"Riviera’s superior wear tolerance and recuperative ability have given us a quality training surface all year long, helping take the Lobos to the NCAA title game for the first time in history."

"Riviera cuts smoother, texture is much finer, stripes better and it has better color. We seeded it in May... and it took off! It never showed any yellowing. It responded extremely well to slicing — and coverage started to almost triple."

"The ability of Riviera bermudagrass to establish quickly and recover quickly from wear is just amazing."

"Six weeks after planting we hosted our first Baseball Camp with full coverage. We feel that our “Razorbacks” & “Riviera” go together, two of the highest rated performers in their class."

"Riviera bermudagrass handled a wet, cold transition zone winter; the amount of winter kill was marginal. Riviera has exceeded my expectations, proving it to be a superior variety."

"There’s no better recommendation for Riviera, than from top sports turf professionals."

Many top sports turf managers today agree that the extremely fast grow-in, quick recovery from heavy use, early green up, cold tolerance and superior quality, make Riviera their first choice and, simply the best, test after test. We can’t put it more simply. They can’t speak more highly of it from Oklahoma to Indiana and beyond.

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Simply Best. Test After Test
LOCATED ON BOSTON'S ESPLANADE, THIS RECENTLY REDEDICATED AREA EMERGED AS A RESULT OF A PUBLIC/PRIVATE PARTNERSHIP.

The goal of this venture was to restore the well-worn and much-loved youth athletic fields on the Esplanade. The three nonprofit groups raised more than $1.8 million in private funds and taxpayers contributed $175,000 through the EOEAs Office of Public Private Partnerships for the rebuilding of the fields. Also, the Ebersol family recently pledged an additional $500,000 through a matching challenge grant program to create an endowment for field maintenance that will protect the capital investment in this public resource.

With the aid of Geller Sport, these damaged and often flooded ball fields now feature two baseball/softball diamonds, a youth baseball diamond, a t-ball field, five youth soccer fields, and a regulation-sized soccer field. Not only have the fields been totally rebuilt, but also new drainage and irrigation systems have been added, as well as dugouts for softball and baseball. Due to the addition of enhanced field lighting, adult and youth groups are no longer forced to compete for limited daylight hours of play.

One of generous non-profit partners, Hill House, known as “your backyard in the city,” has offered quality athletic and creative programs to kids, adults and seniors living in Boston’s downtown neighborhoods since 1966. Hill House soccer programs have flourished at Ebersol Fields and will continue to prosper in the future. Staff members work tirelessly to ensure that the participants have a great experience and that the Fields are maintained at the highest possible quality.

The Esplanade Association (TEA) is dedicated to the restoration of the historic, well-visited linear park along the banks of the Charles River. In addition to Ebersol Fields, TEA constructed a state-of-the-art play area and over the past few years has completed a comprehensive tree inventory. This group also initiated a bench sponsorship program to raise funds for the park’s ongoing restoration and maintenance. TEA will continue to be actively involved in the stewardship of Ebersol Fields, sharing responsibility for its overall maintenance.

The Red Sox Foundation is the official team charity of the Boston Red Sox, founded in 2002 after the group led by John Henry and Tom Werner bought the team. Through Henry,
Verner and many generous partners, The Red Sox Foundation has raised more than $18 million over 10 years, making it the largest professional sports charity in New England and one of the largest in Major League Baseball.

The eagerly anticipated opening of the new fields in September was attended by special guests, including Henry and Werner, who jumpstarted the entire project with a lead donation to honor Teddy's memory. Beaming youngsters were able to view and even try on the weighty 2004 World Series Championship ring while posing for photos.

Teddy Ebersol, namesake of the rejuvenated Fields, was the son of Dick Ebersol, President of NBC Sports, and actress Susan St. James who was killed in a plane crash.

Teddy Ebersol's Red Sox Fields exists within a parcel of land dedicated in 1974 to the memory of Dr. Melvin Lederman, a surgeon at Massachusetts General Hospital who joined the armed forces during the Vietnam War. Tragically, Dr. Lederman was killed in a combat helicopter crash in 1969, two days before the end of his tour of duty. When the Red Sox Foundation proposed refurbishing the flooded and worn fields in Teddy's memory, Dr. Lederman's surviving brother and sister-in-law graciously agreed to allow this youth athletic area to be renamed "Teddy Ebersol's Red Sox Fields." The entire expanse, encompassing the Fields, as well as the quieter corners, would subsequently be rechristened as "Lederman Park."

Youth soccer began at the fields in September 2006, and baseball and softball games are now being scheduled for the spring of 2007, allowing time for the new sod to take hold. While some fencing will remain around the baseball fields until the new grass is firmly rooted, the pathway along the Charles River has already reopened, allowing pedestrians and cyclists to access the full length of the Esplanade.

All agencies and individuals engaged in this project are very grateful to the many donors, large and small, who made this "field of dreams" a reality.

Richard Scott is the Charles District Manager for the Massachusetts Department of Conservation and Recreation's Division of Urban Parks and Recreation, Richard.scott@state.ma.us.

www.sportsturfmanager.org
Turf on turf for BCS Championship

ours after the exhilarating finish in Boise State's win over Oklahoma in the Fiesta Bowl, West Coast Turf began laying 95,000 square feet of sod directly on top of the existing natural grass field.

The freshly cut layer was being rolled out at University of Phoenix Stadium for the Bowl Championship Series national title game between Ohio State and Florida.

Up to 500 rolls of Tifway 419 hybrid Bermuda sod were transported on flatbed trucks from the company's Scottsdale farm to the Glendale stadium. Each roll weighs 2,100 pounds.

Because of the quick turnaround between games, the new sod will be cut at 1-inch thickness instead of the traditional half-inch cut to provide more mass and firmer footing.
"You could actually play the next day on this," said Danielle Marman of West Coast Turf, a Palm Desert, Calif.-based sod grower and installer with offices in Tempe. "If an athlete cuts on it, it will provide a stable surface. It has enough weight where that stuff will not move."

In comparison, the sod West Coast provided for the Fiesta Bowl stood at 1 1/2 inches thick. In that instance, the company had "scalped," then replaced the turf between the hashmarks.

The Fiesta Bowl organization and the Arizona Sports and Tourism Authority jointly footed the $130,000 bill for new grass for the two Glendale bowl games. The Fiesta Bowl donated sod from the BCS game to Saguaro High School in Scottsdale.

*This story based on reporting by Scott Wong in the Arizona Republic, January 3, 2007.*
PEST OF THE MONTH

Demystifying the infamous MOLE
Recreational turf, parks, and cemeteries across the country suffer mole damage each year. Reliable estimates also find 50 million single-family homes in the US and Canada are located in mole prone areas, as well as 5 million businesses in these same regions that maintain lawns on their property. If the total economic toll from moles could be calculated, it would probably be in the millions of dollars. Moles common to North America are what mammologists call “fossilial” animals. “Fossilial” means, “Equipped with limbs and feet adapted for digging,” a feature of moles that makes them specialists in living underground as creatures that tunnel through the earth in search of food. Although few people have actually seen a mole, living or dead, they are relatively common pests in North America.

Mystery moles
Moles are equipped with powerful forelimbs that enable them to move 2.5 times their body weight and move through soil at incredible speeds. Mole species native to North America are carnivorous predators, killing and eating other animals, insects and their larvae and, most importantly, earthworms. They do not eat roots, tubers or bulbs; vegetation in any form is not considered food by a mole. Moles must forage for food and eat almost constantly to meet their needs for a high-protein diet that, incidentally, must also contain ample water. Coupled with a very high metabolic rate, moles must consume the equivalent to their body weight daily to survive.

No food meets a mole’s unique dietary requirements better than earthworms, which supply a high-protein, high-energy diet and abundant water simultaneously.

Moles possess a poorly developed sense of sight. As a result, they depend on their other highly developed senses to find prey. Moles have the ability to detect even the slightest seismic vibrations that earthworms and excavating insects make, and can home in on these signals over considerable distances. This remarkable ability to use vibrations to locate food is due to specialized vibrissae on the snout, forepaws and tail, as well as stiff sensory hairs on the head that help orient them toward vibration stimuli. Specialized sensors, called “Eimer’s organs,” located in the nostrils, allow moles to use touch to identify and differentiate between minute surface details of objects. Add an acute sense of smell and moles possess a powerful set of navigation tools that make them efficient hunters in an underground world.

Control measures that existed before the advent of Bell’s new mole bait, TALPIRID, have been relatively ineffective. Trapping has been the method of choice until now. Professional mole trappers and ambitious do-it-yourselfers testify that trapping is labor-intensive. There are a number of grain-based pelleted baits on the market. Moles do not take pelleted grain baits because grains are not part of a mole’s natural diet. Consequently these products confer no genuine control. Mole experts believe most non-trapping methods to control moles that seemed to have an early, modest measure of success did so merely because the mole’s routine was temporarily interrupted. Testimonials to the efficacy of grain-based baits, sonic chasers and mole repellents are merely anecdotal and not backed by solid science.

Bell Labs’ biologists began to do research on moles, their behavior, biology, ecology, and physiology about six years ago. Bell’s aim was to learn the mole’s strengths and weaknesses and to exploit that knowledge to develop an effective control technology that could be commercialized.

These scientists discovered how to locate active moles and then how to consistently capture moles without injury so they could be held in captivity. Bell’s mole research team also tested many alternative dietary regimens and found one that maintains moles in captivity in good health.

With captive animals, the biologists began to run definitive trials on most commercially available products. They first wanted to determine whether anything already on the market had significant mole killing efficacy. A series of standard “no choice” product acceptance tests were run using pelleted grain baits already labeled for mole control. A “no choice” test means the moles were offered a diet consisting entirely of test material. The pelleted grain baits received zero percent acceptance and the

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Opposite page: Mole eating TALPIRID.
test was concluded after it was clear that moles would not consume the test material. These results are not surprising, given what was learned previously about mole biology. Moles require high protein foods and are not capable of digesting grains. Gel baits were then subjected to the same “no choice” test and were likewise not identified as food by the moles.

The next step was to screen active ingredients by gavage administration (force-feeding). The purpose was to find an active that could be lethal to moles from consuming the amount of pesticide in one piece of bait. The results revealed an unexpectedly high level of resistance to the actives used in traditional rodenticides.
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Bell concluded that bromethalin was the best selection for the active ingredient in the bait. As an energy metabolism antagonist, bromethalin provides an effective counter to the high-energy demands of the mole’s active lifestyle. Consequently, TALPIRID is effective in as little as 24 to 48 hours, greatly minimizing further damage by the mole.

The challenge remained to create bait with mole-attractive features making it as readily acceptable to moles as their natural food. Many formulants, flavorants, shapes and sizes were tested over the ensuing months until the Bell Technical Department settled on a configuration that looked, felt and handled like a nightcrawler, the moles’ favorite food. Moles were shown to readily accept TALPIRID even when offered natural food, i.e., they would actually consume TALPIRID even when provided earthworms.

The end result of all the hard work was the development of a new mole bait product that actually kills moles that consume a single piece of bait. This feature was confirmed under strict laboratory conditions, where TALPIRID produced 80% mortality under choice conditions against live earthworms. Field testing confirmed that TALPIRID applied in a single application at a rate of 1.41 kg/ha (1.24 lb/a) resulted in 100% reduction in the Total Assessment Ratio within three test days post baiting. This reduction was maintained throughout the entire seven-day follow up period.

Bell Labs is pleased to have taken some of the mystery out of mole control through good science. Mole damage sufferers will be glad that someone finally took advantage of modern technology to find a cure for this mysterious plague.

Bell Laboratories sponsored this article.

References


