



## 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	Med. 14-21	Poor	2x week	Very good	Low-med.	Fair-good	Med.-6 lbs.*	Very good	Very good	Excellent	Very high>10	Yes>90%	11 Good

LHC= low height of cut    ET=evapotranspiration    N=nitrogen\*per 1,000 sq. ft.; rates may increase or decrease based on location, soil type, irrigation practices, desired turf quality, humidity & other abiotic and biotic factors.

## BREEDER

NJAES/Cebeco International Seeds, Inc.

## DESCRIPTION

Bingo is a new and improved, heat and disease resistant, tall fescue variety developed for superior turf quality across a wide area of adaptation. Bingo is a special bluegreen, moderately fine textured tall fescue with excellent wear tolerance. Bingo exhibits a unique combination of traits including improved turf density and resistance to brown patch incited by *Rhizoctonia solani*. Bingo is an endophyte enhanced tall fescue with >90% *Neotyphodium coenophialum* endophyte which provides resistance to a number of leaf and crown feeding insects and nematodes. The presence of endophyte also contributes to improved biotic and abiotic stress tolerance, faster seedling establishment, enhanced spring/fall recovery and reduced summer/winter annual weed invasion.

## APPLICATION

Bingo is recommended for permanent turf in full sun or partial shade, on home lawns, commercial sites, parks, golf course roughs and out-of-bounds areas. Bingo is best utilized in polyspecies grass seed mixtures, maintained at a high height of cut, which contain nonaggressive Kentucky bluegrass, perennial ryegrass, hard fescue, sheep fescue or strong creeping red fescue. Bingo can also be mixed with *Zoysia japonica* (Ming®) for cool and warm season turf in transitional climates around the globe.

## PERFORMANCE

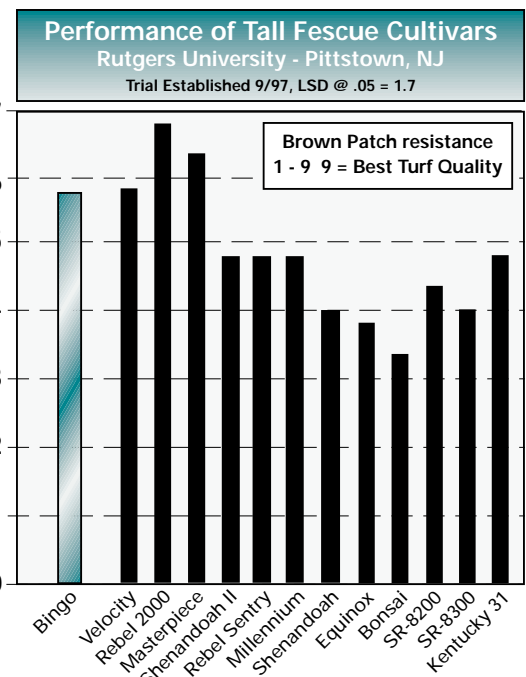
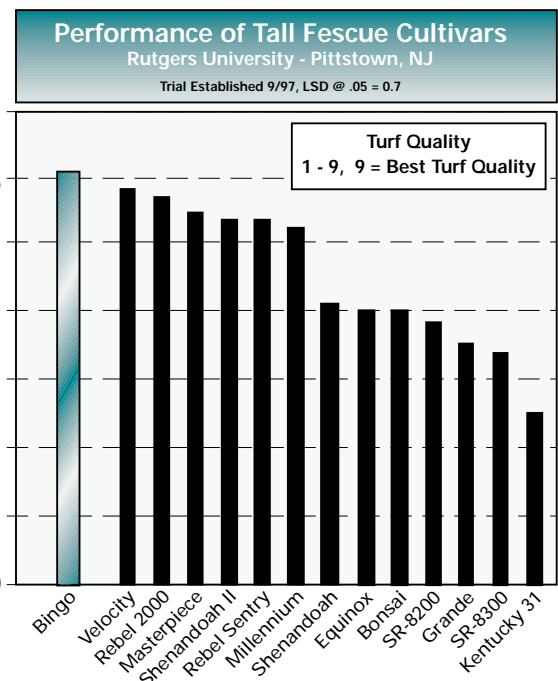
Bingo has been tested in a number of turf trials across North America. Tests in New Jersey and Oregon indicate Bingo is one of the best NEW and IMPROVED varieties commercially available. Preliminary turfgrass data from Rutgers University in Pittstown and Adelphia, NJ and Cebeco International Seeds in Tangent, OR illustrate the exceptional turf quality and brown patch resistance of Bingo (see tables). Bingo will be entered into the year 2000 tall fescue National Turfgrass Evaluation trial (NTEP). In addition, Bingo has been entered into turf trials around the world including Japan, China, South America and was submitted for DUS testing and approval in the European Common Market in late 1999. Bingo was developed for the discriminating superintendent, landscaper and sports turf manager in a range of environments. Bingo can be utilized from the dry temperate climates of southern California to the hot and humid regions of the southeastern US with excellent results. Bingo also exhibits improved resistance to leaf spot, *Pythium* blight and winter net blotch.

## SEEDING

- **Dates:** Spring and fall when soil temperatures are 60°F or higher. Tall fescue is generally slow to tiller once germinated, so higher soil temperatures and increasing photoperiod in spring or warm soils with decreasing photoperiod in the fall provide an optimal environment for seedling establishment.
- **Rates:** 6-8.0 lbs./1,000 sq. ft. or 30.0 - 40.0 g/meter sq. Seed count of Bingo is generally 225,000-230,000 seeds per pound dependent on the year of harvest, location of production and seed production practices.
- **Depth:** Sow @ 1/4 to 1/2 inch or 6.25 to 12.5 mm.

## CULTURAL PRACTICES:

- **Soil preparation:** Prepare firm seed bed free of clods, sticks and vegetative debris. Seed should be in contact with the soil. Tall fescues are best established in well drained soils, but will tolerate heavy soil conditions (high bulk density) better than many other cool season grasses.
- **pH:** Soil is best maintained at a neutral pH of 7.0. However, Bingo is adapted to a range of soil pH conditions and will perform relatively well in moderately acidic or alkaline soils.
- **NPK requirement:** Bingo would be described as a medium to high user of fertilizer. In northern regions 4-5 lbs. N/year; In transitional climates 5-7 lbs. N/year; In southern regions 5-7 lbs. N/year with minimal utilization in summer months to discourage foliar turfgrass diseases such as brown patch. NPK ratios are generally recognized as 5-1-3 with clipping retained on the turf.
- **Water use:** Tall fescue is recognized as a dehydration avoidant species (Beard, 1986) with improved drought tolerance. Tall fescue has an abundant deep and fibrous root mass which mines available subsoil moisture during stress periods. ET rate of >10 mm per day is highest among cool-season turfgrass species. ET rates can be reduced by frequent mowing to encourage a denser turfgrass and infrequent, but heavy irrigation to stimulate deep subsoil root growth.
- **Thatch management:** Requires little thatch management. Only high N levels with minimal traffic pressure encourages thatch accumulation. Verticutting, lower mowing heights and dethatching are recommended for dormant sod or grass breaking dormancy in the spring. At any given dethatching, never remove more than 1/2 inch of thatch layer. If the thatch layer is greater than 1 inch, removal must be done over a period of years.
- **Mowing height:** Bingo should be mowed at 1.5-3.0 inches or 37.5-75 mm.
- **Weed control:** (From *NCSU Pest Control Recommendations for Turfgrass Managers*, 1999 and *Pacific Northwest Weed Control Handbook*, 1999.) In established turf for post-emergent broadleaf control 2-4,D and dicamba (Banvel). Spring pre-emergent control DCPA or bensulide (Dacthal). Pre-emergent crabgrass and goosegrass control on established tall fescue with pendimethalin (Pre-M), prodiamine (Barricade), oxadiazon+benefin, oryzalin (Surflan), benefin (Balan), siduron (Tupersan), dithiopyr (Dimension).



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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