

A Reference Tool For Editors & Writers

Lawn Institute Charts Important Grass Characteristics

*Which cool-season grass will do well in shade, tolerate wear
and have the lowest mowing frequency?*

*Is there a warm-season grass that has excellent drought resistance
and doesn't build up thatch?*

To easily answer these and many other related questions about turfgrasses, gardening and turf writers can now refer to the two enclosed charts that list the most common characteristics of the leading turfgrass species.

Compiled by the Lawn Institute from a wide variety of recent and standard research reports and textbooks, the enclosed chart of grasses is not copyrighted and can therefore be used by writers and editors, as they deem most appropriate for their purposes. The chart was originally published in "Turf News," the bi-monthly magazine of Turfgrass Producers International.

When using this information, it is important to understand that the "ratings" are based on the average of averages within a species and that a particular characteristic of one variety within a species may be higher or lower than the same characteristic for a variety of a different specie. This chart should only be used as a basic guideline and beginning point when selecting turfgrass for a specific purpose or site.

END

Media Contact

Douglas H. Fender
Executive Director and Secretary
International Turf Producers Foundation
Lawn Institute
Turf Resource Center
1855-A Hicks Road
Rolling Meadows, IL 60008

Phone: 847/705-9898
Toll Free: 800/405-8873
Fax: 847/705-8347
Email: dfender@TurfGrassSod.org
Websites: <http://www.LawnInstitute.com>
or www.TurfGrassSod.org

COOL-SEASON (C₃) TURFGRASSES

	Bentgrasses (<i>Agrostis</i>)		Bluegrasses (<i>Poa</i>)			Fescues (<i>Festuca</i>)			Ryegrasses (<i>Lolium</i>)	
	Colonial bentgrass <i>Agrostis tenuis</i>	Creeping bentgrass <i>Agrostis palustris</i> or <i>A. stolonifera</i>	Annual bluegrass <i>Poa annua</i>	Kentucky bluegrass <i>Poa pratensis</i>	Rough bluegrass <i>Poa trivialis</i>	Fescue (fine or red) <i>Festuca rubra</i> spp.	Fescue (fine or sheep) <i>Festuca ovina</i>	Fescue (tall) <i>Festuca arundinacea</i>	Annual ryegrass <i>Lolium multiflorum</i>	Perennial ryegrass <i>Lolium perenne</i>
COOL-SEASON (C₃) Turfgrasses										
Cultivated varieties (cultivars) as of 2001	<6	28	1	161	<6	10	25	169		198
Seeds / pound	5.5 to 9 million	7.5 million		1.3 to 1.8 million	2.5 million	409,000 to 430,000	530,000	230,000 to 250,000	200,000 to 300,000	200,000 to 300,000
Description										
Leaf texture	medium (1-3 mm)	medium (2-3 mm)	medium (2-3 mm)	medium (2-4 mm)	fine (1-4 mm)	fine (0.5-1.5 mm)	fine (0.5 to 1.5 mm)	coarse (5-10 mm)	coarse (3-7 mm)	medium (2-5 mm)
Growth habit	bunch	creeping stolons	bunch or stolons	strong rhizomes	stolons	creeping rhizomes	bunch	(some w/weak rhizomes)	bunch	bunch
Polystand compatibility	medium	medium	low	good	low	good	medium	medium	poor	medium
Environmental Adaptation										
Heat hardiness	medium	medium	low	medium	low	fair	poor	good	poor	fair
Cold hardiness	good	excellent	poor	good	good	medium	good	medium	poor	poor
Killing Temperature (F°)										
Drought resistance	fair	poor	poor	medium	poor	good	good	good	medium	fair
Shade adaptation	medium	good	poor	poor-medium	excellent	excellent	excellent	good	poor	medium
Salt tolerance	poor	poor-medium	poor	poor-medium	poor	medium	medium	medium		good
Wear tolerance	poor	poor	poor	medium	poor	medium	medium	good	poor	good
Recuperative potential	medium	good	poor	good	medium	medium	poor	poor	poor	poor
Submersion tolerance			fair	medium	good	fair				fair
Establishment										
Pounds of Seed/1,000 sq. ft.	0.75 to 2	0.75 to 2		2 to 3	1 to 2	4 to 6	3 to 4.5	6 to 10	7 to 10	4 to 7
Optimum Temperature for germination (F°)	59-86	59-86	68-89	59-86	59-86	59-77	59-77	68-86	68-86	68-86
Establishment method	seeded	seeded/vegetative	seeded	seeded/vegetative	seeded	seeded	seeded	seeded	seeded	seeded
Establishment rate	poor	poor	excellent	medium	medium	good	good	excellent	excellent	excellent
Days to germinate	7 to 14	7 to 14		8 to 21	10 to 21	10 to 21	10 to 21	10 to 14	7 to 14	5 to 12
Growth rate	fast	fast	fast	fast	fast	slow-medium	slow-medium	fast	fast	fast
Days to first mowing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14-21	n/a	n/a
Sod formation	medium	good	poor	excellent	poor	good	medium	poor	poor	poor
Cultural Requirements										
pH	5.5 to 6.7	5.5 to 6.5	5.5 to 6.5	6.0 to 7.0	6.0 to 7.0	5.5 to 6.5	5.0 to 6.0	4.7 to 8.5	6.0 to 7.0	6.0 to 7.0
Cultural (maintenance) intensity	medium	high	high	medium	medium	low	low	medium	medium	medium
Cutting height (inches)	0.4 to 0.8	0.3 to 0.7	0.2 to 1.0	0.5 to 3.0	0.5 to 1.0	1.0 to 2.5	2.0 to 2.5	1.7 to 3.0	1.5 to 2.5	0.5 to 1.5
Mowing frequency (days)	1 to 3	1 to 3	1 to 3	5 to 7	5 to 7	7	7	7 to 14	5 to 7	5 to 7
Nitrogen (lbs/1000/month)	0.5 to 1.0	0.5 to 1.4	0.5 to 1.0	0.4 to 1.0	0.5 to 1.0	0.2 to 0.5	0 to 0.5	0.3 to 0.75	0.4 to 1.0	0.4 to 1.0
Moisture / irrigation	medium	high	high	medium	high	low	low	medium	medium	medium
Evapotranspiration rate (ET) (mm d ⁻¹)		> 10	> 10	> 10	>10	7 - 8.5	7 - 8.5	> 10	> 10	8.5 - 10
Need for Dethatching	high	high	medium	medium	medium	medium	medium	low	low	low

WARM-SEASON (C₄) TURFGRASSES

WARM-SEASON (C₄) Turfgrasses	Bahiagrass <i>Paspalum notatum</i>	Bermudagrass <i>Cynodon dactylon</i>	Buffalograss <i>Buchloe dactyloides</i>	Centipedegrass <i>Eremochloa ophiuroides</i>	Seashore Paspalum <i>Paspalum vaginatum</i>	St. Augustinegrass <i>Stenotaphrum secundatum</i>	Zoysiagrass <i>Zoysia japonica</i> , (wide leaf) <i>Z. matrella</i> , (med leaf) <i>Z. tenuifolia</i> (fine leaf)
Cultivated varieties (cultivars) as of 2001		31	10	3	5	20	14
Seeds / pound	270,000	1.5 million	340,000	875,000	n/a	450,000	1 million
Description							
Leaf texture	very coarse (4-8 mm)	medium to fine (1.5 - 3 mm)	fine (1 - 3 mm)	coarse (3 - 5 mm)	medium	coarse (4 - 10 mm)	medium to fine (1 - 4 mm)
Growth habit	rhizomes & stolons	rhizomes & stolons	stolons	stolons	stolons, rhizomes	stolons	rhizomes & stolons
Polystand compatibility	medium	medium	poor	poor	poor	poor	poor
Environmental Adaptation							
Heat hardiness	excellent	excellent	excellent	excellent	excellent	excellent	excellent
Cold hardiness	poor	poor	fair to medium	poor	poor	poor	medium to very poor
Killing Temperature (F°)	23	19		11	19	23	6
Drought resistance	excellent	excellent	excellent	poor	excellent	fair	good
Shade adaptation	good	poor	poor	fair to good	fair to good	excellent	fair to good
Salt tolerance	poor	good	fair	poor	excellent	excellent	good
Wear tolerance	good	good	medium	poor	good	medium	excellent
Recuperative potential	poor	excellent	good	poor	good	good	excellent
Submersion tolerance	medium	excellent	excellent	poor	good	excellent	excellent
Establishment							
Pounds of Seed/1,000 sq. ft.	4 to 8	2 to 3	0.5 to 1	0.5 to 1	n/a	0.5 to 1	2 to 4
Optimum Temperature for germination (F°)	86-95	68-95	68-95	80-95	n/a	n/a	68-95
Establishment method	seeded/vegetative	seeded / vegetative	seeded / vegetative	seeded / vegetative	vegetative	vegetative	seeded/vegetative
Establishment rate	intermed to poor	excellent	medium	poor	poor	good	poor
Days to germinate	21-35	14-21	14-21	35-40	n/a	n/a	21-28
Growth rate	slow	good-fast	good-fast	slow-poor	slow-good	medium fast	slow to fast
Days to first mowing	21-30	14-21	30-45	45-60+	60-90	n/a	45-60+
Sod formation	good	excellent	good	good	good	excellent	excellent
Cultural Requirements							
pH	4.5 to 8.0	5.5 to 7.5	6.0 to 7.5	4.5 to 5.5	5.5 to 7.5	5.0 to 8.0	5.0 to 7.0
Cultural (maintenance) intensity	very low	high	low	low	medium	medium	medium
Cutting height (inches)	1.5 to 2.5	0.125 to 3.0	0.5 to 3.0	1.0 to 2.0	0.1 to 2.0	0.75 to 4.0	0.2 to 2.5
Mowing frequency (days)	7 to 28	1 to 5	3 to 14	10 to 14	1 to 7	7 to 14	1 to 14
Nitrogen (lbs/1000/month)	0.1 to 0.4	0.8 to 1.3	0.1 to 0.4	0.1 to 0.3	0.3 to 1.0	0.5 to 1.0	0.2 to 1.0
Moisture / irrigation	low	low	low	medium	high	high	low
Evapotranspiration rate (ET) (mm d ⁻¹)	2.5 - 8.5	6 - 7	< 6	6 - 7	2.5 - 8.5	7 - 8.5	6 - 7
Need For Dethatching	very low	high	low	medium	medium	high	high