



EMPIRE
KENTUCKY BLUEGRASS

- + *Classified as an “America type” with improved color*
- + *Top performer in heat, leaf spot and dollar spot tolerance*
- + *High scores against dollar spot, leaf spot and summer patch*
- + *Top third NTEP in turf quality in all regions*
- + *Top twenty NTEP in shade and drought tolerance*
- + *Persists well in low and higher maintenance regimes*

Kentucky Bluegrass Types and General Characteristics

Aggressive types - High shoot density

America types - compact growth with finer leaves, good resistance to dollar spot, leaf spot, susceptible to billbugs

Bellevue types - early spring greenup and medium to low growth

BVMG types - good seedling vigor, moderate winter color, susceptible to strip smut

CELA types - early spring greenup Less seed heads when mowed versus Bellevue types

Cheri types - Medium to wide leaf blades

Common types - early spring greenup, narrow leaves, susceptible to leaf spot

Compact types - Low compact growth, good leaf spot resistance, but poor spring greenup

Julia types - early spring greenup, good leaf spot resistance, strong wear tolerance

Mid Atlantic types - improved heat tolerance, vigorous root systems

Shamrock types - like BVMG types, good tolerance to stripe smut

Wabash types - medium dark green, good heat tolerance and recovery from disease

Other types - not defined by the previous classifications



Picture taken at Rutgers University August 2008

Seed Specification:

New Lawns:

**2 to 3 pounds per 1000 square feet
or 90 to 135 # per Acre**

Overseed:

**1 to 2 pounds per 1000 square feet
or 45 to 90# per Acre**

Dormant Winter Seeding:

same as above



**Burlingham
Seeds**



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Quality Seed Since 1911



2008 Data Progress Report NTEP No. 09-1 Rankings by State

Variety	IA1 Ames	IL1 Urbana	IN1 W Lafayette	KY1 Lexington	MA1 Amherst	M11 East Lansing	MD1 College Park	MN1 St. Paul	NC1 Raleigh	ND Fargo	NE1 Mead
Empire	7.1	5.4	6.8	6.5	5.8	5.8	5.0	4.7	6.9	4.8	7.3
	15	64	30	46	10	64	90	83	19	31	41
TQ High	7.4	6.7	7.5	8.0	6.1	6.8	7.0	6.7	7.6	5.8	8.1
TQ Low	5.9	4.2	4.0	4.0	3.6	4.0	3.7	2.6	4.3	4.2	6.1
LSD	0.9	0.9	0.8	0.8	0.5	1.2	1.1	1.1	1.7	1.4	3.6

Out of 110 varieties in the new NTEP trial on Bluegrass
 Variety Ranked #1
 Turf Quality Within LSD
 Highlights = Top 50

Variety	NJ2 Adelphia	NM1 Las Cruces	OK1 Stillwater	PA1 Univ. Park	TN1 Knoxville	UT1 Logan	VA1 Blacksburg	WA1 Pullman	WI1 Madison	WY1 Sheridan
Empire	5.0	6.4	4.7	7.1	7.8	2.7	4.5	7.1	6.0	7.2
	82	11	40	39	13	110	82	22	33	22
TQ High	7.0	7.3	5.8	7.9	8.0	5.5	5.4	7.7	7.8	7.6
TQ Low	2.7	3.8	3.3	4.1	6.6	2.7	3.8	4.2	1.8	5.2
LSD	0.8	2.0	0.8	0.8	0.3	2.6	1.0	0.7	1.1	0.5

2005 National Kentucky Bluegrass Test 2006-10 Data Final Report NTEP No. 11-10

Variety	Empire	High	Low	LSD
Turf Quality Summary				
Turf Quality Schedule A	6.2	6.9	3.5	0.8
1 INCH OR LESS MOWING HEIGHT 3 - 4 lbs. N/1000 FT2/YEAR IRRIGATION				
Turf Quality Schedule B	5.7	6.4	4.4	0.3
1 - 2 INCH MOWING HEIGHT 3 - 4 lbs. N/1000 FT2/YEAR IRRIGATION				
Turf Quality Schedule C	5.8	6.3	4.4	0.5
2.5 - 3.5 INCH MOWING HEIGHT 0 - 2 lbs. N/1000 FT2/YEAR NO IRRIGATION				
Genetic Color	6.9	7.8	5.1	0.3
Winter Color	6.3	7.0	4.0	1.0
Leaf Texture 1=coarse	6.0	7.6	5.5	0.5
Summer Density	7.3	7.9	6.3	0.8
Fall Density	7.9	8.1	6.7	1.1
Spring Greenup	5.3	6.4	4.1	0.4
% Living Ground Cover Spring	75.8	87.1	63.2	9.6
% Living Ground Cover Summer	79.6	86.2	60.1	12.5
% Living Ground Cover Fall	86.3	91.4	74.3	6.8
Dollar Spot	8.1	8.2	5.4	0.9
Leaf Spot	7.8	8.3	3.9	0.8
% Seed Head	8.1	8.8	4.2	1.2
Quality Rating Northeast Region	5.3	6.1	3.7	0.5
Quality Rating Transition Region	6.0	6.6	4.8	0.4
Quality Rating No. Central Region	6.0	6.6	4.2	0.4
Quality Rating Upper West/Mtn Region	5.6	6.5	4.7	0.6
Quality Rating Southwest Region				
Quality Under Drought Stress (ND)	5.0	5.8	4.4	0.6
Quality Under Traffic Stress (NJ)	3.4	7.3	2.0	2.7
Quality Under Traffic Stress (WI)	6.3	7.0	2.5	0.8
Quality Under Traffic Stress (MI)	4.5	5.6	2.5	1.1

Top Rated
 Turf Quality Within LSD

Turf Features

- Germination Time** - Slow
21 to 28 days is normal in spring and fall with irrigation
- Growth habit** - rhizomes help recovery and sod knitting
- Drought Tolerance** - Good
- Mowing Height** - from 1/2 inch fairway cut to 3 inches
- Disease Resistance**
Very good resistance to dollar spot, leaf spot and summer patch
- Traffic tolerance** - Very Good
- pH Tolerance**
Ranges from 6.0 to 8.0, Ideally at 6.5
- Texture**
Medium leaf texture and dwarf vertical growth habit
- Compatibility** - with Kentucky bluegrass, fine fescue or perennial ryegrass, or 5% in tall fescue mixes
- Color** - Medium dark
- Shade tolerance** - Fair to Good
- Salt tolerance** - Good
- Endophyte enhanced** - No
- Preferred use** - Home and commercial lawns, sports fields, golf fairways, tees and roughs, sod production