

Rubber to the rescue

A topdressing made from shredded used tires gives turfgrass managers another tool to combat turf compaction and traffic injury.

by RON HALL/
Managing Editor

Some professional users say a new crumb rubber topdressing is a valuable tool to alleviate compaction, protect turfgrass from heavy traffic and, at least one user believes, from winter kill of bermudagrass where that's a problem. The crumb rubber product is made from used tires.

How does it protect turfgrass?

Researchers Dr. J. N. "Trey" Rogers, III, and J. T. Vanini demonstrated at Michigan State University's Hancock Turfgrass Research Center that a $\frac{1}{8}$ to $\frac{3}{8}$ -inch layer of the crumb rubber material protects the crowns of turfgrass plants from traffic. They attribute this to the increase in surface area and the rounder edges of the shredded rubber, compared to sand which is often used in topdressing. And, because the rubber particles have less density than soil, they're not worked into the soil; they remain on the soil surface. More good news: after several years of testing, the researchers have yet to discover any environmental downsides to using the product either.

So far the crumb rubber has been used mostly in turfgrass mowed above $\frac{1}{8}$ -inch and subject to heavy foot or, in the case of a golf course, cart traffic. Typically it's applied $\frac{1}{8}$ to $\frac{3}{8}$ -inch deep either by a spreader or a topdresser.

It can be shoveled onto small areas too, and raked or brushed into the turf.

It helped protect turf

Mark Hoban, a certified golf course superintendent, learned about the product several years ago while visiting Michigan State University. "I thought, 'what a great idea,' even though it hadn't been tried on southern grasses," says Hoban.

Prior to last season, he applied crumb rubber topdressing to 11 areas of The Standard Club in Duluth, GA. The Standard Club is an Audobon Sanctuary-certified, 18-hole, 300-acre course just northeast of Atlanta. It has predominantly bermudagrass tees, fairways and immediate ruffs.

Hoban, 11 years at the course, used crumb rubber in areas where foot traffic badly damages turfgrass, like walk trails onto greens or around bunkers. But, he couldn't have anticipated that the 1995-96 winter was going to be so harsh.

"We had a big time winter kill this past winter," says Hoban. "But we only lost two of the 11 areas where we used the crumb rubber. The turf might have been thin in some of those areas, but it grew back during the summer, and I didn't have to resod. But 50 feet to the left or right of those areas that had the crumb rubber we had winter kill."

While his experiences with crumb rubber have been mostly positive, Hoban cautions against viewing it as a cureall.

"Even if you apply it, you won't have perfect grass if you have a lot of traffic, or the grass is in heavy shade, or you have very cold winters. But, it will probably keep you from having to resod the area," says Hoban.

Used on high-cut turf so far

The crumb rubber topdressing product—trade name Crown III—is produced from used tires after all the steel and nylon cord have been removed from them.

President Cornelia "Comy" Snyder, specifically her company, JaiTire Industries, Denver, has the worldwide rights to market the topdressing. She licensed the patent from Michigan State University after researchers





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Rogers and Vanini assessed and documented its value on turfgrass.

This topdressing, unlike sand, is not used on golf course tees or greens. Not yet anyway. But, it is being increasingly used in areas where turfgrass is cut much higher. Say on a pedestrian mall of a campus. Or on a youth soccer field. Or at the entrance of a golf cart path. Actually, users seem to be finding new uses for crumb rubber topdressing at every corner.

Cornelia Snyder wants to establish Crown III in the professional market.

She says that JaiTire has 27 dealers across the United States, and reports that about 500 sites are using the crumb rubber topdressing. These include a handful of high-profile golf courses and sports fields.

One of the dealers offering Crown III is Benham Chemical, headquartered in Farmington Hills, Mich. General Manager Dan Banks says Benham has been working with the product almost since research began at MSU. Benham, working with the MSU turf team, supplied the crumb rubber used for some of the turfgrass areas inside the Pontiac Silverdome during the

World Cup soccer matches several years ago. He points out that the MSU-patented product is the only crumb rubber topdressing on the market.

Get the real stuff

"Turfgrass managers should realize how important it is to get the right source of rubber," says Banks. "There are different

grinds, different sizes and different qualities in terms of content."

One of Benham Chemical's customers this past season was Bill Rousseau, maintenance superintendent for Saginaw Township, Mich. The township bought enough crumb rubber to treat two youth soccer fields. Rousseau says he applied the crumb rubber with a commercial topdresser, three applications at 1/4-inch each to build up to a 3/4-inch layer.

"So far the results have been very good," says Rousseau. "We could see a difference in the grass. In the treated area the grass was standing and looking good, and right next to it where we stopped, it was matted down."

Many turf managers may balk at the \$480-a-ton cost for crumb rubber, but JaiTire's Snyder defends the price. Because the product is new, it requires extensive marketing, Snyder says. Also, there are significant expenses involved in acquiring, shipping and shredding used tires.

"The real question is the value," says Snyder. "If you apply the product to 100 square feet at the end of a cart path it's going to cost about \$50. But if you don't have to resod that golf cart path you've made that \$50 back and more." □

Mulch from shredded tires?

Scott NeSmith is researching the use of shredded tires as a mulch, both for agriculture and, possibly, for landscapes too.

"In terms of mulch, we can see right away that the properties are there," says the associate professor of horticulture at the University of Georgia. "It conserves moisture. It suppresses weed growth. It modifies the soil temperature some but it doesn't cool the soil quite as much as the pine bark does. We're trying to get a better look at that."

NeSmith began the work last year at the Griffin Research Station about 40 miles south of Atlanta. So far, he's put the shredded tire mulch around about 100 Christmas trees, and has other plots where trees are surrounded by pine bark mulch, sod or where treated with a herbicide. He's conducting similar experiments with blueberry plants.

NeSmith says he wants to determine if there is any long-term effects, either to plants or the environment, to using mulch made of shredded tires..

He says the material—it comes in different grades from several inches across to gravel-sized—might turn out to be the answer to areas that are difficult to get to, or too costly to mulch on a regular basis □