 14 degrees cooler than bare soil. The front lawn of a home has the cooling effect of about 9 tons of air conditioning (the average home uses 2.5 tons per 1500 square feet). The cooling effect of irrigated turf reduces the amount of fuel that must be burned to provide the electricity which powers the air conditioners.