GUIDELINES OVERVIEW

CHAPTER 1 •

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Successful turf establishment and performance begins with selection of appropriate species and varieties. These guidelines provide information to select species and varieties adapted to the many uses, growing conditions, management and expectations of turfgrass in the northeast US.

• How To Use The Guidelines •

Before You Plant:

High quality turfgrass requiring fewer inputs begins with selecting species and varieties that are best adapted to site conditions, as well as functional and visual performance requirements.

Don't forget long-term implications of your choices. Make sure the selection process includes realistic consideration of the management program to be followed after establishment.

Select grasses that are best adapted to the most límítíng factors for good growth, such as shade or traffic.



These guidelines focus on the most common turfgrass species used in the northeastern United States, including Kentucky bluegrass (*Poa pratensis*), perennial ryegrass (*Lolium perenne*), creeping bentgrass (*Agrostis stolonifera*), tall fescue (*Festuca arundinacea*), and the fine-leaf fescues: creeping red fescue (*Festuca rubra* var. *rubra*), chewings fescue (*Festuca rubra* ssp. *commutata*), hard fescue (*Festuca trachiphylla*), and sheep fescue (*Festuca ovina*). See <u>Table 1</u> for an overview of key characteristics of these species. Refer to sections on <u>LAWN</u> <u>TURF, SPORTS TURF</u> and <u>GOLF TURF</u> to narrow down the options. Find information on species and varieties in <u>Chapter 3</u> and details on seed label terminology in <u>Chapter 4</u>. For less commonly used species, see <u>Chapter 5</u> on "Other Grasses".

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TABLE 1: (GENERAL CHARACT	ERISTICS OF COMM (VARIETIES MAY)	ON COOL-SEASO DIFFER)	N TURFGRASS SPECIES	5
	Kentucky Bluegrass	Perennial Ryegrass	Tall Fescue	Fine Fescue	Creeping Bentgrass
Spreading Ability	Good	Poor	Poor	Poor	Good
Recover from Damage	Good	Poor to fair	Poor to fair	Poor to fair	Very good
Growth Habit	Strong rhizomes	Bunch type	Bunch Type	Mostly bunch type, some with weak rhizomes	Strong stolons
Blade Width (texture)	Medium to fine	Medium	Wide to medium	Very fine	Fine
Establishment from Seed	Slow (~ 30-90 days)	Fast (~ 14 -21 days)	Fast to medium (~ 21-30 days)	Medium (~ 21-50 days)	Medium (~ 21-50 days)
Shade Tolerance (minimum 4 hours direct sun)	Poor	Poor	Fair	Very good	Fair
Heat Tolerance	Fair	Poor to fair	Good	Fair	Fair to good
Drought Tolerance (resistance to summer dormancy)	Poor	Poor	Very good	Good	Poor
Wear Tolerance (traffic)	Good	Good	Good	Poor	Poor
Salt Tolerance	Poor	Fair	Fair	Fair	Good
Submersion Tolerance	Fair	Fair	Good	Poor	Excellent
Maintenance Level	Medium to high	Medium to high	Low to medium	Low to medium	Highest
Thatching Tendency	Medium	Low	Low	Medium	High
Annual Nitrogen Requirement	3-4 lb/1000ft2	2-6 lb/1000ft2	2-4 lb/1000ft2	1-2 lb/1000ft2	4-6 lb/1000ft2
Common Uses	Tees, fairways, roughs, sports, lawns	Tees, fairways, roughs, sports, lawns	Roughs, sports, lawns	Roughs, lawns	Greens, tees, fairways

Of note...

Most turf seed is sold as mixtures and blends. Mixes contain two or more species, and may also have more than one variety of a species. Blends contain two or more varieties of a single species.

Do not lessen the quality of the combination by choosing a weak performer. Studies show one poor variety in a mixture or blend of good ones can reduce overall quality.

For sunny areas that receive a lot of wear and tear, a mix of Kentucky bluegrass and perennial ryegrass is welladapted if maintenance level is expected to be high.

For unirrigated lawns with well-drained soil, tall fescue provides the best drought tolerance.

For mostly shady low-traffic locations, consider the fineleaf fescues.

• LAWN TURF •



With the exception of forests, lawns comprise the single greatest land use in New York State. Over 80% of the more than three million acres of turfgrass is growing in home lawns. Lawns are valued for their visual appeal as well as their function in urban areas. Expectations range from the perfectly manicured, weed-free estate lawn to low maintenance landscape areas in

industrial parks. Be sure to take into account long-term management of the site. For example, a Kentucky bluegrass lawn may look great at first, but if regular mowing and fertilization are not part of the routine maintenance program, quality will quickly deteriorate and require renovation. The gallery on page 7 includes some of the considerations for selecting lawn turf.



LAWN TURF

	TUR				
Conditions	Kentucky Bluegrass	Perennial Ryegrass	Tall Fescue	Fine Fescue	Seed Rate (lbs/1000ft2)
Sunny, medium to high	100				1-3
maintenance, higher	80-90	10-20			3-4
expectation of quality	70-80	0-15		15-20	4-6
		100	100		4-6
Sunny, low maintenance,			100		6-8
lower expectation of	20	15		65	3-4
quality				100	4-6
Shady, low maintenance,	න්තය, බංජා ප්රයාභ වෙනසු කියාන සංකෝ මස්පති වේ.			100	4-5
lower expectation of quality					

Table 2: Blends contain two or more varieties of the same species. Mixtures contain two or more species and one or more varieties of each species. Use of multiple varieties increases genetic diversity and can improve adaptability.



Of note...

Overseeding is the periodic application of seed to an existing turfgrass stand to increase plant density and uniformity.

High traffic areas of athletic fields require regular overseeding to maintain performance and safety standards.

Repetitive overseeding with perennial ryegrass or tall fescue will help maintain a dense, uniform surface.

Due to its slow germination rate, Kentucky bluegrass is not a good choice during the season. However, it can be used in the off season to reestablish damaged fields.

• SPORTS TURF •



Sports turf requires excellent traffic tolerance and recovery. Kentucky bluegrass, perennial ryegrass and tall fescue are options depending on use and management program. Since tall fescue has lower irrigation and fertility requirements than Kentucky bluegrass and perennial ryegrass, it is possible to maintain safe, good quality fields with fewer inputs. The gallery on <u>page 9</u> includes some of the considerations for selecting sports turf. More information about species characteristics and selection of varieties is included in <u>Chapter 3</u>.



	TURFGRAS	Cood Data		
	Kentucky Bluegrass	Perennial Ryegrass	Tall Fescue	(lbs/1000ft2)
New Fields	100			1-3
	80-90	10-20		3-4
	50	50		3-5
		100		4-6
			100	6-8
	10		90	6-8
Overseeding		100		6-8
(IN SEASON)			100	6-8

Of note:

According to the 2003 New York State Turfgrass Survey, an average of 118 turf acres are maintained on each of New York's 860 golf courses.

There were about 20 million rounds played, an average of about 24,000 rounds per course.

Selection of appropriate species and varieties is critical in order to maintain high visual and performance standards demanded by many golf courses.

Proper selection can also result in reduction of inputs required to maintain such standards.

• GOLF TURF •



Golf turf includes tees, fairways, roughs and putting greens. Kentucky bluegrass and perennial ryegrass are commonly used for tees, fairways and roughs. Fescues may also be used in rough areas. Creeping bentgrass is the species of choice for greens, but it may also be used for tees and fairways on intensively managed courses. Golf turf is often grown under high stress conditions from traffic, weather and management practices. Use of resistant varieties can reduce incidence of diseases which can be particularly devastating on the golf course.

	Creeping Bentgrass	Kentucky Bluegrass	Perennial Ryegrass	Tall Fescue	Fine Fescue	Seed Rate (lbs/1000ft2)
Putting Greens	100					<u>¹⁄</u> ₂ - 1
Tees & Fairways	100	100 80-90	10-20 100			¹ / ₂ -1 1-3 3-4 4-6
Roughs		100 80-90	10-20 100	100	100	1-3 3-4 4-6 6-8 4-5