# Making it through a minor league season without sod

#### By Joey Stevenson

R.R.R.R.R.R.

ne of our goals this past season was to play an entire baseball season without using sod. Simple, right? Not so fast! With 72 Triple-A home games and 12 extra event baseball games, a few softball games, a Girl Scout concert, and five other "extra events" the

ardina

DETERN FREN

R

IPL CINA SPORT



IndyIndians.col

FOK

idea of no sod was truly a distant dream. But, as I write this in mid-October, we were able to accomplish what I thought was not possible. This is the story of how we did it.

The ability to do this was put into motion several years ago. Located in central Indiana, the northern part of the transition zone,

Indianapolis Indians groundskeepers: Joey Stevenson (left) and assistant Evan Buckly.

Anterentinterestin

the field had to be constructed properly. Composed of 100% sand rootzone and re-surfaced in 2003 with 100% Kentucky bluegrass (varieties include Blacksburg, Quantum, Midnight, Limousine, NU Destiny, and Rugby), Victory Field is regarded as a top playing surface. Recently, in central Indiana and other "northern" locations, we've seen the use of cold-tolerant Bermuda grasses. Since this option was out of the question for us, one of the best reasons we are able to tolerate wear comes straight out of the summer of 2005.

That summer in Indiana was extremely hot and dry. What typically happens to bluegrass 2 years after sod and hot/dry conditions? You guessed it—summer patch. With the stories I heard and pictures I saw, 50-60% of the field was completely devastated. Again with re-surfacing out of the question, the next best option was seed. This turned out to be one of the best opportunities to implement a perennial ryegrass mixture of seed (varieties Paragon, Grand Slam, and Pizzazz).





Top: Intern Brian McDougal in front of mound with no sod. Bottom: Back arc at 2nd base, another seeded area.

After 4 years of overseeding with our perennial ryegrass blend and alternate years with our bluegrass blend, we have accomplished roughly a 60/40 rye/blue playing surface. Since the ryegrass has been implemented we have seen the playing surface tighten up 10fold and overall provide an excellent playing surface. It is also pertinent to mention ryegrass has good wear and drought tolerance, hence the nickname "perennial drygrass." It also tolerates low mowing; the seed germinates rapidly, and for those interested in mowing patterns it stripes extremely well.

So was it just the perennial ryegrass that helped us? The answer is "Heck no." Also implemented in 2005 and tweaked over the past few years were using organic fertilizers for all granular applications. At Victory Field we use an all-Nature Safe fertilizer program, spring and fall applications of 12-2-6 60% ammonium sulfate (not so organic) and summer applications of 10-2-8 all organic.

#### When a pound is not a pound

One of the misconceptions I have heard is a pound of nitrogen is a pound of nitrogen. This is simply not the case when you're using organics vs. synthetics. Fertilizers can be composed of ammonical nitrogen, urea and inorganic salts, and other forms synthetic nitrogen. The key for organic fertilizers is the source of nutrients that are meal-based. The benefits of using a product like this are: increased microbial activity, low burn potential, improved CEC with humus, improved soil structure during heat and drought periods, and high protein meal releasing nutrients over a 7-8 week period. Also, the sulfate applications in the spring and fall allow for excellent springgreen up and building up carbohydrates and sugars moving into the summer and for fall feeding. Ammonium sulfate also has the ability to lower soil pH in the rootzone that improves micro-nutrient uptake and the spread of root disease like summer patch.

With the correct turf blend and the use of a properly balanced fertilizer program we have seen no wear issues and no outbreaks of disease since 2005. We use the philosophy of KISS—Keep It Simple, Stupid. The fertilizer program is based on application intervals of two weeks and the use of only two granular fertilizers in stock. We do not deal with headaches of a long list of fertilizer choices and in the end our turf is the healthiest we have ever seen.

So with these two crucial steps in place we still had to pay close attention to how we managed our wear areas. With our goal of no sod for an entire season, preparations had to begin at the conclusion of the 2007 season.

After we concluded our fall overseeding in early September, a second application of perennial ryegrass seed was drop spread just to the edges. At first when the seed began to germinate our edges looked extremely strange since ryegrass seedlings are about five shades lighter in color than a mature blue/rye field. This may have looked like a mistake at first but after weak seedlings were thinned out by winter and two spring core aerifications our edges were in perfect shape to take on the season.

This second application of ryegrass seemed to get our edges to nearly 80-90% ryegrass. In the past the mound had been re-sodded to

100% Kentucky bluegrass following each season and it would always need to be re-sodded the following season three or four times. So our experiment remained: How would ryegrass around the mound perform compared to bluegrass in the following season?

After about 30 games into the season and the mound showing literally no wear, we knew we were on to something. As the warm summer weather began to set in, our methods of management had to change with the onset of different environmental stresses. It was common for us to add about an 8-ounce cup of seed to the area in front of mound after each game. In the grand scheme of things seed is extremely inexpensive and we knew the players would work the seed in to get the seed/soil contact.

We all know that it is not an ideal environment for ryegrass seedlings with midsummer daytime temperatures in the mid90's and nighttime temperatures not dipping below 70, not to mention pulling the tarp 45 times. So how did we get around this? We purchase our seed from CISCO Companies in Indianapolis, which is coated with the fungicide Apron. This allows for the ryegrass to germinate and not be susceptible to damping-off, a common ryegrass seedling disease.

During homestands we would try several methods of pre-germinating seed. Following each homestand, we will solid tine aerify all our wear areas. These included down the foul lines, coach's boxes, around home plate, and around the mound. Subsequent to the aerification our pre-germ seed would be rotary spread to all the wear areas. This series of events would be carried out after each homestand. With typically 5-8 days in between homestands, the ryegrass would be germinated and filled in. In my opinion seedlings provide a safer playing surface than loose sod and sod staples.

At a conference with our manager after the season, he said being around the league and playing on re-sodded surfaces was awful and if you could find a method to get around re-sodding you would be a step ahead.

As we all know methods and practices that worked one year will not always work the next. It is our goal at Victory Field to try and stay ahead of the weather and environmental curves and continue to provide a safe playable surface. It is important for us to use what we have learned in classroom and our previous experience, but it is more important for us to continue to try new ideas and become more efficient overall.

Joey Stevenson is the head groundskeeper for the Triple A Indianapolis Indians.



## GROWING PAINS eased by erosion control game plan

#### By Tom Wedegaertner

hen Christ the King Cathedral School and Catholic Church, Lubbock, TX expanded its student body to include high school grades 9-12, it also needed to address expansions of everything from buildings and bus routes to staff members and sports fields. Construction had begun, but after adding a high school football team, the school realized it was short on practice space.

School staff, church members and the Trojan Booster Club agreed to build a practice field from scratch on a site near the school that had previously been open pasture. Having an onsite practice field would decrease the liability involved in bussing players to and from an off-site facility. And with two-a-day practices ahead, the new sports field would be a convenient addition.

The site was an open field featuring native grasses and uneven surfaces. Construction crews used a road grader to rip the soil in three directions, pulling up eight inches of top soil, along with rocks, roots and tree stumps. The field was then scanned by crews who manually removed unwanted debris, applied herbicides to kill remaining vegetation, and installed an irrigation system.

Church member and former CTK student John Wanjura volunteered his services and expertise as a researcher for the USDA-ARS Cotton Production and Processing Research Unit by leading the field design efforts and erosion control initiatives. "I was glad to help steer a part of the school's response to growth," said Wanjura.

With limited time before the practice season began, crews faced the final step in building a sturdy practice field that looked good and performed under extreme conditions. "We needed to plant a ground cover that was tough enough to withstand the wear and tear of a high school football team," said Wanjura, "and with anticipated seasonal rains ahead, we needed to establish dense, strong vegetation

HydraCM is made from a combination of straw, reclaimed cotton plant material, and a blend of tackifiers and additives that form a web to hold soil in place

quickly." After consulting with a fellow colleague at the USDA and determining that hydraulically applied mulch was needed to prevent soil erosion and aid in grass establishment, Wanjura selected North American Green's HydraCM Steep Slope Matrix. HydraCM is made from a combination of straw, reclaimed cotton plant material and a blend of performance enhancing tackifiers and additives that form a protective web that holds soil in place. "HydraCM contains beneficial nitrogen, phosphorus and potassi-

"Though the field surface

was flat, we were concerned about impending rain events and wanted to be sure the hydromulch took to the soil," said Wanjura. "We wanted a mid-grade hydromulch to ensure success." Developed by Mulch and Seed Innovations LLC, Centre, AL along with Cotton Incorporated and the USDA, HydraCM is a highperformance hydraulic erosion control product made with mechanically processed straw fibers, reclaimed cotton plant material, and proprietary performance-enhancing tackifiers.

#### Installation

On Memorial Day 2008, Lubbock landscaper Ashton Walden first mixed the HydraCM with Bermuda grass seed, commonly known for its resilience in extreme rain and heat, and then applied the blend directly for a convenient one-step application.

A noticeable glitch during the application process lead to initial concerns about how well the mulch would perform—the mulch was mistakenly applied at a rate of 2,500 lbs/acre instead of the recommended 3,000 lbs/acre. But crews decided to wait it out and to be prepared to distribute a second application, if necessary.

"We had never used

HydraCM before and weren't sure how it would cover due to being under sprayed," said Wanjura. The area experienced heavy rainfall two days later, and steadily continued for another week resulting in more than five inches of rain. "Following the rainfall, there was no seed floating on top of the soil, and no evidence existed that residue had seeped toward the storm drains around the perimeter of the field," confirmed Wanjura. "Despite the rainfall, we were surprised to find that the HydraCM had stood its ground."





um nutrients that, when made available to the soil, are important for plant growth," added Wae Ellis, vice president of sales and marketing for Mulch and Seed Innovations. "HvdraCM is also highly absorbent and has an excellent water holding capacity, which assists with germination and encourages the establishment of vegetation. Meanwhile, its crosshatching matrix provides air space and porosity for seedlings to push through with little resistance."

Much to Wanjura's surprise, the vegetation began growing within days, and at two weeks the field was lush enough to require mowing. "I thought it would be a month or two before the stand was established enough to be mowed. In the past we have worked with seed alone and it took five to six months before mature vegetation grew," said Wanjura. "I really believe that HydraCM's hydraulic application should be given credit for the fast soilseed contact and quick germination," said Wanjura.

In addition to quick vegetation establishment, the use of HydraCM and seed was at least five to ten times less expensive than placing sod, according to Wanjura.

In keeping with the closeknit spirit of the Christ the

1

King community, Wanjura and his brother Eric volunteer their time to maintaining the practice field through regular mowing and supervision. This past fall, the Trojan football team completed another football season, this time with a true home field advantage.

Tom Wedegaertner is director of cottonseed research and marketing for Cotton Incorporated, twedegaertner@cottoninc.com.