

Cost and safety are driving concerns for public entities when considering the options available for construction new playing surfaces. Leaders must demonstrate that they are using tax dollars responsibly while also choosing the best, safest surfaces available. Research studies consistently demonstrate that natural surfaces are less expensive to construct and maintain than synthetic surfaces over the life of the field while providing a safer playing surface.

For more information about the benefits of natural turfgrass on your playing fields, please contact:
Michigan Sod Growers Association

<http://michigansod.org/>
or

Turfgrass Producers International
www.TurfgrassSod.org
847-649-5555

Research shows that natural turfgrass relieves stress and contributes to the enjoyment of life.

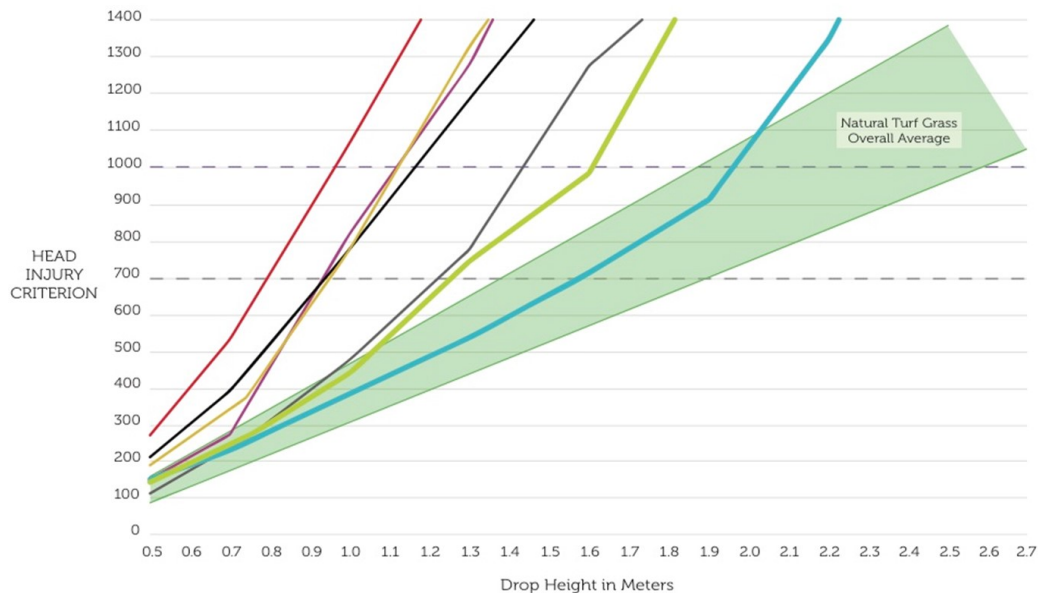
Well maintained natural turfgrass athletic fields provide low cost, safe playing surfaces for athletes.

Fields with good quality turfgrass cover have higher traction, cushioning, and resiliency, and lower surface hardness, reducing the probability of injury in contact sports.

Natural Turfgrass: Make the Smart Choice for Your Community



Natural Turf vs. Synthetic Surfaces: A Summary of Recent Research Data



The chart on the left illustrates how natural turfgrass (shaded area) performs in head injury testing versus synthetic surfaces (solid lines) in impacts from various heights (measured in meters along bottom of chart).

The numbers on the left side of the chart represent the head injury criterion (HIC) scale. The HIC is a measure of the likelihood of head injury arising from an impact.

A surface with a head injury criterion (HIC) of 700 involves a 5% risk of a severe head injury while an HIC of 1,000 raises that risk to 16%.

This chart shows how the risk of severe head injuries rises much faster at lower heights on synthetic surfaces versus natural turfgrass. These studies were conducted at the University of Tennessee Center for Athletic Field Safety.

Oregon State University 2017 Cost Comparison Data

Surface Type	Average Total Cost Per Sq. Meter	Average Annual Cost Per Sq. Meter Over Life of Surface
Synthetic Field Surface	\$163.00	\$20.10
Natural Grass Surface	\$45.60	\$10.10

Carolina Green Corp. Athletic Field Construction

Natural turf field 380'x225' (85,500 ft ²), consisting of modified soil, drainage, irrigation and sod; one-time construction cost	\$300,000	Synthetic surface field 380'x225' (85,500 ft ²), consisting of standard construction, engineering, storm water management, permitting, stone base, drainage, and artificial surface; one-time construction cost	\$700,000
Yearly maintenance, includes topdressing, fertilization, weed control, and aerification @ \$15,000 per year	\$120,000	Yearly cleaning with G-max testing @ \$3,500 per year	\$28,000
Replace 30,000 ft ² of sod down the middle of the field each year @\$30,000 per year	\$240,000	Add 10 tons of rubber every four years @ \$10,000 per application	\$20,000
Strip sod from field, clean off organic layer over drainage lines, re-grade, and sod; work recommended after eight years	\$125,000	Complete field replacement at eight years	\$400,000
Natural turf field cost for eight-year life of field	\$785,000	Synthetic surface field cost for eight-year life of field	\$1,148,000