

USDA First-Year Bentgrass Evaluation Program Results Now Available

By Monroe S. Miller

One of the most interesting facets of our job, in my opinion anyway, is choosing specific varieties of grass seed from the primary genus/species we culture on our Wisconsin golf courses.

The bluegrasses have been especially interesting for the past 25 or so years. Starting with Merion Kentucky Bluegrass and right up to the most recent 1991 release, grass varieties offer some unique management opportunities.

In the March/April 1990 issue of *The Grass Roots*, Pat Zurawski wrote an article entitled "Bentgrass Variety Trials." In that piece he described an experiment he did in our nursery with bentgrass varieties. The results were interesting to us, and I've made variety choices based on what we saw. That article, by the way, was reprinted in several other chapter newsletters.

With that background, you can well imagine how interested I was in the first year results of the U.S. Department of Agriculture's National Turfgrass Evaluation Program for bentgrasses.

The USDA has tested bluegrasses, fescues, ryegrasses and Bermuda grasses for years. They didn't include bentgrasses because so few improved varieties were available.

As you well know, that has all changed. We now have quite a number of bentgrasses to choose from, and because of those choices the USDA initiated bentgrass trials.

Plots were established in 1989 at sites of all climates. Essentially all of the bentgrass varieties available on the market were included. Some from foreign markets and some in development were included, too.

The bentgrass varieties were tested on three different root zones: 1) fairway/tee, 2) native soil-green and 3) modified soil-green.

The tables that follow are composites of more than a dozen ratings, including color, vigor, leaf texture, spring, summer and fall density, percent living ground cover in summer and fall, winter color and disease resistance.

Keep in mind when you study these results that they are first-year results. Varieties commonly move up and down in rankings with time.

If you'd like a copy of this USDA report, request one from:

Mr. Kevin Morris
Beltsville Agricultural Research Center-West
Building 001, Room 333
Beltsville, MD 20705

Locations submitting data for the field trials follow, with Code name, type of soil and pH:
AL1: Auburn University, Ala., sandy loam, 4.6-5.5; BC1: Agassiz, British Columbia, sandy clay loam, 5.6-6.0; FL1: West Palm Beach, Fla., sand, 6.6-7.0; GA1: Griffin, GA, sand, 5.6-6.0; IL1: Carbondale, Ill., silty clay and clay, 6.1-6.5; IN1: W. Lafayette, Ind., silt loam and silt, 7.1-7.5; KS2: Wichita, Kan., sandy loam, 6.6-7.0; KY1: (for modified green): Lexington, Ky., sand, 7.1-7.5; KY1: (for fairway/tee): Lexington, Ky., silt loam and silt, 6.1-6.5; LA1: Baton Rouge, La., loamy sand, 4.6-5.5; LA2: Calhoun, La., sandy loam, 6.1-6.5; MA1: Deerfield, Mass., sand, 6.1-6.5; MI1: East Lansing, Mich., N/A, 7.1-7.5; MS1: Mississippi State, sand, 6.1-6.5; NJ1: North Brunswick, N.J., loam, 6.1-6.5; NJ3: Martinsville, N.J., N/A; NY1: Ithaca, N.Y., sandy loam, 5.6-6.0; OH2: Marysville, Ohio, silty clay loam, N/A; OR3: (for native green): Halsey, Ore., silt loam and silt, 4.6-5.5; OR3: (for fairway/tee): Halsey, Ore., sandy loam, 4.6-5.5; OR4: Corallis, Ore., silty clay and clay, 5.6-6.0; OR5: Tangent, Ore., silt loam and silt, 6.1-6.5; RI1: (for native green): Kingston, R.I., silt loam and silt, 6.1-6.5; RI1: (for fairway/tee): Kingston, R.I., silt loam and silt, 6.1-6.5; TX1: (for modified green): Dallas, Texas, sand, 7.6-8.5; TX1: (for fairway/tee): Dallas, Texas, silty clay and clay, 7.6-8.5; UB1: Beltsville, Md., loam, 4.6-5.5; VA5: Riverbend CC, Fairfax, Va., silty clay loam, 6.1-6.5; WA1: Pullman, Wash., silt loam and silt, 6.1-6.5; WA3: (for modified green): Puyallup, Wash., sand, 5.6-6.6; WA3: (for fairway/tee): Puyallup, Wash., sandy loam, 5.6-6.0;

** Turfgrass quality ratings on 1-9 basis with 9 being ideal turf.

*** To determine statistical differences among entries, subtract one entry's mean from another entry's mean. Statistical differences occur when this value is larger than the corresponding LSD value (LSD 0.05)

Fairway/Tee National Bentgrass Test

Name	IN1	KS2	KY1	NJ1	NJ3	OH1	OR4	OR5	RI1	TX1	UB1	VA5	WA3	Mean
*Providence	7.1	8.4	7.8	7.3	6.5	5.9	7.5	5.3	6.0	2.8	7.3	5.4	6.0	6.4
*Forbes 89-12	7.0	8.3	7.5	6.2	5.9	6.3	6.9	6.0	5.7	3.5	6.9	5.2	5.7	6.2
*Penncross	7.1	8.3	7.0	5.5	5.2	6.7	5.9	7.0	5.5	3.0	5.8	6.1	5.7	6.0
WVFB 89-D-15	6.6	8.0	7.3	6.7	6.2	5.9	6.3	6.3	5.7	2.7	6.6	4.4	5.3	6.0
*Penneagle	7.2	7.9	7.1	6.3	5.4	6.7	5.6	6.3	5.7	2.8	6.4	5.3	5.1	6.0
*Putter	7.0	8.1	6.8	5.8	5.9	6.3	6.9	4.7	5.6	2.3	6.4	5.6	6.3	6.0
*Normarc 101	6.9	7.9	7.0	6.4	5.4	6.2	6.1	5.0	5.4	3.5	6.3	5.1	5.0	5.9
*Cobra	6.8	7.8	7.0	6.2	5.7	6.1	5.4	6.0	5.6	2.0	6.0	5.5	5.3	5.8
*SR 1020	7.0	8.1	6.8	6.0	5.5	6.0	7.0	3.3	5.4	2.3	6.3	4.7	5.6	5.7
88.CBL	-	8.0	7.2	6.3	-	-	-	-	5.6	2.2	6.4	4.9	5.0	5.7
TAMU 88-1	6.6	7.9	6.7	4.9	-	6.1	5.3	6.0	4.9	2.5	5.1	5.0	5.4	5.5
*National	6.8	7.9	6.4	4.4	5.4	5.7	5.4	5.7	4.8	2.8	6.2	4.3	4.5	5.4
*Emerald	6.5	7.6	6.5	4.2	4.4	5.4	5.6	6.3	5.2	2.7	5.1	5.7	5.1	5.4
*Carmen	6.7	7.0	6.8	4.8	5.6	5.4	5.4	5.0	5.1	2.0	5.9	4.9	5.4	5.4
88.CBE	-	-	7.2	6.5	-	-	-	-	5.5	2.2	6.4	5.0	4.9	5.4
*Bardot	5.6	5.9	6.9	5.0	4.2	5.0	5.5	6.7	5.7	2.3	5.2	5.3	6.3	5.3
*Egmont	5.2	6.3	6.5	4.6	3.9	4.3	5.5	7.0	5.7	1.8	5.4	5.0	6.0	5.2
*Tracenta	5.6	5.6	7.2	4.8	4.1	4.2	5.1	5.0	5.4	1.3	5.4	5.3	6.2	5.0
Allure	4.8	5.1	5.9	3.7	3.6	4.1	4.7	6.3	5.3	1.3	3.7	3.9	5.9	4.5
BR 1518	4.9	5.0	5.9	3.5	2.5	4.2	2.9	6.0	4.9	1.8	3.5	2.8	4.4	4.0
LSD VALUE	0.6	0.8	0.5	0.8	0.5	1.2	0.8	2.0	0.7	1.4	0.6	1.0	0.6	0.3

Modified Soil - Green National Bentgrass Test

Name	FL1	GA1	KY1	LA1	MA1	MI1	MS1	TX1	WA3	Mean
*Normarc 101	-	6.3	6.6	6.8	7.6	7.5	5.9	4.2	4.0	6.1
*SR 1020	4.9	6.0	6.2	6.2	8.1	7.2	5.7	3.9	4.7	5.9
*Putter	4.8	5.3	6.3	5.7	7.8	6.7	5.1	4.5	5.8	5.8
88.CBE	5.6	5.8	6.3	6.1	7.7	7.5	4.8	3.3	4.8	5.8
*Providence	4.0	5.8	7.4	5.7	7.2	7.7	5.7	3.3	4.8	5.7
*Penncross	5.0	6.3	5.9	6.0	7.2	7.2	5.1	3.6	5.3	5.7
*Pennlinks	4.7	5.8	6.0	5.7	7.0	6.7	5.5	3.8	5.7	5.6
WVFB 89-D-15	5.3	5.8	5.8	6.4	6.9	6.0	5.3	3.4	5.2	5.6
88.CBL	4.3	6.2	5.9	5.5	7.2	7.5	5.5	3.1	4.8	5.6
*Cobra	3.7	5.3	6.3	6.0	7.0	7.0	5.3	4.2	4.5	5.5
TAMU 88-1	4.1	5.3	6.1	6.4	6.8	6.2	4.9	3.8	5.3	5.4
MSCB-8	4.4	6.0	5.9	6.0	6.8	6.2	5.5	3.8	4.3	5.4
*Forbes 89-12	4.3	5.5	6.2	5.9	7.0	6.0	5.2	3.4	4.7	5.3
UM 84-01	5.6	6.7	5.4	5.5	5.2	6.3	4.5	3.7	5.0	5.3
*Carmen	4.3	6.0	5.4	5.8	7.1	6.2	4.9	2.8	5.0	5.3
MSCB-6	4.1	-	6.2	5.4	5.9	6.3	5.8	3.4	4.3	5.2
*Emerald	3.2	5.7	6.2	5.4	6.3	5.5	4.0	-	4.8	5.1
*National	4.6	5.0	5.7	5.4	5.9	5.3	4.4	2.9	4.7	4.9
*Bardot	3.4	5.3	4.8	5.1	5.7	1.5	4.8	-	6.5	4.6
*Egmont	2.9	3.5	5.2	5.2	7.0	1.7	4.5	-	6.3	4.5
*Tracenta	4.3	3.8	4.2	5.3	5.0	1.2	4.3	-	6.7	4.3
Allure	4.0	3.7	3.0	5.0	5.3	1.2	3.9	-	6.3	4.0
BR 1518	2.2	4.3	3.8	4.3	4.8	1.0	3.9	2.8	5.3	3.6
LSD VALUE	1.4	1.0	1.5	1.5	1.1	1.3	1.4	1.7	1.1	0.5

Native Soil - Green National Bentgrass Test

Name	AL1	BC1	IL1	LA2	NJ1	NJ3	NY1	RI1	WA1	WA2	Mean
*Forbes 89-12	6.3	6.3	7.2	5.6	6.8	4.2	7.8	5.8	4.3	6.0	6.0
*Providence	5.2	6.0	6.8	5.7	7.2	4.0	7.3	6.2	4.3	5.7	5.8
WVFB 89-D-15	6.2	6.3	6.0	5.3	7.3	4.3	7.0	5.7	5.0	5.0	5.8
88.CBL	5.7	6.1	6.9	5.3	6.4	4.5	7.3	5.7	5.0	4.5	5.7
*Putter	4.3	6.0	7.3	5.4	6.0	4.1	7.0	6.1	5.0	5.8	5.7
*Penncross	5.9	6.5	6.9	5.7	5.9	4.1	7.0	5.1	4.3	5.2	5.6
88.CBE	5.6	5.9	6.5	5.7	6.9	4.8	6.7	5.3	4.3	4.5	5.6
*Cobra	4.8	6.1	6.5	5.3	6.3	4.5	6.3	5.7	5.3	4.8	5.6
*Pennlinks	5.2	6.1	6.8	5.4	5.9	3.5	6.0	5.4	5.0	6.0	5.5
*Normarc 101	5.5	6.3	6.4	5.6	5.7	4.3	6.7	5.8	4.3	4.7	5.5
*SR 1020	4.6	6.0	6.7	4.8	6.5	3.9	6.3	5.1	5.0	4.4	5.3
*Egmont	5.8	6.0	4.5	4.8	3.8	3.9	5.3	6.0	6.0	5.0	5.1
*Bardot	5.7	6.4	4.5	5.0	4.7	3.7	6.2	4.6	5.3	5.2	5.1
*Emerald	4.8	6.3	6.9	4.3	4.4	3.9	5.8	5.1	4.7	4.7	5.1
*Tracenta	5.7	6.0	4.9	5.0	4.5	3.8	4.8	4.5	6.0	5.2	5.0
*Carmen	4.5	6.0	6.9	4.8	5.5	3.9	5.0	5.2	3.3	4.5	5.0
*National	4.9	6.1	6.5	4.3	4.4	3.5	5.5	5.7	3.7	4.5	4.9
Allure	6.1	6.2	4.7	4.9	3.0	3.1	3.8	4.7	5.3	4.7	4.7
BR 1518	5.7	5.4	4.4	5.2	2.3	2.3	4.5	4/1	5.7	2.2	4.2
LSD VALUE	1.0	0.3	1.1	0.7	0.7	0.8	1.2	0/7	1.2	0.9	0.3

* Commercially available in the United States in 1991.

Be certain to read *Wisconsin Pathology Report and Campus Connection* for more on the bentgrasses.