



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
Stolons	Medium 14-18	Very Good	3x Week	Good	Medium-High	Poor/Fair	Low 4 lbs.*	Fair/Good	Good	Fair	High 9-10	No	<3 Poor

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 and other abiotic and biotic factors.

BREEDER

Cebeco International Seeds, Inc.

DESCRIPTION

Tiger is an improved dark green, US adapted elite colonial bentgrass with a distinctive upright crown growth habit and very fine texture. In contrast to "Highland Types" which have unattractive broad stolons, Tiger has prolific slender stolons. Tiger does not exhibit false crowning as many common colonial bentgrass varieties do.

APPLICATION

Developed primarily for elite LHC turf surfaces on golf course greens (cool temperate climates), tees and fairways, croquet and tennis courts and bowling tops. Tiger (moderately-aggressive) is very compatible in LHC turfgrass species mixtures containing chewings fescue, slender creeping red fescue and perennial ryegrass. It responds to lower levels of nitrogen fertilization, is more resistant to dehydration and requires less mowing and verticutting than improved creeping bentgrass. Tiger can also be utilized as an alternative to creeping bentgrass in elite winter overseeding mixtures containing improved *Poa trivialis*, slender creeping red fescue, chewings fescue and perennial ryegrass. Colonial bentgrass provides better cool weather performance and more rapid transition than creeping bentgrass in winter overseeding programs.

PERFORMANCE

Tiger is the top performing commercially available colonial bentgrass in the 1996 NTEP Progress Report No. 97-5 for fairways and tees across 21 locations in the US and Canada. Tiger is being tested in official European trials in northern and southern Europe at the Sports Turf Research Institute in Bingley and INRA in France. Tiger is resistant to dollar spot, moderately resistant to fusarium patch and susceptible to brown patch.

CULTURAL PRACTICES (Permanent turf)

- **Soil preparation:** Prepare a firm seed bed free of clods, sticks and vegetative debris. Seed should be in contact with soil. On modified greens established in mild temperate climates build root zone to USGA specification with all root zone material blended off-site to insure homogeneity (www.usga.org/green/coned/greens3.htm).
- **NPK requirement:** Of the cool-season grasses used for turf, colonial bentgrass is more tolerant of infertile, droughty soils and often predominate where there is competition from trees and shrubs for nutrients and moisture. For these reasons, colonial bentgrass is an excellent choice for low maintenance low height of cut turf utilization. Generally, colonial bentgrass requires 2-5 lbs. N/1,000 sq.ft., 1-2 lbs P²O⁴/1,000 sq.ft. and 2-3 lbs. K²O/1,000 sq.ft. annually for new and existing low maintenance low height of cut lawns and golf course fairways. Colonial bentgrass may not perform well during hot, humid summers particularly if it is over fertilized and grown on poorly drained soils.
- **Water use:** Colonial bentgrass is recognized as a dehydration avoidant turfgrass species (Beard, 1986), but can be a high user of water with an ET rate of 9-10mm per day. During soil moisture stress colonial bentgrass can reduce water loss from leaf tissue via modifications in plant morphology that help reduce evapotranspiration. These morphological adaptations include higher shoot density, horizontal leaf orientation, narrow-short leaf blades, slow vertical leaf extension rate and stomatal closure and cuticular wax accumulation.
- **Thatch management:** The dense slender stoloniferous growth habit of Tiger colonial bentgrass provides opportunities for development of thatch. Dethatching, verticutting and tight mowing are recommended for dormant sod or for grass breaking dormancy in the spring. During dethatching never remove more than ½ inch of thatch. If a thatch layer of greater than one inch exists, removal must be done over a period of months or years. Tiger, however, produces significantly less thatch than improved creeping bentgrass and is therefore recommended as a low maintenance alternative for creeping bentgrass fairways where properly adapted.
- **Mowing height:** Tiger can be mowed as tight as ¼-⅝ inch or 6.25-14mm on low maintenance golf course fairways up to standard mowing heights of ¾-1 inch or 18.75-25mm.
- **Diseases of colonial bentgrass:** Brown patch (*Rhizoctonia solani*), pythium spp. (*Pythium* spp.), pink snow mold

(*Fusarium* spp.) and gray snow mold (*Typhula* spp.) are the most limiting. Tiger is very resistant to dollar spot incited by *Sclerotinia homoeocarpa*.

- **Weed control:** (From NCSU *Pest Control Recommendation for Turfgrass Managers, 2000* and *Pacific Northwest Weed Control Handbook, 2000*) 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. Pre-emergent herbicides to control annual grassy weeds in established turf: benefin (Balan), bensulide (Pre-Far), dithiopyr+trifluralin, pendimethalin (Pre-M), prodiamine (Barricade). Post-emergence herbicides for annual grassy weeds: dithiopyr and fenoxaprop.

OVERSEEDING

Trials conducted at University of Florida in Gainesville indicate that Tiger can be used as a component in elite winter overseeding mixtures containing improved *Poa trivialis*, creeping bentgrass, perennial ryegrass, chewing fescue or slender creeping red fescue.

Why use Tiger for winter overseeding?

- Elite fine textured putting surface
- Erect upright growth habit with slender prolific stolons
- Better low light intensity tillering than improved creeping bentgrass
- High seed count, 7,000,000/pound, similar to creeping bentgrass
- Transitional qualities similar to improved *Poa trivialis* and significantly better than creeping bentgrass
- Requires less nitrogen, mowing and verticutting than improved creeping bentgrass
- More resistant to dehydration and requires less syringing than improved creeping bentgrass

RATES & MIXTURES

USE	MIXTURE					SEEDING RATE LBS./1,000 SQ.FT.		
	Colonial Bentgrass TIGER	<i>Poa trivialis</i> Sabre II	Perennial Ryegrass Top Hat, Gator II, Gator 3, R.2, AllStar®, Derby Supreme, Essence®, Ph.D®	Chewings & Slender Creeping Fescue Longfellow II, Longfellow, Marker	Creeping Bentgrass Viper, Cobra, CEO®	Greens, bowling tops, croquet	Tees	Fairways or Lawns
Permanent low height of cut turf	100%					1-2	1-2	1-2
	20%			80%				7-8
	10%		40%	50%				7-8
Over- seeding	20%	80%				8-10		
	40%	60%				6-8		
	10%	60%	30%			12-15		

CULTURAL PRACTICES (Overseeding)

- **Soil preparation:** Renovate dormant warm season turf using verticutting, aeration or low mowing 3-4 weeks following application of .5-.75 oz./1,000 sq.ft. Primo® or up to 30 days dry down of existing turf. Diquat® at 1 qt./acre can be used to artificially induce dormancy prior to renovation on growing warm season turf around sprinkler head and soils with high water holding capacity. Remove thatch and old verdure. Seed should be in contact with soil, top dressed with sand (greens and tees), dragged and irrigated until sufficiently established.
- **pH:** Tiger and colonial bentgrass in general prefer neutral to slightly acidic soils.
- **NPK requirement:** 6-1-4 when clippings removed or approximately ¼ lb. N per week during 60 day grow-in on greens. After day 60 drop to ½ lb. N per week during remainder of growing season. Tiger is extremely responsive to increased levels of nitrogen. Keep P levels to a minimum to help reduce *Poa annua* encroachment on overseeded turf.
- **Water use:** Colonial bentgrass is recognized as a dehydration avoidant turfgrass species (Beard, 1986), but can be a high user of water with an ET rate of 9-10mm per day. During soil moisture stress colonial bentgrass can reduce water loss from leaf tissue via modifications in plant morphology. Tiger, a colonial bentgrass, responds more favorably to irrigation than to any other cultural practice and will provide excellent turf surface when properly hydrated.
- **Thatch management:** Slender prolific stolons can produce medium to high levels of thatch generally under high nitrogen levels. Thatch is generally not a problem on overseeded turf where traffic pressure naturally thins growing turf.
- **Mowing height:** Tiger may be mowed at very low height for extended periods of time on overseeded greens, tees and fairways. Generally, mowing heights of ¼ - ½ are recognized in the industry. Small seed size (7,000,000 seeds per pound), ability to germinate in a dormant grass mat and maintaining relatively low mowing height during grow-in results in minimal disruption of play.
- **Weed control:** Phenoxy based lawn care products can be used to control broadleaf weeds with excellent results. In overseeding, numerous post-emergent, pre-emergent and growth regulator strategies to control winter annual grassy and broadleaf weeds have been recommended for greens, tees and fairways.
- **Diseases of colonial bentgrass:** Brown patch (*Rhizoctonia solani*) and Pythium spp. (*Pythium* spp.) are the most limiting on overseeded turfgrass. Tiger is very resistant to dollar spot incited by *Sclerotinia homoeocarpa*.

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 label directions.



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