

Grant me better grass

The athletic director at our district has the opportunity to receive a grant that will cover the costs for the application of shredded tires on our football field. We have a clay-textured base with Bermudagrass and I overseeded with perennial ryegrass last year. The AD has been told that it will make the field softer but it will increase the field temperature. I'm looking for pros and cons with this type of surface.

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Research into the use of crumb rubber on athletic fields began in the mid-1980's and products have been on the market for more than 10 years. These are my recommendations based on research and experience. I would certainly like to receive some reader updates on positive or negative experiences concerning crumb rubber.

Research trials by others and myself have been able to show some benefit compared to using no rubber. As I travel around and look at some of the actual playing fields that have been using crumb rubber it is clear that all field situations do not benefit from its addition. Before getting to the advantages and disadvantages you need to ask yourself two important questions: What exactly do you expect to gain by using crumb rubber? And, before considering crumb rubber have you already provided the basic inputs to improve the field, such as irrigation, proper mowing, aerification, sand or compost topdressing, and aggressive seeding?

Crumb rubber is topdressed into native grass until a 0.5 to 0.75-inch layer has accumulated. The crumb rubber is mixed amongst the turf crowns and develops a pseudo-thatch layer that reduces crushing and tearing of plant stems and crowns. The layer of rubber also reduces compaction of the soil surface. This sounds wonderful to anyone with too much traffic on the field and since that is most of you, you have probably wondered if crumb rubber would help your situation. Nearly all states in the US have recycling grants for many products and rubber tires have been used with mixed success.

Advantages:

- * Our best result from traffic simulation trials indicated that crumb rubber slows the rate at which turf cover is lost and there was 20 percent more turf cover with crumb rubber compared to no topdressing.
- * Under dry conditions and if the rubber has not been incorporated by aerification, the field will be slightly softer according to Gmax measurements.
- * The crumb rubber layer holds less water and reduces muddy and frozen conditions near the playing surface.
- * Crumb rubber is readily available and easy to apply with conventional equipment.

Disadvantages:

- * Under simulated traffic, sand topdressing with 0.5 to 0.75 inches of sand

provided the same amount of turf cover as an equal amount of crumb rubber.

* When the grass eventually wears thin black particles of crumb rubber are visible.

* Late spring and summer establishment of cool-season grasses, within the exposed particles of black rubber, can be impossible because of excessive heat. Bermudagrass performs better than any cool-season grass during this accelerated heat situation.

* Crumb rubber floats and can accumulate in uneven pockets on the field during heavy rain. Reestablishing grass can be difficult in areas where too much rubber has accumulated.

* Long term turf management practices for crumb rubber fields have not been determined, i.e., do you add more each year to manage the mat layer and can it be used with sand or compost?

I seldom make a blanket recommendation to use crumb rubber on the entire playing surface since there are many moderate to low traffic field areas that grow just fine and would not benefit from crumb rubber application. My expectation is to produce more turf cover for a longer period of time on intense traffic areas of the field. Furthermore, anything placed on the field should enhance, or at least not detract, from the playing conditions or reestablishment practices when the grass eventually wears away.

Soccer goalie areas, between the hash marks on football fields, and dugout-to-home areas on baseball fields are all difficult traffic areas on athletic fields that need enhanced traffic tolerance. Because I have observed mixed reviews with crumb rubber, I recommend that you gain experience with crumb rubber on your specific facility before making a decision to use it on an entire field. Whether you get it for free from a recycling

grant or purchase it from your budget you will want to make sure it is meeting your expectation for field improvement. Believe me, if it is a product that meets your expectations you will gladly pay a reasonable price.

Do this simple test to prove to yourself if crumb rubber can improve your field. Apply the crumb rubber as recommended by the distributor to an area between the hash marks and from the 50-yd. line to the 45-yd. line (approximately 0.5 to 0.75 tons/800 sq.ft.). Use your normal management practices on the entire field, including the test area. Observe the test area for 1 year and it should become self evident if the crumb rubber is helping you in terms of more turf cover, drier conditions, and reduced hardness.

For soccer, use the crumb rubber in only half of the goalie box for a similar side by side evaluation. Do not treat all of one goal and try to compare it to the goal on the other end of the field since the traffic may vary from goal to goal. Athletes challenge each other on your field all the time, I guess it's only fitting that a product makes it through the "tryouts" before it makes the team. **ST**

QUESTIONS? Send them to Dave Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011, or email dminner@iastate.edu. Or, send them to Grady Miller at the University of Florida, PO Box 110670, Gainesville, FL 32611, or email gmillerr@mail.ifas.ufl.edu.

