



The Links at Spanish Bay in Monterey, CA seeded with Jamestown chewings fescue

Jamestown

Chewings Fescue



For more than 300 years chewings fescues have been used on golf courses. Of all chewings fescue varieties, Jamestown developed by Dr. C.R. Skogley, University of Rhode Island, has earned an enviable reputation.

In national turfgrass evaluation trials, Jamestown has outperformed several well-known, commercially available fineleaf fescues:

Mean Scores from 19 Nationwide Test Locations (National Turfgrass Evaluation Program, 1986)	
Jamestown	4.7
Koket	4.5
Pennlawn	4.4
Ensylva	4.4
Highlight	4.2

Advantages of Jamestown Chewings Fescue

- Fine leaves
- Tillers aggressively
- Dense, low growth
- Persists under low mowing
- Darker green
- Tolerates drought
- Excellent shade performance

For new greens

Mix Jamestown with bentgrass in a 50/50 mix by seed weight. Jamestown allows you to have your greens in play more quickly compared to 100% bentgrass seedings.

For repairs

Use 3-4 lbs. of Jamestown with 1/2 lb. of bentgrass per 1000 square feet for quick re-establishment of damaged areas.

For winter overseeding

Use Jamestown in a mix for overseeding Bermudagrass greens, tees and lawns.

NOTE: Jamestown Chewings Fescue is included as a component of Marvelgreen 3 + 1 and Marvelgreen Classic winter overseeding mixtures.



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The 18th hole prior to construction.



The same hole following construction accented with dune grasses.

Fescues Emulate Scotland

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Greens and tees were lightly topdressed every two weeks with the sand/peat mix. "Now we topdress once a month and aerify once in the spring and once in the fall."

Another thing that Rygg noticed was that the thatch fescues tend to build does not affect their performance. "Thatch is part of the Scottish nature of the course," Rygg adds. "The fescues seem to thrive in two or three inches of thatch because they are so deep rooted." However, he is adding a groomer attachment to his walk-behind greens mowers this winter to control the thatch on the greens.

The tees have also baffled skeptics by withstanding everything thrown at them. "The fescue takes abuse as good or better than ryegrass and Kentucky bluegrass," says Rygg. "It seems to resist divots because it's so dense and we don't have to keep the tees as wet. A divot here is rarely bigger than a half inch. We also have a divot bombing program where the crew places a mixture of seed, sand and peat to every divot they see. We mow them with walk-behind greensmowers at 5/8 inch, fertilize with a half pound of nitrogen per month and overseed them frequently."

Mowing the undulating fairways at 5/8 inch without scalping has been a challenge for Rygg and his crew. "Fortunately, because we have fescue we don't have to mow as low or as often as we would other grasses," he states. "Fescues grow more slowly than conventional golf course grasses. They also don't change the golf shot as they grow, because the dense, narrow shoots prevent flier lies."

"We can't use big equipment on the fairways, so we mow with 72-inch triplex Toros with hydraulically driven ten-bladed reels." These are fitted with baskets to remove any Poa seedheads and

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Fine Fescue Defined

What are Fine Fescues and why are they so important to turf managers?

Our Fescue turfgrasses are part of most every park, golf course, industrial campus, athletic field, condominium commons and home lawn from the transition zone, Northward.

But, many people are not aware of that. Perhaps we are the most overlooked turfgrass in existence.

We feel that Fine Fescues are the best turf investment a grounds manager can make. And, we'd like to point out *why*.

Fine Fescues are *real* grass. And, as with all living things, there is give and take. Sure, our Fescues take water and some maintenance, but they are better *givers*. Our natural grass turns noxious gases into oxygen and is a natural air conditioner for turf users.

We feel that while artificial turf has its place on locker room floors, it has no business where *real* people work, play and relax. Our grass is just *naturally* more refreshing.

Our Chewings (*Festuca rubra commutata*) and creeping red (*Festuca rubra rubra*) Fescues are rather unique when compared with other turfgrass species. Although they have most of the features of other cool season grasses, Fescues have several distinct benefits worth noting.

Fine Fescues are low maintenance. Our varieties require less fertilizer and water than other species. That's a big *plus* at today's water, fertilizer and manpower prices.

Fine Fescues fare well around trees. It seems our grass doesn't need as much sunlight, water and nutrients as other turfgrass species. Because Fescues don't compete with trees for these important elements, they're called *shade grass*. Our Fescues don't creep into flower beds, nor crowd out other species in a mixture.

And, because they're Oregon grown, our Fescues germinate, adapt and perform better than imported types.

You'd expect to pay a fortune for such a turfgrass, but Fescues are quite reasonable

Why don't Fescues cost a great deal? Fine Fescues have been around a long time and

have been changed very little. Why mess with a good thing? While other former "pasture" species are coming closer to looking like our old standard; receiving notoriety for their "improvements" and enjoy the price increases associated with the word "new," our Fescues have continued what they do best . . . support the up-and-comers. But then, Fine Fescues were meant to be stepped on.

Fine Fescues are Ideal for Recreation, Sports and Leisure

Not only do Fine Fescues excel alone or in perennial ryegrass/Kentucky bluegrass mixtures on horizontal playing surfaces; Fescues are excellent for low maintenance areas like berms, roadside banks, ski slopes and hilly spots that don't retain moisture. So, you see, Fescues are ideal all-around grasses for *all around* your recreation and sports facility. Their low maintenance requirements offer *turf managers* a chance for a little more leisure . . . and there's nothing wrong with that.

For a series of nine tech sheets on Oregon grown Chewings and creeping red Fescues, call or write:



Oregon Fine Fescue Commission

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Fescues Emulate Scotland

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to control thatch. "If you stand on top of a dune, you can see that the Poa invades in the low spots but never gets started on top of the mounds." In the spring and fall, Poa is sprayed with a tank mix of endo-thall. Rygg plans to hit the Poa in low spots with glyphosate and reseed. "Overall, we have maybe one percent Poa on the fairways."

Broadleaf weeds are easily controlled with postemergent herbicides but Rygg does fight crabgrass, kikuyugrass, and tall fescue that invade the course. "Since we are constantly reseeding we avoid using preemergent herbicides," says Rygg. That forces the crew to pull grassy weeds by hand. He would like to experiment with Acclaim, a selective grassy weed control from Hoechst, but it is not currently registered in California.

An overseeding program is an important part of the maintenance of fairways, tees and greens. In addition to spot seeding, Rygg keeps a tractor-mounted slicer/seeder and Ryan Renovaire busy most of the year.

"I'd rather spend money on seed at this point than experiment alot with chemicals," Rygg admits. "It's no different than using ryegrass on conventional golf courses to maintain density and uniformity. Overseeding gives the golfer the best possible conditions for his game."

The short rough constitutes a four-foot-



A bagpiper adds to the authenticity of Spanish Bay by playing every evening at dusk.

wide ring around the fairways. Cut at 1/2 inch with a National reel mower, it serves as a last-hope barrier between the fairway and the tall rough. Both short and tall rough receive only two applications of fertilizer each year, being maintenance-free for the most part. During the summer the tall rough has a brownish-green cast that warns golfers of impending doom if their shot ventures into it.

The deep-rooted fescue also holds together the steep walls of numerous pot bunkers strategically spread throughout the course. Combined with the tall rough, dunes, marshes, and constant wind, pot bunkers send the message to the golfer that nature is his toughest opponent on the course, exactly as it is in Scotland.

In fact, at sunset the golfer might swear that he really is in Scotland when a kilted musician plays his bagpipe from the atop the dunes near the hotel.

With more than 100 golf courses under his belt, Robert Trent Jones II continues to make golf courses blend into their surroundings. With the Links at Spanish Bay, Jones has achieved another goal: to give American golfers the authentic experience of linksland golf.

Jones, Watson, Tattum, Hurley and Rygg all seem to agree that fine fescue is an inseparable part of that experience. They are also convinced that fescues can be maintained satisfactorily in this country for golfers to enjoy. ●

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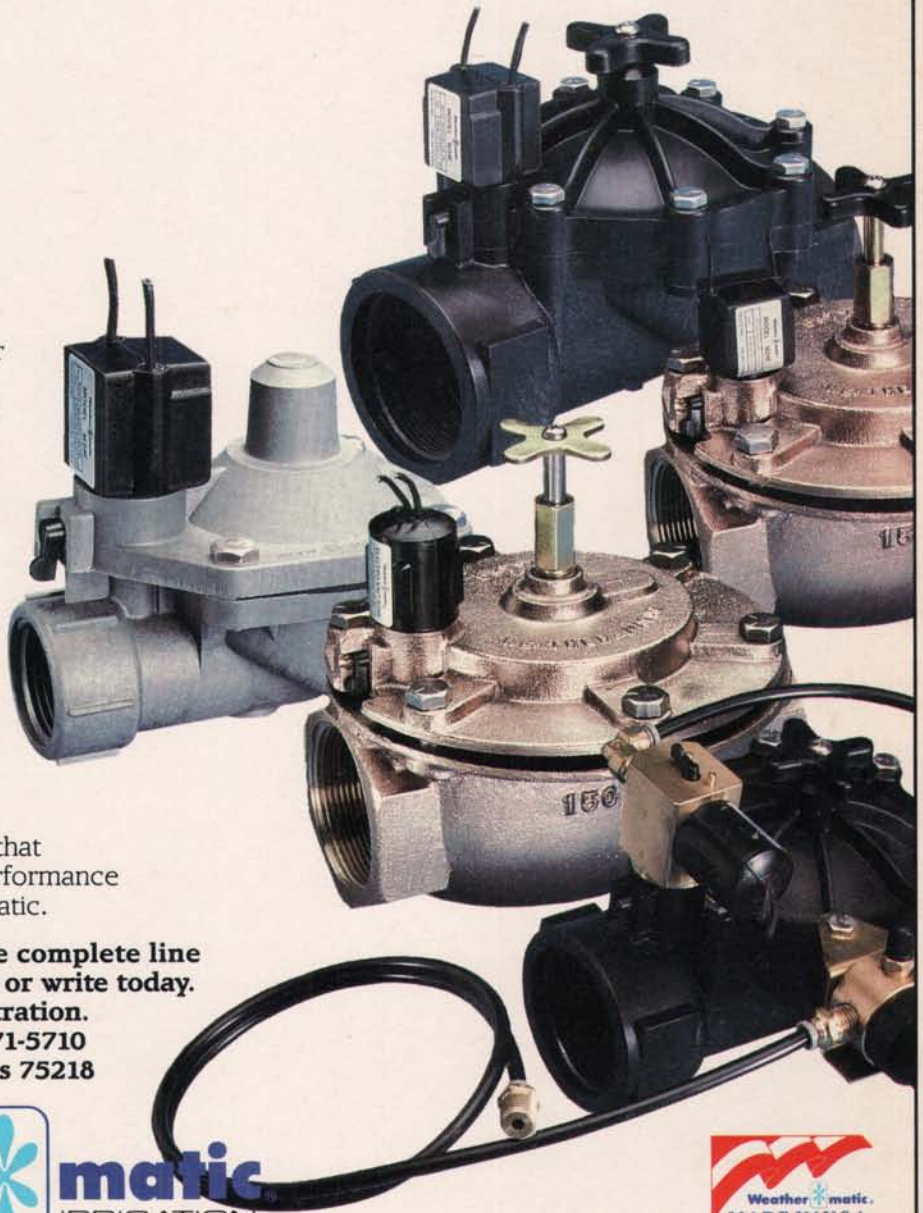


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PALA MESA RESORT WINS DEERE TEAM CHAMPIONSHIP



The victorious Pala Mesa Resort team included (from left) Jim Davis of Hydro-Scape Products in San Diego, Bob Dobek, Danna Campbell, Chris Starkjohann and John Slavik

After two grueling days of competition on the tough Jack Nicklaus Resort Course at PGA West in LaQuinta, CA, a fivesome representing Pala Mesa Resort in Fallbrook, CA, captured the 1988 John Deere Team Championship.

The Pala Mesa team turned out tops of more than 700 teams participating in regional tournaments and 29 teams that earned the right to play in the championship round at PGA West in November. Representing Pala Mesa were PGA professional Chris Starkjohann, superintendent Bob Dobek, club manager Danna Campbell, club president John Slavik, and Deere distributor Jim Davis. All teams played a modified scramble format officiated by the PGA.

The John Deere Team Championship is one of 34 PGA-sanctioned events. The pur-

pose of the tournament is to bring together the different managers at golf courses throughout the country as a team, and to recognize those teams that perform best together in a scramble format.

First runner-up in the championship was the team from Prestwood Country Club in Dallas, TX. The team from Glen Oaks Club in Old Westbury, NY, slipped from first place to fourth on the second day of the championship. Moon Valley Country Club in Phoenix also moved past Glen Oaks on the final day.

All members of the winning team received championship rings. In addition, PGA professional Starkjohann won \$2,000. Members of the top three teams were presented with glass trophies to display back home at their clubs.

GOLF COURSE ARCHITECTS OFFER COST GUIDELINES

Real estate developers should expect to spend at least \$1.25 million to build an 18-hole golf course, excluding the cost of land, according to the American Society of Golf Course Architects (ASGA) in a new publication, *Planning the Real Estate Development Golf Course*. Nevertheless, the ASGA says developers can expect a profit in the first year of operation.

The group gives a rough estimate of construction costs for a regulation 18-hole course as between one and three million dollars. This would include clearing, grading, drainage, irrigation system, seeding,

building greens and tees, shelters, bridges, cart paths and service roads. In addition, the developer would need to spend between \$150,000 and \$300,000 for maintenance equipment and between \$100,000 and \$250,000 for a maintenance building. Finally, ASGA estimates annual maintenance costs to run between \$100,000 and \$250,000.

ASGA cites examples of the impact of a golf course on values of surrounding homesites. If land is not available for a regulation-length course (130 to 150 acres), ASGA states that developers might consider shorter executive-length courses, which typically occupy between 75 and 100 acres. The brochure is available free from ASGA, 221 North La Salle St., Chicago, IL 60601, (312) 372-7090.

KELTY NAMED DIRECTOR OF RESEARCH AT SCOTTS

Michael Kelty has been appointed director of research and development for the O.M. Scott & Sons Company. He will be responsible for the research and product development programs, which support and maximize the growth of the company's consumer and professional businesses.

Since joining Scotts in 1979 as regulatory environmental specialist, Kelty has held several technical management positions, including director of chemical technology.

A graduate of John Carroll University in Cleveland with a bachelor of science degree, Kelty completed his Ph.D. at Ohio State University in 1977. Prior to joining Scotts, he was an assistant professor of environmental and health services at Cleveland State.

LESCO PROMOTES MACK AND SIEGFRIED

Lesco, Inc., a manufacturer and distributor of turf care products and equipment to the lawn care and golf course industries, has announced the promotion of two managers.

Jeffrey W. Mack has been appointed vice president of equipment sales. He will be responsible for the overall marketing function of the company's line of professional turf equipment.

Mack's former position with Lesco was as equipment product manager. He is a graduate of Denison University in Granville, OH, where he received a degree in economics.

Also named to a vice presidency was James Seigfried. He will serve as vice president of equipment development. In this capacity Seigfried will be responsible for managing the development of the Lesco line of professional turf equipment.

Seigfried joined the company in 1980 as manager of the Sebring, FL manufacturing plant and then served as manager of research and development from 1983 to the present. Prior to 1980, he was a golf course superintendent for 23 years at the Losantiville Country Club in Cincinnati, OH, and the Firestone Country Club, in Akron, OH.

WHITE NAMED DIRECTOR OF MARKETING

David R. White has been appointed director of marketing for the CoRoN Corporation, headquartered in Souderton, PA. His responsibilities include all the sales and marketing efforts for the company on a national and international basis.

White's experience includes service as sales manager, foliar products, for the Tri-zone Corporation, and agricultural sales representative for the Arcadian Corporation. He has a degree in agricultural economics from Penn State University.



Joe Robbie Stadium as it was being prepared for the last game of the Dolphin's 1988 season.

Joe Robbie Stadium Prepares For Super Bowl XXIII

Fifty-four million households are expected to have their television sets tuned to Super Bowl XXIII this month. The contest for the National Football League Championship has become one of the premier televised sporting events in the world. And, perhaps the first time, it is being held in a stadium that was designed in large part as a multi-million-dollar stage for the Super Bowl — Joe Robbie Stadium in Miami, FL.

The NFL selected the stadium as the site for Super Bowl XXIII when it was nothing more than a set of architectural drawings. Joe Robbie, owner of the Miami Dolphins, wasn't even certain he could finance construction of the \$120-million stadium when he unrolled the blueprints on the conference table at NFL headquarters in New York to show the Super Bowl Site Selection Committee.

He wanted to own the stadium, building it without financing from state or local governments. To obtain private financing, something few sports authorities believed was possible at the time, Robbie developed a unique plan.

With the help of HOK Sports Facilities Group in Kansas City, MO, Robbie satisfied the NFL committee that he could indeed finance his dream. He also realized that his plan would be more likely to succeed with a commitment from the NFL for the 1989 Super Bowl.

The plan hinged on preselling tickets and long-term leases for more than 200 skyboxes and 10,000 club seats, far more than had ever been built in a stadium before.

To win the confidence and support of Miami fans and the NFL, Robbie had to build a better sports facility than the famous Orange Bowl. In addition to providing parking, comfortable seating, and convenient concessions for 73,000 spectators, he needed the ultimate field for both the players and the extremely important television audience.

For a long time, Robbie had shown special interest in the field conditions at the Orange Bowl, home for his Dolphins from 1965 to 1987. He has been a fan of natural turf since 1976, when he was instrumental in having the artificial turf in the Orange

Bowl replaced with a Prescription Athletic Turf (PAT) system.

When it was time to decide what type of surface the new stadium would have, Robbie again chose PAT. HOK's Dennis Wellner recalls, "Joe Robbie wanted natural turf from day one. He was very realistic about the limitations of a natural field, but he insisted on it anyway."

The field was also the largest PAT system at the time. It was proportioned by HOK to meet international soccer standards, in addition to football and baseball (with some alterations). As a result of its size, the stadium is almost certain to be used in 1994 during the World Cup Soccer tournaments. Robbie was a tremendous influence in convincing FIFA, the international soccer federation, to select the United States for the games.

Cancellations are a definite threat in Miami, where tropical storms are commonplace and the annual rainfall averages 60 inches. The patented sand-based field with suction drainage can remove four inches of water from a field in one hour. The plastic

Joe Robbie Stadium

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liner below the field also prevents salty subsurface water from intruding and allows the field to be subirrigated.

Salt-water intrusion is a distinct possibility, because the stadium is located on the Snake Canal in Davie, FL, a few thousand feet from the ocean. The water table is just one foot beneath the surface. To stabilize the foundation of the stadium, 500 cubic yards of fill were brought in to raise the stadium ten feet. The grass parking lots, however, remain at the original elevation.

Southern Turf Nurseries (STN) of Norcross, GA, is the licensed PAT installer in the Southeast. As the stadium took shape, STN was custom-growing three acres of Tifway 419 bermudagrass on the sandy soil at its sod farm in Lake Wales, FL. "We had soil samples from the farm tested," recalls STN's Bill Wilson. "The lab said the samples were the closest thing to a greens mix they had ever seen."

Construction of the field took place between February and May 1987. The Dolphins' first exhibition game at Robbie Stadium was scheduled for August, so the sod had to knit in roughly two months.

STN began to prepare the flat subgrade on February 9. No slope in the subgrade is required for the PAT system to operate. The plastic barrier was then placed on top of the subgrade. Three miles of wrapped, perforated drainpipe were positioned on top of

the barrier. The pattern of the pipe was designed to drain and subirrigate the field in three sections, one for the center of the field and two for the sidelines.

The drain lines feed into "wet pits" located behind both goalposts. Under normal circumstances, the pits serve as large collector drains, removing excess water by gravity. When rainfall exceeds normal drainage, suction created by two pumps underneath the stands is utilized to pull water through the root zone. To subirrigate, the process is reversed by adding water to the wet pits.

At the same time, STN installed the mains and laterals for the surface irrigation system. It consists of 44 Toro 640 heads placed in a square pattern 64 feet apart. At Robbie's request, only 12 heads are located in bounds.

The other important ingredient of the drainage system is the foot of sand that makes up the root zone of the field. Dr. William Daniel, inventor of the PAT system, made sand part of the design for two primary reasons: It does not compact and it drains better than soils containing clay or silt. He selected fine to medium-sized sand because it retains moisture better than larger sands.

For Joe Robbie Stadium, STN shipped in 8,000 cubic yards of properly sized sand and carefully spread it over the drainage and irrigation lines. Although the system does not require a sloped surface to func-

tion properly, a four-inch crown was installed so water could run off tarps. The NFL requires that all stadiums have a tarp to cover the field during a pre-game or game-time rain.

To provide additional moisture retention and to improve the cation (chemical) exchange capacity of the sand, calcined clay was mixed into the top three inches. Ten pairs of Aquamiser moisture sensors were then imbedded at two depths in the sand, two inches and four inches. The sensors were connected with wire to a controller next to the irrigation controller. The risers and sprinkler heads were installed and the sand was irrigated before the sod was shipped from the farm to the stadium.

By May 1, all 128,000 square feet of sod was installed and rolled. Both surface irrigation and subirrigation were activated to encourage the sod to send down deep roots. The moisture-control system was set between 30 and 50 percent. Frequent soil tests were taken so that nutrient levels could be kept at moderate-to-high levels at all times. Granular slow-release fertilizers are the backbone of the nutrition program.

Controversy seems to surround every new facility in professional sports, especially when it is hosting the Super Bowl. Not only does Joe Robbie take an interest in the playing field, the Dolphins' Don Shula is perhaps one of the most vocal coaches in the NFL about field conditions. He listens

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Mascaro's invention, the Vertislicer, was used to break through a subsurface layer and to encourage root growth.