Opinion

MY VIEW

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The following two perspectives were written in response to the cover story, "Taking Synthetic Turf to Task," published in the Nov. 28, 2007 Nantucket Independent

BULLISH ON ARTIFICIAL TURF

My View

By Darren Gill
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The natural grass industry is big business, with over $40 billion in annual sales in the U.S. They have a very slick lobby group, specifically created to attack artificial turf which they recognize as a serious threat to their business. Their business, by the way, includes some 80 million pounds of herbicides and pesticides sold each year to grow and maintain natural grass in the U.S.

These are intentionally toxic and known carcinogens with dangerous health risks linked to central nervous system disorders, liver and kidney damage, birth defects, childhood leukemia, brain cancer and soft tissue sarcoma. Other childhood malignancies associated with pesticide exposures include neuroblastoma, Wilms tumor, Ewings sarcoma, non-Hodgkins lymphoma, and cancers of the brain, colorectum, and testes. Pesticide by-products were found in 93 percent of urine samples taken from children ages three to 13, and 99 percent of Seattle area children tested, ages two to five, had detectable levels of residues in their urine.

The U.S. Geological Survey found that 96 percent of all fish analyzed in major rivers and streams contained residues of one or more pesticides at detectable levels. Pesticides have been identified as a potential cause of amphibian declines and deformities and have been implicated as one of the reasons that wild and managed pollinators are disappearing at alarming rates. Studies of major rivers and streams have documented that one hundred percent of all surface water samples contained one or more pesticides at detectable levels.

Pesticides, especially herbicides, have contaminated drinking water throughout the country. Removing pesticides from contaminated water supplies is difficult, expensive, and not always successful. A California study found that among 600 water suppliers that have detected pesticides in their water sources, only 40 use treatment facilities that effectively reduce concentrations of pesticides.

We all need to know a lot more about the very 'un-natural' chemicals that are used to grow and maintain what is called 'natural' grass."

While the discussion on PAHs, heavy metals and any potential carcinogens must continue to be addressed on a regular and consistent basis, this article appears to be totally misguided in its reference to artificial turf.

Hundreds of studies have been completed to discover the truth about any potential risks of artificial turf. Government health ministries and environmental bodies around the world have commissioned extensive research.

So have world health organizations, leading universities and independent scientific committees. Elected officials have reacted to the concerns of their constituents by commissioning studies to get the facts.

But recent headlines reveal the tactics being used by some with a different agenda. They do not report the truth.

The research has been done. The studies exist. Get the facts and find out for yourself.

• Tests comparing samples of artificial turf infilled with rubber showed similar release rates to control samples without any infill material.

• Tests show no VOC in tire factories to be in excess of those found in the ambient air levels. There is clear scientific evidence that release of PAHs into the environment is negligible relative to other sources such as cooking, power generation, wood stoves or vehicular traffic. Neighborhood Sunday BBQs release more volatile compounds into the atmosphere than the local artificial turf fields.

• In the event of ingestion of crumb particles, although highly improbable, the particles do not present any toxicity, as the digestive system is not powerful enough to extract the chemical components from the rubber.

• Tire waste has no toxic influence on fauna and micro-aquatic organisms. Inhaling is practically negligible because crumb rubber does not give off volatile products. Direct contact with the skin does not present any real danger, even from the point of view of allergy. Biological tests have shown the absence of genotoxicity.

• Not a single injury has ever been reported as a result of inhalation, ingestion or direct contact with rubber particles in artificial turf. Yet each year over 750,000 Americans suffer injuries — including 82,000 brain injuries — playing recreational sports. A five-year study shows artificial turf reduced neural injuries by 55 percent and cranial / cervical injuries by 47 percent.

• Artificial turf represents .0000075 of the rubber worn off tires on our roads. If this is a concern, why are we not doing anything about the 99.9999925 part of the problem?

For a listing of the hundreds of studies carried out and a collection of the actual research and the factual conclusions, please feel free to visit www.fieldturf.com/sbrfacts

The results of a long-term study confirm that the rubber granules used

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NOT SO BULLISH ON ARTIFICIAL TURF

My View

By Kurt Tramposch
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Few major community investments have engendered such enthusiastic public support — yet simultaneously sparked spirited, sometimes contentious debate — as artificial turf athletic fields. While one might expect mild controversy over the usual host of concerns specific to financing, maintenance, and replacement costs, significant questions about environmental health and possible harmful chemical exposures to both athletes and community have acquired heightened relevance in the past two years of analysis and debate in the U.S., Canada, and the European Union (see SynTurf.org or AnInconvenientTurf.org).

Over the past few years, Sweden and Norway have performed extensive testing on synthetic fields and have banned additional recycled rubber fields because they contain "substances of very high concern." In Italy, a government-appointed commission reported in 2006 that tests found synthetic turf fields contained carcinogenic polycyclic aromatic hydrocarbons (PAHs), toluene, and heavy metals in excess of legal limits and that "the inhalation of the dust from these substances poses a risk to soccer players." The commission recommended that 130 tons of tire-crumb should be removed from each of the 200 existing playing fields — an endeavor that sports a price tag higher than the cost of constructing most artificial turf fields in the United States.

Such dramatic action abroad has been partially mirrored recently in the United States where health experts and officials are engaged in closer scrutiny of artificial turf and questioning earlier research that sanctioned the fields as "safe."

What is "artificial" or "synthetic" turf and where did it come from?

Original "chemgrass" was the 1950s brainchild of a former Newton school superintendent who, citing the advances of plastics chemistry, longed to create a synthetic grass so that urban children might have a low-maintenance, durable athletic surface alternative to gravel and asphalt playgrounds. After its installation in the Houston Astrodome, it was dubbed "Astro-turf" and led to over thirty years of urban, academic, and professional sports use. Because this "first generation" carpet was laid over concrete or asphalt surfaces, the fields did not drain sufficiently, often harbored bacteria and mold, presented tripping hazards as they became ragged and faded, and were associated with innumerable player injuries to the ankle, knee, hip, spine, shoulder and head. Contact with the rough plastic carpet strands also caused "rug rash" or "turf burn," a serious dermal abrasion.

How has it changed? Why is this "new generation" of artificial grass so popular?

By the late 1990s, the Environmental Protection Agency was mandating proper disposal of mountains of used auto and truck tires. At the same time, the sports world was demanding safer and longer-lasting synthetic fields. The convergence of these factors led to experiments with pulverized waste tire "crumb," grain-sized particles of tire inserted or "in-filled" into the plastic polymer fibers of the "turf" carpet. This two- or three-inch cushion of rubber not only provided additional bounce to the surface, resulting in a safer playing surface for athletes, but also prolonged the useable life of the carpet fibers. Further enhancements, including flame-resistant polymers that prevent discarded cigarettes from igniting the carpet, and the addition of silica sand to the crumb rubber, made the synthetic playing field safer and respond more like a real grass surface. It also presented an easier to maintain surface than grass fields, and didn't require pesticides or fertilizers. Coaches and athletes generally found the surface to be "almost" as good as grass, with fewer of the injuries associated with the earlier Astroturf.

Why the recent concerns over environmental exposures from artificial turf?

The tire-infill artificial turf technology is a relatively recent innovation of the last eight years. This accounts for a growing awareness that the "new" turf still manifests a few of the same problems that characterized the original Astroturf — the incidence of dermal abrasions (even with softer, friendlier plastics), the potential for dramatically elevated heat of the playing surface, and the thorny issue of disposal after the 10-to-15-year useful life of the carpet. One Boston Parks Department employee was chagrined to learn that an older synthetic community field's carpet could not be replaced with the more desirable newer 'infill" system because the worn carpet was classified as a "special waste" and too expensive to remove.

Although one artificial turf manufacturer reported the release of heavy metals from their carpet, using recycled tires as infill — up to 120 tons per field — attracts the most health attention. For a typical football or soccer field this can total between 20,000 and 40,000 pulverized auto and truck tires. This "crumb" has a chemical identity which is identical to the chemistry of

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