

Great in Grass[®]



TURF SEED PRODUCT GUIDE

USA



Our 110,000 square foot central office and production/warehouse facility, located in Oregon's Willamette Valley, is an ultra-modern structure designed to efficiently accommodate our operations and volume of business well into the next century — providing customers with the fast, accurate order processing and shipping they have come to expect from us.



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Barenbrug USA is 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 many countries around the world.

For four generations, the Barenbrug family has shared a passion for grass — we care just as deeply about turf as our customers and growers, whether they are seeding world-class golf fairways, sports fields, professional landscapes or residential lawns.

We are an industry leader known for superior craftsmanship and reliability — a reputation we have cultivated over the years, and one we will work hard to sustain well into the future.

BARENBRUG USA

Barenbrug USA, an industry-leading plant breeding, seed production, research and marketing company, is part of the global Barenbrug Group. We sell turf, forage and wildlife seed through a wholesale and retail distribution network across the USA. We also export and market these seeds to many countries around the world.

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The Barenbrug Advantage

At its core, Barenbrug USA concentrates on leadership in the research, production, marketing and sale of innovative grass seed products. Our focus and determination are evident in the solutions we develop for the turf industry. Our research and development covers all the major U.S climate zones, and our nationwide network of territory and sales managers provide you with on-the-ground coverage no matter where you live.



Innovation

Innovation is fundamental to everything we do. Our worldwide research groups continually search for new ways to produce superior seed and bring more value to our customers. Plus, we work to make significant contributions to improve a world where the population will grow to 9 billion within a few decades. We improve farmers' productivity by reducing their consumption of water, fertilizers and pesticides.

Barenbrug USA Facility

Our 110,000 square foot central office and production/warehouse facility has been open since early 1997. This ultra-modern structure was designed to efficiently accommodate our operations and volume of business well into the next century. Fast, accurate order processing and shipping are now – and will continue to be – the key to Barenbrug USA's success in the highly competitive grass seed business. This major investment in the heart of Oregon's Willamette Valley will allow Barenbrug to improve the processing and speed the shipping of custom orders throughout the USA and Canada.

Sales Team

Our network of territory managers and sales managers enables you to have a sales team on the ground with coverage throughout the nation.

Partnerships

Our company would never have become the leader it is without strategic alliances with partners in research and development, grass seed production and sales and marketing. Throughout the world, we work with developers, universities and institutes to get the best out of genetics and seed technologies. We offer a stable and reliable source of income for the best grass seed producers in the world, through long-term relationships based on mutual trust.

International

Think global, act local. Because we exchange knowledge and new ideas with partners throughout the world, we can offer solutions tailored to highly specific, localized cases. Not only are we the best partner for our customers, but we also can offer a challenging platform for partners in technological developments, in existing markets as well as in developing regions.

Quality and Marketing

Top-quality grass seed allows us to create sustainable sports fields and golf courses with perfect playing surfaces. The Barenbrug brand is where all of our core values come together. Plus, our passion for the subject and the way we communicate it allow us to work together with our customers and our partners, with one vision in mind.



Research and Development

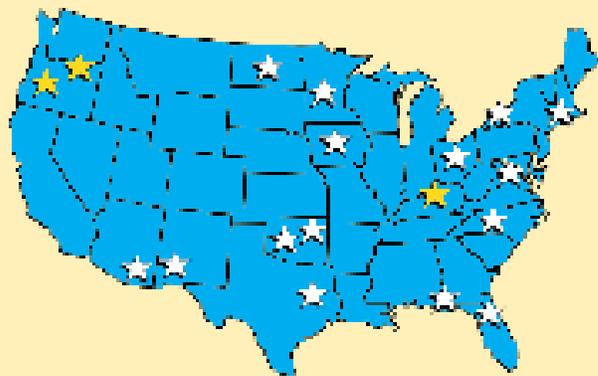
To meet our world's expanding needs, Barenbrug research combines old-line breeding methods with the latest in technologies to develop tomorrow's varieties of turfgrass and forage. Barenbrug's highly trained, professional plant breeders work as an intercontinental team — sharing new germplasm, new methodology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

Barenbrug conducts research all over the world, because our customers are located all over the world. Two U.S. research facilities, international research stations and cooperative agreements with governments, private institutes and universities allow Barenbrug to access the global germplasm pool to innovate new varieties adapted to every climatic condition and growing requirement.

Our research groups have one overarching goal: to bring more value to our customers through innovation.

PARTNERSHIPS

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



Yellow Jacket® Enhanced Seed Coating

The Barenbrug advantage in seed coating technology includes using our worldwide network of research stations to create coatings that enhance seed performance, turf establishment and long-term turf performance.



Since introduced in 2006, Yellow Jacket® Seed Enhancement has proven to be a successful key to helping our customers establish turf in demanding applications. Numerous independent university tests have proven grass seed enhanced with Yellow Jacket technology greatly outperforms raw seed.

UNIQUE COATING WITH OUTSTANDING PERFORMANCE

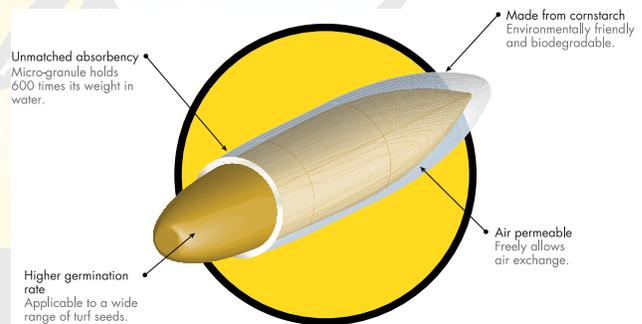
- Provides super-absorbency • Apron XL • Plant nutrition in one package
- Improved germination in low humidities, areas prone to wind, with limited water or poor coverage
- Protection against *Pythium sp.* seedling disease for up to three weeks
- Stronger, more extensive early root development
- Improved germination with stronger establishment and uniformity

How does Yellow Jacket work?

Holding up to 600 times its own weight in water, Yellow Jacket's super-absorbent coating holds moisture, nutrients and disease protection around the seed from germination through early establishment. Without coating, water quickly moves past the seed, allowing it to dry out more easily and resulting in the need for more-frequent watering, higher irrigation costs and greater disease potential.

The Yellow Jacket absorbent coating also increases the density and visibility of the seed, an especially strong benefit for smaller seeds such as bentgrass, bermudagrass and bluegrass. This added bulk density makes seeding easier and more accurate while allowing for a more uniform distribution pattern when applied with a seed spreader. Seed stays where it falls due to the extra weight and will move down through the turf canopy to the soil surface more easily.

The coating also contains Apron XL® (ai. Mefenoxam), a systemic fungicide that quickly protects the newly germinated seeds from *Pythium* seedling diseases. This protection is enhanced as the coating holds the fungicide close to the seed for up to three weeks after water is applied. During this time, new roots are protected and allowed to thrive for faster establishment and healthier growth, especially during periods of high heat and increased disease pressure.



Time lapse photography shows how quickly Yellow Jacket coated bentgrass establishes all while reducing water usage. Pine Lakes Golf and Tennis Club in Lincoln, Nebraska. Pat Jones, Superintendent was mowing at 1/2" 3 weeks after sowing.

Barenbrug Seed Quality



Barenbrug Standards

We only supply the highest-quality products available. While many companies will make that claim, we exceed industry standards by defining a superior level of quality.

Barenbrug puts its own production experts in the field to augment the work of state quality inspectors. Our team monitors Barenbrug fields to ensure genetic purity and field cleanliness. Only seed that passes our strict review will be used in our professional program. While a blue tag means "Certified," a yellow Barenbrug bag (with or without a tag) indicates a superior product.

Sod Quality

"Sod Quality" seed references the level of seed purity demanded by professional turfgrass sod producers — the highest quality seed available. With field cleanliness, high-caliber seed producers, superior seed production facilities and strong testing guidelines, Barenbrug's program of Sod Quality Seed Production ensures consistency of seed quality and field performance.

Certified Seed

When you see the word "Certified" on a blue bag tag or label, it means that the grass seed comes from a field that was inspected by state agriculture department officials during crop production. The purpose of certification is to prevent cross-pollination and ensure genetic purity.



While some believe the Certified tag is a guarantee of the highest seed quality, that's not exactly true. Certified seed standards allow for small amounts of both crop and weed seed. Although a certified seed lot can be good quality, with no weed content, the blue tag is not a guarantee. Be sure to read the tags and labels so you know what is inside the bag.

VNS

VNS stands for Variety Not Stated. If you see this on a seed tag or bag label, the variety name in the bag is unknown. Even if the seed is free of weeds, it may be a forage or common variety not suitable for your needs. To insure you are purchasing the appropriate grass seed, make sure the variety names are listed and we recommend against the use of VNS.

HGT®, Healthy Grass Technology

In 1999, Barenbrug's turfgrass research program embarked on the road less travelled, seeking originality and unique characteristics in Kentucky bluegrass. The results are significant, with several unique Barenbrug bluegrass releases — highly sought by turf professionals for their performance, persistence and quality.

The most significant to date is the release of Barvette HGT® Kentucky bluegrass. 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 and traffic tolerance and recovery. With exceptionally strong summer patch resistance, Barvette

HGT has become the go-to bluegrass for transition zone applications.

Barenbrug's HGT bluegrasses, provide superior speed of germination, establishment, traffic tolerance and recovery from use and wear.



BRANDED PRODUCTS

KENTUCKY BLUEGRASS

Turf Blue® HGT®

Turf Blue® HGT®, featuring 35% Barvette HGT Kentucky bluegrass, provides the best in bluegrass performance for golf, sports turf and play.

- Very early spring green-up
- Rapid germination & establishment
- Excellent summer density and performance
- Exceptionally strong resistance to Summer Patch
- Very tolerant of bluegrass billbugs and white grubs
- Extremely traffic tolerant with rapid recovery from use
- Tolerant of fairway cutting heights to 0.5"



Turf Blue®

Turf Blue® features a diverse mixture of 3-4 varieties of strong performing Barenbrug Kentucky bluegrasses. Quick to germinate with fast establishment, these mixtures are ideal for use in all areas of Kentucky bluegrass adaptation. Turf Blue can be counted on to provide year-round bluegrass quality with great uniformity and dark green color.

- Rapid establishment
- Good spring green-up
- Strong year-round performance and turf quality
- Very good overall disease resistance
- Very good overall traffic tolerance and wear recovery



HGT at Pepperdine University, Malibu, CA

KENTUCKY BLUEGRASS, *Poa pratensis*



AVAILABLE VARIETIES

KENTUCKY BLUEGRASS

Kentucky bluegrass is a strong turf component commonly used across the temperate and cooler climates of the U.S. Highly desired for its strong rhizomatous growth habit and unmistakable turf quality, Kentucky bluegrass is an extremely varied species. It may exhibit a multitude of unique, desirable traits that differ significantly from one variety to another, including color, texture, disease resistance, traffic tolerance and temperature tolerance.

BARIMPALA

Very quick to germinate and establish, especially when compared to elite bluegrasses. Barimpala also exhibits strong heat and drought tolerance. With bright green early spring color, Barimpala provides strong traffic tolerance and recovery. Very strong resistance to rust, leaf spot and snow mold. It is a strong component of our Turf Blue® brands.

BARRARI

Barrari is named after a famous Italian sports car brand. Why? Because Barrari is quick to germinate and establish. Ideal for both seed production and turf establishment, Barrari provides color, durability and wear recovery. It is a key component in both Turf Blue and Turf Blue HGT®.

BARDUKE

Barduke is a versatile variety with a dark blue-green color. It germinates and establishes quickly, and has good drought tolerance and resistance to diseases such as leaf spot. Barduke is excellent with tall fescue mixes and a strong component of the Turf Blue program.

BARRISTER

Barrister was a front page rated variety in the 2006 NTEP trials and placed 3rd in the same trial under low maintenance conditions. Very dark green and fine leaved, Barrister has strong adaptability to all bluegrass regions. Tolerating fairway cutting heights with excellent density, Barrister is a proven component of the Turf Blue brands.

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 that receive minimal care. It has a medium green color. Baron has good seedling vigor and notable heat and drought tolerance.

RPR®, *Lolium perenne ssp. stoloniferum*

RPR®, *Lolium perenne ssp. stoloniferum*, is a new subspecies of traditional perennial ryegrass created exclusively by Barenbrug's innovative Turfgrass Research and Development Group to withstand heavy traffic and rapidly recover.



In January 2015, RPR received a utility patent #8,927,804. RPR is durable, thrives under temperature extremes and, most exciting, regenerates turf horizontally with determinate stolons. This ability to expand laterally is what separates RPR from any other perennial ryegrass. The technology provides unmatched traffic tolerance

and other highly desirable traits, including rapid initial establishment.

With initial selection and breeding work done in Virginia, RPR is significantly more heat and drought tolerant than standard perennial ryegrass. Outperforming traditional perennial ryegrass in transition zone climates, RPR is durable, resilient and a survivor. With a growing list of successful, professionally maintained sports turf applications, RPR's reputation as a problem-solver is growing.

RPR is ideal for all perennial ryegrass uses, especially sports turf, recreational turf, golf tees, fairways and high traffic areas.

BRANDED PRODUCTS

Perennial Ryegrass

Turf Star® RPR®

A mixture of RPR® varieties and elite perennial ryegrass, Turf Star® RPR is the solution for all sports and recreational facilities where perennial ryegrass is the turf of choice. 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.



- Combines the benefits of determinate-stolons with the color and turf quality of elite perennial ryegrass
- High endophyte content for improved stress tolerance
- The only *ssp. stoloniferum* perennial ryegrass available

Top Flight

Top Flight is a high-quality blend of three proven perennial ryegrass varieties. Top Flight exceeds certified standards and creates a lush green turf that is excellent for golf courses, parks, sports fields and home lawns.

- Quick germination with very fast establishment
- Excellent green color with uniform density
- Ideal for the overseeding of warm season turf

Turf Star®

Turf Star® is a blend of three premium perennial ryegrass varieties ideal for all sports turf and recreational turf, residential and commercial lawns in cool to temperate climates. Featuring dark green varieties with strong genetics and high mechanical purity, Turf Star is your grass of choice. Fast to germinate and quick to establish, Turf Star is ideal for full sun to light shade applications.



- Very wear tolerant
- Works well in all areas of perennial ryegrass adaptation
- Dense low-growth habit with a fine leaf texture
- Excellent mowing quality: 0.5" to 3 inches

PERENNIAL RYEGRASS, *Lolium perenne*

AVAILABLE VARIETIES

Perennial Ryegrass

A mainstay of cool season grass mixtures, perennial ryegrass provides fast germination and establishment, fine leaf texture, exceptional traffic tolerance and overall beautiful turf quality. Available in mixes and blends, Barenbrug's ryegrasses are ideal for residential and commercial mixes as well as golf, sports turf and recreational turf.

PINNACLE II

The second generation of the Pinnacle cultivar, Pinnacle II has become a Barenbrug standard for high quality turf performance and stable seed production. Ranking in the top statistical group of cultivars in the 1999 NTEP trials, Pinnacle II has persisted as an outstanding turf performer in blends and mixes.

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 including very good gray leaf spot resistance. Traffic-tolerant with strong summer performance, Pinnacle III is ideal for premium blends and mixes where high turf quality and appearance are desired.

BARLENNIUM

Barlennium exhibits an excellent dark green color with fine leaf texture, shows early spring green-up and is very wear-tolerant. An outstanding variety for overseeding, it has excellent salt tolerance and is highly ranked in the NTEP trials. Barlennium will give you superior performance over other perennial ryegrasses when effluent water usage is high.

BARGOLD

A Barenbrug exclusive, Bargold exhibits improved shade tolerance and is extremely tolerant of wear and of very tight mowing (0.25"). Very fine-textured with medium green color, Bargold is a key component of Barenbrug's Turf Star XPC.

PEAK

With quick germination and fast establishment, Peak is a proven performer in quality turf mixes, blends and fall overseeding mixtures. A component of the SOS® (Super Overseeding), Peak's medium green color, leaf texture, turf performance and spring transition make it an ideal partner with Turf-Annual varieties.

PREMIER II

Premier II is a versatile grass with excellent dark green color, very quick spring green-up and a very fine leaf blade. It forms a dense turf and displays great adaptability to a wide range of soil conditions. Premier II consistently rates high in turf quality, disease resistance, density, color and low mowing adaptability.

PIROUETTE II

Pirouette II is a high-ranked perennial ryegrass. It also has a high ranking on the NTEP list for leaf texture. Pirouette II germinates and establishes quickly and develops into a dense, lush green turf. It has an excellent adaptability to a wide range of soil conditions.

RTF®, Rhizomatous Tall Fescue

In 2002, Barenbrug released a unique tall fescue with rhizome rich plants called RTF®. RTF stands for Rhizomatous Tall Fescue, and this unique variety is still the only tall fescue with rhizomes available. Tall fescue is typically a bunchgrass with very limited ability to repair and recover, however, RTF's unique rhizome development enables the repair and recovery of the turf.



Rhizomes are underground stems that provide turf the ability to repair damaged areas, maintain uniformity and density, add to drought tolerance and reduce the need

for frequent overseeding. These deep rhizomes spread laterally as much as 9" but are not as invasive as those of Kentucky bluegrass or creeping red fescue.

Barenbrug was issued a Utility Patent (#6,677,507) for RTF in 2004. RTF Technology now features its third generation of RTF breeding. 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.

RTF is available as sod (through The RTF Turf Producers Association) and as seed in Turf Saver® RTF.

BRANDED PRODUCTS

Tall Fescue

Turf Saver® RTF®

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.



- A mixture featuring 40% RTF varieties combined with two elite turf-type tall fescues
- Quick to establish with good uniformity and density
- Strong traffic tolerance, the only self-repairing tall fescue seed mixture available
- Extensive, deep root system for improved drought tolerance
- Strong disease resistance and insect tolerance



Rhizomes from an RTF plant

Water Saver® Pro

This high quality turf-type tall fescue blend performs exceptionally in the U.S. Transition Zone and most areas from Colorado to the California coastline. In deep soils, Water Saver Pro can establish roots up to 8 feet deep, providing improved drought tolerance and good summer persistence. Ideal for home and commercial landscape needs, including parks, green belts and low-maintenance areas. For golf, ideal for near-rough, driving ranges and club grounds.



- Three-way, dark green blend of strong-performing turf-type varieties
- Germinates in 8-10 days with fast establishment
- Ideal in full sun and moderate shade
- Lower-growing turf with excellent heat tolerance
- Exceptional traffic tolerance with moderate wear recovery
- Excellent overall disease resistance
- Tolerates extremes of soil pH: 5.5 to 8.0

TALL FESCUE, *Festuca arundinacea*



AVAILABLE VARIETIES

Tall Fescue

First introduced in the early 1980's, turf-type tall fescue has become the number one cool season turf species used in the turf grass transition zones of the U.S. With the ability to establish a deep root system for improved persistence in warm summer temperatures and periods of drought, turf-type tall fescues will tolerate full sun to moderate shade.

BARLEXAS II

Barlexas II is a dark green variety with a high ranking in the NTEP. Barlexas II is fine-leaved, quick to establish and handles drought well. It also can withstand short mowing height.

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.

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.

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.

BEARCAT

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

FINE FESCUE, *Festuca species*

As the need for lower-maintenance turf grasses increases, more golf course managers and landscape architects are discovering the unique look of fine fescue. Barenbrug is known worldwide for high quality fine fescue varieties, and several of the world's best-known fine fescue golf courses (St. Andrews, Bandon Dunes and Chambers Bay) have chosen our products.

With very fine leaf texture, low growth characteristics and exceptional density, fine fescues are a common component of shade mixtures, slope and soil stabilization in landscaped areas and low-maintenance turf.

Mixing readily with Kentucky bluegrass and perennial ryegrass, fine fescues bring the "shade" to shade mixes and exhibit excellent cold tolerance. 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, unmowed naturalized areas and low maintenance turf areas.

BRANDED PRODUCTS

Fine Fescue

Dunes Mix™

Our Dunes Mix™ is a superior quality mixture of our genetically advanced fine fescues. It mixes Chewings and Slender Creeper for the "dunes" look found on many of the world's finest golf courses.

- High quality either mowed or unmowed
- Lower and slower-growing with minimal fertility requirements
- Well suited for temperate U.S. climates
- Full sun in cooler, temperate climates; moderate shade in warmer areas



Dunes Mix™ on Cabot Links in Inverness, Nova Scotia

Ground Cover Fine Fescue Mixture

Hard and sheep fescue are often overlooked when considering fine fescue in mixtures. However, both bring strong summer durability with low maintenance requirements. Our product mixes the two types of fescue to provide full sun applications in cooler, northern temperate climates or moderate shade into the Transition Zone.



- Ideal for low maintenance areas requiring turf coverage, slow growth and good heat tolerance
- Produces very little thatch
- The best fine fescues for 'summer performance'
- Ideal for unmowed extreme rough areas or naturalized areas
- Works well with wildflower mixtures at 10% of total seed mix

FINE FESCUE, *Festuca species*



Dunes Mix™ at Bandon Dunes Golf Course - Bandon, Oregon

AVAILABLE VARIETIES

Fine Fescue

BARCROWN II

Barcrown II is the successor of Barcrown, a variety recognized worldwide. Barcrown II has dark green color and its low-mowing and quick recovery qualities make it the #1 slender creeping red fescue in the NTEP. It is a very dense variety with high shoot density and a quick green-up in the spring.

BRIDGEPORT II

Bridgeport II Chewings fescue is suitable for a wide variety of applications. This variety exhibits high shoot density and is able to withstand close mowing. Dark in color, Bridgeport II is ideal for greens, approaches, tees, fairways, roughs, parks and home lawns. Bridgeport II blends well with the other fine fescues from Barenbrug, as well as with other species like Kentucky bluegrass and fine-leaved perennial ryegrass.

HARDTOP

Hardtop is a highly ranked hard fescue with outstanding features. It is drought-tolerant and can withstand short mowing, as close as 0.5". Hardtop can compete in shade better than other fine fescues. It can grow well in the northern climates, but is also a good performer in warmer, drier climates as a component in mixtures.

SLENDER CREEPING RED FESCUE

CHEWINGS FESCUE

HARD FESCUE

CONTENDER

Contender is a highly ranked creeping red fescue. It is a dark green variety with a high turf quality compared to other red fescues. Contender greens-up fast in spring and performs best on fairways, roughs, parks or home lawns. Contender can be blended with other fine fescues or with other species like fine-leaved perennial ryegrass and Kentucky bluegrass.

BAROK

Barok is one of the world's few fine-leaved sheep fescues suitable for turf. Sheep fescue is known for excellent drought tolerance. Barok fits perfectly on links-style golf courses and performs well on roughs. It also can be used on fairways and approaches where it will tolerate close mowing.

STRONG CREEPING RED FESCUE

SHEEP FESCUE

ART™, Advanced Ryegrass Technology

With the initial development of Panterra by Texas A&M, Barenbrug's U.S. Research team took the promise of improved Turf



Annual Ryegrass and developed the program into an 'ART™ form'. Our Advanced Ryegrass Technology now encompasses four unique turf-annuals including Panterra, Panterra V, BarTerra and TerraBar.

ART is featured in our unique brand of overseeding mixtures, the SOS® Brand. These mixtures are ideal for the

economical fall overseeding of warm season turf, and for providing winter color, traffic tolerance and safe winter-turf. SOS mixtures are extremely fast to germinate and establish, and they provide an ideal alternative to more expensive and persistent perennial ryegrass overseeding mixtures. They offer both quick "natural" spring transition and, when needed, stronger spring persistence.

SOS mixtures also 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.

AVAILABLE PRODUCTS

Turf-Type Annual Ryegrass



SOS 400

Featuring Panterra and/or Panterra V, a dwarf variety with a darker green appearance. SOS 400 provides the most economical turf-annual performance for general purpose overseeding, the fastest to transition in the spring and significant turf quality improvement over named annual ryegrasses such as Gulf.



SOS 211

Featuring 50% Panterra/Panterra V mixed with 50% perennial ryegrass, 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 over 100% perennial ryegrass overseeding mixes, SOS 211 is the ideal mix for those areas requiring higher turf quality.

SOS 220

SOS 220 features the latest in turf-annual ryegrass breeding and turf performance, the high-quality BarTerra and TerraBar. Providing darker green, finer leaf texture, improved density and reduced clippings, this 'third generation mix' provides the best in turf-annual performance each and every fall.

SOS 121

Combining the best in turf-annual performance, BarTerra and TerraBar, with 25% elite perennial ryegrass, SOS 121 features outstanding turf quality and improved spring persistence, with the fast germination and establishment only turf-annual ryegrass can provide.

TURF-ANNUAL RYEGRASS, *Lolium multiflorum*



AVAILABLE VARIETIES

Turf Type Annual Ryegrass

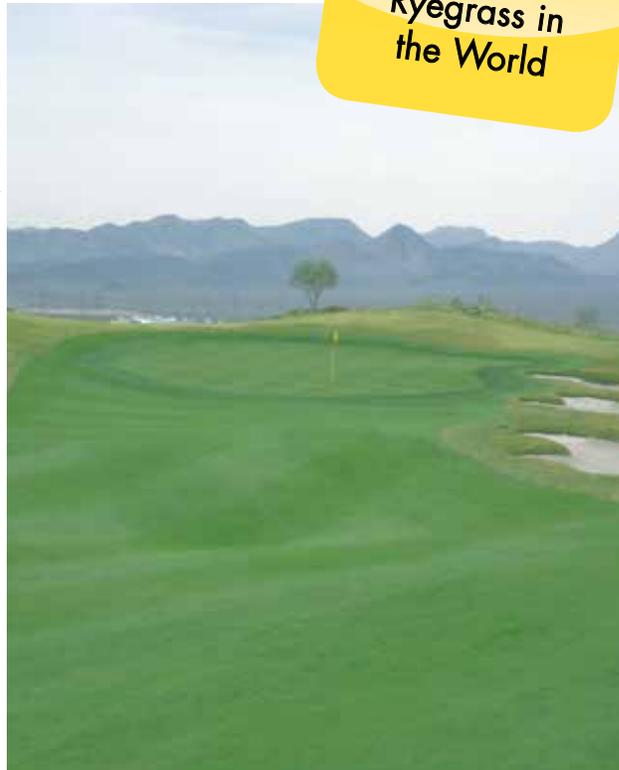
PANTERRA

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 naturally transitions when temperatures exceed 90 degrees thus virtually eliminating the need for 'chemical spring transition'. Using this ryegrass in Bermuda grass, turf managers won't have to apply chemicals to kill it.



Panterra V on the left, Gulf annual ryegrass on the right

Number One
Selling Turf-Annual
Ryegrass in
the World



SOS® 400 at Boulder Creek Golf Club - Boulder City, Nevada

SUPERCHARGED BERMUDAGRASS

Barenbrug's top-rated bermudagrass varieties have now been supercharged with Yellow Jacket® Enhanced Seed Coating. The result is seed that has improved germination and establishment while reducing water consumption and establishment costs. Yellow Jacket acts like a sponge around the seed, holding water and nutrients for the seed to draw on as needed for germination. Yellow Jacket also provides a turf nutrient package and Apron XL® LS, providing both healthy development and protection of bermudagrass seedlings.

Supercharged
BERMUDAGRASS



AVAILABLE PRODUCTS

Bermudagrass

PanAm

PanAm provides high quality turf suitable for golf fairways, tees, near-roughs and driving ranges. Also ideal for home lawns, green belts and park and recreational turf, PanAm is an economical blend of turf-type bermudagrasses, providing strong genetic diversity and a high quality turf when compared to common bermudagrass. Dark green in color with excellent heat and drought tolerance, PanAm is ideal for improving existing seeded bermudagrass turf or new bermudagrass areas.

- Provides uniform density with dark green color
- Good frost tolerance and early spring green-up

Bahama

Bahama Brand provides exceptionally high quality turf for all bermudagrass uses. Bahama delivers performance throughout the entire range of bermudagrass adaptability including the northern edge of the turf transition zone. Transcontinental traces its roots to North Carolina while SWI-1044 has roots of development from Arizona to Florida.

- Transcontinental and SWI-1044 both provide proven turf quality and improved cold tolerance
- Both varieties with proven NTEP performance data

Barbados

Barbados Brand has proven itself in both U.S. and international trials, with the 2002-06 NTEP trial highlighting its strong performance. Bermuda product SWI-1044 is finer-leaved than both Princess 77 and Riviera and exhibits excellent spring and summer density. A tested elite cultivar in the 2002-06 NTEP trials, SWI-1044 exhibited outstanding turf quality. SW-1044 recovers quickly and has speedy spring transition. In the fall, it exhibits a more open turf, allowing for easier establishment of overseeded ryegrass. With SWI-1044, Barenbrug's Barbados brand is closing the quality gap between seeded and hybrid (vegetative) bermudagrass varieties.

- NTEP tested in 2002 National Test; Ranked #2 Overall of 29 seeded bermudas evaluated for 4 years
- Top statistical group for least winter kill
- Top statistical group for seedling establishment

BERMUDAGRASS, *Cynodon dactylon*



AVAILABLE VARIETIES

Bermudagrass

Bermudagrass is best suited for Transition Zone to warmer, southern climates, although recently introduced “cold-tolerant” varieties have expanded the northern zone of adaptation from Nebraska east to Pennsylvania and New Jersey.

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.

PANAMA

An advanced seeded cultivar with fine leaf texture and excellent color. With great seedling vigor and fast establishment, Panama quickly forms a dense turf for full sun bermudagrass applications. It’s widely adaptable with moderate cold tolerance, and works well as a single cultivar or in Barenbrug’s PanAm Brand bermuda blend.

RIVIERA

Riviera was developed and released by Oklahoma State University in the late 1990s. At the time of its release, Riviera exhibited the strongest cold tolerance for available seeded bermudagrass. It’s still known today for its cold tolerance and excellent turf quality. Only available SuperCharged with Yellow Jacket® enhanced seed coating.

BARGUSTO

Bargusto is a Barenbrug variety bred for exceptional wear tolerance and overall quality. It’s a great option for affordable turf with good performance.



Circuit of the Americas Racetrack in Austin, TX. Barbados on the highest profile area of the track

SUPERCHARGED BENTGRASS

With Yellow Jacket® Enhanced Seed Coating

Barenbrug and Tee-2-Green have partnered to offer the most advanced and recognized creeping bentgrasses available. Through our exclusive partnership, Barenbrug has SuperCharged Tee-2-Green bentgrass varieties and blends with Yellow Jacket® Enhanced Seed Coating.



SuperCharged Bentgrasses vs. Uncoated Seed

- Provides super-absorbency and Apron XL® LS in one package
- More easily controlled and uniform seed application
- Seed easier to see during application
- Heavier seed moves more readily through turf canopy
- Improved germination with less water needed
- Protection against Pythium sp. seedling disease for up to three weeks
- Stronger, more extensive early root development
- Improved germination with stronger establishment and uniformity
- Ideal for greens, tees and fairways

The following bent varieties are available with Yellow Jacket coating:



Pennlinks II / Penneagle II 50:50 Mix

Barenbrug also offers several other varieties, including velvet bentgrass. Inquire for availability.

BENTGRASS, *Agrostis*



CREEPING BENTGRASS

Agrostis stolonifera

BENGAL

Bengal is a highly rated creeping bentgrass for fairways on the 2003 NTEP trials. Featuring exceptionally strong drought tolerance, Bengal is an ideal choice where drought and limited water resources are of concern. 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:

| | | |
|----------------|---------------------------------------|--------------------|
| Penncross | Penneagle II | Crystal BlueLinks |
| Penn A-1 | PennTrio Blend | Pure Select |
| Penn A-1 / A-4 | Pure Distinction | PureFormance Blend |
| Penn A-4 | PennLinks II | Seaside II |
| Pennway Blend | Pennlinks II / Penneagle II 50:50 Mix | |

COLONIAL BENTGRASS

Agrostis capillaris

BARKING

BarKing is a fine-leaved colonial bentgrass which performs well under low mowing. It is the successor of the globally known variety Bardot. BarKing has excellent winter performance, great color and superb wear tolerance. It performs great under dry conditions and has good dollar spot and brown patch tolerance.



Bentgrass seed production in Willamette Valley, Oregon

Sports Turf

Barenbrug has a long and durable partnership with the sports turf industry. We've been a player for decades, experiencing what persistent use and play does to turfgrass. In pursuit of ever tougher, traffic-resistant turf, Barenbrug develops and tests varieties for durability under foot and in world class competitive conditions.

Among the high profile customers using Barenbrug products: The Rose Bowl, Busch Stadium, Comerica Park and numerous university sports venues.

Barenbrug is the only seed company in the U.S. with a breeding program that selects and tests varieties for tolerance to heavy, sustained beating by artificial traffic

simulators. The sports turf products purchased for the world's best athletes are the same durable turfgrasses you can purchase for your stadium, municipal sports complex, business or home lawn.

Providing superior turfgrasses to the turf industry is of primary importance to us. However, we're also intent on supporting our turfgrass industry professionals through our participation in the Sports Turf Managers Association.



SPORTS TURF PRODUCTS

Aggressive establishment, traffic tolerant, strong recovery: Barenbrug turf is built for play!

- Turf Star® RPR® - Regenerating Perennial Ryegrass
- Turf Star® - Perennial Ryegrass Blend
- Turf Saver® RTF® - Rhizomatous Tall Fescue
- Turf Blue® HGT® - Featuring Barvette HGT Kentucky bluegrass
- Turf Blue® - Quality Blend of Kentucky Bluegrass
- SOS® - Super Over Seeding - Turf-type Annual Ryegrass
- SOS® Cool Season Turf-type Annual Ryegrass Mixture
- SuperCharged Bermudagrass
- Water Saver® Pro - Tall Fescue Blend



Perennial Ryegrass with a Bermuda base, Rose Bowl Stadium, Pasadena, California

"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 stadium field in 35 days using HGT last fall. This year the wear tolerance and recovery have been equally impressive through 150 events in 200 days. Under stress from professional soccer, youth soccer, lacrosse and rugby, the HGT never really showed wear."

Jerad Minnick, Agronomic Specialist, Maryland SoccerPlex

Golf

The reason why the world's most exclusive golf courses choose Barenbrug is that they've experienced the superior mechanical and genetic qualities inherent in Barenbrug grass seed products. To meet the high standards for an industry continuing to "raise the bar," we invest tremendous capital in research and development. The results – we offer the best varieties and the right formulations. And we strive to out-perform all other brands. That's why St. Andrews, Pebble Beach, Chambers Bay (site of 2015 U.S. Open) and Bandon Dunes, to name a few, all rely on high quality Barenbrug products for their legendary courses.

Over and above our commitment to the best seed product, Barenbrug further supports the industry in other distinct ways. First, we contributed to the market our proprietary Yellow Jacket® advanced seed coating, which helps seed establish quickly and conserves precious water resources. Secondly, Barenbrug is the exclusive grass seed supplier in the Golf Course Superintendents Association of America's (GCSAA) Partner Recognition Program. By purchasing Barenbrug seed, you join us in supporting the GCSAA and its local chapters.



GOLF PRODUCTS

Quality turf seed mixtures for greens, fairway, tee and rough.

SOS® - Super Over Seeding - Turf-Type Annual Ryegrass

Turf Star® RPR® - Regenerating Perennial Ryegrass

Turf Star® Perennial Ryegrass Blend

Turf Saver® RTF® - Rhizomatous Tall Fescue

Dunes Mix™ - Quality Mixture of Fine Fescues

Water Saver® Pro - Tall Fescue Blend

Turf Blue® HGT® - Featuring Barvette HGT Kentucky bluegrass

Turf Blue® - Quality Blends of Kentucky Bluegrass

SuperCharged Bentgrass - Exclusively offering Yellow Jacket® Enhanced Tee-2-Green bentgrasses

Bengal - Creeping Bentgrass

SuperCharged Bermudagrass

“RPR with yellow jacket has performed extremely well under Misquamict heavy play conditions and establishes very rapidly. I am very pleased with the results I have gotten with RPR and Barenbrug products in general.”

*William R. Morton CGCS Director of Golf Course Operations
The Misquamict Club, Watch Hill, RI*



Turf Star at Pebble Beach



RTF Sod at the 2013 U.S. Open

Lawn, Landscape and Hydroseeding

Being a part of the lawn and landscape industry for more than 100 years gives Barenbrug a distinct advantage over other turf seed companies. We have long recognized the value of seed purity, varietal performance and turf technologies and their importance to the professional landscape and hydroseeding industry.

For quality residential turf, business parks, city green belts and medians, Barenbrug offers the professional landscape and maintenance industry unique, high quality seed mixtures providing rapid germination, fast establishment and long term performance.

For turf areas requiring economy and quality, Barenbrug provides custom mixtures for the hydroseeding industry that meet or surpass specifications and a scope of distributors servicing the USA and Canada.

With a nation-wide professional support team providing technical and sales expertise, Barenbrug USA is an industry leader committed to a greener future.

LAWN AND LANDSCAPE PRODUCTS

Professional grass seed mixtures for lawn and landscape; aesthetics and play.

- Turf Star® RPR® - Regenerating Perennial Ryegrass
- Turf Star® - Premium Quality Perennial Ryegrass Blend
- SOS® - Super Overseeding Turf-Type Annual Ryegrass
- Turf Blue® HGT® - Featuring Barvette HGT Kentucky bluegrass
- Turf Blue® - Quality Blend of Kentucky Bluegrass
- Turf Saver® RTF® - Rhizomatous Tall Fescue
- Water Saver® Pro - High Quality Turf-Type Tall Fescue Blend
- Dunes Mix™ - Quality Mixture of Fine Fescues
- SuperCharged Bermudagrass



RPR on a apartment complex in Portland, Oregon



RTF Sod on a playground in Vancouver, Washington

SOD

Barenbrug has served the sod industry in the USA for the past 30 years. Barenbrug's commitment to the industry includes superior seed standards, genetic performance, separate sod seed mixing and multiple seed testing on components.

Our comprehensive research program focuses on faster germination and establishment with superior sod strength. Shorter turnarounds and higher sod yields are goals we strive for.

We also include strong participation and a professional commitment to Turfgrass Producers International (TPI) as well as partnerships with industry leaders, Sod Solutions and the RTF Turf Producers Association.

For more information on Sod Solutions:

www.sodsolutions.com

www.hgtsod.com

For more information on TPI:

www.turfgrasssod.com

For more information on the RTF Turf Producers Association:

www.rtf sod.com

SOD PRODUCTS

Clean mixtures providing professional sod producers rapid establishment and sod strength.

Turf Star® RPR® - Regenerating Perennial Ryegrass

Turf Star® Perennial Ryegrass Blend

RTF® Sod - Rhizomatous Tall Fescue

Water Saver® Pro - High Quality Turf-Type Tall Fescue Mixtures

SOS® ART™ - Super Overseeding with Advanced Ryegrass Technology

Dunes Mix - Quality Mixture of Fine Fescues

Turf Blue® HGT® - Featuring Barvette HGT Kentucky bluegrass

Turf Blue® - Quality Blends of Kentucky Bluegrass



HGT at Busch Stadium, St. Louis, Missouri
65 Games and Heading Into September

Turf Blue HGT Sod provided by Graff's Turf, Ft Morgan, CO





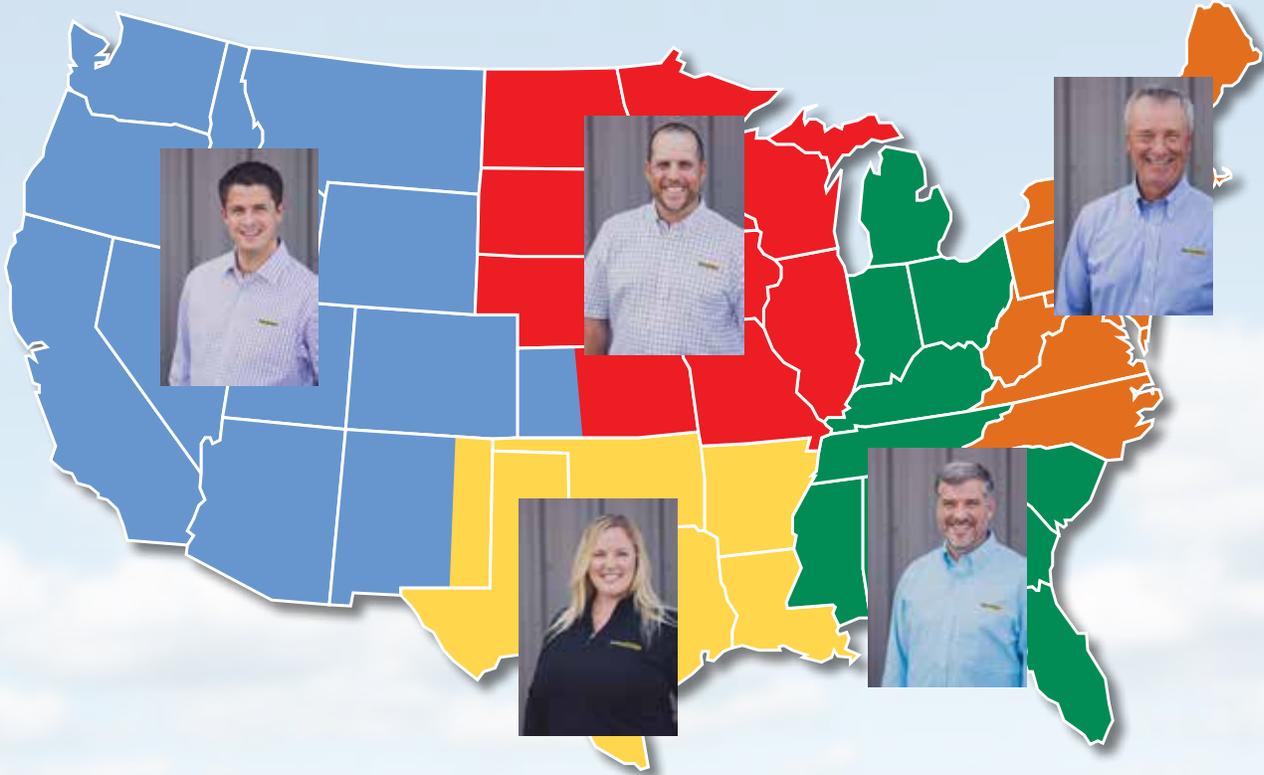
Partnerships

Success stories are built on innovation, persistence and great partnerships.

Our company would never have become as successful as it is without strategic alliances with partners in Research & Development, production and sales and marketing. We have built on our passion for grass together.



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