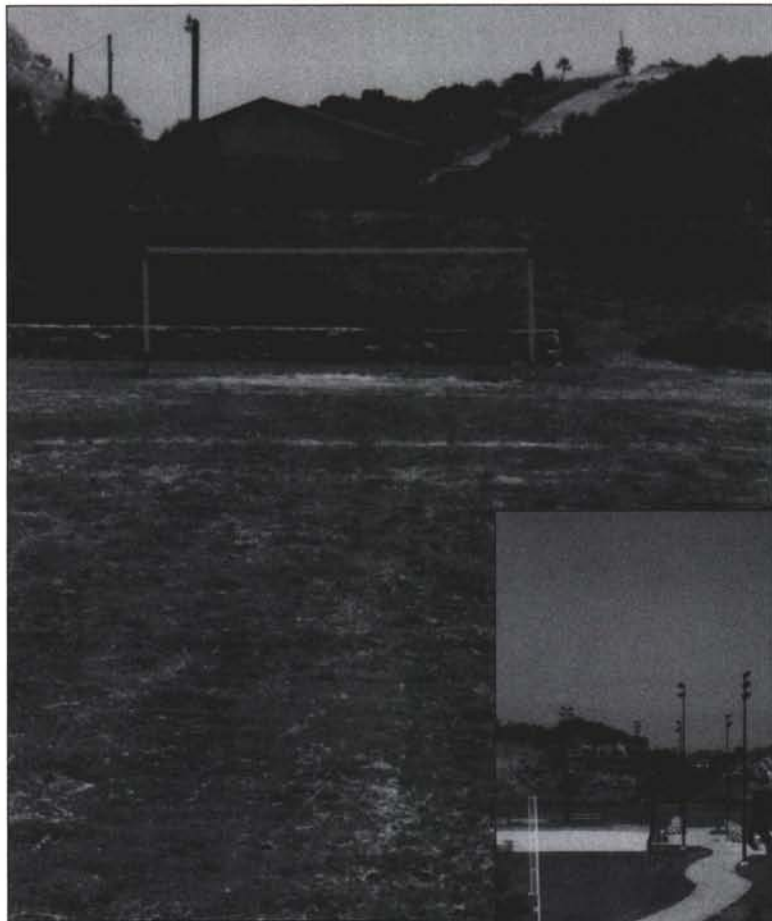


Turf Renovation At Las Positas And The Alisal: "Agroscopic Surgery"

By Scott Buley



Right: Las Positas Park fields eight weeks after renovation. Dry spots were caused by an existing-and later corrected-irrigation problem. Above : One of the "better looking" portions of Las Positas Park prior to renovation. Photos courtesy: Scott and Nancy Buley.



The park had not been watered for several years. What once was a fine stand of tall fescue was reduced to clumpy bits of fescue, overrun by an ugly assortment of weeds.

With the resumption of normal rainfall after seven years of drought along California's Central Coast, the pressure is on turf managers to bring sports fields back to top quality as fast as possible. Of course, the water conservation lessons learned from those dry years must never be forgotten, and are a permanent addition to our arsenal of turf management practices.

The successful renovation and overseeding of fairways at The Alisal Golf Course in Solvang, CA, while I was superintendent, led turf managers at Las Positas Park to ask for renovation advice and assistance. The Santa Barbara, CA, park includes three baseball diamonds and two soccer fields.

The park had not been watered for several years. What once was a fine stand of tall fescue was reduced to clumpy bits of fescue, overrun by an ugly assortment of weeds dominated by burr clover. The poor soils underlying the site, built on a landfill, capped with 12 inches of clay mixed with chunks of asphalt and other buried objects, forced us to scramble to find appropriate renovation equipment.

There was an added challenge beyond technique and equipment selection—the fields needed to be ready for play as soon as possible. The fields were "officially" closed during renovation, but because the park area remained open the fields did receive some play during the process. While most turf managers want to cre-

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Turf Renovation

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ate the best possible field conditions as quickly as possible, many must also minimize disturbance to the existing surface while maintaining play. Such was the case at Las Positas.

Choosing Renovation Tools

To radically change and improve the sports fields, while maintaining adequate playing conditions, we borrowed from lessons we learned during renovation at The Alisal. The 18-hole private resort course is open for play every day of the year, except for the occasional half-day closing of nine holes for routine aeration and sanding.

Much like arthroscopic knee surgery in sports medicine, which utilizes advanced diagnostic and laser techniques in medicine to minimize trauma, pain, and scarring to the athlete, the Toro Hydroject 3000, the Verti-Drain, and the the SISIS Airdrain are what I call "agrosopic" in nature. They cause a minimum of surface disturbance and scarring while maximizing "subterranean" soil improvement. And, like in medicine, the less you disturb the turf "patient," the sooner it will be up and running.

Conventional deep aerifiers would have brought up rock or broken many tines, so we opted for the SISIS Airdrain, which we'd first seen during a week-long Sports Turf Research Institute course in England. It proved very effective in slicing the ground deep enough to leach out the accumulated salts. Using this machine first allowed enough water to penetrate the heavy clay soil so the core aerator could work effectively. The Airdrain blades are designed like old-style broad swords, arranged in a high-tech spiral patten, and the machine works quickly. Deep slicing and verticutting broke up the mat of weeds, thatchy grass, and debris. Tons of material were vacuummed off with Lawn Genies and a Giant Vac Sweeper.

Another bit of British technology we employed at Las Positas was 7/8-inch jumbo thatching tines for overseeding preparation. We had previously used them on the fairway renovation at The Alisal, attached to a Varicore three-point-hitch cam-driven aerifier. The combination created perfect, protected seed pockets, one-quarter to one-half-inch below the surface, which was ideal for growing seeded bermudagrass. For both

renovation projects, we selected NuMex Sahara bermudagrass for its superior drought-tolerance under heavy-wear conditions. In our experience, conventional seeder-slicers hadn't been successful for overseeding bermudagrass because they weren't calibrated for such fine seed, the spacings were too far apart, and this type of grass didn't survive in a competitive situation with existing ryegrass and kikuyugrass stands in fairways.

At The Alisal, the 7/8-inch-diameter, one-half-inch-deep pocket on two-by-two-inch spacings assured the seedling survival and a competitive edge. In our experience, traditional seeder-slicing in the summer heat made it difficult to maintain adequate moisture at the seedling's shallow rooting depth. By creating a seed pocket with the thatching tine, we created millions of tiny seedbeds where the bermudagrass could grow without competition from existing grasses or compaction. We then reel mowed the plugs to partly refill the holes with loose soil and very little grass or thatch.

In previous renovation efforts, it had been nearly impossible to maintain adequate moisture for seedling survival without creating conditions too wet to continue play. Superintendents face this hydrophylic-hydrophobic dilemma on their putting greens on a daily basis. With the protected seed pocket, we were able to continue using golf carts at The Alisal—and let limited play continue at Las Positas Park—in adequately moist ground with minimal seedling mortality due to compaction or wear.

It was interesting to note that, on the golf course, where water coverage was poor, the grass survived and thrived far longer in the protected seed pockets. This was particularly true of the NuMex Sahara bermudagrass on the fairways and tees, and the SR 1020 creeping bentgrass on greens.

More Trans-Atlantic Technology

Thanks again to our visit to England, we adapted a British-made Contraseeder, designed and calibrated for fines fescues and Colonial bentgrass, for use with NuMex bermudagrass seed and other bentgrasses. Using this machine and the ultra-lightweight walking Autoseeder, in conjunction with the shallow jumbo aeration tine, we were able to nurture an excellent stand on the Las Positas site in approximately two

months. Another seeding method that works very well—and we've found to be faster than slit seeding—is the use of a spiker-seeder on ground that has been prepared with shallow tine aeration

We reached the best results on The Alisal putting greens by aerifying, sand topdressing, and autoseeding in multiple directions at a rate of less than one-half pound per 1,000 square feet, and spike seeding a final pass to minimize visual striping. The Autoseeder's blades are particularly close to the hopper, which made application especially accurate and enabled us to reduce the seeding rate.

This method, coupled with deep drilling to 12 inches with a Powadrill, has substantially reduced the amount of *Poa annua* on the greens at The Alisal. It has also led to a healthy stand of SR 1020 bentgrass on the 40-year-old native soil greens that were in need of rebuilding because of severe black layer problems.

Our hope is that these and other "Old World" renovation techniques, which we adapted for use here at home, will improve the health, playability, and safety of turfgrass. All the tech-

On sports fields and golf courses, our goal is to keep turf surfaces in optimum condition year-round, even during periods of renovation and conversion to the "grass of the season." That's one of the true challenges of working in the transition zone.

niques mentioned in this article apply to cool-season grasses. We use nearly identical techniques for fall overseeding of ryegrass into existing bermudagrass stands. Bermudagrass planted in August was successfully spike-seeded with ryegrass in late October without damaging the tender warm season turf.

On sports fields and golf courses, our goal is to keep turf surfaces in optimum condition year-round, even during periods of renovation and conversion to the "grass of the season." That's one of the true challenges of working in the transition zone. This can be done through inno-

vative "agrosopic" turf management techniques, where the "surgery" is so sophisticated that the patient is up and running in no time. □

Editor's note: Scott Buley has served as a turf management and renovation consultant throughout the West Coast. He wishes to thank Marty Jenkins, executive director of the Las Positas Park Foundation, and Jeff Cope, assistant director of the City of Santa Barbara's Parks Department, for their cooperation during the renovation project.

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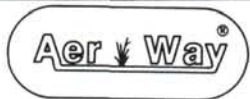


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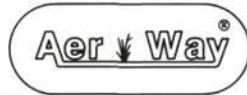
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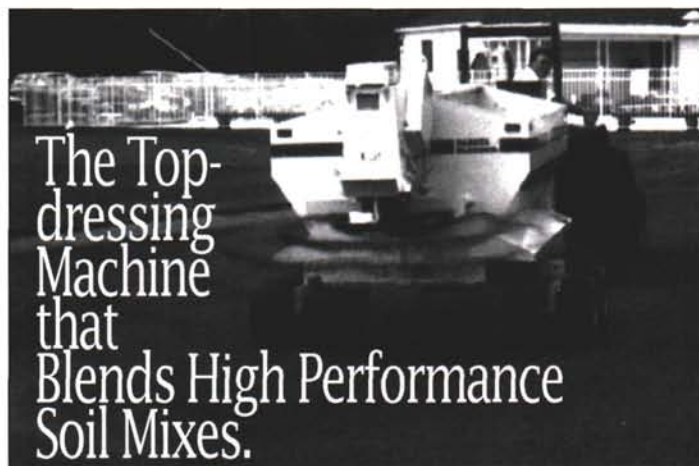
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