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Performance of Kentucky Bluegrass Cultivars in Michigan, 2001-05

Michigan State University

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**K**entucky bluegrass is the most widely used turfgrass in Michigan. It is used in home lawns, institutional grounds, parks and athletic fields. The species is persistent and attractive and has a medium to fine leaf texture and medium to dark green color when properly fertilized. Plants produce extensive underground stems, called rhizomes, which provide good sod-forming characteristics and recuperative potential superior to that of most other turfgrasses. It is cold- and wear-tolerant but has only moderate heat and drought tolerance. Optimum growth occurs during the spring and fall, but without irrigation it will likely turn dormant during hot, dry periods in the summer. Kentucky bluegrass will recover quickly with the advent of cooler temperatures and adequate soil moisture.

Plants perform best when grown on well-drained soils in open, sunny areas. This grass species does not tolerate poorly drained soils or extensive shade. Kentucky bluegrass generally requires more nitrogen (N) fertilizer than other cool-season grasses and tends to produce a significant amount of thatch. Mowing height should be maintained at 2.5 to 4 inches except during hot, humid conditions, when the mowing height should be raised to 3 to 5 inches. It is difficult to maintain at 2 to 3 inches without irrigation. When planted from seed, Kentucky bluegrass requires up to two weeks for seed emergence.

The National Turfgrass Evaluation Program (NTEP) Kentucky bluegrass test was established in September 2000 at the Hancock Turfgrass Research Center at Michigan State University. The test comprised 172 commercial cultivars (see table). The trial was mowed three times per week at a height of 2.5 inches. Three to 4 pounds of N per 1,000 square feet were applied each growing season. Plants were irrigated whenever necessary to prevent wilting.

The plots were visually evaluated once per month during the growing season for turfgrass quality and other parameters. “Quality” means the overall appearance of the turf plots. Components include density, texture, uniformity, color, and freedom from disease and insect damage. Quality was rated using a scale of 1 to 9, where 9 equals the highest quality. Entries are listed in order of highest seasonal average quality for 2001, 2002, 2003, 2004 and 2005 to lowest seasonal average quality for the five years combined.

Percent living ground cover in the summer was rated on the basis of surface area covered by the originally planted species. It is used to express damage caused by disease, insects, weed encroachment or environmental stress. Percent living ground cover is often measured in the spring, summer and fall and rated as a percentage. The summer allows us to track the turfgrass response to various stresses during the growing season. For comparison, average turfgrass quality and percent living ground cover of Kentucky bluegrass grown at 11 U.S. locations — Illinois, Indiana, Kentucky, Massachusetts, Missouri, Ohio, Oklahoma, Rhode Island, Utah, Washington and Wyoming — are included in the table. Turfgrass quality of Kentucky bluegrass grown under artificial shade at Bowling Green, Ky., was included also (see the table).

Differences between two entries are statistically significant only if the numerical difference between two entries exceeds the LSD value listed in the table. For example, if cultivar ‘Award’ is 0.5 units higher in quality than cultivar ‘Allure’, this difference is significant because the LSD

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value is smaller (0.4). If the LSD value is greater than the numerical difference between the two cultivars then the difference is not significant. Coefficient of variation indicates the percent variation of the mean. Smaller variation indicates good data validation.

Few differences in turfgrass quality were found among the Kentucky bluegrass entries in this test during 2001-

05. In spite of differences in growing conditions in 2001, 2002, 2003, 2004 and 2005, the average turfgrass quality of some improved cultivars varied little among seasons. The entries showing the best seasonal average quality over the five-year test period are listed in the table.

For more information, visit: [www.ntep.org](http://www.ntep.org) under Michigan State University data.

Mean turfgrass quality and percent living ground cover of Kentucky bluegrass cultivars and selected lines grown at Michigan State University (Hancock Turfgrass Research Center) and 11 other locations in the United States for the years 2001-05. Mean turfgrass quality of Kentucky bluegrass grown under artificial shade at Bowling Green, Ky., was included.

Entry	Quality 2001-05		Percent living ground cover 2001-05		Quality under artificial shade 2001-05
	MI	At 11 U.S. locations	MI	At 11 U.S. locations	in Kentucky
AWARD	6.8	6.2	73	85	5.3
BEDAZZLED	6.8	6.3	77	86	5.5
BOUTIQUE	6.8	5.4	83	82	5.4
LANGARA	6.8	5.9	75	87	5.3
NORTH STAR	6.8	5.9	67	87	5.1
ALPINE	6.7	5.6	77	82	4.8
BARRISTER (J-1655)	6.7	6.0	77	84	4.3
BLUE KNIGHT	6.7	5.4	77	69	4.7
COURTYARD (J-1838)	6.7	6.1	70	86	5.5
GLENMONT (H94-293)	6.7	5.6	78	79	5.2
IMPACT	6.7	6.2	73	82	5.3
KINGFISHER (SRX 2394)	6.7	5.8	73	74	5.2
MOONLIGHT	6.7	5.6	77	83	5.3
NU DESTINY (J-2695)	6.7	6.1	77	85	5.6
NUGLADE	6.7	6.0	75	85	5.3
*SORBONNE DLE76 9037	6.7	5.6	73	91	5.3
TOTAL ECLIPSE	6.7	6.0	75	90	5.5
TSUNAMI (J-2487)	6.7	6.0	65	81	5.4
UNIQUE	6.7	5.8	77	87	5.2
ARCADIA	6.6	6.1	82	87	5.5
ARROW (A97-1567)	6.6	5.5	77	88	5.1
BLACKSTONE	6.6	5.8	75	84	5.3
BLUE VELVET (J-1513)	6.6	6.1	73	86	5.7
DIVA (PRO SEEDS-453)	6.6	6.1	73	85	5.3
EAGLETON	6.6	5.5	77	87	4.7
EXCURSION (J-1648)	6.6	6.0	72	85	5.6
FREEDOM II	6.6	5.6	68	84	5.3
GINNEY (J-1368)	6.6	6.0	70	85	5.5
HALLMARK	6.6	5.5	77	86	5.0
*J-2885	6.6	5.8	73	89	5.2

*Continued*

## Performance of Kentucky Bluegrass Cultivars in Michigan, 2001-2005

Entry	Quality 2001-05		Percent living ground cover 2001-05		Quality under artificial shade 2001-05
	MI	At 11 U.S. locations	MI	At 11 U.S. locations	in Kentucky
KATIE (A96-451)	6.6	5.3	75	78	5.4
MOONSHADOW PICK 113	6.6	5.6	67	88	5.3
ODYSSEY	6.6	6.0	68	88	5.5
PERFECTION (J-1515)	6.6	5.9	67	88	5.6
*PP H 6366	6.6	5.9	75	79	4.8
PRINCETON 105	6.6	5.9	72	81	4.9
QUANTUM LEAP	6.6	5.9	75	85	5.7
ROYCE (A98-304)	6.6	5.8	73	89	5.0
RUGBY II	6.6	6.0	73	88	5.2
SERENE	6.6	5.9	77	86	5.0
SR 2284 (SRX 2284)	6.6	5.5	80	81	4.6
VALOR (A97-1330)	6.6	5.8	80	88	5.2
WILDWOOD	6.6	5.5	78	84	4.8
*A98-1028	6.5	5.3	78	79	5.5
A98-183	6.5	4.9	72	83	5.0
A98-365	6.5	5.2	75	88	5.1
APOLLO	6.5	5.7	77	88	5.4
AVALANC	6.5	5.9	77	91	5.1
*B4-128A	6.5	5.8	75	85	4.9
*BA 82-288	6.5	5.1	75	82	4.9
*BA 83-113	6.5	5.1	73	85	6.3
BARIRIS	6.5	5.6	72	88	4.6
BARONETTE 9 BA 81-058	6.5	5.2	75	80	4.7
BARONESS (BAR PP 0648)	6.5	5.8	72	86	5.2
BEYOND (J-1880)	6.5	6.0	73	85	5.6
BLUEMAX (PST-B5-89)	6.5	5.4	78	83	5.6
BLUESTONE (PST-731)	6.5	5.9	87	84	5.4
BORDEA	6.5	5.5	80	79	5.4
CABERNET	6.5	5.3	73	86	5.3
CASABLANCA (B3-171)	6.5	5.7	78	87	5.0
CHAMPLAIN (A98-1275)	6.5	5.6	72	86	4.8
DELIGHT (A97-1432)	6.5	5.7	73	84	5.6
EVEREST	6.5	5.7	72	84	5.6
EVERGLADE	6.5	5.8	75	83	5.3
FREEDOM III (J-2890)	6.5	5.8	75	87	5.4
*HV 238	6.5	5.5	80	88	5.1
JEFFERSON	6.5	5.6	77	84	5.0
JULIA	6.5	5.3	83	89	4.9
LIMOUSINE	6.5	5.8	83	85	4.8
MALLARD (A97-1439)	6.5	5.4	82	90	5.2
MOONSHINE (PST-1804)	6.5	5.6	80	81	5.4
*PST-161	6.5	5.2	82	88	5.1
*PST-B5-125	6.5	5.5	70	82	4.9

Continued

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Entry	Quality 2001-05		Percent living ground cover 2001-05		Quality under artificial shade 2001-05
	MI	At 11 U.S. locations	MI	At 11 U.S. locations	in Kentucky
*PST-H6-150	6.5	5.6	75	89	4.8
RAMBO	6.5	5.6	73	87	5.1
RAMPART (PICK 417)	6.5	5.3	75	80	4.8
SHOWCASE	6.5	5.6	77	86	5.3
*SI A96-386	6.5	5.3	80	85	4.9
SKYE (A97-1715)	6.5	5.6	80	85	5.1
SONOMA	6.5	5.6	75	78	5.2
VOYAGER II (PST-1QG27)	6.5	5.8	74	87	5.2
A96-742	6.4	4.8	78	88	4.9
A97-857	6.4	5.0	67	83	4.9
ALEXA (J-2561)	6.4	6.0	70	89	5.5
ASCOT	6.4	5.5	72	81	4.9
*BA 84-140	6.4	5.5	80	70	5.0
*BAR PP 0566	6.4	5.2	73	86	5.2
BAR PP 0573	6.4	5.3	70	86	5.0
BARNIQUE (BAR PP 0671)	6.4	5.8	65	83	5.0
BLACKSBURG II	6.4	5.1	78	83	4.9
BLUE RIDGE (A97-1449)	6.4	5.1	77	77	5.1
BLUE SAPPHIRE (NAK99)	6.4	4.9	77	80	4.6
BOOMERANG	6.4	4.8	73	79	4.7
CHATEAU	6.4	5.7	75	81	5.1
CHEETAH (PP H 6370)	6.4	5.6	78	87	5.4
CHELSEA	6.4	5.6	83	82	5.0
COVENTRY	6.4	5.6	78	82	4.8
CVB-20631	6.4	5.0	73	77	4.4
*DLF 76-9032	6.4	5.5	77	87	5.0
DURHAM (A96-427)	6.4	5.3	75	83	5.3
DYNAMO (B3-185)	6.4	5.7	75	87	5.1
GOLDRUSH	6.4	5.1	77	84	4.8
GOLDSTAR (A98-296)	6.4	5.3	73	83	4.8
*H92-203	6.4	5.6	78	88	4.7
*H92-558	6.4	5.4	78	79	4.7
*HV 140	6.4	5.3	78	85	4.3
LAKESHORE (A93-200)	6.4	5.4	77	79	5.3
LIBERATOR	6.4	5.7	75	85	5.1
*LIMERICK	6.4	5.2	78	85	4.4
MERCURY (PICK-232)	6.4	5.2	82	86	5.4
MIDNIGHT II (A98-739)	6.4	6.0	77	86	5.6
MIDNIGHT	6.4	6.2	78	87	5.6
*NA-K992	6.4	4.3	80	80	4.4
*PICK 453	6.4	5.4	80	83	4.5
PP H 7907	6.4	4.9	73	72	4.2
PP H 7929	6.4	4.8	72	77	4.5

Continued

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Entry	Quality 2001-05		Percent living ground cover 2001-05		Quality under artificial shade 2001-05
	MI	At 11 U.S. locations	MI	At 11 U.S. locations	in Kentucky
*PST-108-79	6.4	5.5	70	84	4.9
*PST-B3-170	6.4	5.6	73	84	5.1
*PST-B4-246	6.4	5.5	73	81	4.7
PST-YORK HARBOR 4	6.4	5.0	75	81	4.6
RITA	6.4	5.3	70	81	4.9
ROYALE (A97-1336)	6.4	5.5	77	79	5.3
SHAMROCK	6.4	5.4	70	78	5.0
*SRX 2114	6.4	5.5	77	80	5.4
ULYSSES (PP H 7832)	6.4	5.4	78	78	4.9
A96-739	6.3	5.2	70	85	5.1
A97-1409	6.3	4.9	73	78	5.2
ALLURE	6.3	5.6	75	77	5.0
AWESOME (J-1420)	6.3	5.9	78	86	5.3
*B5-43	6.3	5.6	75	77	4.9
*B5-45	6.3	5.5	77	81	5.0
*BA 00-6001	6.3	5.5	73	83	5.4
BARITONE	6.3	5.4	73	85	4.8
BARON	6.3	5.2	75	81	4.9
BARONIE	6.3	5.1	75	79	4.9
*BH 00-6002	6.3	5.1	82	82	5.1
*BH 6003	6.3	4.3	77	80	4.6
BLUE-TASTIC (187-308)	6.3	5.5	77	83	5.4
BRILLIANT	6.3	5.9	75	86	5.3
BROOKLAWN	6.3	5.5	73	81	5.6
CHAMPAGNE	6.3	5.5	77	82	5.3
CHICAGO II	6.3	5.7	73	81	5.6
ENVICTA	6.3	5.1	73	81	4.8
FAIRFAX	6.3	5.6	77	81	5.0
*GO-9LM9	6.3	4.2	78	71	4.3
JEWEL	6.3	4.9	70	81	4.8
JULIUS	6.3	5.7	72	77	4.4
*LILY	6.3	5.5	80	79	4.6
MARQUIS	6.3	5.3	82	85	4.8
MONGOOSE (A98-881)	6.3	5.3	82	79	5.1
MONTE CARLO (A96-402)	6.3	5.2	73	78	5.4
*PST-222	6.3	5.1	78	73	5.4
*PST-H5-35	6.3	5.4	75	76	5.3
*SRX 26351	6.3	5.3	68	75	4.9
SRX 27921	6.3	5.0	72	70	5.2
SRX QG 245	6.3	4.9	75	77	4.1
WASHINGTON	6.3	5.2	75	88	4.5
99AN-53	6.2	4.7	73	74	4.9

*Continued*

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Entry	Quality 2001-05		Percent living ground cover 2001-05		Quality under artificial shade 2001-05
	MI	At 11 U.S. locations	MI	At 11 U.S. locations	in Kentucky
*A98-407	6.2	5.1	67	75	5.2
ABBEY	6.2	5.1	83	82	4.4
APPALACHIAN (A98-139)	6.2	4.6	72	83	5.1
BARTITAIA	6.2	5.4	73	78	5.5
BARZAN	6.2	4.9	75	83	4.5
*DLF 76-9036	6.2	5.1	82	83	4.6
KENBLUE	6.2	4.1	73	83	4.3
MISTY	6.2	5.2	73	82	5.6
*PST-604	6.2	5.1	75	79	5.2
WELLINGTON	6.2	4.3	73	76	4.1
*B5-144	6.1	5.6	73	80	5.0
BODACIOUS	6.1	4.8	83	77	4.6
RAVEN	6.1	5.2	78	84	4.8
DLF 76-9034	6.0	4.4	80	83	4.7
LSD value	0.4	0.3	13.2	12.2	0.7
C. V. (%)	4.3	9.7	10.3	15.2	15.8

\* Not commercially available yet.

### Sources of Seed

The following list of seed companies is included to help the reader who may not be able to find sources of some varieties of seed — it is not intended as a recommendation of these companies, or as an inclusive/exclusive listing.

CSI/GEOTURF INC. 1225 76th Street Byron Center, MI 49315 Phone: 888-208-5772	J. MOLLEMA & SONS 4660 E. Paris, S.E. Grand Rapids, MI 49512 Phone: 800-234-4769	MICHIGAN STATE SEED SOLUTIONS 717 N. Clinton Grand Ledge, MI 48837 Phone: 800-647-8873, 517-627-2164	RHINO SEED AND LANDSCAPE SUPPLY 850 Old US-23 Brighton, MI 48114 Phone: 810-632-5640
SOUTHERN MICHIGAN SEED 48580 County Road 352 Decatur, MI 49045 Phone: 269-423-7051	STANDISH MILLING COMPANY INC. 1331 West Cedar Street Standish, MI 48658 Phone: 989-846-6911	SWEENEY SEED COMPANY 110 South Washington Street Mount Pleasant, MI 48858 Phone: 800-344-2482	TRI TURF 3751 Blair Townhall Road Traverse City, MI 49684 Phone: 800-636-7039

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