



TURF MAINTENANCE CHARACTERISTICS

Growth Habit	Estab. Rate Days	LHC Tol. 1/2"	Mowing Freq.	Traffic Tol. (Brinkman)	Thatch Prod.	Comp. Mix	N Req.	Shade Tol.	Cold Tol.	Drought Tol.	ET Rate mm/day	Endophyte	Salinity Tol. mmhos
Bunch	Slow 21-28	Good	2x month	Poor	High	Poor	Low	Good	Very good	Very good	Med 7-8	No	<3 Poor

BREEDER

Cebeco Seeds, The Netherlands

DESCRIPTION

Quatro sheep fescue (*Festuca vulgaris*) is an extremely fine bladed bunchgrass that produces an exceptionally dense sward and a distinct deep dark green colored turf. Quatro is the first commercial tetraploid sheep fescue available in the US. Unlike other sheep fescues, test results in Europe and North America indicate it provides durable, attractive turf under a range of mowing heights, soil conditions and growing environments. Quatro establishes rapidly from seed, yet is one of the slowest growing grasses commercially available. Quatro exhibits drought and arid climate heat tolerance and has a unique dehydration avoidance mechanism allowing it to remain green under drought stress induced dormancy.

APPLICATION

Quatro was bred specifically for improved shade tolerance, LHC mowing and reduced maintenance conditions. Quatro is best adapted in northern regions of the temperate cool season turfgrass adaptation zone where heat and humidity related diseases are minimized. It can be successfully utilized in full sun or shade, in parks, playgrounds, commercial sites, golf course tees, fairways and roughs. In poly specie mixtures, Quatro can become extremely dominate under low maintenance growing conditions. We therefore recommend that Quatro be used as a minor component representing no more than 20 percent of the seed mixture by weight. Quatro is compatible in turfgrass mixtures containing Kentucky bluegrass, perennial ryegrass, colonial bentgrass and other fine fescues.

SEEDING

- **Dates:** Spring and fall when soil temperatures are above 60°F or higher. Fine fescue is generally slow to tiller once germinated, so higher soil temperatures and increasing photoperiod in the spring or warm soils with decreasing photoperiod in the fall provide an optimal environment for seedling establishment.
- **Rates:** 4.0-5.0 lbs./1,000 sq. ft. or 19.5-24.5 g/meter sq. Seed count of Quatro is generally 680,000-720,000 seeds per pound and dependent on the year of harvest, location of production and seed production practices.
- **Depth:** Sow at 1/4 to 1/2 inch or 6.25 to 12.5mm.

STRI BREEDERS REPORT 1992

Sports Turf Research Institute Bingley and UK

SHOOT DENSITY (SHOOTS/SQ. METER)



RED THREAD (0=NO DISEASE)



PERFORMANCE IN NORTH AMERICA

Quatro has been tested extensively around the world. Data from the 1995 NTEP Fine Fescue Progress Report conducted across 23 locations in the US and Canada indicates that among all fine fescue varieties Quatro ranked statistically first in color, spring green up, spring density, winter color, drought tolerance and red thread resistance.

1995 NTEP PROGRESS REPORT*

Variety	Genetic color rating	Spring green up	Spring density	Summer density	Winter color	Drought tolerance	Red thread
QUATRO sheep fescue	7.0	6.1	4.5	6.0	3.3	8.0	8.3
Discovery hard fescue	6.7	5.3	5.3	7.1	2.7	5.3	8.2
Brigade hard fescue	6.6	5.4	4.3	5.4	3.0	6.3	8.3
Shademaster II strong creeping red fescue	6.7	5.7	4.4	5.1	3.0	3.3	5.8
Flyer II strong creeping red fescue	6.6	5.7	3.9	5.1	2.7	4.3	6.4
Banner II chewings fescue	6.1	5.5	4.3	5.3	2.3	2.0	7.8
Jamestown II chewings fescue	5.8	5.5	4.1	5.3	2.3	3.3	8.0
LSD at .05	.3	.4	.9	1.1	.9	1.8	1.0

*COMPLETE TEST DATA AVAILABLE UPON WRITTEN REQUEST.

Ratings 1-9, 9=darkest color, earliest green up, best density, best drought tolerance and best disease resistance.

PERFORMANCE IN EUROPE

In Europe at STRI, Europe's most recognized sports turf research institute, Quatro has performed better in lawn, golf fairway and landscaping turf trials managed at 13mm mowing height than many of the best fine fescue varieties available in the European market.

STRI FINE FESCUE TURFGRASS SEED REPORT (1997 Bingley, UK)

Variety	Shoot density rating (species class)	Shoot density	Short growth	Freedom from red thread	Summer greenness	Winter greenness
QUATRO sheep fescue	#1 variety	8.3	7.5	8.1	DG	DG
Crystal hard fescue	#1 variety	7.8	7.2	6.6	MG	MG
Baroxi chewings fescue	#1 variety	8.3	7.3	7.6	MG	MG
Barcrown slender creeping red fescue	#1 variety	9.0	7.6	8.1	DG	MG
Hollywood strong creeping red fescue	#1 variety	5.8	5.6	5.2	MG	MG

Ratings 1-9, 9=highest density, shortest plant growth, best disease resistance.

DG= dark green, MG=medium green, LG=light green

CULTURAL PRACTICES

- **Soil preparation:** Prepare firm seed bed free of clods, sticks and vegetative debris. Seed should be in contact with soil. Fine fescues are intolerant of poorly drained soils.
- **pH:** Should be slightly acidic, 6.5 or less, for favorable growth.
- **NPK requirement:** Of the cool-season grasses used for turf, fine fescues are more tolerant of infertile, dry soils and often predominate where there is competition from trees and shrubs for nutrients and moisture. For these reasons, fine fescues are an excellent choice for low maintenance turfs. Fine fescues may not perform well during hot, humid summers, particularly if they are over fertilized, grown in poorly drained soils or mowed too closely.
- **Water use:** Sheep fescue is recognized as a dehydration resistant and tolerant species (Beard, 1986) with improved drought tolerance. An ET rate of 7- 8 mm per day is the best among the cool-season turfgrass species.
- **Thatch management:** The dense bunch type growth habit of Quatro sheep fescue provides opportunities for development of thatch. Verticutting, tight mowing and dethatching are recommended for dormant sod or for grass breaking dormancy in the spring. During any dethatching never remove more than 1/2 inch of thatch. If a thatch layer of greater than one inch exists, removal must be done over a period of years.
- **Mowing height:** Quatro is unique among fine fescue species. Quatro can be mowed as tight as 1/2-9/16 inch or 12.5-13 mm on low maintenance golf course fairways to standard mowing heights for fine fescues of 1.0-2.5 inch or 25-62.5 mm.
- **Weed control:** (From *NCSU Pest Control Recommendations for Turfgrass Managers, 2002* and *Pacific Northwest Weed Management Handbook, 2001*.) For general broadleaf control in established turf: 2,4-D+dicamba, 2,4-D+MCPP, 2,4-D+MCPP+dicamba, 2,4-D+2,4-DP and others. Preemergent herbicides to control annual grassy weeds in established turf: benefin (Balan), bensulide (Pre-Far), dithiopyr+trifluralin, pendimethalin (Pre-M), prodiamine (Barricade). Postemergence herbicides for annual grassy weeds dithiopyr and fenoxaprop. Sethoxydim (Poast) and fluzafop (Fusilade) are used as broad spectrum herbicides to control broadleaf and annual grassy weeds in fine fescue seed production fields of Oregon.

Any and all reference to pesticides, herbicides and fungicides, whether generic or named products, is for general informational purposes only. Text reference is not intended as an endorsement, nor does omission imply criticism. Always read and follow labeled instructions.



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