

Professional Turf Seed Product Guide

2020-2021

www.barusa.com

800•547•4101



FOUR GENERATIONS OF EXCELLENCE

For four generations, the Barenbrug family has sought to make life beautiful through the enhancement of green spaces around the globe. We care just as deeply about turf as you!

Whether you're seeding worldclass golf fairways, sports fields, professional landscapes, or residential lawns, we know we have a solution for you.

WHO WE ARE

We're a plant breeding, seed production, research and marketing company, selling turf, forage, and wildlife seed through a wholesale and distribution network across the country. We also export and market seeds to countries around the world. Our Mission.

"Increase animal productivity to help feed the world, and enhance the enjoyment of green spaces."

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So Many Needs. So Many Seeds.

Barenbrug Research

Our world's needs are constantly expanding and changing. To meet these needs, our research team combines old-line breeding methods with the latest technologies to develop the varieties of tomorrow. Our highly trained, professional plant breeders work as an intercontinental team - sharing new germplasm, new methodology, and new biotechnology.

We conduct research across the globe because our customers are located all over the world. Two facilities in the United States, international research stations, and cooperative agreements with governments, private institutes, and universities allow us to access the global germplasm pool to innovate new varieties adapted to every climatic condition and growing requirement.

To learn more, visit: www.barusa.com

Partnerships

We work with governments and universities to augment our efforts in research, incorporating decades of knowledge and experience into our development programs.





We love this earth and want to ensure that future generations are able to enjoy the outdoors as we have. As part of our commitment to sustainability, we breed and develop new varieties that are rigorously tested to the strictest standards. All of these standards are centered around this mission: to not only refine varieties that make this world beautiful but to craft them to be good for our planet.

Here at Barenbrug, sustainability is something we take very seriously. From the production of the catalog you hold in your hands being printed with agri-based inks and on recycled paper, to the solar panels on top of our warehouse in Tangent, Oregon, we take the right steps to do our part. So you know, our Green Earth seal is not just another program to us, it's a way of life.

When you see this seal next to a variety throughout this catalog, you can be sure it will perform the best in its respective category, and you are investing in a variety that is making a greener earth.



Water quality is quickly becoming an increasing issue. With this, water usage in turfgrass settings are under national scrutiny. These turfgrasses of tomorrow show extreme potential, in even the harshest of environments.

Low Mowing



As turfgrass breeders and managers, we understand the costs involved in creating a healthy turfgrass environment. These turfgrasses are specifically designed to require less mowing. Enabling you to spend more time and money on key areas of your operation.



With growing populations, our access to clean water will begin to decrease over time. With this in mind, these blends are engineered to provide the same quality and performance we are accustomed to, even under these new conditions.



Not all environments or budgets are designed to support a high maintenance turfgrass stand. Fertilizing less will save you time and money. These grasses not only perform exceptionally well under low nutrient settings, they actually prefer them! "This season at Kettle Hills we have removed trees from the golf course. We used RPR with Yellow Jacket and found the seed used less water and established faster. Because of these characteristics, RPR with Yellow Jacket is our new favorite seed!"

Yellow Jacket[®] Enhanced Seed Coating

Better Turf with Less Input

A recognized leader in innovative grass seed coating, Barenbrug's Yellow Jacket® Enhanced Seed Coating has been providing the professional turfgrass seed industry with quality coated seeds since 2007. Since this time, millions of pounds of Yellow Jacket enhanced seeds have been sold across the United States.

Figure 1:

Percent cover of Bermudagrass 92 days after seeding

Conducted at one of several Phytotron facilities in the world, this study displayed Yellow Jacket coated seed's ability to outperform uncoated seed with percent germination

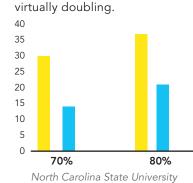


Figure 2:

Seed Germination percent at different soil moisture contents While irrigating at 98% and 56%

YELLOW JACKET

ET*, this study indicated Yellow Jacket coated seed established faster and maintained higher turf quality than uncoated seed.

coated uncoated 25 20 15 0 High Moisture Low Moisture

New Mexico State University

Yellow Jacket Benefits

- Improved turf quality
- Enhanced uniform seeding
- Less water needed for establishment
- Faster and improved establishment
- Seed moves readily thru the turf canopy for improved soil contact
- Easy to visually monitor during application
- Apron XL systemic fungicide improves seedling and root development
- Proven performance even in the most demanding applications

Learn More

*Evapotranspiration

Yellow Jacket Enhanced Seed Coating



Yellow Jacket Advantage With Yellow Jacket Coating, each seed can hold up to 600 times its weight in water.

30% With Yellow Jacket Coating, up to 30% less water is needed for establishment.

To learn more, visit: **www.barusa.com**

Yellow Jacket Enhanced Seed Coating

Yellow Jacket Establishment

Time lapse photography shows how quickly Yellow Jacket Coated bentgrass establishes all while reducing water usage.



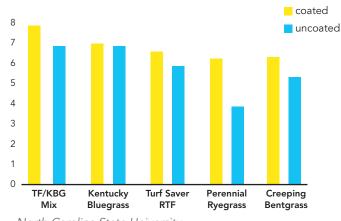


Pine Lakes Golf and Tennis Club Lincoln, Nebraska

Figure 3:

Turf Quality Rating

All coated entries exhibited superior turf ratings and disease performance a full year after seeding. After the study, it was clear Yellow Jacket Coated seed improves turfgrass quality, density, and disease ratings.



North Carolina State University





Healthy Grass Technology®

Kentucky Bluegrass Engineered for Turf Health

Developed from extremely traffic tolerant parent stock and within harsh climatic conditions, Barvette HGT came out of Barenbrug's research program solving each of the major species-wide problems, and possesses many additional qualities making it one of the most unique Kentucky bluegrasses ever bred.

Learn More

Figure 1:

Exceptionally Strong Spring Green-Up

Spring green-up is an important trait sought after when developing new Kentucky bluegrasses. While most bluegrasses are very slow to break winter dormancy, Barvette HGT exhibits early spring green-up. In the 2005-10 NTEP trials, Barvette HGT finished in the top statistical group. This allows the Turf Blue HGT blend to come back early and strong for spring play.

	Transition Zone TQ	Spring Green-up
Barvette HGT	6.6	6.3
SRx466	6.6	5.7
Barserati	6.5	5.7
Blue Note	6.4	5.3
Midnight	6.1	3.7
Shamrock	5.5	5.7
Rating: 1-9	LSD=0.6 5 Locations	LSD=0.5 13 Locations



HGT Advantage:

- Fast germination
- Excellent sod formation
- Fast establishment
- Superior summer patch resistance
- Early spring green-up
- Excellent summer
- performance



Patented Technology

With our HGT, you can be sure you are receiving something truly unique.

To learn more, visit: **www.barusa.com**



Figure 2: Traffic Tolerance and Rapid Recovery

Barenbrug's Turf Blue HGT® blend offers outstanding traffic tolerance and wear recovery. In research studies at Michigan State University, Barvette HGT was trialed with 109 commercial varieties, and came out on top for wear recovery, percent ground cover, and turf quality. Likewise, in the NTEP traffic stress tests, Barvette HGT topped all other entries at Michigan State University and Rutgers University trials.



Rutgers University, 2014-2016

Figure 3: Resistance to Summer Patch and Rust

Summer patch and stem rust are serious turf diseases that cause significant damage to most Kentucky bluegrass varieties. Tested intensively at many locations across the country and in university trials, Barvette HGT has shown excellent resistance to summer patch and stem rust. Following the 2005-10 NTEP trials, Barvette HGT ranked number one in summer patch tolerance, and topped the first statistical grouping for stem rust resistance.

66

We here at Maryland SoccerPlex are HGT's biggest fans! Germination speed and seedling development made it possible for us to fully rebuild, seed, and re-open our field in 35 days! Jerad Minnick

Jerad Minnick Maryland Soccerplex

Blackjack	*****	Barserati		Barvette HGT
5	6	7	8	9

Healthy Grass Technology: Technology



Turf Blue HGT®

Kentucky Bluegrass

Advantages:

- Features 5, high-quality, strong performing bluegrass varieties
- Unmatched Summer Patch resistance
- bluegrass is grown

• New Seedings • Overseed of bermudagrass • Ideal for all areas where

Applications:

• Turfgrass Renovation

Turf Blue HGT® features the very best of Barenbrug's Kentucky bluegrass varieties. Starring 35% Barvette HGT, Turf Blue HGT has outstanding bluegrass performance in the most difficult of climate adaptations, the transition zone.

Learn More

Turf Blue HGT[®] is available in each of

- the following alternative forms:
- Turf Blue HGT[®] with Yellow Jacket[®]
- HGT[®] Sod
- Turf Blue HGT® with RPR®
- Turf Blue HGT® with RPR® with Yellow Jacket®

Turfgrass Water Conservation Alliance Approved

Barserati, a component of Turf Blue HGT, is TWCA approved. For any variety to qualify, it must pass multiple screenings of scientifically repeatable drought stresses, and score at or near the top of any statistical analysis base. To learn more, visit: **www.tgwca.org**

Specifications	:
Seeding Rate2	
Mowing Height Package Size	0.5-2″ 10/25/
	os. bag

Characteristics		
Color	$\bullet \bullet \bullet \bullet \bullet$	
Turf Quality	$\bullet \bullet \bullet \bullet \bullet$	
Germination Speed	$\bullet \bullet \bullet \bullet \bullet$	
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$	
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$	
Disease Resistance	$\bullet \bullet \bullet \bullet \bullet$	
Water Requirement	$\bullet \bullet \bullet \bullet \bullet$	

Turf Blue[®] Pro

Kentucky Bluegrass

Advantages:	Applications:	Specifications:
 Features 4, high-quality, strong performing bluegrass varieties Powered by the high NTEP ranking Barserati Traffic tolerant & strong recovery Fast germination and establishment 	 Ideal for all areas where bluegrass is grown 	Seeding Rate 2-3 Mowing Height 0. Package Size 5/10 50lbs.

In the NTEP trials, Barserati ranked high in turf quality, color, traffic tolerance, and disease resistance. It is currently certified with the Turfgrass Water Conservation Alliance for its extraordinary drought tolerance. With early spring green up and strong summer performance, Turf Blue Pro can be counted on to provide yearround bluegrass quality.

Learn More

Turf Blue Pro is available in each of the following alternative forms:

- Turf Blue[®] Pro with Yellow Jacket[®]
- Turf Blue[®] Pro with RPR[®]
- Turf Blue[®] Pro Sod

To learn more, visit: www.barusa.com

HGT[®] Sod

Kentucky Bluegrass

HGT bluegrass blends are ideal for Kentucky bluegrass sod production. Vigorous to germinate and establish, HGT quickly forms strong rhizomatous growth with an extensive root system. This growth allows for excellent 'sod strength,' reduced field waste, great pallet appearance, and quality 'big roll' installations.

HGT Sod is available exclusively through Sod Solutions. To learn more visit: www.hgtsod.com

Seeding Rate 2-3 lbs.
Mowing Height 0.5-2"
Package Size 5/10/25/ 50lbs. bag

Learn More

Characteristics

Color	• • • • •
Turf Quality	
Germination Speed	• • • • •
Wear Tolerance	
Aggressiveness	
Disease Resistance	
Water Requirement	• • • • •



Rhizomatous

Tall Fescue

Rhizomatous Tall Fescue®

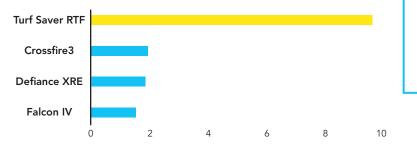
It's Fescue, but Better

Our RTF program has an extensive history of breeding and development so you can be sure when you choose RTF, you're choosing tried and true varieties. The significance of rhizomes in turf is their ability to repair damaged areas, maintain a more uniform turf density, increase sod tensile strength, add drought tolerance, and reduce the need for frequent over-seeding. These deep rhizomes spread laterally as much as 9", but are not as invasive as those of Kentucky bluegrass or creeping red fescue.

Figure 1:

Rhizomatous Index

This shows the difference researchers have found between Turf Saver RTF and others. Designed to factor in the percentage of plants that make rhizomes, the cultivar rhizomatous index is derived by multiplying the number of rhizomes by the percentage of plants with rhizomes and the rhizome length. When you put it all together, Turf Saver RTF is in a class of its own.



RTF's root system and rhizomes make a more stable root-zone on sand-based applications, meaning less damage.

Proven

Unique

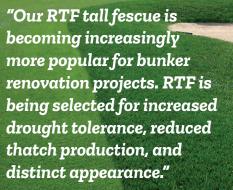
RTF's patented technology fills gaps and bare spots fast and requires 30% less water than other varieties.

Results

RTF exceeds expectations by performing well all season long on bunker faces, surrounds, and outside boundary areas.

Learn More

nizomatous Tall Fescue: Technology



Benefits of Turf Saver® RTF®

Uses Less Water

- Rapid development of a deep root system
- Excellent drought and heat tolerance with less irrigation
- Adaptable to a wide range of soil conditions

Self-Repairing Technology

- High level of traffic tolerance
- Dense turf without open areas prevent weed growth
- The only Tall Fescue with true rhizomes that quickly fill in damaged or open spots with new grass

Reduced Inputs

- Environmentally friendly, reduces chemical and fertilizer inputs
- Will not brown out in the intense summer heat
- Endophyte enhanced for improved insect, disease, and drought tolerance

Turfgrass Water Conservation Alliance Approved

In 2017, BarRobusto, a component of Turf Saver RTF, became TWCA approved. For any variety to qualify, it must pass multiple screenings of scientifically repeatable drought stresses, and score at or near the top of any statistical analysis base.

To learn more, visit: www.tgwca.org

hizomatous Tall Fescue: Technology



A rhizome is a horizontal plant stem, most often found underground. They are valued, because they send out new tillers, which emerge several inches away from the mother plant. Barenbrug's patented RTF® has the highest amount of rhizome activity.



"I've planted seed and sod lawns for years. This is the best color, sustainability, disease resistant, and overall performance in a fescue I've ever had!"

Turf Saver® RTF®

Tall Fescue

Turf Saver RTF is the most advanced and unique tall fescue mixture available, providing the benefits of rhizomes not found in any other varieties. While other spreading varieties describe "potential" rhizome development or "aggressive tillering," the deep-rooted and heat-tolerant Turf Saver RTF has been proven to mend damaged turf and maintain both uniformity and density.

Learn More

Water Saver[®] Pro Tall Fescue Blend

Tall Fescue

This high-quality, 3-way turf-type tall fescue blend performs exceptionally in the U.S. Transition Zone and most areas from Colorado to California. Water Saver Pro contains varieties with improved leaf texture and excellent disease resistance.

Learn More

To le	earn	more,	visit:	www.l	barusa.com
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Characteristics		
Color	• • • •	
Turf Quality	• • • • •	
Germination Speed	$\bullet \bullet \bullet \bullet \bullet$	
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$	
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$	
Disease Tolerance	$\bullet \bullet \bullet \bullet \bullet$	

Characteristics		
Color		
Turf Quality	$\bullet \bullet \bullet \bullet \bullet$	
Germination Speed	$\bullet \bullet \bullet \bullet \bullet$	
Wear Tolerance		
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$	
Disease Resistance		



RTF[®] Sod

Tall Fescue

RTF Sod provides the fastest route to the RTF experience, from sod harvest to installation of a mature stand in a matter of hours. The deep-rooted and heat-tolerant RTF Sod has been proven to maintain both uniformity and density while repairing itself after damaging events. RTF Sod is grown through a network of sod growers, and has its own association, with research and development ensuring continual improvement of the product to supply RTF for generations to come.

Characteristics		
Color		
Turf Quality	$\bullet \bullet \bullet \bullet \bullet$	
Germination Speed	$\bullet \bullet \bullet \bullet \bullet$	
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$	
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$	
Disease Resistance	$\bullet \bullet \bullet \bullet \bullet$	

Learn More

RTF[®] is available for sod production exclusively through the RTF Turf Producers Association: www.rtfsod.com

Advantages:

- Drought tolerant
- Summer persistent
- Roots up to 8 feet deep

Applications:

- Commercial landscape
- Parks & recreation
- Golf club grounds, rough, and driving range



Regenerating Perennial Ryegrass®

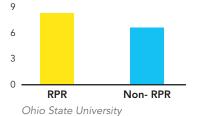
Determinate Stolons

In 2009, Barenbrug's innovative research and development team introduced a unique perennial ryegrass subspecies to the turf industry, RPR. Receiving its utility patent in 2015, RPR can tolerate extreme heavy traffic and displays outstanding recuperative abilities. It provides excellent turf quality and appearance in the harshest of conditions, gets off on the right foot with early establishment, and continues to thrive through summers. RPR is the ideal selection for all applications receiving heavy, destructive traffic. **Figure 1:** Figure 2:

Figure 1:

Intense Traffic Tolerance

Research plots were rigorously subjected to damage by a traffic simulator revealing RPR's ability to maintain quality and integrity despite three days of traffic.





Patented Technology

Other companies claim similar levels of performance from spreading perennial ryegrasses; these other products however, don't produce determinate stolons, and are not capable of regeneration after severe traffic like RPR.

After a long summer of heat stress, RPR rated significantly higher in turf quality over an average of three perennial ryegrasses.

Turf Quality

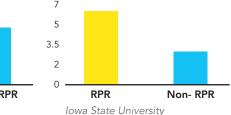




Figure 3:

Visual Wear

RPR compared to an average of the perennial ryegrass blend. Data was collected late season at the Southeastern Turfgrass Research Center in Kentucky when the pressure on the fields was high.

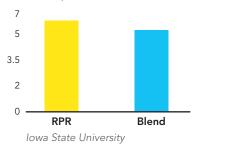
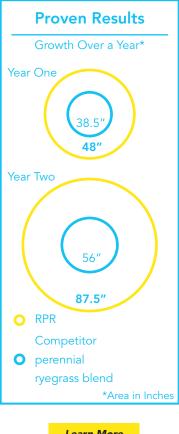


Figure 4:

Traffic Tolerance

After traffic was applied, regeneration of the plants was evaluated and it was clear RPR greatly outperforms the non-RPR variety.





Learn More

To learn more, visit: **www.barusa.com**

Regenerating Perennial Ryegrass: Technolog

"Repeated seedings over the entire playing surface with RPR plus Yellow Jacket coating produced a steady improvement in overall turf quality. RPR has literally been a life saver!"

Don Moody, Grounds Supervisor SUNY Cortland, Cortland, NY

Turf Star[®] RPR[®]

Perennial Ryegrass

A mixture of RPR varieties and elite perennial ryegrass, Turf Star RPR is the solution for all golf, sports, and recreational facilities where elite perennial ryegrass quality is required. Turf Star RPR's extreme wear tolerance and ability to recover thin and damaged turf is unique to the industry. Extremely fast germinating and quick to establish, Turf Star RPR can also be overseeded into traditional cool season turf lawns, such as Kentucky bluegrass, fine fescue, and traditional perennial ryegrass. CharacteristicsColor• • • • • • •Turf Quality• • • • • •Wear Tolerance• • • • • •Aggressiveness• • • • • •Mowing Frequency• • • • • •Close Mowing
Tolerance• • • • • •



Turf Star®

Perennial Ryegrass

Turf Star is a 3-way blend of superior quality perennial ryegrasses for virtually all golf, sports turf, and recreational applications in cool to temperate climates. Featuring dark green perennial ryegrass varieties with strong genetics and mechanical purity, Turf Star is a popular choice when high quality is desired. Fast to germinate and quick establish, Turf Star features strong traffic tolerance and good recovery.

Learn More

Top Flight

Perennial Ryegrass

Top Flight is a high-quality 3-way blend of proven perennial ryegrass varieties designed to be more affordable for the warm-season turf over-seed market. Top Flight exceeds certified standards and creates a lush green turf that is excellent for golf courses, parks, sports fields and home lawns. Top Flight germinates fast as well as quickly establishing a dense turf. When transitioning back to warm-season turf, Top Flight will be easier to chemically remove than elite perennial ryegrasses.

Learn More

Characteristics		
Color	• • • • •	
Turf Quality		
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$	
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$	
Mowing Frequency	$\bullet \bullet \bullet \bullet \bullet$	
Close Mowing		
Tolerance		

Characteristics					
Color	$\bullet \bullet \bullet \bullet \bullet$				
Turf Quality	$\bullet \bullet \bullet \bullet \bullet$				
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$				
Aggressiveness	$\bullet \bullet \bullet \bullet \bullet$				
Mowing Frequency	$\bullet \bullet \bullet \bullet \bullet$				
Close Mowing Tolerance	••••				

Learn More



Applications:

• Low maintenance turf

applications

• Fairways

• Roughs

Fine Fescue

With a very fine leaf texture, low growth characteristics, and exceptional density, fine fescues are a common component of shade mixtures, erosion control blends, and low-maintenance turf in golf and landscapes. In cooler, temperate climates, established fine fescue lawns also have good drought tolerance, low fertility requirements, and will tolerate full sun. Barenbrug offers all five fine fescue species for use in mixes for landscape, golf, erosion control, un-mowed naturalized areas, and low maintenance turf areas; each providing unique benefits to maximize turfgrass sustainability.

Dunes Mix[™]

Our Dunes Mix[™] is a superior quality mixture of our genetically advanced fine fescues in Chewing's Fescue and Slender Creeping Red Fescue. Recently rejuvenated with improved genetics, these two types of fescues come together to create the "dunes" look found on many of the world's finest golf courses. Going forward, Dunes Mix will give its users improved density, a finer texture, and better stress tolerances of drought and disease.

Advantages:

- Minimal fertility requirements
- Well-suited for U.S. and Canada climates
- To learn more, visit: **www.barusa.com**

- Other Varieties Available:
- Sheep's Fescue
- Strong Creeping Red Fescue
- Hard Fescue
 - Visit **www.barusa.com** to learn more

Mowing Height:

Close mowing heights, from greens height (0.2") to rough-cut, or even naturalized no-mow applications



Slender Creeping Fescue

This type of fescue is not as dark in color as its "strong" counterpart, but is typically very dense, can tolerate low mowing (greens height), and offers quick spring green-up. It is also capable of spreading through underground rhizomes, however weaker than a strong creeper. Slender creepers make up a part of our popular 'Dunes' Mixture.

Learn More

Cultivar: Bridgeport II

- Dark green color
- Very fine texture
- Moderate Red Thread
- tolerance
- Withstands close mowing

Cultivar: Sandrine

- Improved turf quality
- Medium green color
- Very dense, very fine texture
- Dollar Spot and Red Thread
- tolerance

Cultivar: Barcrown II

- Dark green color
- Very fine texture
- Good Red Thread resistance
- Cultivar: Barpearl
- Medium, green color
- Extremely fine texture
- Red Thread tolerance
- Cultivar: Sprinkler
- Medium, green color
- Very fine texture
- Good Dollar Spot and Red Thread tolerance
- Salt and drought tolerant

Chewing's Fescue

This type of fescue is typically medium green in color, with good shade tolerance. It has a bunchtype growth habit, and prefers to grow in low nutrient soils as well as moderately cool climates like coastal regions of the Northwest and Northeast United States/Canada. Chewing's fescues make up a part of our popular 'Dunes' Mixture.

Learn More

To learn more, visit: **www.barusa.com**

Fine Fescue: Products

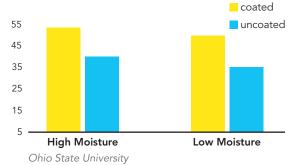


SUPERCHARGED BENTGRASS Better Establishment with Less Water

Supercharged Bentgrass was a first ever combination of top-rated bentgrass varieties and Barenbrug's exclusive Yellow Jacket® Enhanced Seed Coating. With our Yellow Jacket coating, we are able to offer some of the most advanced and recognized bentgrasses available.

Figure 1: Percent Cover 92 Days After Seeding

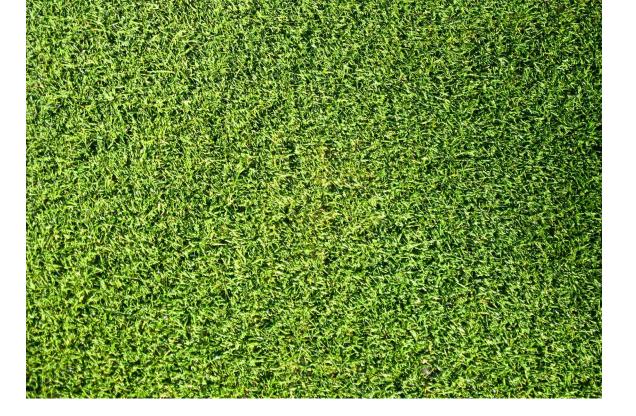
This independent study compared Yellow Jacket coated seed with uncoated seed under conditions of high and low moisture (96% and 56% of ET). It was clear that the bentgrass coated with Yellow Jacket performed significantly better than the uncoated seed.



Supercharged Bentgrass Advantages

- Provides a super absorbent, Apron XL fungicide, and fertilizer in one package
- Seedling protection against Pythium sp. for up to three weeks
- Ideal for greens, tees, and fairways
- Improved germination with stronger establishment and uniformity
- More easily controlled for uniform seed application
- Heavier seed moves more readily through turf canopy and is less affected from static-electricity

Learn More



Supercharged Bentgrass Applications

Tees, Fairways, & Interseeding

Pure Distinction
Pure Select
Penn A-1
Seaside II
Penn A-1.

Penn A-4
Penn A-1
Penn A-1/A-4
Crystal Bluelinks

Greens, Tees, & Fairways

Pure Distinction
Penn A-4
Pure Select
Penn A-1
Seaside II
Penn A-1/A-4

Pennlinks II
Penncross
Crystal Bluelinks

Other Varieties (Supercharged)

Alpha	 Proclamat
Capri: Colonial Bentgrass	•L-93

Additional Options

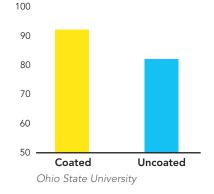
•Pennway •Penneagle II •Capri: Colonial Bentgrass Proclamation

tion

•Bengal •Nu-Penn •Penn A2 Figure 1:

Creeping Bentgrass Germination Percentage

This graph demonstrates how Supercharged Bentgrass coated with Yellow Jacket germinates at a much higher percentage than uncoated seed after seven days. This is critical for out-competing weeds and creating the ideal turf surface.



To learn more, visit: **www.barusa.com**



SUPERCHARGED BERMUDAGRASS

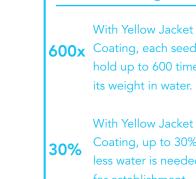
Better Establishment with Less Water

Quick to establish and best-suited for full sun locations, bermudagrass is heat-tolerant and capable of developing a deep, extensive root system. When fully established, bermudagrass requires significantly less water than traditional cool season species to provide a quality turf surface. Both stoloniferous and rhizomatous, bermudagrass exhibits high density, strong traffic tolerance and excellent traffic recovery when mowed at 1" or lower.

Monaco Elite Bermudagrass

Exclusively from Barenbrug, Monaco is continuing the legacy founded by Riviera. Newly released from the Johnston Seed breeding program, Monaco, Cynodon dactylon var. dactylon, is a synthetic variety produced by the intercrossing of five clonal parent lines. All seed is from the Syn-1 generation which results in superior genetic integrity and seed quality year in and year out. Monaco is coated with Yellow Jacket Enhanced Seed Coating. To learn more about this coating, see page 6.

Learn More





BERMUDAGRASS

The Yellow Jacket Advantage:

600x Coating, each seed can hold up to 600 times its weight in water.

> Coating, up to 30% less water is needed for establishment.



Monaco Elite Bermudagrass

Monaco is a highly ranked variety tested in the 2013 NTEP trials, and possesses a rare combination of traits in exceptional wear tolerance, high winter hardiness, and early spring greenup. Monaco is excellent for use on golf courses, sports turf, and higher quality lawns, producing a quality grass surface that appears early, withstands a multitude of stresses, and stays late into the year.

Characteristics				
Color	••••			
Turf Quality	••••			
Spring Green-up	$\bullet \bullet \bullet \bullet \bullet$			
Fall Color Retention	$\bullet \bullet \bullet \bullet \bullet$			
Winter Hardiness	$\bullet \bullet \bullet \bullet \bullet$			
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$			

PanAm Brand

The PanAm Brand of improved seeded common bermudagrasses provides a high-quality turf suitable for golf fairways, tees, intermediate-roughs, and driving ranges. Also ideal for lawns, green belts, and parks and rec turf situations, PanAm is an economical blend of seeded turf-type bermudagrasses Bargusto, Transcontinental, and Chilly Verde. PanAm contains strong genetic diversity, and can be applied across various regions within the United States.

Color

Turf Quality

Spring Green-up

Fall Color Retention

Winter Hardiness

Wear Tolerance

Learn More

Bermudagrass is best suited from the Transition Zone to warmer, southern climates. Recently introduced "coldtolerant" varieties have expanded the northern zone of adaptation from Nebraska to New Jersey.



Characteristics

To learn more, visit: www.barusa.com



Super Overseeding

Overseeding Made Easy

Ideal for Fall Overseeding

SOS mixtures germinate and establish extremely fast, and they provide an ideal alternative to more expensive and persistent perennial ryegrass over-seeding mixtures. The turf-annual blends offer a quick "natural" spring transition - in some cases, up to 65% through transition by mid June. Innovative From one of the originals

Panterra, to the improved Panterra V, to the latest in turfannual improvement, BarTerra. Together, these varieties make up the backbone of the turf-annual brand SOS.

Late Season Establishment

SOS mixtures provide late season establishment for sports turf, parks and areas heavily damaged by fall activities and use. Germinating in soil temperatures in the mid-40s, these mixtures can be seeded in the late fall, providing turf coverage for both winter and early spring school sports and activities.

SOS Turf-Annual Ryegrasses from Barenbrug offers unique solutions for challenges posed by fall over-seeding. With three generations of turf-annuals available, budget, on-site requirements, and turf quality can be tailored to your project's specific needs.

SOS MAXX

SOS Maxx features the third-generation of turf-annual ryegrass varieties. These varieties rival the quality of intermediateryegrasses, but carry turf-annual low costs. Compared to the first- and second-generation turf-annuals, you will be planting a darker green, more compact turf that produces fewer clippings. SOS Maxx gives you the experience of future turf-annual quality while retaining the classic fast germination, establishment, and natural transition known to the species.

Learn More

Characteristics					
Color	• • • • •				
Turf Quality	$\bullet \bullet \bullet \bullet \bullet$				
Establishment	$\bullet \bullet \bullet \bullet \bullet$				
Spring Resistance	$\bullet \bullet \bullet \bullet \bullet$				
Wear Tolerance	$\bullet \bullet \bullet \bullet \bullet$				



SOS 400

Featuring Panterra and/or Panterra V, SOS 400 provides the most economical turf-annual performance for general purpose over-seeding. These dwarf varieties provide a darker green appearance, finer leaf texture, and higher turf density, resulting in a significant turf quality improvement over named annual ryegrasses. SOS 400 will transition the fastest among the three over-seed products.

Characteristics					
Color	• • • • •				
Turf Quality	• • • • •				
Establishment					
Spring Resistance	• • • • •				
Wear Tolerance					

Characteristics

Color

Turf Quality

Establishment

Spring Resistance

Wear Tolerance

Learn More

SOS 211

Featuring a mixture of 50% Panterra varieties and 50% perennial ryegrass named varieties, SOS 211 offers the fast germination and establishment of turf-annuals combined with the improved turf quality and spring persistence of perennial ryegrass. With significant cost savings compared to 100% perennial ryegrass over-seeding mixes, SOS 211 is the ideal mix for those areas requiring higher turf quality.

Learn More

To learn more, visit: www.barusa.com

percharged Overseeding: Technology & Products

Turf-annual ryegrass

Lolium multiflorum

PANTERRA

Bred by Texas A&M University scientists, Barenbrug's Panterra was the first true turf-annual ryegrass ever developed. Panterra germinates quicker and at lower temperatures than perennial ryegrass, and transitions by itself when temperatures exceed 90 degrees. An additional advantage is turf managers who use this in Bermuda grass won't have to spray chemicals to kill it. Panterra is a component of SOS 400 and SOS 211

PANTERRA V

Panterra V is the second generation of turf-annual ryegrass. It has the same characteristics as Panterra, a dwarf variety with a darker green appearance. It features the same germination speed and turf quality as Panterra. Panterra V is a component of SOS 400 and SOS 211.

BARTERRA

Third generation turf-annual ryegrasses, BarTerra represents the best in breeding and research within the turf-annual species. It is exceptionally lower-growing, finer-leaved, and darker green with all the benefits associated with annual ryegrass. It features quick germination and establishment, fast natural spring transition, and superior turf quality. This variety makes up a component of SOS Maxx.

Creeping Bentgrass Agrostis stolonifera

BENGAL

Bengal is a highly rated creeping bentgrass on the NTEP list. Bengal is the best variety in the NTEP trials for drought-tolerance, making it a perfect choice in areas where water use is restricted. Bengal shows excellent spring green-up, good green color, and high turf quality. Use Bengal coated with Yellow Jacket and increase your water savings.

TEE-2-GREEN VARIETIES

Our partnership with Tee-2-Green allows us to SuperCharge Tee-2-Green bentgrasses with our Yellow Jacket technology. The following bent varieties are available either uncoated or with Yellow Jacket coating:

Penneagle II	Crystal Bluelinks	Pure Select
Penn A-1	PennTrip Blend	Pure Distinction
Penn A-1/A4	Nu-Penn Blend	PureFormance
Penn A4	PennLinks II	Seaside II
Penncross	Pennway Blend	

Common Bermudagrass Cynodon dactylon

MONACO ELITE BERMUDAGRASS

Monaco is a superior seeded bermudagrass excellent for use on golf courses, sports turf, and higher quality lawns. It has excellent density and wear tolerance. Bred for a genetically darker green color, it also has quicker spring green-up, high fall color retention, and winter hardiness. Monaco is only available as Yellow Jacket coated seed.

TRANSCONTINENTAL

Transcontinental is known for improved cold tolerance and good summer turf quality. It establishes very quickly, and has a uniform leaf texture with good turf density. Transcontinental is a main component of our PanAm blend

BARGUSTO

Bargusto is a Barenbrug variety bred for exceptional wear tolerance and overall quality. It is a great option for affordable turf with good performance. Bargusto is a main component of our PanAm blend.

Fine Fescues Festuca spp.

CONTENDER

Contender strong creeping red fescue is ideal in mixtures with all cool season species except Tall Fescue. Ideally suited for well-drained soils, this creeper exhibits strong shade tolerance, especially in drier conditions. Contender provides fine leaf texture, density, and the ability to recover from light damage. This fescue has high turf quality for a strong creeper, and will green-up sooner in the spring. Contender is available as a straight or in custom blends.

BARPEARL

Barpearl slender creeping red fescue has a medium green color, and forms a very dense turf with fine leaves and high shoot density. Barpearl is ideal for close mowing applications, and has a very quick green-up in the spring. It has good red thread resistance and strong shade tolerance. Barpearl is a main component of Dunes Mix.

HARDTOP

Hardtop is primarily used in low turf maintenance applications, but is adapted to high end mixtures as well. When compared with other fine fescues, Hardtop has an improved tolerance to heat, drought, and several diseases. With good shade adaptation and low fertilizer needs, Hardtop hard fescue is suited to almost all areas of cool season grass adaption. Hardtop is available straight or in custom blends.

SHEEP'S FESCUE

Sheep's fescue is often blue-green in color, has excellent cold tolerance, good drought tolerance, and moderate shade tolerance. It is adapted to high elevation areas and does not do well in saturated clay-based soils. The best use of sheep's fescue would be as a ground cover for erosion control or in very low maintenance environments due to its dense, bunch-type root system and low/slow growth habit. Improved varieties are an excellent choice for low maintenance areas such as golf course roughs, native grass stands, and wildflower mixes. Un-mowed, its mid-summer seed head adds beauty to naturalized landscaped areas as well. Sheep's fescue is available as a straight or in custom blends.

BARCROWN II

Barcrown II slender creeping red fescue is the successor of Barcrown, a variety recognized worldwide. Barcrown II has a dark green color, and has exhibited very strong performance in the NTEP Fine Fescue trial. Very dense and fine leaved with a high shoot density, Barcrown II is ideal for close mowing applications, and has a very quick green-up in the spring. Barcrown II is a main component of Dunes Mix.

SPRINKLER

Sprinkler slender creeping red fescue has a medium green color, and forms a very dense turf with fine leaves and high shoot density. Sprinkler is ideal for close mowing applications, especially in stressful environments where saline soils and drought conditions are present. It has good dollar spot, red thread resistance, and has strong shade tolerance. Sprinkler can become a component of Dunes Mix when added stress tolerance is desired.

BRIDGEPORT II

Bridgeport II chewing's fescue has excellent seedling vigor, exceptional density, and fast spring green-up. A natural choice in moderate climates when quick establishment and dense cover are a must. This fine leaf fescue is moderately drought-tolerant, and is remarkable under low maintenance conditions. Bridgeport II is a main component of Dunes Mix.

SANDRINE

Sandrine chewing's fescue shows improved turf quality over Bridgeport II, a medium green color, and is very dense with very fine leaf texture. It has excellent seedling vigor, fast spring green-up, and is resistant to dollar spot and red thread. This fine leaf fescue is moderately drought-tolerant, and is remarkable under low maintenance conditions. Sandrine is a main component of Dunes Mix.

Kentucky Bluegrass

Poa Pratensis

BARIMPALA

Fast establishing, especially when compared to high-end NTEP varieties. Barimpala germinates and establishes quickly under a wide range of extreme temperatures, and it has outstanding heat and drought tolerance. Barimpala keeps its turf quality under wear. It has quick spring green-up and good crown rust and leaf spot tolerance. Barimpala is a component of Turf Blue HGT.

BARRARI

Barrari is named after a famous Italian sports car brand. Why? Because Barrari seed is super quick to germinate and establish. Those who grow Barenbrug seed for us love Barrari, because its quick start and establishment characteristics allow growers to extend their seeding window later into the fall. Barrari is a main component of Turf Blue Pro and Turf Blue HGT.

BARON

Baron is a widely adapted and dependable variety. It is versatile and low-maintenance, making it a great choice for home lawns, parks, and other turf areas receiving minimal care. It has a medium green color, good seedling vigor, and notable heat and drought tolerance. Baron is a component of Turf Blue Pro.

BARVETTE HGT

Barvette HGT is the key Kentucky bluegrass component in Turf Blue HGT. With outstanding performance in the 2005 NTEP Kentucky bluegrass trials, Barvette HGT has extremely fast germination, establishment, traffic tolerance, and recovery. With exceptionally strong summer patch resistance, Barvette HGT has become the go-to bluegrass for transition zone applications. It is often mixed with tall fescue to create Turf Saver RTF with HGT.

BARDUKE

Barduke is a versatile new variety with a dark green color. It germinates and establishes quickly, and it has good drought tolerance and resistance to diseases such as leaf spot. Barduke is a component of Turf Blue Pro.

BARRISTER

Barrister was rated #1 in the 2006 NTEP trials, and is still on top. Barrister is very dark green, very fine leaved and recommended in any region bluegrass is used. Barrister has a very high wear tolerance, as proven in the NTEP trials. It can tolerate close mowing, and is already used by many satisfied customers. Barrister is a main component in Turf Blue Pro as well as a component in Turf Blue HGT. Barrister is often used in mixes with tall fescue products such as: Water Saver Pro, Turf Saver RTF, and RTF Sod.

Varieties.

BARSERATI

Barserati was a highly ranked bluegrass in the 2011 NTEP cycle. Barserati came out of the NTEP trials ranking high in turf quality, color, traffic tolerance, and disease resistance. It happens to be very drought tolerance as well. It is currently certified with the Turfgrass Water Conservation Alliance for its extraordinary drought tolerance. Barserati is the "driver" in the blend Turf Blue Pro, and is a good fit for all areas where bluegrass is grown. It is also a main component of the Turf Blue HGT blend.

Regenerating Perennial Ryegrass

Lolium perenne ssp. stoloniferum

BARBETA, BARLIBRO, BARGAMMA

Exclusive to Barenbrug, these RPR varieties were bred in the harsh summer Virginia climate. Identified as a new subspecies of perennial ryegrass, RPR varieties are labeled Lolium perenne ssp. stoloniferum. Producing determinate stolons from the plant crowns, RPR varieties are exceptionally traffic-tolerant with outstanding recovery from heavy use you can't otherwise find on the market. They are ideal for all perennial ryegrass uses, especially sports turf, recreational turf and golf. These RPR varieties are available as 100% RPR, Turf Star RPR, and Turf Blue HGT with RPR.

Perennial Ryegrass

Lolium perenne ssp. perenne

BARLENNIUM

Barlennium turf-type perennial ryegrass is sure to impress not only today but for many days to come. Featuring the elite perennial ryegrass characteristics of dark green color, low-compact growth habit, excellent turf density, broad climate adaptability, and overall strong turfgrass quality, Barlennium is an ideal component for coolseason mixtures with Kentucky bluegrasses, fine fescues, or simply other perennial ryegrasses. Barlenium is a main component of Turf Star, and is combined with the turf-annuals to create SOS 211.

PINNACLE III

A third generation Pinnacle cultivar, Pinnacle III exhibits high endophyte, excellent dark green color, early spring green-up, and strong overall disease resistance. Adding strong traffic tolerance and Gray Leaf Spot resistance, Pinnacle III is a perfect companion when paired with Barenbrug's RPR varieties in Turf Star RPR or in Turf Star. Providing color and turf quality, Pinnacle III also mixes with Kentucky bluegrass, fine fescue, and other perennial ryegrasses. Pinnacle III is a main component of Turf Star and accompanies RPR in the product Turf Star RPR.

PREMIER III

Very dark green in color, Premier III exhibits strong winter color in temperate climates, and is one of the earliest perennials to green-up in the Spring. Premier III is ideally suited as a fall over-seed for warm-season turf, but it is equipped to perform in many perennial ryegrass uses and areas with a broad range of adaptability. Premier III is a main component of Turf Star.

PARKSIDE

A new Barenbrug release, Parkside perennial rye incorporates turf quality and strong performance with excellent traffic tolerance. With strong grey leaf spot resistance, Parkside is an ideal component where disease resistance is a key factor. Dark green, fine-leaved and uniform, Parkside also exhibits very early spring greenup. Parkside is a main component of Turf Star.

PEAK

With quick germination and fast establishment, Peak perennial rye is a proven performer in quality turf mixes, blends and fall over-seeding mixtures. A component of the SOS (Super Over-seeding Program), Peak's medium green color, leaf texture, turf performance and spring transition make it an ideal partner with Barenbrug turfannual varieties in SOS 211. It is also a main component in the perennial ryegrass over-seed blend Top Flight.

Tall Fescue

Festuca arundinacea

BARROBUSTO

BarRobusto is a high-quality, very dark green tall fescue. It performs extremely well in the southern transition zone, and has high brown patch resistance. BarRobusto contains a high level of endophyte, which increases its resistance to diseases and pests. This variety is certified for drought tolerance by the Turfgrass Water Conservation Alliance. BarRobusto is a main component of Water Saver Pro and Turf Saver RTF.

BARVADO

Bred from plants that survived a brown patch epidemic, Barvado tall fescue was developed by breeders and given the code "EBP," meaning "Enhanced Brown Patch." This dark green variety provides excellent turf quality, and is highly ranked in NTEP trials. It is a semi-dwarf variety, and has medium leaf texture. Barvado has high live endophyte content as well, giving it improved disease and insect resistance. Barvado is a main component of Water Saver Pro and Turf Saver RTF.

RTF VARIETIES

RTF technology now features three generations of tall fescue varieties available with rhizomes. While many competitors have attempted to duplicate our patented product, our evaluations show their varieties produce few, if any, rhizomes. RTF remains a unique tall fescue with stronger rhizome development and improved turf quality. The significance of rhizomes in turf is their ability to repair damaged areas, maintain a more uniform turf density, increase sod tensile strength, add drought tolerance, and reduce the need for frequent over-seeding. These deep rhizomes spread laterally as much as 9", but are not as invasive as those of Kentucky bluegrass or creeping red fescue. RTF varieties are main components of Turf Saver RTF and RTF Sod.

BARRINGTON II

Featuring high traffic tolerance, Barrington II exhibits strong brown patch resistance, and is ideal in tall fescue blends and mixes for all areas of tall fescue adaptation. Lower growing with good density and dark green color, Barrington II contains high endophyte for improved resistance to summer stress. Barrington II is a component of Water Saver Pro.

BEARCAT

Selected for strong brown patch resistance, improved traffic tolerance, and strong overall turf quality, Bearcat is excellent for full sun to moderate shade. Bearcat is a great component for blends, mixtures, and all tall fescue applications in all areas of species adaptation. Bearcat is a component of Water Saver Pro.

66

RTF is not your typical Tall Fescue. A few months ago I re-sodded my yard with RTF tall fescue. As a contractor I've used tall fescue blend seed before and found them slow to fill in a lawn, even when over applying seed by a factor of three. So when I did my own yard I thought I'd try RTF sod and I'm glad I did. The sod was thick, strong, flexible, and cut in perfect rolls. It went down flawlessly.

After a few months and a little fertilizer, it looks fantastic - even with heavy use by pets and kids. Lots of random people walking by complement it. It's easy, durable, and good looking. What more could you want?

Lynn M. Salem, Oregon

Notes.	
BARENBRUG	
RPR. These grasses reduce the amount of	
These grasses reduce the amount of herbicides and pesticides you use, and provide great coverage. With RPR we'll	
herbicides and pesticides you use, and	
provide great coverage. With RPR we'll	
See emergence in just seven days! John Cogdill • Operations Manager City of Boulder Parks and Rec	
City of Boulder Parks and Rec	
титик. 50 _ж 22.68 _м	

Notes.	
	BARENBRUG
	The Turf Blue HGT we seeded in late April germingted and filled
	in tremendously compared to the
	other bluegrasses used.
	Constraints of the seeded in late April germinated and filled in tremendously compared to the other bluegrasses used. Tony L. Philadelphia, PA
	тим. 50. 22.69.

RTF is not your typical tall fescue. A	
Jew months ago i re-solded my yard	
with RTFthe sod was thick, strong, flexible, and cut in perfect rolls. It	
went down flawlessly! Lynn M.	
Art Et Laweeker Mercentra Humeder Marte Foldamer Marte Foldamer	

Species and Characteristics

	Perennial Ryegrass	Perennial Ryegrass (RPR)	Tall Fescue	Kentucky Bluegrass	Common Bermudagrass	Annual Ryegrass
Genus	Lolium	Lolium	Festuca	Роа	Cynodon	Lolium
Specific Epithet	perenne	perenne	arundinacea	pratensis	dactylon	multiflorum
Subspecies		soloniferum				
C-Fixation type	C3	C ₃	C ₃	C ₃	C ₄	C3
Growth Habit	Bunch	Determinate Stolons	Bunch/ Rhizomes	Rhizomes	Stolons/ Rhizomes	Bunch
Establishment	fast	fast	moderate/ good	slow/ moderate	slow/ moderate	fast
Wear Tolerance	good/very good	good/very good	moderate/good	good	very good	poor/ moderate
Recovery	slow	moderate	slow/moderate	moderate/fast	fast	slow
Thatch	little	some	little	some	excessive	little
Heat Tolerance	moderate/ good	moderate/ good	very good	good	the best	very poor
Salt Tolerance	poor	poor	good	moderate	very good	poor/ moderate
Fertility Requirement	moderate/ high	moderate/ high	low/ moderate	moderate	moderate	moderate/ high
Mowing Recommendation	2"-3"	1.5"-2.5"	2.5"-3.5"	2"-3"	0.5"-1"	2"-3"
Drought Tolerance	poor/good	moderate	very good	good	very good	poor
Leaf Texture	fine	fine	moderate/ course	fine/ moderate	fine/ moderate	fine/ moderate

Seeding Rates

	Seeds/pound	lbs/1000 ft²	lbs/acre	kg/ha	g/m²
Creeping Bentgrass	7,000,000	0.75-1.25	35-55	37-61	4-6
Colonial Bentgrass	5,000,00	1-2	45-90	49-98	5-10
Chewings Fescue	450,000	4-6	175-260	195-295	20-30
Creeping Red Fescue	450,000	4-6	175-260	195-295	20-30
Hard Fescue	500,000	4-6	175-260	195-295	20-30
Tall Fescue	250,000	8-10	350-435	390-490	40-50
Kentucky Bluegrass	1,300,000	1.5-2.5	65-110	75-120	10-15
Perennial Ryegrass	250,000	8-10	350-435	390-490	40-50
Perennial Ryegrass (RPR)	250,000	8-10	350-435	390-490	40-50
Annual Ryegrass	200,000	10-15	435-650	490-730	50-75
Common Bermudagrass	1,400,00	2-3	45-130	100-145	10-15

Species and Characteristics (cont.)

	Creeping Bentgrass	Colonial Bentgrass	Chewings Fescue	Creeping Red Fescue	Hard Fescue
Genus	Agrostis	Agrostis	Festuca	Festuca	Festuca
Specific epithet	stolonifera	capillaris	rubra	rubra	trachyphylla
Subspecies			commutata	litoralis/rubra	
C-Fixation type	C3	C3	C3	C3	C3
Growth Habit	Stolons	Bunch	Bunch	Rhizomes	Bunch
Establishment	moderate	moderate	moderate	moderate	poor
Wear Tolerance	poor to moderate	poor	poor	poor	poor
Recovery	fast	slow	slow	moderate	slow
Thatch	excessive	moderate	moderate	excessive	moderate
Heat Tolerance	very good	poor	poor/moderate	poor/moderate	poor/moderate
Salt Tolerance	good	moderate	poor/moderate	poor/good	good
Fertility Requirement	moderate	low	low/moderate	low/moderate	very low
Mowing Recommendation	0.125"-1"	0.5"-1"	2"-3.5"	2"-3.5"	2.5"-3.5"
Drought Tolerance	moderate	moderate/good	good	good	very good
Leaf Texture	very fine/ moderate	fine	very fine	very fine	very fine

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