

[54] KENTUCKY BLUEGRASS

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[57] ABSTRACT

A variety of Kentucky bluegrass having a high level of disease resistance, excellent turf performance in the sun and shade, and a good to medium level of seed yield potential.

1 Drawing Sheet

## 1

### BACKGROUND

Kentucky bluegrasses have been disclosed in U.S. Plant Pat. No. 3,156 which issued on May 9, 1972; U.S. Plant Pat. No. 3,186 which issued on May 23, 1972; U.S. Plant Pat. No. 4,336 which issued on Nov. 28, 1978; and U.S. Plant patent application, Ser. No. 872,537, filed June 10, 1986.

### SUMMARY OF THE VARIETY

The present invention relates to a new and distinct variety of *Poa pratensis* which has been designated Ba 72-500 Kentucky bluegrass.

Ba 72-500 plant material originated by crossing a Kentucky bluegrass plant disclosed in U.S. plant application Ser. No. 872,537, the seed parent, with a pollen parent plant. As a result of this breeding, a distinct variety was produced and asexually propagated by rhizomes, tillers and disseminules.

Ba 72-500 Kentucky bluegrass reproduced asexually by propagules, i.e., by tillers and rhizomes and by disseminules (modified caryopses produced by apomixis). Progeny plants have been produced which are indistinguishable from the mother plant.

Ba 72-500 has a number of highly desirable characteristics including a good level of resistance to *Helminthosporium* spp. that causes leaf spot, melting out, and crown rot; *Ustilago striiformis* that causes stripe smut; *Erysiphe graminis* that causes powdery mildew; and *Puccinia* spp. that causes rust; a leafy turf type growth habit; moderately wide leaf blades; an attractive green color which can be maintained throughout the entire growing season; good turf performance as evidenced by consistently high performance scores in tests throughout the U.S.A. and Canada, and a good-to-medium seed yield potential in the bluegrass seed production region of the U.S.A.

In comparison with its seed parent, the new variety is more shade tolerant and has better resistance to powdery mildew and rust.

### BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a photograph of Ba- 72-500 Kentucky bluegrass plant in the vegetative stage including the extensive root and rhizome system;

FIG. 2 is a photograph of Ba 72-500 Kentucky bluegrass panicle; and

## 2

FIG. 3 is a photograph of Ba 72-500 Kentucky bluegrass seed.

### DETAILED DESCRIPTION OF THE VARIETY

Ba 72-500 Kentucky bluegrass (*Poa pratensis* L.) is perennial with creeping rhizomes forming a moderately dense turf. When plants winter in the field with freezing temperatures and then are brought into the greenhouse during late winter to continue growth undisturbed by clipping under moderate temperatures (60°–80° F.), culms are erect averaging 439 mm tall with an average of 2.7 nodes per culm. The uppermost internode averages 9.8 cm, and the peduncle averages 12.9 cm in length and 0.660 mm in thickness. The flag leaf averages 4.1 cm in length, 3.2 mm in width, and 0.112 mm in thickness. The panicle is nodding with an average length of 6.8 cm, width of 3.8 cm, and 5.0 whorls. The lowest whorl has an average of 4.0 branches and the third whorl from the bottom of the panicle has an average of 2.4 branches. The average spikelet at the tip of a branch in the lowest whorl is 5.1 mm in length and has 4.2 florets with an outer glume of 3.1 mm in length and an inner glume of 3.4 mm in length. A similar spikelet from the third whorl from the bottom is 5.0 mm in length and has 3.9 florets with an outer glume of 3.1 mm in length and an inner glume of 3.4 mm in length. After the seed has been conditioned, the lemma has a rough keel with occasional long, fine hairs at the base. The seed of Ba 72-500 is 2.77 mm in length and 0.80 mm in width with approximately 1,300,105 seeds per pound. Comparisons of Ba 72-500 and other bluegrasses for seed measurements and seed counts per pound are found in Tables 1 and 2.

TABLE 1

Seed Measurements of Ba 72-500 and Other Bluegrass Varieties After Conditioning.		
Variety	Length (mm)	Width (mm)
Ba 72-500	2.77	0.80
Baron	3.07	0.86
Bristol	2.73	0.80
Nassau	2.96	0.78
Newport	2.76	0.71
Park	3.04	0.72
Ram I	3.51	0.84
Victa	3.20	0.86
LSD (.05)	0.19	0.06



TABLE 2

Seed Counts Per Pound of Ba 72-500 and Other Bluegrass Varieties After Conditioning	
	Number of Seeds Per Pound
Ba 72-500	1,300,105
Adelphi	1,383,976
America	1,659,824
Gnome	1,017,641
Baron	1,051,693
Birka	1,223,530
Bonnieblue	1,135,303
Bristol	1,270,821
Classic	1,250,316
Eclipse	1,335,668
Georgetown	1,232,913
Glade	1,108,441
Kenblue	1,463,923
Merit	1,109,728
Nassau	1,127,130
Newport	1,226,481
Park	1,248,349
Sydsport	1,355,644
Vantage	1,555,303
Victa	1,038,298

Since environmental conditions such as soil and climate influence morphological characteristics to some extent, comparisons of morphological characteristics of Ba 72-500 are made with other Kentucky bluegrass varieties in Tables 3-7.

TABLE 3

Morphological Comparisons of Ba 72-500 and Other Bluegrass Varieties Grown as Unmowed Spaced Plants in the Field at Marysville, Ohio.				
	Mature Plant Height (cm)	Leaf Blade Width	Panicle Density	Seedhead Weight
	2 Year Mean	2 Year Mean	2 Year Mean	2 Year Mean
Ba 72-500	46	2.4	6	335
Nugget	36	2.0	5	225
Glade	53	2.2	7	314
Vantage	67	2.5	6	786
Adelphi	53	2.3	6	396
Park	55	2.2	6	361
Bristol	55	2.3	7	385
Parade	53	2.5	5	372
A-34	65	2.1	8	384
Kenblue	63	2.4	6	498
Victa	46	3.0	7	442
Merion	49	2.2	7	191
LSD (.05)	18	0.7	2	427

Ratings:  
Leaf Blade Width: 1-4.4 = wide blades  
Panicle Density: 0-9.9 = very high panicle density  
Seedhead Weight: Weight (mg) of three panicles

TABLE 4

Morphological Comparison of Panicles of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.				
Variety	Panicle Nodding*	Panicle Length (cm)	Panicle Width (cm)	Number of Whorls Per Panicle
Ba 72-500	2.0	6.8	3.8	5.0
Baron	1.0	7.8	4.1	5.2
Bristol	2.0	9.7	5.0	5.0
Nassau	2.0	10.0	6.0	5.0
Newport	2.0	10.3	4.4	4.5
Park	1.6	9.0	3.7	4.0
Ram I	2.0	9.0	4.7	4.0
Victa	1.2	7.5	4.1	5.4
LSD (.05)	0.5	1.6	1.0	0.8

Number of Branches		Peduncle Length (cm)	Peduncle Width (mm)
Variety	Lower Whorl	Third Whorl	
Ba 72-500	2.0	6.8	3.8
Baron	1.0	7.8	4.1
Bristol	2.0	9.7	5.0
Nassau	2.0	10.0	6.0
Newport	2.0	10.3	4.4
Park	1.6	9.0	3.7
Ram I	2.0	9.0	4.7
Victa	1.2	7.5	4.1
LSD (.05)	0.5	1.6	1.0

TABLE 4-continued

Morphological Comparison of Panicles of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.				
Variety	Length (cm)	Width (mm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)
Ba 72-500	4.0	2.4	12.9	0.660
Baron	3.8	2.5	12.7	0.559
Bristol	3.3	2.7	15.0	0.686
Nassau	3.0	2.0	8.0	0.533
Newport	2.3	2.3	18.0	0.558
Park	4.3	3.7	14.3	0.787
Ram I	2.5	2.0	18.5	0.610
Victa	4.4	3.4	12.2	0.711
LSD (.05)	0.7	0.8	3.7	0.018

\*Panicle nodding rated 1 = erect, 2 = nodding.

TABLE 5

Morphological Comparison of Culms and Flag Leaves of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.			
Variety	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Thickness (mm)
Ba 72-500	4.1	3.2	0.112
Baron	4.5	3.2	0.119
Bristol	5.5	3.4	0.127
Nassau	6.2	3.1	0.127
Newport	6.1	3.5	0.135
Park	4.2	2.6	0.109
Ram I	4.7	3.1	0.127
Victa	5.9	4.0	0.124
LSD (.05)	1.8	0.6	0.013

Morphological Comparison of Culms and Flag Leaves of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.			
Variety	Top Internode Length (cm)	Culm Length (mm)	Number of Nodes Per Culm
Ba 72-500	9.8	439	2.7
Baron	10.1	482	2.5
Bristol	11.3	522	2.7
Nassau	11.2	450	2.5
Newport	11.2	547	2.3
Park	13.0	578	3.0
Ram I	10.2	527	3.0
Victa	10.6	474	2.4
LSD (.05)	2.1	79	0.6

TABLE 6

Morphological Comparison of Spikelets and Florets of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.				
Variety	Spikelet Length (mm)		Number of Florets per Spikelet	
	Lowest Whorl	Third Whorl	Lowest Whorl	Third Whorl
Ba 72-500	5.1	5.0	4.2	3.9
Baron	5.0	5.0	3.7	3.8
Bristol	6.2	6.0	5.7	5.3
Nassau	4.6	4.6	4.5	4.5
Newport	5.3	5.2	5.2	5.2
Park	6.5	6.7	5.2	4.7
Ram I	4.7	5.2	5.2	5.5
Victa	5.2	5.0	3.8	3.8
LSD (.05)	0.9	0.8	1.1	1.0

Glume Length (mm)				
Variety	Outer		Inner	
	Lowest Whorl	Third Whorl	Lowest Whorl	Third Whorl
Ba 72-500	3.1	3.1	3.4	3.4
Baron	2.9	2.8	3.4	3.3
Bristol	3.4	3.3	3.7	3.9
Nassau	2.3	2.4	2.7	2.7
Newport	2.6	2.5	2.9	2.9
Park	3.0	3.2	3.5	3.7
Ram I	2.6	2.4	2.9	2.7
Victa	2.8	3.0	3.3	3.3

TABLE 6-continued

Morphological Comparison of Spikelets and Florets of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.				
LSD (.05)	0.5	0.4	0.4	0.4

TABLE 7

Morphological Comparison of Leaves of Ba 72-500 and Other Bluegrass Varieties in the Greenhouse at Marysville, Ohio.				
Variety	Ligule Length (mm)	Leaf Length (mm)	Leaf Width (mm)	Leaf Angle (Degrees From Horizontal)
Ba 72-500	0.25	204	4.1	50
Baron	0.30	313	4.4	63
Bristol	0.30	253	4.3	37
Nassau	0.22	226	3.5	39
Newport	0.22	251	4.1	50
Park	0.33	329	4.2	44
Ram I	0.18	188	3.7	40
Victa	0.28	235	4.3	52
LSD (.05)	0.11	49	0.6	10

Hairs <sup>a</sup> Around Ligule on Upper Surface of the Leaf			
Variety	Hairs <sup>a</sup> on Collar	Hairs <sup>b</sup> on Ligule	
Ba 72-500	1.0	3.5	2.7
Baron	1.0	5.0	4.0
Bristol	1.3	4.7	4.3
Nassau	2.7	5.0	1.0
Newport	1.0	4.0	0.8
Park	1.0	1.7	0.0
Ram I	1.0	3.7	0.3
Victa	1.0	3.3	2.2
LSD (.05)	0.3	1.4	1.8

<sup>a</sup>Hairs around ligule and on collar rated 1-5: 1 = none, 5 = many.  
<sup>b</sup>Hairs on ligule rated 0-5: 0 = none, 5 = many.

Ba 72-500 has performed very well throughout the U.S.A. and Canada as exhibited by high turf quality ratings in ten different locations as the comparisons show in Table 8.

TABLE 8

Comparison of the Turf Quality of Ba 72-500 and Other Bluegrass Varieties in the U.S.A. and Canada				
Variety	St. Louis Missouri 1 Year Mean	Guelph Ontario 2 Year Mean	Winnipeg Manitoba 2 Year Mean	Beltsville Maryland 1 Year Mean
Ba 72-500	3.2	7.7	6.9	5.8
A-34			6.6	5.6
Adelphi	2.9			5.9
Admiral			6.0	
America	2.8			
Aquila			7.1	
Banff				4.8
Baron	2.7		6.2	5.3
Birka	2.3			
Bonnieblue				5.0
Bono				
Bristol	2.7			5.0
Columbia				4.9
Eclipse				5.9
Enmundi				5.5
Fylking				4.9
Geary				
Geronimo				
Glade	2.8			5.3
Gnome	2.9	7.0		
Kenolue				
Merion		6.7		5.3
Merit	2.8		6.5	6.1
Midnight				5.5
Monopoly				4.9
Mystic			6.6	

TABLE 8-continued

Comparison of the Turf Quality of Ba 72-500 and Other Bluegrass Varieties in the U.S.A. and Canada			
Variety	Adelphia New Jersey 2 Year Mean	Lincoln Nebraska 2 Year Mean	Agassiz British Columbia 1 Year Mean
Nassau		5.9	4.5
Newport			
Nugget		7.1	
Parade			5.0
Park	1.8	6.7	
Ram I			4.6
SO Common			
Shasta		6.7	7.1
Sydsport	2.7		5.8
Touchdown	2.7		5.8
Trampas		6.3	
Vantage	2.6		5.5
Victa	2.8		5.5
Wabash			

Variety	Adelphia New Jersey 2 Year Mean	Lincoln Nebraska 2 Year Mean	Agassiz British Columbia 1 Year Mean
Ba 72-500	6.1	6.0	5.4
A-34		6.2	
Adelphi	6.4	6.1	
Admiral			
America			
Aquila	5.7		
Banff			
Baron	6.4	5.6	
Birka	5.9	5.9	
Bonnieblue	6.7	5.8	
Bono			5.2
Bristol	6.5	5.9	6.1
Columbia	5.9		
Eclipse	7.2	5.8	
Enmundi	6.3	5.9	
Fylking	5.7	6.1	
Geary	3.6		
Geronimo			5.1
Glade	6.7	6.4	
Gnome	6.4		
Kenolue	3.3		
Merion	6.0	5.9	5.3
Merit	6.2	6.0	4.9
Midnight	7.3	5.9	
Monopoly	5.7		
Mystic			
Nassau	5.9		
Newport			
Nugget			
Parade	5.6	6.5	
Park		5.7	
Ram I	6.2	5.9	
SO Common	3.2		
Shasta	5.7		
Sydsport	6.0	6.3	
Touchdown	6.1	5.9	
Trampas			5.7
Vantage	3.6	5.8	
Victa	6.5	5.7	
Wabash	4.8		

Variety	Gervais Oregon 3 Year Mean	Marysville Ohio 5 Year Mean	Prince Frederick Maryland 4 Year Mean
Ba 72-500	2.8	2.8	2.3
A-34			
Adelphi	2.4	2.7	1.9
Admiral			
America	2.5		
Aquila			
Banff			
Baron			
Birka			
Bonnieblue			
Bono			
Bristol	2.8	2.7	2.1
Columbia			
Eclipse			
Enmundi			
Fylking			



TABLE 8-continued

Comparison of the Turf Quality of Ba 72-500 and Other Bluegrass Varieties in the U.S.A. and Canada				
Geary				
Geronimo				
Glade	2.5		1.8	
Gnome	2.3			
Kenolue	1.4			
Merion				
Merit	2.4		1.9	
Midnight				
Monopoly				
Mystic				
Nassau				
Newport		1.4		
Nugget				
Parade		2.7		
Park		2.1	1.7	
Ram I				
SO Common				
Shasta				
Sydsport				
Touchdown				
Trampas				
Vantage		2.6	1.8	
Victa	2.2	2.6	2.1	
Wabash				

Rating Scale: Larger number indicates higher quality.

Good turf performance under shady conditions is an important characteristic for broad, general usage of a bluegrass variety. Ba 72-500 performs very well under shady conditions as seen from the comparative test results in Tables 9 and 10.

TABLE 9

Turf Performance Ratings Under Natural Shade of Ba 72-500 and Other Bluegrass Varieties at Marysville, Ohio.					
	Year 1	Year 2	Year 3	Year 4	4 Yr Mean
Ba 72-500	2.1	2.3	2.5	2.5	2.4
Merion	1.8	1.6	2.0	1.8	1.8
Fylking	1.8	1.9	1.9	2.0	1.9
A-34	2.0	2.2	2.6	2.7	2.4
Park	1.7	1.8	1.9	2.0	1.9
Newport	1.9	1.7	1.9	2.1	1.9
Bristol	1.8	2.1	2.2	1.8	2.0
Enmundi	2.0	2.0	2.2	2.5	2.2
Bonnieblue	2.0	1.7	2.0	1.7	1.9
Touchdown	1.8	2.1	2.1	1.7	1.9
Aquila	1.8	1.7	1.7	2.1	1.8
Parade	1.8	2.0	2.2	1.8	2.0
Victa	2.0	1.5	1.8	2.0	1.8
LSD (.05)		.46		.47	

Rated 1-4.4 = Best

TABLE 10

Turf Performance Ratings Under Natural Shade of Ba 72-500 and Other Bluegrass Varieties at Gervais, Oregon.							
Quality							
Year 1				Year 2			
	June	Aug.	Oct.	Mean	Feb.	Sept	Mean
Ba 72-500	2.8	2.8	3.3	3.0	3.3	3.0	3.2
Bristol	2.5	2.8	2.3	2.6	3.0	1.7	2.4
Gnome	3.5	1.0	1.0	1.8	1.0	0.5	.8
Victa	2.8	1.8	1.7	2.1	2.0	1.8	1.9
LSD (.05)	.97	.97	.63		.95	.96	
Quality							
				Year 3	Year 4	4 Yr	
				Feb.	May	Mean	
Ba 72-500				2.2	2.2	2.7	
Bristol				2.0	2.3	2.3	
Gnome				1.3	2.3	1.6	
Victa				1.8	1.0	1.7	

TABLE 10-continued

Turf Performance Ratings Under Natural Shade of Ba 72-500 and Other Bluegrass Varieties at Gervais, Oregon.			
	LSD (.05)	.83	.80

Rated 1-4. 4 = Best

The new variety has a pleasant medium green color which can be maintained throughout the growing season and widely scattered locations in the U.S.A. and Canada as shown by the comparative test results in Table 11.

TABLE 11

Comparison of Turf Color of Ba 72-500 and Other Bluegrass Varieties at Various Locations in the U.S.A. and Canada.				
Variety	St. Louis Missouri 1 Year Mean	Truro Nova Scotia 1 Year Mean	Winnipeg Manitoba 1 Year Mean	Lincoln Nebraska 2 Year Mean
Ba 72-500	9.4	7.1	7.0	7.0
A-34			6.3	6.5
Adelphi	9.4			7.2
America	9.4			7.0
Aquila			7.3	6.7
Baron	9.2		7.3	6.9
Birka	9.1			6.7
Bonnieblue				7.0
Bono	9.0			
Bristol	9.5			7.3
Eclipse				7.0
Enmundi				7.0
Fylking				6.8
Geronimo				
Glade	9.3			7.1
Gnome	9.3	7.5		
Kenblue				
Merion				6.9
Merit	9.2		7.2	7.0
Midnight			8.1	7.9
Mystic			6.5	
Nassau			7.2	
Newport				
Nugget			7.3	
Parade				6.8
Park	9.0			6.1
Ram I				7.3
Rugby				6.8
Shasta			7.2	
Sydsport	9.2			7.0
Touchdown	9.0		6.6	6.8
Trampas		6.9		
Vantage	9.2			6.8
Victa	9.2	7.5		6.9

Variety	Agassiz British Columbia 1 Year Mean	Gervais Oregon 3 Year Mean	Marysville Ohio 2 Year Mean	Prince Frederick Maryland 3 Year Mean
Ba 72-500	5.5	7.2	8.1	7.7
A-34				
Adelphi		7.6	8.4	7.4
America		7.6	8.5	
Aquila				
Baron			8.5	
Birka			8.1	
Bonnieblue				
Bono	6.0			
Bristol	7.0	9.3	8.9	8.3
Eclipse			8.5	
Enmundi				
Fylking				
Geronimo	5.8			
Glade		8.3	8.4	8.0
Gnome		7.4	8.1	
Kenblue		6.6	8.1	
Merion	5.7			
Merit	6.5	7.4		7.4
Midnight			8.9	
Mystic				

TABLE 11-continued

Comparison of Turf Color of Ba 72-500 and Other Bluegrass Varieties at Various Locations in the U.S.A. and Canada.

Nassau			
Newport	7.5		
Nugget			
Parade			
Park		8.1	6.8
Ram I			
Rugby			
Shasta			
Sydsport		8.2	
Touchdown		8.1	
Trampas			
Vantage		8.5	6.8
Victa	7.1	8.4	7.6

Rating Scale: Larger number indicates darker green color.

Resistance to common turf diseases is important for consistent performance throughout the year and among locations. Comparisons of resistance to leaf spot (also known as melting out and crown rot) caused by the fungus *Helminthosporium vagans* are presented in Table 12.

TABLE 12

Comparison of Leafspot Disease Incidence on Ba 72-500 and Other Bluegrasses at Several Locations in the U.S.A. and Canada.

Variety	St. Louis <sup>a</sup> Missouri 1 Year Mean	Beltsville <sup>b</sup> Maryland 1 Year Mean	Adelphia <sup>b</sup> New Jersey 1 Year Mean	Agassiz <sup>c</sup> British Columbia 1 Year Mean
Ba 72-500	3	7.7	7.0	3.0
A-34		5.3	4.3	
Adelphi	2	8.0	5.7	
America	8			
Aquila			6.3	
Banff		5.3	7.0	
Baron	2	7.0	8.7	
Birka	5		6.3	
Bonnieblue			7.0	
Bono	7			3.0
Bristol	2	7.0	8.3	2.3
Columbia		5.7	6.3	
Eclipse		7.7	9.0	
Enmundi		7.0		
Fylking		6.7	6.3	
Geary			2.0	
Geronimo				4.7
Glade	2	7.3	6.3	
Gnome	2	7.0	8.0	
Kenblue		3.3	1.7	
Merion		6.3	7.7	3.0
Merit	3	7.3	7.7	3.7
Midnight		7.0	7.0	
Monopoly		5.3	6.0	
Nassau		7.7	7.4	
Newport				
Parade		6.0	5.0	
Park	52			
Ram I		6.5	7.0	
Rugby			5.0	
Shasta			6.0	
Sydsport	3	7.3	6.3	
Touchdown	7	7.7		
Trenton			6.0	
Vantage	7	5.0	2.0	
Victa	2	8.0	7.0	
Wabash			2.0	
LSD (.05)	7		1.9	

Variety	Gervais <sup>a</sup> Oregon 3 Year Mean	Marysville <sup>a</sup> Ohio 5 Year Mean	Accokeek <sup>a</sup> Maryland 2 Year Mean	Marysville <sup>a</sup> Ohio (Shade) 1 Year Mean
Ba 72-500	21	4	1	0
A-34				
Adelphi	46	9		

TABLE 12-continued

Comparison of Leafspot Disease Incidence on Ba 72-500 and Other Bluegrasses at Several Locations in the U.S.A. and Canada.

5	America	29			0
	Aquila				
	Banff				
	Baron				
	Birka				0
	Bonnieblue				
10	Bono				
	Bristol	8	5		2
	Columbia				
	Eclipse				
	Enmundi				
	Fylking				
15	Geary				
	Geronimo				
	Glade	46			0
	Gnome	76			0
	Kenblue	75			67
	Merion				
20	Merit	65			
	Midnight				
	Monopoly				
	Nassau				
	Newport	45			
	Parade		10		
25	Park		54		
	Ram I				
	Rugby				
	Shasta				
	Sydsport	—			
	Touchdown				0
30	Trenton				
	Vantage		15	30	
	Victa	70	7	12	0
	Wabash				
	LSD (.05)	15	5	10	4

Ratings  
<sup>a</sup>% of turf affected by disease  
<sup>b</sup>1-9, 9 = least disease  
<sup>c</sup>1-9, 9 = most disease

Comparisons of resistance to powdery mildew caused by *Erysiphe graminis*, rust caused by *Puccinia* spp., dol-larspot caused by *Sclerotinia homeocarpa*, stripe smut caused by *Ustilago striiformis*, and red thread caused by *Corticium fuciform* are presented in Tables 13-18.

TABLE 13

Comparison of Stem Rust (*Puccinia graminis*) Disease Incidence on Ba 72-500 and Other Bluegrasses at Adelphia, New Jersey

	Test 1	Test 2
Ba 72-500	7.2	7.7
Midnight	7.0	7.8
Columbia	6.7	7.8
Banff	6.5	7.7
Bristol	7.7	7.7
Parade	6.2	7.5
Monopoly	7.1	7.4
Ram I	7.0	7.3
Victa	5.6	7.2
Merit	5.7	7.0
Baron	6.4	7.0
Nassau	6.8	7.0
Eclipse	4.7	7.0
Aquila	6.9	7.0
Bonnieblue	5.4	7.0
Adelphi	7.1	6.9
America	7.4	6.9
Vantage	6.2	5.9
Touchdown	3.5	5.7
Birka	3.5	5.6
Merion	2.4	3.6
LSD (.05)	0.9	1.0

Rated 1-9,9 = No Disease



TABLE 14

Comparison of Rust (Puccinia spp.) Disease Incidence on Ba 72-500 and Other Bluegrasses.			
Variety	Turf	Unmowed Spaced Plants	
	Location	Rating Years	
	Aggasiz <sup>a</sup> British Columbia	Gervais <sup>b</sup> Oregon	Marysville <sup>b</sup> Ohio
	2 Year Mean	1 Year Mean	1 Year Mean
Ba 72-500	1.3	1	17
A-34			10
Adelphi		23	10
America		9	
Bono	2.1		
Bristol	1.2	6	9
Geronimo	1.5		
Glade		4	13
Gnome		13	
Kenblue		30	24
Merion	2.8		33
Merit	2.9	8	
Newport		23	
Nugget			13
Parade			7
Park			32
Vantage			43
Victa		9	18
LSD (.05)		12	16

<sup>a</sup>Rated 1-9, 9 = most disease  
<sup>b</sup>Rated as % of disease incidence

TABLE 15

Comparison of Dollarspot Disease Incidence on Ba 72-500 and Other Bluegrasses.		
Variety	Prince Frederick Maryland	Marysville Ohio
Ba 72-500	24	47
Adelphi	8	20
America		13
Baron	50	23
Birka	6	47
Bonnieblue	10	
Bono	4	63
Bristol	6	17
Columbia	10	
Eclipse		8
Glade		40
Gnome		22
Kenblue	8	37
Merit	4	
Midnight	6	
Park		33
Ram I	40	
Rugby	12	
Sydsport		43
Touchdown		50
Trenton	28	
Vantage	11	15
Victa	5	23
Wabash	11	
LSD (.05)	19	24

Ratings: % of turf that is affected by disease.

TABLE 16

Comparison of Stripe Smut Disease Incidence on Ba 72-500 and Other Bluegrasses.		
Variety	Prince Frederick Maryland 3 Year Mean	Accokeek Maryland 2 Year Mean
Ba 72-500	0	2
Bristol	7	
Mosa	23	
Vantage		3
Victa		9

TABLE 16-continued

Comparison of Stripe Smut Disease Incidence on Ba 72-500 and Other Bluegrasses.		
Variety	Prince Frederick Maryland 3 Year Mean	Accokeek Maryland 2 Year Mean
LSD (.05)	16	9

Rating: % of turf affected by disease.

TABLE 17

Comparison of Red Thread Disease Incidence on Ba 72-500 and Other Bluegrasses at Gervais, Oregon	
Red Thread	
Ba 72-500	0
Victa	10
Bristol	0
Glade	15
Adelphi	0
Kenblue	23
Newport	3
America	2
Merit	7
Gnome	0
LSD (.05)	13

Ratings % of turf affected by disease.

TABLE 18

Comparison of Powdery Mildew Disease Incidence on Ba 72-500 and Other Bluegrasses.				
Variety	Greenhouse <sup>a</sup>	Natural Shade <sup>b</sup>		
	Adelphia New Jersey	Gervais Oregon	Marysville Ohio	
	1 Year Mean	1 Year Mean	3 Year Mean	2 Year Mean
Ba 72-500	5.4	3	3	0
A-34	4.5			
Adelphi	0.8			
America	6.7			7
Aquila	8.7			
Banff	0.4		15	
Baron	1.4			
Birka	5.7			2
Bonnieblue	0.8			
Bristol	6.4	3	10	1
Columbia	0.5			
Eclipse	6.9			3
Enmundi	6.9			
Fylking	1.3			
Geronimo				40
Glade	7.0		37	21
Gnome	1.7	78		61
Kenblue				2
Kimono	0.9			
Majestic	0.9			
Merion	0.9			
Merit	2.3			
Midnight	0.7			
Monopoly	5.9		2	
Mosa				
Mystic	8.3			
Newport			33	
Nugget	7.0			
Parade	2.2			
Ram I	7.2			
Rugby	0.6		15	
Shasta	0.7			
Sydsport	6.1			
Touchdown				0
Vantage	5.0			
Victa	1.9	35	47	52
LSD (.05)	0.8	21	16	6

Spaced Plants - Sun<sup>b</sup>  
Prince Frederick  
Maryland  
1 Year  
Marysville  
Ohio  
2 Year

TABLE 18-continued

Comparison of Powdery Mildew Disease Incidence on Ba 72-500 and Other Bluegrasses.

Variety	Mean	Mean
Ba 72-500	0	0
A-34	2	15
Adelphi	12	23
America		
Aquila		
Banff		
Baron		
Birka		
Bonnieblue		
Bristol	1	0
Columbia		
Eclipse		
Enmundi		
Fylking		
Geronimo		
Glade	57	23
Gnome		
Kenblue		10
Kimono		
Majestic		
Merion		5
Merit		
Midnight		
Monopoly		
Mosa	58	
Mystic		
Newport		
Nugget		3
Parade		0
Ram I		
Rugby		
Shasta	—	
Sydsport		
Touchdown		
Vantage		34
Victa		13
LSD (.05)	25	12

<sup>a</sup>Rated 0-9, 9 = least disease<sup>b</sup>Rated as % of turf affected by disease

Ba 72-500 has the ability to tolerate heat and drought stress as illustrated in Table 19.

TABLE 19

Comparison of Drought and Heat Tolerance of Ba 72-500 and Other Bluegrasses in Prince Frederick, Maryland.

Variety	Test 1 4 Year Mean	Test 2 1 Year Mean	Test 3 3 Year Mean
Ba 72-500	20	0	27
Adelphi			36
Bristol	31		36
Glade			49
Merit			43
Mosa	27		
Park			39
Vantage		50	39
Victa		50	30
LSD (.05)	12	24	22

Rated as % brown turf due to drought and heat stress.

The low growth habit and slower vertical growth rate of Ba 72-500 indicates that it should withstand low mowing heights as well as possibly decrease the total number of mowings per year under favorable environmental conditions, especially in comparison to the common type varieties of Kenblue, Newport, and Park as presented in Table 20.

TABLE 20

Comparison of Growth Habit of Ba 72-500 and Other Bluegrasses at Marysville, Ohio.

Variety	Test 1 1 Year Mean <sup>a</sup>	Test 2 2 Year Mean <sup>b</sup>	Test 3 3 Year Mean <sup>b</sup>
Ba 72-500	2.0	1.4	66
Adelphi	2.0	2.4	
America	1.8		
Baron	1.8		
Birka	2.0		
Bono	2.0		
Bristol	2.0	2.0	74
Eclipse	2.0		
Fylking			93
Glade	2.2		
Gnome	2.0		
Kenblue	2.9		
Merion			96
Merit			78
Newport			84
Parade		2.2	100
Park	2.9	2.2	
Sydsport	1.9		72
Touchdown	2.0		
Vantage	2.7	2.0	84
Victa	1.9	2.0	77
LSD (.05)	0.3	0.5	12

<sup>a</sup>Rated 1-5.5 = high growth, 1 = dwarf.<sup>b</sup>Rated as height (mm) of turf about one week after last mowing.

The leaf texture of Ba 72-500 is similar to many bluegrass varieties when maintained under mowed turf conditions as the comparative test results show in Table 21.

TABLE 21

Comparison of Leaf Texture of Ba 72-500 and Other Bluegrasses Under Mowed Turf Conditions.

Variety	St. Louis Missouri	Agassiz British Columbia	Marysville Ohio
Ba 72-500	4.3	6.0	5.0
Adelphi	5.3		
America	6.0		
Baron	4.6		
Birka	6.0		
Bono	5.6	6.7	
Bristol	5.3	7.0	5.0
Fylking			5.8
Geronimo		5.7	
Glade	6.0		
Gnome	4.3		
Kenblue			5.5
Merion		6.3	5.0
Merit	4.3	5.0	5.0
Newport			5.0
Park	6.0		
Sydsport	5.0		5.0
Touchdown	5.0		
Vantage	6.0		5.3
Victa	4.4		4.8
LSD (.05)	0.7		0.4

Ratings: 1-9.9 = finest texture.

Ba 72-500 has a good level of seed yielding ability which should make it an economically feasible variety to produce for commercial markets as shown in Table 22.

TABLE 22

Seed Yield Comparisons of Ba 72-500 and Other Bluegrass Varieties in Oregon

Location	Gervais			La Grande			Madras
Seeded	Year	Year		Year	Year		Year
Harvest Year	1	2	Mean	1	2	Mean	Year 1
Variety							
Ba 72-500	559	757	658	876	857	867	1113
Victa	780	1394	1087	1419	1200	1310	1324

TABLE 22-continued

Seed Yield Comparisons of Ba 72-500 and Other Bluegrass Varieties in Oregon							
Location	Gervais			La Grande			Madras
	Year	Year		Year	Year		
Seeded	Year	Year		Year	Year		
Harvest Year	1	2	Mean	1	2	Mean	Year 1
Newport	435	1256	846				
Bristol	347	808	578	1089	970	1030	
Mosa	322	1060	691				
Julia	296	1016	656				
Baron							1194
Trampas							388
LSD (.05)	140	134		149	181	220	

Ratings: Pounds per acre of conditioned seed.

The low susceptibility of Ba 72-500 to rust and lodging under typical seed field conditions should aid in producing enconomical seed crops as indicated by the comparative results in Table 23.

TABLE 23

Plant Characteristics of Ba 72-500 and Other Bluegrass Varieties at Gervais, Oregon Under Seed Production Conditions.			
	Rust	Lodging	
		Year 1	Year 2
Ba 72-500	1	2.5	0.2
Victa	2	2.0	0
Bristol	4	4.0	1
Newport	4	4.0	1
Mosa	4	2.0	0
Julia	4	5.0	4

Ratings  
Rust: 1-4.4 = very susceptible  
Lodging: 0-5.5 = severe lodging

What is claimed is:  
1. A variety of bluegrass plant, substantially as shown and described, characterized particularly by a high level of resistance to disease and especially leaf spot disease, a desirable green color throughout the growing season, a high quality persistent turf under a wide variety of environmental conditions including shady conditions and a good-to-medium level of seed yielding capacity.

\* \* \* \* \*



FIG. 1

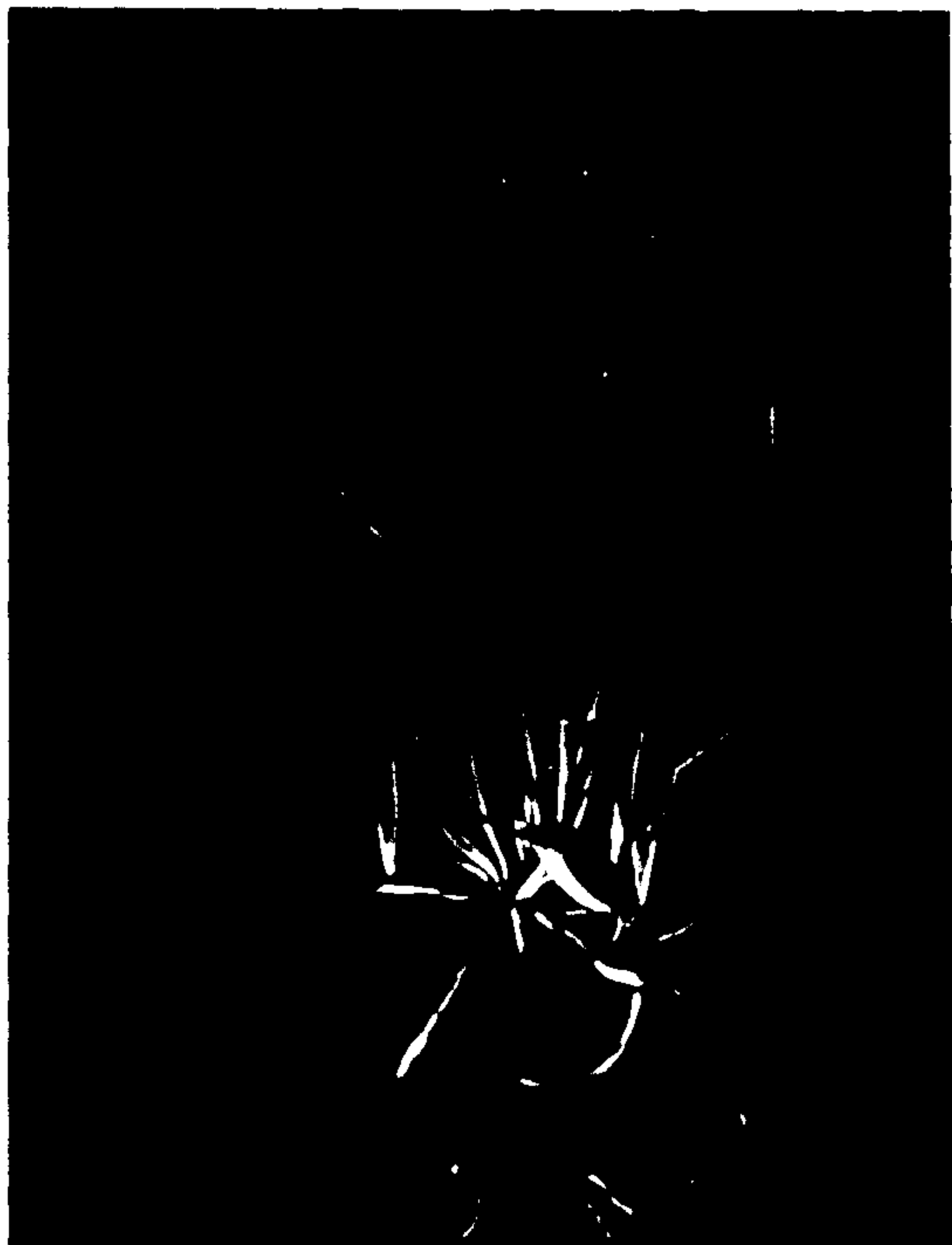


FIG. 2



FIG. 3

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