



# Natural and Synthetic Sports Surfaces: A Comparative Discussion

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A huge number of municipalities and schools across the country have decided to go in the direction of synthetic surfaces and although I acknowledge the benefits of this choice I also have a few major concerns with it.

Since the beginning of time and the invention of outdoor sports, athletes have played on natural surfaces. The reason wasn't so much a choice by the athlete or the organizer, but by Mother Earth and the environment itself. Turf is the world's most resilient natural surface and covers more than 46.5 million acres of soil in the United States alone. Turfgrass is everywhere; city yards, country fields, recreation parks and golf courses, and the list goes on and on. Most people don't even realize that they are benefiting from turfgrass every day. Turfgrass cleans the air of pollution by converting carbon dioxide to oxygen; in fact, a 50 ft by 50 ft patch of lawn produces enough oxygen per day for a family of four, and the average golf course produces enough oxygen per day for up to 7,000 people! Turfgrass also acts like the atmosphere's natural air conditioner; eight home lawns can produce the same effect as 70 tons of air conditioning. Turf controls dust, noise, and filters rain and surface water of pollutants before it enters our ground water. These are just a few of the many environmental benefits of natural turf and make it quite obvious why it became the world's most highly used surface.

Besides the environmental benefits there are a number of athletic and safety benefits of natural turf as well. Being an athlete since I was a young boy and competing on both natural and synthetic surfaces, I believe I have a good perspective of the differences between the two. I will start off by comparing playing surfaces. I remember playing soccer as a kid on natural fields riddled with pot holes and bumps; the ball would bounce unexpectedly, people would step in divots and twist their ankles, and when it rained it would sometimes turn into a mud pit making the surface undesirable for play. After the game my father and I would drive by the synthetic fields that were newly installed in West Vancouver. They seemed picture perfect in the exact same conditions, they had no mud or potholes. I remember thinking to myself that I would much rather play on a surface that is exactly level and unaffected by rain. It wasn't until my teen years, when the sports I was involved in got more competitive, that I started to play on synthetic surfaces. To my surprise it wasn't at all what I had imagined. The famous quote "Don't judge a book by its cover" definitely applies in this case. Although the surface was level, it was extremely hard and fast. It also contained millions of little black rubber pellets that would fill your cleats and I can't even explain the pain involved when you would take a fall on the rubbery surface. I would sometimes come home after games



with all the skin missing off my arms from “rug burn”. When we played in the heat, the temperature was almost unbearable and considerably hotter than a natural turf surface.

Once we had the experience to compare, my friends and I agreed unanimously that a natural turf surface that was maintained properly, with good drainage, regular mowing, irrigation, and an efficient fertility program was a much more desirable surface on which to play. Natural turf is cooler on hot days, the ball rolls a little slower and more naturally, grip is better and it hurts a lot

less to take a fall. After researching I found that my friends and I are not alone with this opinion. Almost all European soccer stars won't even consider playing on a synthetic surface because they believe they are more prone to injury. Some stadiums that were converted to synthetic turf in the NFL are now switching back to natural turf because the players unanimously voted that they feel much safer playing on a natural surface.

Now I don't want to sound like I am anti-synthetic. I believe that these fields do serve some purpose; however, I do feel that the

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cons outweigh the pros. The first mistake that people often make when considering a synthetic field is thinking that synthetic fields will take care of themselves and have much lower maintenance costs, but this is completely false. Synthetic fields, in fact, have higher maintenance costs than a natural surface. They have to be cleaned regularly for blood, spit, feces, and bacteria as well as regularly top dressed with black rubber pellets, an ongoing cost. They still require irrigation to control temperature. One benefit of a synthetic field is that they can be used much earlier in the season when turf fields are still dormant or vulnerable to damage. Synthetic fields can handle heavy traffic for youth sports but I believe with the right species of grass, fertility programs, overseeding and maintenance programs, natural surfaces can handle the same traffic and have similar stress tolerance with much more environmental benefits.

With the world's "green" movement I do not see how synthetic fields are a move in the right direction for North America. One thing about synthetic fields often overlooked by schools and municipalities is the disposal of the left over material. A synthetic field has a life span of anywhere between six and twelve years

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depending on the use. The cost to remove and dispose of one of these fields can be upwards of \$500,000, a cost often forgotten when fundraising or budgeting for the field. Synthetic fields have not been around long enough for the industry to develop a recycling program, and the mass amount of rubber is extremely hard to get rid of. I've read articles about high schools in the United States that did not have the money to dispose of their synthetic field. Their only option was to roll them up and stuff them in their school tennis courts filling them to the rim. This restricts kids from using those facilities, is a terrible eye sore, and is a lingering cost and blatant reminder that one day will have to be dealt with.

When it comes down to it, I really think that it is a no brainer. I understand the benefits of synthetic fields, but if it is possible in our climate to use natural surfaces why would we go in that direction? My generation's goal is to try and reverse what the world has been doing in the past century to our environment with pollution in terms of the industrial revolution, mass production, and our carbon footprint. As a turf manager I can do my part by simply growing healthy turfgrass and feel that it is in my best interest and is my responsibility to pass on my views and opinions on this subject. If we want to make a change and be better citizens for our atmosphere and the planet, we are going to have to go in a different direction than making fake grass. •