SEED RESEARCH REPORTS

SR 4420
Perennial Ryegrass

SR 4420 Perennial Ryegrass is specially designed for high turf quality and its resistance to grey leaf spot, snow mold, brown patch and crown rust. **SR 4420** is an excellent choice for golf courses and sports fields because of its dark green color, good seedling vigor, fine leaf texture, extremely high fall density and superior traffic stress tolerance.

HISTORY

SR 4420 was developed at Rutgers University in the fall of 1997 based primarily on its resistance to grey leaf spot and its excellent heat tolerance. Following rigorous testing at the Rutgers Turfgrass Breeding program, seed from 25 plants with dark green color, high shoot density and high seed yield was sent for further trials at Seed Research in the fall of 1998. In the spring of 1999, it was noted that these progeny had two distinct heading and anthesis periods. The progeny from six plants with early heading were separated from the remainder of the population and designated SRX 4820, now known as **SR 4420**, which represents the early transitioning portion of the population.

CHARACTERISTICS

- Excellent gray leaf spot, dollar spot and crown rust
- Extremely dark green color; Quick emergence
- High turf quality with a fine leaf texture and reduced stemminess
- Long term persistence - excellent cold and hot weather performance
- Excellent winter color and winter density when overseeded into dormant bermudagrass
- Early spring green-up in northern climates. Very high spring, summer, fall and winter density
- High billbug resistance due to high endophyte levels

APPLICATION

SR 4420's dark green color makes it ideal for a variety of turf applications. Blend **SR 4420** with other perennial ryegrasses for golf course fairways, sports fields, sod production and home lawns. It also can be mixed with Kentucky bluegrasses and fine fescues. In blends with other perennial ryegrasses or mixed with Poa Trivialis, its dark green color and high turf quality make it ideal for overseeding permanent turf.

SEEDING RATE

- New turf: 7-9 pounds per 1,000 square feet or 300-400 pounds per acre
- Overseeding rate: 30 pounds per 1,000 square feet for golf greens
        250-450 pounds per acre for roughs
        600-700 pounds per acre on fairways
- Seeds per pound: approximately 250,000

GERMINATION

- Emergence in 3-7 days under proper conditions. First mowing 2 weeks after emergence.

PVP
IMPROVEMENT THRU RESEARCH

2001 NTEP NATIONAL PERENNIAL RYEGRASS TRIAL*

Mean Turfgrass Ratings Using Schedule "A" (Golf Fairways)

Turfgrass Quality 1-9; 9=ideal

VARIETY	MEAN	VARIETY	MEAN	VARIETY	MEAN
Amazing	6.0	Wilmington	5.6	Manhattan 3	5.4
SR 4420	**5.9**	Affirmed	5.6	Charger II	5.3
SR 4220	**5.8**	Phantom	5.6	Edge	5.3
SR 4500	**5.7**	Affinity	5.5	Linn	3.5
Catalina II	5.6	Line Drive	5.5	*LSD***	*0.30*
		Passport	5.5	*CV****	*9.9*

2000 RUTGERS UNIVERSITY PERENNIAL RYEGRASS TRIAL

Grey Leaf Spot Ratings

Disease ratings 1-9; 9=least disease

VARIETY	Ave.	Sept.	Oct.	VARIETY	Ave.	Sept.	Oct.	VARIETY	Ave.	Sept.	Oct.
SR 4420	**5.30**	**5.3**	**5.3**	High Life LF	4.05	4.7	4.3	Greenland	3.50	3.3	3.7
Ecologic	5.15	5.3	5.0	Vibrant	4.15	4.3	4.0	Fiesta II	3.50	3.3	3.7
Jet	5.00	4.7	5.3	Lowgrow II	4.00	3.7	4.3	Headstart	2.7	2.7	2.7
SR 4220	**4.65**	**5.0**	**4.3**	Dancer	3.85	3.7	4.0	Exacta	2.00	2.0	2.0
Barefoot	4.65	5.0	4.3	Bayou	3.85	3.7	4.0	Platinum	2.00	2.0	2.0
SR 4400	**4.50**	**4.3**	**4.7**	Racer	3.70	3.7	3.7	Churchill	2.00	2.0	2.0
				Fiesta III	3.70	3.7	3.7	*LSD***	*1.25*	*1.4*	*1.1*

2000-2001 NTEP NATIONAL PERENNIAL RYEGRASS TRIAL*

Summer Density Ratings

Turfgrass Quality 1-9; 9=maximum density

VARIETY	MEAN	VARIETY	MEAN	VARIETY	MEAN
SR 4500	**7.3**	Elflin	6.8	Headstart	6.7
SR 4420	**7.0**	Radiant	6.8	Racer	6.5
SR 4220	**6.9**	Jet	6.8	Buccaneer	6.1
Hawkeye	**6.9**	Exacta	6.7	Linn	5.0
Affirmed	6.8	Premier	6.7	*LSD***	*0.40*
		Fiesta 3	6.7	*CV****	*10.8*

2000-2001 NTEP NATIONAL PERENNIAL RYEGRASS TRIAL*

Red Thread Ratings

Disease ratings 1-9; 9=least disease

VARIETY	MEAN	VARIETY	MEAN		
Applaud	6.3	Jet	5.3	*LSD***	*1.2*
Gator 3	6.3	Pennant II	5.3	*CV****	*16.0*
SR 4420	**6.0**	Pizzazz	5.3		
Hawkeye	**5.7**	Manhattan 4	5.3		
SR 4220	**5.3**	Buccaneer	5.0		
Cabo	5.3	Palmer III	5.0		
Fiesta 3	5.3	Panther	4.7		
		Paradigm	3.7		

*—Full data set available on the NTEP web site at www.ntep.org.

**—To determine if ratings between two varieties are truly different, subtract the lower rating from the higher one. If the result is greater than the LSD value for that column, then the difference is real.

***—CV is the coefficient of variation, which indicates the percent variation of the mean in each column.