

Grass Seed Developments: **BEST BETS FOR SPORTS TURF**

By Dr. Gil Landry

Before there can be sports turf, there must first be the grass with which quality fields are planted. University and private industry researchers have worked together over the years to discover, test, develop and cultivate superior varieties to withstand the rigorous demands of athletic play.

Turf characteristics in high demand for sports fields include: wear resistance, tolerance to various regional weather conditions, quick establishment and durability, and aesthetic qualities of rich color, fine texture, and dense, uniform growth patterns.

There's a growing interest by turf managers in endophyte-enhanced seed. Researchers report there are some overall plant benefits beyond insect and disease resistance. Endophyte-enhanced turf appears to be more tolerant to some stresses. There are, and will be, problems in producing and marketing endophyte-enhanced seed with the necessary longevity, the required persistence of the endophyte in the seed. But it's an area most seed producers are currently developing.

We've asked seed company researchers for their recommendations of the best varieties for sports turf use among their company's recent or pending instructions. Here are their recommendations, along with their reasons behind them.

Turf Merchants, Tangent, OR

Steve Tubbs, general manager

Froghair intermediate ryegrass is a 1993 introduction. The intermediates are genetic crosses using annual ryegrass and perennial ryegrass in the parentage. Froghair ryegrass is designed for overseeding in the southern U.S. and is especially useful in overseeding into higher cuts of bermudagrass. It can be used in blends with perennial ryegrasses, fescues, and *Poa trivialis*. It's aggressive in establishment, upright in growth habit, medium textured at maturity, and darker in color than annual ryegrass. It exhibits somewhat less aggressive growth to aid in spring transition.

Affinity perennial ryegrass ranked first in the National Turfgrass Evaluation

Program (NTEP), 1991 Perennial Ryegrass Progress Report in summer density ratings, leaf texture ratings, and fall density ratings. It has a dark green color year round, with very good winter color and excellent spring green-up. Affinity with endophyte enhancement has high natural resistance to many turf pests and shows resistance to many turf diseases, especially Fusarium Patch, Brown Patch, Pythium Blight, and Crown Rust.

Zen brand seeded zoysiagrass exhibits heat and drought tolerance. It's adapted to a wide variety of soil conditions, grows in sun and shade, shows improved cold tolerance, and has good salt tolerance. It has a medium texture and medium green color. It spreads by both above-ground and underground runners. It exhibits excellent wear tolerance.

Viva (BA-366) Kentucky bluegrass was developed by O.M. Scott and Sons Company. It has bright green color, good drought tolerance in terms of wilting resistance and recovery from stress, and shows outstanding Dollar Spot resistance.

Turf Seed, Inc., Tangent, OR

Bill Meyer, vice president of research

Bright Star dwarf perennial ryegrass has made a great showing in the NTEP trials. It's resistant to cold and has good heat tolerance. It's proven excellent for overseeding in the South, and all across the U.S. in Alliance, a blend with three other very good perennial ryegrasses.

Confederate, a turf-type tall fescue, is especially good for the transition zones. It has excellent disease resistance and is proving itself a winner on athletic fields. It holds up well with lower maintenance and less water than perennial ryegrasses. It does take a little longer to handle play after reseeding than do the perennial ryegrasses.

Mowless is another new turf-type tall fescue. It's doing well on athletic fields in a mixture with Silverado, El Dorado, and Tomahawk, especially in California where more dwarf characteristics are especially beneficial.

Unique is a new bluegrass selection from an old turf area in Rhode Island. It's



In all seeding applications, local climate and field condition information, as well as knowing the varieties of seed available, are critical to success. Photo courtesy: Allan Roench, Gandy Company.

in the top 10 of the NTEP trials. It holds up well through the winter and has good overall disease resistance. It has compact dwarf characteristics, good color, and is dense and aggressive.

Pennington Seed, Inc., Madison, GA.

Ronnie Stapp, vice president

A new seeded bermudagrass will be available in 1994, right now code-named 886A. It's more dwarf than Cheyenne, with a very low growth habit. It's cold tolerant, quick to germinate, and a more prolific seed producer than most current varieties. Its color is darker than common bermudagrass. It's finer bladed than Cheyenne, but not quite as fine-bladed as the vegetative varieties.

A new turf-type tall fescue with the code name ITR90-2 has been in the Rutgers University development program. It's low-growing, though not quite as dwarf as Bonsai. It was highly rated in the NTEP trials last year. It's fine-bladed and very dark green. The company has high expectations for its use in sports turf and lawn areas, especially in the South.

Virtue is a turf-type tall fescue currently on the market. It's a fine-bladed grass with good dark color and overall attributes. It's being used primarily in commercial turf blends, including those for sports turf. It's making an excellent showing in Enviro-Blend with Tomahawk and Monarch across the fescue belt from California to the East Coast.

The new endophyte-enhanced perennial ryegrass Morning Start is in the 1993 Primo-Blend. It has insect and disease resistance, good color, and performed well in the NTEP trials.

Another new perennial ryegrass, code-named 2B3, is a possible leading variety for future years and should be in seed production by 1994. It's doing well in

NTEP trials and has especially good color.

Jacklin Seed, Post Falls, ID

Doug Brede, research director

Pixie turf-type tall fescue is an intermediate variety bred to be very dense, wear-resistant, and dark green. It's done fairly well against Brown Patch. In 1992, only samples of this variety were available.

Jackpot, a new seeded bermudagrass, will be available as seed samples this fall and as certified seed in the spring of 1994. It's the first seeded type bermudagrass that rivals vegetative types. It has a fine texture and is very dark green. It's not as cold-tolerant as those bred especially for cold-tolerance, but it's the equivalent of most vegetative types. It has improved resistance to Leaf Spot.

There are two experimental turf-type seeded zoysiagrasses on the horizon, currently code-named J-37 and J-38. Both are dense, finer textured, and darker green than the Chinese common now available. The excellent density of these seeded varieties makes them good candidates for sports turf use.

This is the first season for ample certified seed of NuStar bluegrass. This

medium-dark green variety was discovered thriving in an area of Washington that received only 10 inches of precipitation a year. It's been screened and found successful in both high- and low-maintenance situations, and is doing especially well on the East Coast. It shows good resistance to Leaf Spot.

O.M. Scott and Sons, Marysville, OH

Virgil Meier, in charge of research

Achiever perennial ryegrass was released in 1993. It has high endophyte insect resistance, fine texture, good density, and has performed well in the NTEP trials.

Adobe, a turf-type tall fescue, also has high endophyte insect resistance. It's an intermediate dwarf variety that retains excellent drought tolerance with fewer clippings.

The major attribute of Buckingham Kentucky bluegrass is its very dark green color. It blends well with other bluegrasses and with perennial ryegrasses to raise the color level of the turf. It's especially useful where aesthetics are important, as in a sports turf stadium.

Lofts Seed, Inc., Bound Brook, NJ

John De Matteo, turfgrass agronomist

Palmer II, Prelude II, Repel II, and

Yorktown III are all perennial ryegrasses which are especially good for sports turf use. These varieties have been on the market for one to two years. All have good, dark color, fine leaf texture, and are high in endophytes.

International Seeds, Halsey, OR

Craig Edminster, director of research

A new seeded bermudagrass variety, yet to be named, offered in cooperation with Arizona Grain Valley Seed Company and International Seed will be introduced this year. The variety is showing good potential for home lawns, sports fields, and golf fairways and roughs. It's not as dense as the vegetative bermudagrasses. It shows excellent seed production. It's cold-tolerant, thriving far north in the warm-season zone and well into the transition zone. It has an upright growth pattern, uniform texture, and excellent wear resistance. It's entered in the fall NTEP trials, with results expected over the next couple of years.

A new turf-type tall fescue, currently named APF, is also being developed in cooperation with Rutgers University. It has excellent turf quality and is wide-

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SEED

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ly adapted. It's fully endophyte-enhanced (85 to 90 percent) and has an excellent disease profile, especially against Summer Patch, Brown Patch, and Pythium.

Essence+ (plus) perennial ryegrass is being targeted for the Pacific Northwest, northern California, new England, and southern European markets. It is also endophyte-enhanced and has made an excellent showing against Stem Rust, Crown Rust, and Leaf Spot.

Seed Research of Oregon, Corvallis, OR

Skip Lynch, national technical representative

SR 8300 is a unique turf-type tall fescue from a different germplasm source than any other tall fescue on the market. It has a semi-dwarf growth habit, medium-to-fine leaf texture, rapid tillering, and shows both heat and drought tolerance. It has strong resistance to Leaf Spot and Stem Rust.

SR 4300 is an endophyte-enhanced perennial ryegrass that withstands insect and drought stresses. It's dense, dwarf-growing, and tolerates very close mowing.

Finelawn Research, Lake Oswego, OR

David Lundell, technical service

Stallion Select perennial ryegrass has high endophyte levels and disease resistance. It has fine leaf texture and excellent turf quality, and has done well in the last NTEP trials.

Finelawn 88 turf-type tall fescue is a semi-dwarf variety with fine leaf texture, good disease resistance, dark green color, and fast establishment.

A major introduction for sports turf fields is *Poa Supina*, a grass which originated in Germany and has proven to withstand the abuse of heavy play. It has good disease resistance under various management practices and shows resistance to Snow Mold and Dollar Spot.

P. Supina was used in various mixes — ranging from 5 to 30 percent of the mix with Chateau bluegrass, Stallion perennial ryegrass, and Pebble Beach perennial ryegrass — as a new planting on one of the practice soccer fields at Ohio State University in November 1991. To this point, the field has not needed overseeding. P. Supina is also in use at Wheaton College, Wheaton, IL, soccer field and the Chicago Bears practice field.



Pendulum seeder covers large areas with speed.

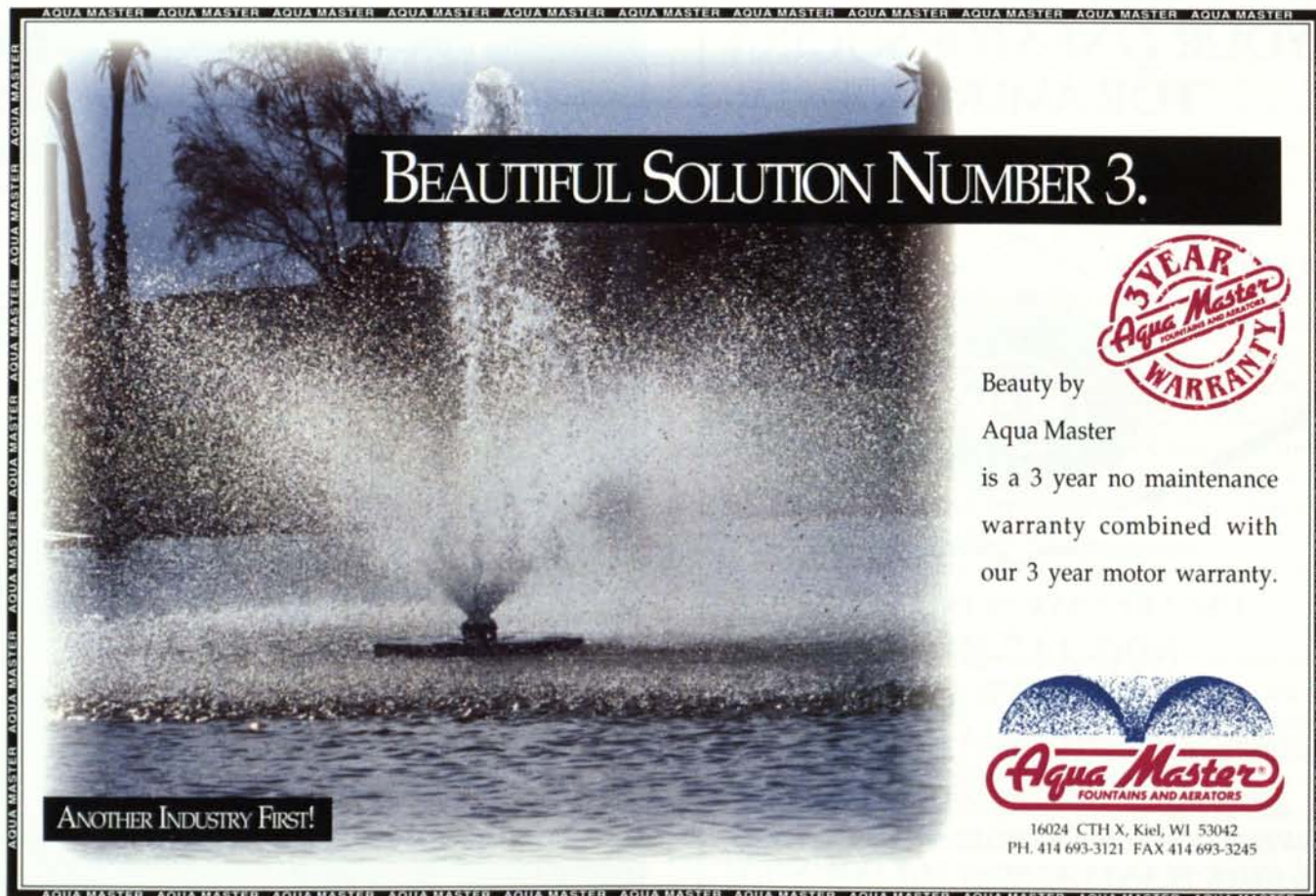
Photo courtesy: John Deere.

It's suggested that P. Supina be used as 20 percent of the mix for overseeding established fields. It can take a bit longer to become established in an overseeding situation than some of the other grasses, but once established, it handles the stresses of erratic weather and heavy wear extremely well.

Lesco, Inc., Rocky River, OH


Art Wick, vice president

New for the fall of 1993 is Advantage turf-type perennial ryegrass, an advanced generation cultivar with very dark



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blue-green color, fine texture, and excellent mowing qualities. It has a reduced vertical growth rate and reduced steminess during late spring and early summer. It's endophyte-enhanced (96 percent), with good resistance to above-ground feeding insects and improved overall stress tolerance.

Wildwood Kentucky bluegrass was selected from a golf course in western Pennsylvania for its aggressive, dark-green appearance following a six-week drought in 1988. It's very low growing, has a medium-fine leaf texture, and exhibits early spring green-up. It has good resistance to Leaf Spot, Dollar Spot, Stripe Smut, Leaf Rust, Melting Out, and Powdery Mildew. A limited supply will be available for demonstration purposes in the fall of 1993.

Research is continuing on low-growing, dark perennial ryegrasses, on perennial ryegrasses to provide improved transition in overseeded dormant warm season grasses, on improved high-endophyte creeping red fescues, and on high-endophyte tall fescues adapted to the south-eastern portion of the transition zone.

In 1994, Lesco will introduce an improved seeded zoysiagrass with earlier spring green up and an improved seeded bermudagrass with greater cold tolerance and earlier spring green-up.

Medalist America, Albany, OR

Eric K. Nelson, Ph.D.,

Director of turfgrass research

Sundevil seeded bermudagrass has dark green color, heat tolerance, and improved cold tolerance with reported winter survival as far north as Idaho. Its quick spring green-up provides improved recuperative potential for traditional spring sports in the South and transition zone.

Triple A is a blend of Amigo, Arriba, and Arid turf-type tall fescues that provides quick establishment, controlled vertical growth, and reduced mowing requirements. Amigo contributes wear tolerance and high overall trial ratings. Arriba adds broad adaptation, disease resistance, persistence, summer density, and dark green color. Arid brings broad adaptation and consistent performance.

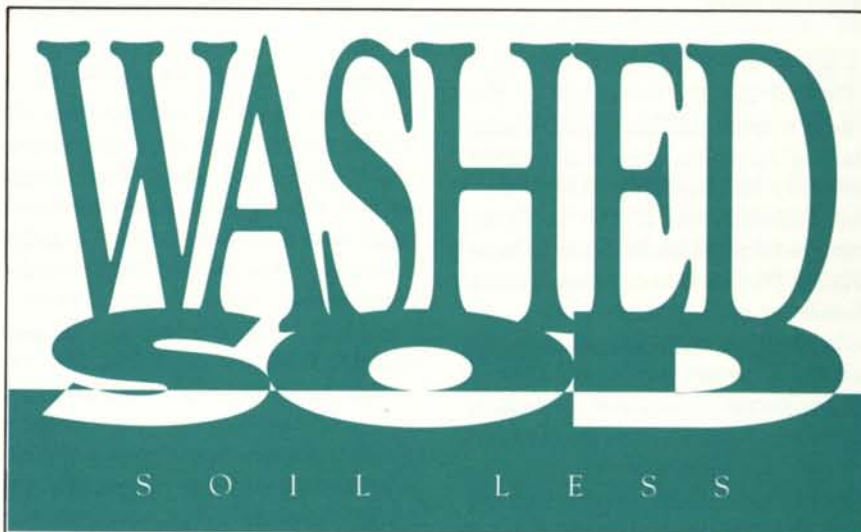
NuBlue Kentucky bluegrass joins the Triple A trio of turf-type tall fescues in the A Plus mixture to provide a denser, finer textured turf with improved recuperative potential.

Medalist X overseeding blend, containing Dandy, Target, and Mulligan perennial ryegrasses offers quick germination and establishment, wear tolerance, disease resistance, good density, medium dark green color, fine texture, and good spring transition.

Medalist Gold overseeding blend combines 50 percent APM, 25 percent Target, and 25 percent Dandy perennial ryegrasses for density, dark green color, fine texture, uniformity, and disease tolerance.

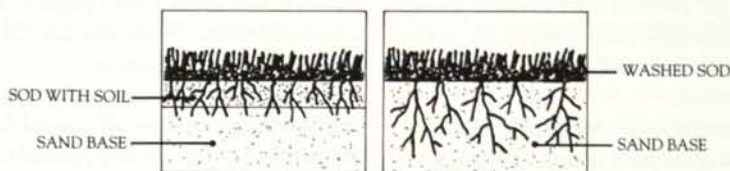
As a result of continual research, testing, and development at universities and seed companies, sports turf managers can select from a wide range of cultivars to tailor athletic turf to regional conditions and specific needs. □

Editor's note: As Extension Turfgrass Specialist with the University of Georgia, Dr. Gil Landry provides leadership in the development of statewide educational programs in turfgrass management. In addition, he serves as president of the national Sports Turf Managers Association.



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