

Tackling *poa annua* in the Cardinal's turf

Soil tests, sulfur and a control product help manager get Arizona bermudagrass practice fields healthy again.

Tim Peterson likes to ask questions. "I've always had a tendency to dissect things," says the sports field manager for the NFL's Arizona Cardinals. "I'm not satisfied just knowing that something works. I want to know how it works."

Peterson has asked lots of questions during his careers in air conditioning and cooling, to owning his own lawn care and landscape management firm, to membership in the fraternity of athletic field managers.

Peterson's analytical bent has been especially useful to him as he tackles numerous challenges associated with his Cardinals post. Two of those challenges have been restoring ailing turf to controlling *poa annua* (annual bluegrass) on the field.

When he joined the Cardinals in August of 1994, the sand-based turf Peterson inherited had seen better days. "Our 419 Tiff Bermudagrass fields were yellow and stunted," he says. "The grass was practically dead at a time when it should have been thriving."

"To put it in perspective," Peterson explains, "you have to cut healthy turf just about every day. When I first came here, I mowed the fields about once every four weeks."

So he started asking questions. He found some interesting answers:

▶ soil probes showed a pH as high as 8.5



The sideline area along Field 1 is representative of how thick the *poa annua* was on Fields 2 and 3 prior to treatment.

▶ sodium content was 337 parts per million

▶ exchangeable sodium was at 12.5 percent, well above the normal 5 percent level.

Sulfur-based product helps

"My job is basically about creating and maintaining a viable soil environment that allows the necessary interactions and exchanges to take place between soil, water and nutrients that allow grass to grow,"

says Peterson, who explains that the high pH levels increased the sodium levels, which caused salts to bind on the soil colloids. These salts prevented the water from penetrating and dissolving nutrients so they could be absorbed into plant roots.

"I knew that before I could accomplish anything else with this turf, the first thing I had to do was bring pH levels and the total soil chemistry back in line."

He did this through numerous applications of a water-soluble, sulfur-based product called Disper-Sul. From November 1994 through March 1995, he applied a total of 6,000 lbs. of the product over 6.4 acres, at a rate of 5 lbs. per 1000 square feet.

"We were fortunate to have a lot of rain my first year. Every time it was in the forecast, I would put down more sulfur," Peterson recalls. This diligence paid off:

▶ By August 1995, soil from the different fields tested anywhere from 6.9 to 7.3 on the pH scale;

▶ Sodium levels dropped dramatically, too, from 337 parts per million to a low of 98 parts per million.

▶ Exchangeable sodium checked in at 3.5 percent, well under the acceptable limit of 5 percent.

Saving money

When Peterson lowered the soil pH and sodium content, he had better looking fields and a better looking budget.

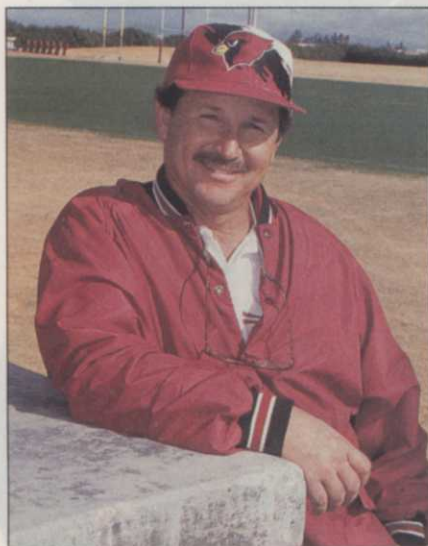
"When pH and sodium are out of line, you have to increase the amount of fertilizer and herbicide you use just to get the same response," says Peterson. "You're wasting money."

"Our turf wasn't healthy. It was anemic, and as a result, it didn't provide as much competition against weeds and problem grasses as a healthy turf would. That may have helped the *poa annua* get started."

The annual bluegrass burst through the turf once the bermudagrass fields went dormant in the winter of 1994-95.

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—Tim Peterson



The number 2 and 3 fields at the Cardinal's training facility are now completely bermudagrass, with not a blade of *Poa* in sight, says Tim Peterson.

Field 3 showed the most *Poa*, says Peterson, with eight or nine large patches of about 15 square feet showing.

Don Follett, facility manager for Arizona State's Sun Devil Stadium suggested Peterson try Kerb herbicide. The product is used as a preemergent and postemergent herbicide to control annual bluegrass, quackgrass and orchardgrass, among others. Peterson applied the product—in water

soluble packets—at the recommended rate of 1.5-2 pounds per acre.

"The second week, the *poa annua* started yellowing a bit. In the third week, I forgot I had ever sprayed it; it actually looked like Kerb had caused the *poa annua* to disintegrate."

Peterson says the control lasted all season. □



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