

NEW SPORTS FIELDS FROM OLD TIRES

Bio-Cycle, July 1990
(by permission)

A Fort Collins, Colorado company is using scrap tires to improve sports fields, tracks and pathways. In essence, the process developed by International Soil Systems, involved incorporating crumb rubber from shredded tires into the soil to a depth of three to five inches. "The rubber particles, about the size of Rice Krispies, make the soil much more porous," says Paul Hoffren, Director of Development, "and that increases the rate of water absorption and oxygen diffusion to the grass roots." The results are described as twofold: On grass playing fields, the soil does not compact under heavy use and the grass grows luxuriously, resulting in a very resilient surface. "It's not so much the rubber directly giving resiliency, but the aeration it provides makes the grass thick and cushiony," says Hoffren.

"Studies indicate that injuries on artificial turf are one and one-half times greater than on natural turf, and less on a good turf than a poor one. Many knee injuries in professional football can be traced to high school injuries that occurred not on the good playing field but on the practice field. We think insurance companies are going to get very interested in doing something about that situation."

On race tracks, ball diamonds or tennis courts, the patent-pending, crumb rubber treatment, which the company calls The Rebound Sys-

tem", allows the surface to dry faster but not to the point of cracking and breaking up. "A Rebound-treated race track or horse trail reduces the concussive force of hoof on track that is partially responsible for lameness," says Heffron.

Bob Malmgren, a soil scientist with some 40 years experience, began working with rubber five years ago and developed the Rebound process. "We want to emphasize that his process won't work on all soil," he said, "and each situation requires its own special handling. We just don't prescribe so many pounds of Rebound per sq. foot. We have to do testing and analysis at each site before coming up with a prescription." The process can be used when building new gridirons or retro-fitting existing ones. Restructuring the soil with Rebound is said to be for all practical purposes a one-time, nearly permanent treatment.



Malmgren says that it takes an average of 12,000 tires to treat a football field with Rebound. It doesn't take too much time on a calculator to appreciate what a dent that would put in the scrap tire glut as interest in sports soars.

At present cost rules out Rebound for normal agricultural uses - about \$2600 for an acre of corn, Malmgren estimates. "But it was one of our experiments with corn that opened our eyes to the possibilities," he says. "One year we used a 10 percent rubber incorporation to a depth of 6 inches on some corn plots at Colorado State to compare with conventional soil structures. After a bad storm in August, the only corn left standing was on the rubber-treated plots. When we investigated, we found that the increase in macropore development had resulted in massive root systems that anchored the plants better."

So far, the young company (five people) has, by design, operated out of pocket, avoiding debt. Now with the research to support their produce under their belts, the potential markets everywhere, "we're looking for capital," says Heffron. "Ideally, we'd like to affiliate with a company in a related business - somebody in the scrap tire business with the ability to supply a large market. With all the potential uses, we feel there is a nearly unlimited market." - G.L.

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