

The Dell Diamond of Round Rock, Texas

STMA 2001

Professional Baseball Field of the Year



The Dell Diamond of Round Rock, TX, earned the STMA 2001 Baseball Field of the Year Award in the Professional Division. The Dell Diamond is home of the Round Rock Express, a AA affiliate of the Houston Astros, which is owned by Hall of Famer Nolan Ryan.

Construction began in December 1999, and Dennis Klein came on board as head groundskeeper December 15. He was an assistant groundskeeper with the Texas Rangers before taking the Round Rock position. Klein says, "Having been a part of the initial construction of The Ballpark in Arlington and a few reconstructions thereafter really helped. On the Dell Diamond construction, I made personal notes on how everything was laid out, such as where the valves were under the warning track. It also helped that W. O. Adams Construction, Lancaster, TX, the contractor for the project, was excellent to work with."

The field has a 12-in. soil profile of 90 percent sand and 10 percent organic peat. This tops 6 in. of pea gravel and the drainage tiles and subgrade layer. Some underground electrical lines run through the center of the field and the subsurface drainage system is designed around them. Everything is laser-graded to channel away excess water. The field is turtle backed from home plate to center field with drainage channeled to hit the subgrade and run off to the ditches. These divert the water to a holding tank behind the center field wall, which is equipped with two pumps that pump water out.

The turf is Tif 419 Bermudagrass and was sodded on February 24,

2000. The skinned area infield dirt is 45 percent clay, 50 percent sand, and 5 percent silt. The mound and plate areas are an 85 percent clay mix. Calcined clay is used on all the dirt areas. The warning track is topped with crushed red brick. The first game was played April 16, 2000.

Challenges

The field is equipped with an inground irrigation system with 16 heads on the sidelines, 47 heads in the outfield and four heads in the infield. Klein says, "Working outdoors in Texas during the summer months is a challenge in itself. My two full-time assistants, Jeff Meyer and Kurt McLerran, are tops. With their input and the teamwork from our part-time seasonal crew, we've been able to meet the challenges.

"During the summer of 2001, we had 40 days of over 100 degree temperatures and had a 45-day stretch from July through mid-August with no rain. Winds are often strong and wind direction erratic. When our irrigation system was installed, we included an infield connector behind the mound, one at the infield perimeter and eight around the warning track, all around the field. We very rarely run the infield and sidelines irrigation systems, choosing to do all of our infield and sidelines turf irrigation by hand to more closely match application to needs. We use the irrigation system for the outfield in the early morning."

Other turf area challenges include the bullpens, where the benches are on the grass between the mounds and plate, adding to stress. There's also the inside seating berm that consists of two half-acre turf areas for general admission seating and picnicking. It's full every night.

In 2001, Klein started making a monthly application of a wetting agent for faster penetration and better infiltration and to combat hydrophobic hot spots. It proved

beneficial and will remain in the maintenance program.

Klein adds, "We have to water our skinned area 8-10 times a day to keep adequate moisture in the dirt. The use of plate and mound tarps on the field and in the bullpens is essential for holding moisture until batting practice. I feel the skinned area is the most important part of a baseball field. A cleat-in, cleat-out corkboard-type effect is what we strive for and, to accomplish this, we'll often have someone on the end of a water hose for a good portion of the day."

The crew also maintains four acres of outside landscape that includes turf, trees, shrubs, and flowerbeds. Then there's the hayfield. Klein says, "The site was originally farm ground. We still grow, cut, and harvest hay on the 42 acres behind the stadium. Some of the hay goes to local farmers. We also give



Field of the Year

bales away for lawn decoration starting around October first. We just place stacks of bales in an easy-access area near the busy main road that borders the stadium and people help themselves to it."

The facility also features a 10-ft. diameter hot tub; a 20 x 50-ft., 4-ft. deep swimming pool; a play area and basketball area; and a rock climbing wall.

Packed schedule

Besides the 72-game schedule of the Red Rock Express, The Dell Diamond hosts high school and college play. Spring of 2002 will start in February with six college games and 11 high school games, followed by 10 college and seven high school games in March. All this takes place before the pros arrive in April.

Also in April is the annual "Relay for Life." Klein says, "It's an all-night walk-a-thon benefiting breast cancer. One hundred and fifty tents are set up in the outfield as a rest and play area for the many teams participating to benefit this important cause."

High school play continues from April through June with the field hosting the UIL Texas High School Baseball Finals in all five classes. This puts 16 games on the field in 4 days. It also hosts the Austin All-Star game and two Texas State High School All-Star games.

Team owner Nolan Ryan runs a fantasy camp that draws the older crowd. Spike Owen and Cliff Gustafson run the "Legends of Baseball" camp for youth 6-18 which starts in late May and runs through June. It takes the field from 9:00 am to 1:00 pm Monday through Thursday for 3 weeks and concludes with a final week of



Last summer The Dell Diamond field weathered 45 days without rain from July to mid-August and more than 40 100+-degree days.

overnight camp. Since this overlaps the Express schedule, the pros will hit the field at 4:00 pm for batting practice before a night game.

Klein says, "This is tough, but workable. The Legends camp just uses the field for six or seven different stations and scrimmage at the end of the day. If I feel the field is getting too much wear, I can cancel the batting practice."

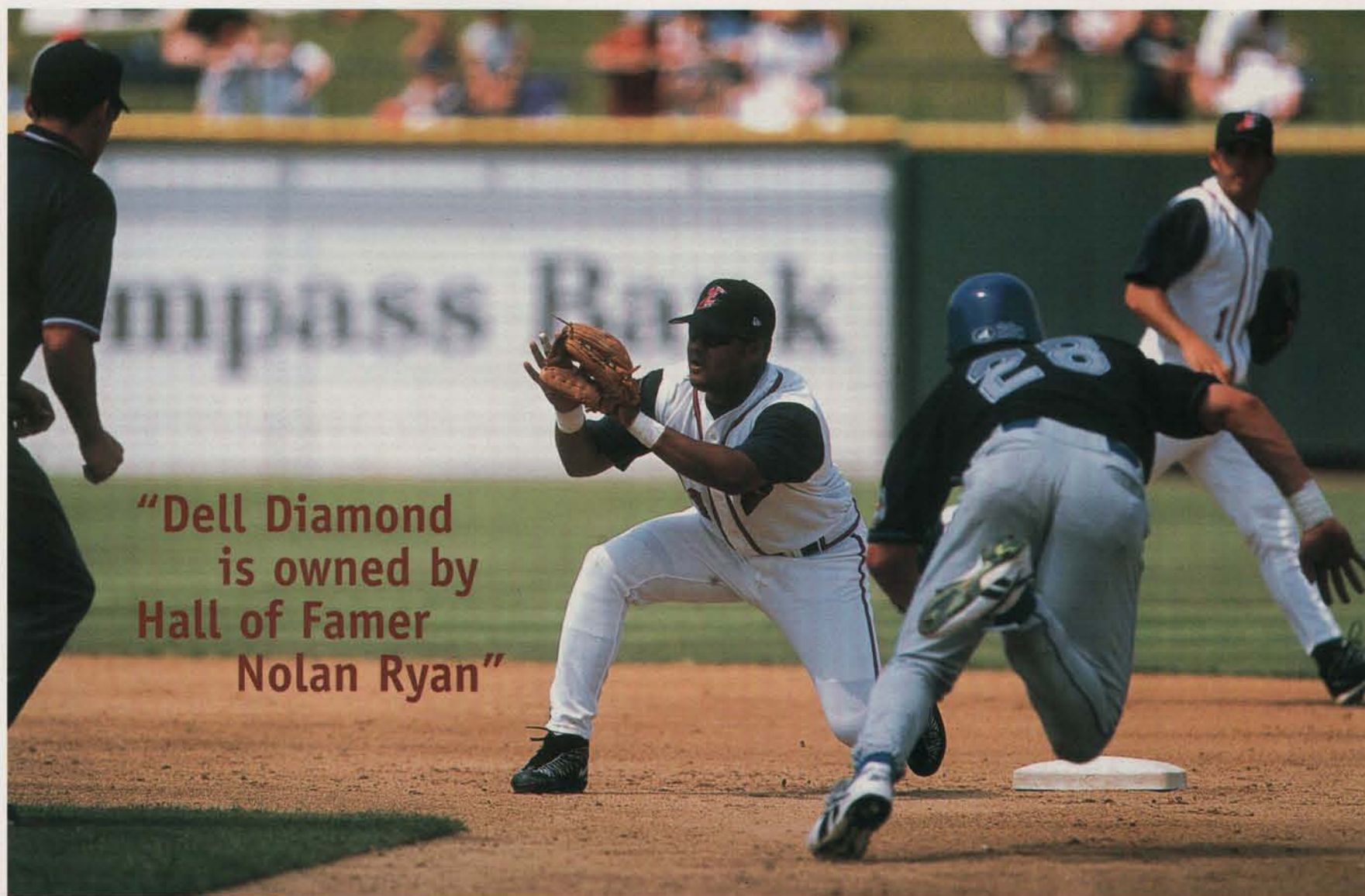
Other events round out the schedule. There are concerts, a local church's annual Easter sunrise service, and rental of the facility's conference center for corporate functions, which generally includes an on-field softball game.

A one-time event in 2001, hosting the filming of the Walt Disney movie production, "The Rookie," was a turf manager's nightmare. Klein notes, "It was a 3-day shoot using the entire field with people and equipment everywhere. They set up 25 feet of scaffolding to take shots down to the pitching. There were three or four full teams for action shots with the stars moving in and out of the different scenes. Dennis Quaid even brought his pitching

wedge out of the trailer with the intent of hitting a few golf balls from the field. A word to one of his people nixed that idea."

Fine-tuning for excellence

Klein and crew continually refine the program, moving ever closer to perfection. Klein says, "Networking is a wonderful resource. Everyone in this industry is willing to



"Dell Diamond
is owned by
Hall of Famer
Nolan Ryan"

The Dell Diamond Maintenance Program

Fertilization (Granular)

- ▶ 0-0-21 Monthly applications
- ▶ 6-2-0 (organic) November and January applications
- ▶ 13-0-46 Various applications April-September
- ▶ 21-0-0 (Ammonium Sulfate) Various applications April-September
- ▶ 24-6-12 Two applications for cool season grass

Fertilization (Spray)

- ▶ 6-0-0 with 9 % iron Monthly applications
- ▶ 20-20-20 Various applications March-September; foliar spoon feeding
- ▶ 13-0-46 Various applications March-September; foliar spoon feeding
- ▶ Humic acid Bi-monthly applications

Fungicide

- ▶ Preventative applications of targeted materials March, April and May
- ▶ Curative only as required following best IPM methods

Insecticide

- ▶ Fire Ant Control, applications as required follow-

ing best IPM methods

- ▶ Grub and Cut Worm control, applications as required following best IPM methods

Wetting Agent

- ▶ Applications monthly, May-September

Mowing

- ▶ Reel triplex, walk-behind triplex used when time allows
- ▶ Height of cut varies from 3/4-inch in late fall to early spring to 1/2-inch during the bermudagrass growing season

Verticut

- ▶ As necessary to tighten bermudagrass turf by cutting runners and controlling grain
- ▶ To prepare seedbed for perennial ryegrass
- ▶ To help transition out perennial ryegrass

Aerification

- ▶ Solid tines during active play periods
- ▶ Hollow tines during slower periods when suffi-

cient recovery time available

- ▶ Pivoting, shattering aeration to relieve compaction after extreme events

Topdressing

- ▶ Sand applications at various rates throughout the year

Infield Drags pulled behind infield groomer unless otherwise noted

Nail drags

- ▶ Self-constructed 6 x 4-ft.
- ▶ Self-constructed 2 x 3-ft., used for cutouts and edges

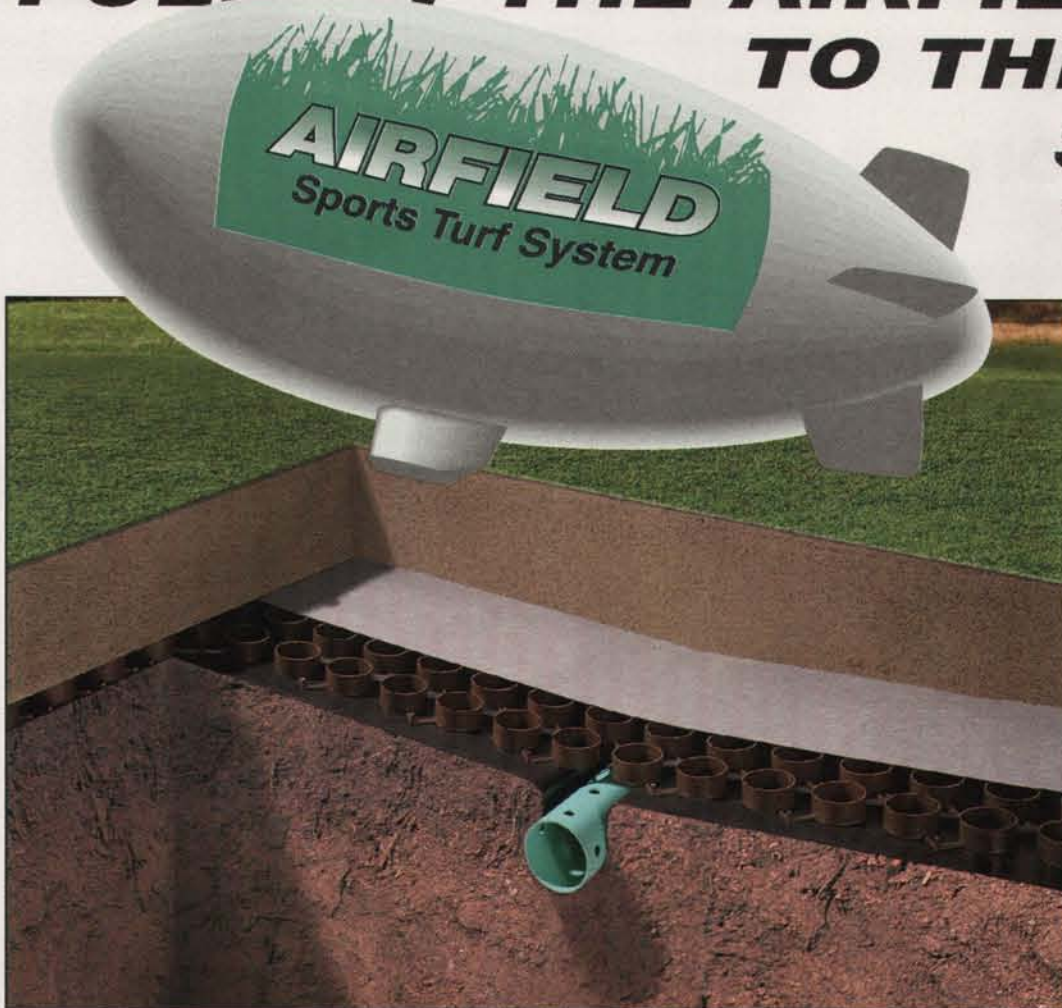
Screen drags

- ▶ 4 x 6-ft. drag with level board attached; used for infield
- ▶ 2 x 6-ft. drag (5) pulled by hand; used for fifth inning drag during play

Miscellaneous

- ▶ Spinning edger; used weekly to edge
- ▶ Curved shaft weed trimmer; used to clean up what spinning edger leaves

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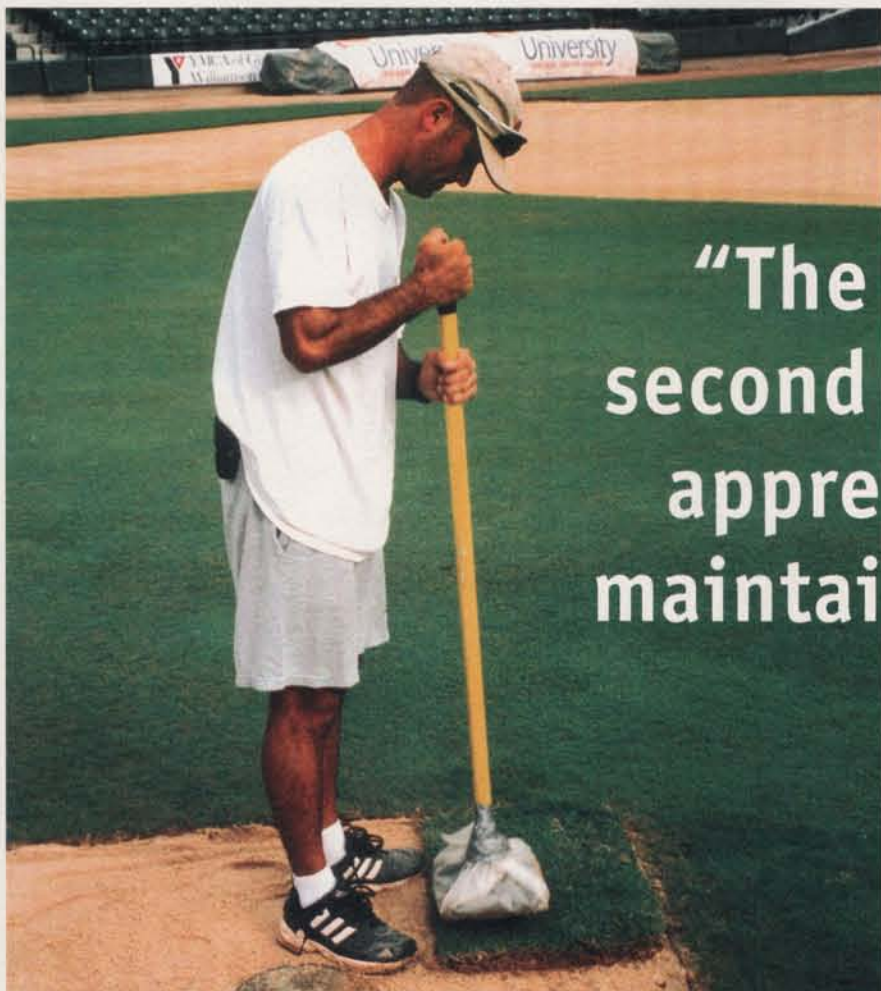
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“The playing surface is second to none and we truly appreciate the way it is maintained and cared for.”

share tips and ideas and we love to incorporate them to improve our program. If I don't know something, I want to make sure I have the phone number of the guy that does have the answer. For example, working for Tom Burns of the Texas Rangers gave me some great background on sand-based fields. Dr. Jim McAfee is a super source of advice. Leo Goertz and Craig Potts of Texas A & M brought their student

interns and their equipment to tackle the field painting for the All-Star game.”

In 2001, the overseeding strategy was the first order of business. Transist, an intermediate perennial ryegrass, was selected primarily for its record of early exit once the heat hits. The crew overseeded in February, rather than the more traditional October, anticipating that 4 months less maturity would ease the transition out. They used a light rate of 7 lbs. per thousand sq. ft. The rye was up and doing well for college play in March. April and May were the target months for the transition out.

Klein says, “After the first regular season Express home stand, we started the process. As temperatures reached 80 degrees, we began vertical mowing every 2 weeks, setting the units at ground level to steadily eliminate rye and stimulate some early bermudagrass growth. We lowered the mowing height of cut from March's 3/4-in. to 1/2-in. by mid-April to provide maximum exposure to warmth for the Bermuda. Our winter fertilizations of potassium had provided well for the Bermuda. We began applying Ammonium Sulfate at the rate of 1-1/2-lbs. per thousand sq. ft. in late April and mid-May to push a surge of ryegrass growth. With the lower height of cut we hoped to cut off part of the rising crown on the rye, thus eliminating more of the competition. The last week of May, we aerated with a pivoting, shattering aerator. We also topdressed with 40 tons of sand, using the very heavy rate to fill the 3/4-in. aerification holes and modify the soil profile. Entering June, the field was at about 90 percent bermudagrass.”

With heavier early season play in 2002, Klein opted for early November overseeding in 2001, but anticipates a similar transition out process.

To ease turf stress in the summer months, the crew mows in two directions one day, in one direction the next. Klein notes there's also a point to determine the turf won't snap back, so stop fighting and replace it.

Trade-offs are needed when hosting so many games. The high school teams take no infield and hit in the indoor batting cages. The college teams take their infield, but hit in the indoor batting cages. When the high school and college teams warm up in the outfield, they are moved a bit further out, to avoid hitting the same spots used by the pros. The compromises allow more games with a little less concentrated on-field activity.

Kudos to Klein and crew

“The Houston Astros congratulate Dennis Klein and his staff, not only for this award, but also for the tremendous playing surface he has available for our players on a daily basis at The Dell Diamond,” said Astros assistant general manager Tim Purpura. “The playing surface is second to none and we truly appreciate the way it is maintained and cared for.”

“We put a tremendous amount of pressure on Dennis Klein with the numerous events we have,” said Express general manager Jay Miller. “It's not uncommon to see Dennis on the field at 6:00 am on a Sunday, even when the team is out of town. That's why the field looks the way it does.”

Klein earned the Texas League's Groundskeeper of the Year Award in 2000, The Dell Diamond's inaugural season.

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