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[54] **'BA 78-165' KENTUCKY BLUEGRASS**

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[58] **Field of Search** Plt./90.2

[56] **References Cited**

U.S. PATENT DOCUMENTS

P.P. 3,156	5/1972	Fuchigami et al.	Plt./90.2
P.P. 3,186	5/1972	Barenbrug et al.	Plt./90.2
P.P. 4,336	11/1978	Mayer et al.	Plt./90.2
P.P. 6,280	9/1988	Meier et al.	Plt./90.2
P.P. 6,537	1/1989	Meier et al.	Plt./90.2
P.P. 6,538	1/1989	Meier et al.	Plt./90.2
P.P. 6,585	2/1989	Meier et al.	Plt./90.2
P.P. 7,831	3/1992	Meier et al.	Plt./90.2
P.P. 8,490	12/1993	Meier etal.	Plt./90.2
P.P. 9,036	1/1995	Meier et al.	Plt./90.2
P.P. 9,209	7/1995	Meier et al.	Plt./90.2
P.P. 9,611	7/1996	Meier et al.	Plt./90.2
P.P. 9,848	4/1997	Meier et al.	Plt./90.2

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[57] **ABSTRACT**

A variety of Kentucky Bluegrass having a medium to high level of resistance to leaf spot and melting out disease, red thread and powdery mildew; a moderate tolerance to billbugs; a medium deep green color throughout the growing season; the ability to form a medium to high quality turf under a variety of environmental conditions; a moderately wide leaf blade; a low growth habit; and a high level of seed yielding capacity.

1 Drawing Sheet

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a new and distinct variety of *Poa pretensis* that has been designated Ba 78-165 Kentucky Bluegrass.

2. Description of Related Art

Kentucky bluegrasses have been disclosed in U.S. Plant Pat. No. 3,156, issued May 9, 1972; U.S. Plant Pat. No. 3,186, issued May 23, 1972; U.S. Plant Pat. No. 4,336, issued Nov. 28, 1978; U.S. Plant Pat. No. 6,280, issued Sep. 6, 1988; U.S. Plant Pat. Nos. 6,537 and 6,538, issued on Jan. 17, 1989; U.S. Plant Pat. No. 6,585, issued Feb. 7, 1989, U.S. Plant Pat. No. 7,831, issued Mar. 17, 1992; U.S. Plant Pat. No. 8,490, issued Dec. 7, 1993; U.S. Plant Pat. No. 9,036, issued Jan. 3, 1995; U.S. Plant Pat. No. 9,209, issued Jul. 18, 1995; and pending U.S. Plant patent application Ser. No. 08/453,854, filed May 30, 1995, now U.S. Plant Pat. No. 9,611; Ser. No. 08/532,995, filed Sep. 22, 1995, now U.S. Plant Pat. No. 9,848, and Ser. No. No. 08/604,763, filed Feb. 23, 1996, as well as U.S. Plant patent application Ser. No. 08/680,167, filed coextensively herewith.

SUMMARY OF THE VARIETY

Ba 78-165 plant material originated by crossing Ba 74-157, an unreleased Kentucky Bluegrass plant maintained in the O. M. Scott plant nursery, as the seed parent with Ba 74-501, another unreleased Kentucky Bluegrass plant maintained in the O. M. Scott plant nursery, as the pollen parent. As a result of this breeding, a distinct variety was produced and asexually propagated by rhizomes, tillers and disseminules.

Seed of Ba 78-165 Kentucky Bluegrass was produced first at Marysville, Ohio and later at Gervais, Ore. This seed was used to plant turf performance evaluation trials and later seed production fields.

Asexual production of Ba 78-165 by propagules (tillers and rhizomes) and by disseminules (modified caryopses

produced by apomixis) has consistently produced progeny plants indistinguishable from the mother plant. The apomixis level of Ba 78-165 is approximately 96% based upon examining seedling characteristics of approximately 100 to 150 seedlings from different crop years in a growth chamber.

Ba 78-165 has a number of highly desirable characteristics including a medium to high level of resistance to Drechslera spp. that causes leaf spot, melting out and crown rot; a medium to high level of resistance to *Erysiphe graminis* that causes powdery mildew and a medium to high level of resistance to *Laetiseria fuciformis* that causes red thread. Ba 78-165 has an attractive leafy turf type, low growth habit; moderately wide leaf blades and a medium deep green color which can be maintained throughout the entire growing season. Ba 78-165 demonstrates good early spring greening and good winter color under mild winter conditions.

Ba 78-165 is an overall good turfgrass performer as evidenced by medium to high scores for quality and color. Ba 78-165 has a high seed yield potential in the bluegrass seed production region of the northwestern United States.

In comparison with a number of other Kentucky Bluegrass varieties, Ba 78-165 has a significantly longer seed and rachilla than many other Kentucky Bluegrasses and a significantly lower seed count than several other Kentucky Bluegrasses. The panicle of Ba 78-165 Kentucky Bluegrass is significantly shorter than many other Kentucky Bluegrasses, and below average in width, whorl number and branch counts per whorl. Ba 78-165 has, on average, smaller spikelets, glumes and number of florets. The peduncle is above average in length and width. It has a flag leaf that is below average in length, above average in width and thickness relative to most other Kentucky Bluegrasses. The flag leaf ligule is of average length and the leaf margin has significantly fewer hairs than other Kentucky Bluegrasses. The vegetative leaf is above average in length and width and slightly below average in thickness. The ligule of the vegetative leaf is significantly shorter than most other Kentucky Bluegrasses. Ba 78-165 has significantly fewer hairs on the

upper ligule margin and collar margin than several of the Kentucky Bluegrass varieties and significantly more hairs than other Kentucky Bluegrasses on the dorsal side of the leaf.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a Ba 78-165 Kentucky Bluegrass panicle;

FIG. 2 is a Ba 78-165 Kentucky Bluegrass seed; and

FIG. 3 is a Ba 78-165 Kentucky Bluegrass plant shortly after completing anthesis.

DETAILED DESCRIPTION OF THE VARIETY

Ba 78-165 Kentucky Bluegrass (*Poa pratensis* L.) is perennial with creeping rhizomes forming a dense turf. When plants overwinter in the field under freezing temperatures and are then brought into the greenhouse during late winter to continue growth undisturbed by clipping under moderate temperatures (60°–80° F.), culms are erect averaging 47.5 cm in length and 3.1 nodes per culm. The uppermost internode averages 14.8 cm in length. The peduncle averages 22.4 cm in length and 0.73 mm in width. The vegetative leaf averages 24.2 cm in length, 3.9 mm in width, 0.23 mm in thickness and the ligule 0.35 mm in length. The flag leaf averages 4.0 cm in length, 3.5 mm in width, 0.12 mm in thickness and a ligule length of 1.45 min.

The panicle averages 78.7 mm in length, 48.2 mm in width, and 8.1 whorls. The lowest whorl and the third whorl from the bottom of the panicle average 3.2 and 2.5 branches, respectively. A spikelet in the lowest whorl averages 4.3 mm in length, 2.1 mm in width, 2.8 florets and the outer glume and inner glume average 2.9 and 3.2 mm in length, respectively. A spikelet from the third whorl from the bottom of the particle averages 4.5 mm in length, 2.2 mm in width, 2.9 florets, and the outer glume and inner glume averages 2.7 mm and 3.4 mm in length, respectively.

The conditioned seed of Ba 78-165 averages 3.32 mm in length, 0.97 mm in width, and a rachilla length of 0.50 min. It has a high level of hairs at the base of the lemma, and at the margins of the palea.

Comparisons of Ba 78-165 with other Kentucky Bluegrass varieties in terms of seed numbers per pound are shown in Table 1 as follows:

TABLE 1

Comparison of Seeds Per Pound after Conditioning of Ba 78-165 and Other Kentucky Bluegrass Varieties.

Variety	Seeds Per Pound
Ba78-165	965,500
Ba73-366	993,500
Ba78-381	1,023,250
Abbey	988,500
Buckingham	978,000
Coventry	1,374,750
Garfield	1,250,500
Merit	1,250,250
LSD (.50)	77,042

Ba 78-165 differs significantly from several of the other Kentucky Bluegrass varieties in regard to the following morphological characteristics: (1) seed length; (2) rachilla length; (3) panicle length; (4) number of branches in the third whorl; (5) spikelet length in the lowest whorl; (6) glumes in the third whorl; (7) culm length and internode

length and color; (8) flag leaf margin hairs; (9) vegetative leaf ligule length, and (10) hairs on the upper margin of the ligule, collar margin and the leaf dorsal side.

Since environmental conditions such as soil and climate may influence morphological characteristics to some extent, comparisons of Ba 78-165 were made with other Kentucky Bluegrass varieties under like conditions and the comparisons are set forth in Tables 2–10 as follows:

TABLE 2

Morphological Comparison of Seed, Rachilla and Lemma and Palea Hairs of Ba 78-165 and Other Kentucky Bluegrass Varieties After Conditioning

	Seed		Hairs*		
	Length	Width	Rachilla	Lemma	Palea
Ba 78-165	3.23	0.97	0.50	4.00	1.60
Ba 77-700	3.20	0.85	0.77	2.80	0.90
Abbey	3.02	0.85	0.56	1.80	0.40
Ascot	3.00	0.81	0.68	6.30	1.50
Cannon	3.32	0.85	0.72	0.20	2.00
Gnome	2.93	0.90	0.61	2.10	0.80
Merit	2.85	0.78	0.62	0.90	0.15
Viva	2.72	0.77	0.79	1.20	0.20
LSD (.05)	0.191	0.072	0.177	1.53	0.823

*Rating Scale: 0–9; 9 = most hairs

TABLE 3

Morphological Comparison of Panicles, Whorl Number and Whorl Branches of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

	Panicles			Number of Branches	
Variety	Length mm	Width mm	Whorl Number	Lowest Whorl	Third Whorl
Ba 78-165	78.7	48.2	8.1	3.2	2.5
Ba 77-700	87.7	57.9	8.2	3.9	3.3
Abbey	86.4	54.1	9.0	4.1	3.3
Ascot	91.4	60.7	9.1	2.4	2.3
Cannon	91.7	49.9	8.9	4.4	3.6
Gnome	85.4	43.7	9.1	3.6	3.4
Merit	77.3	38.9	8.1	2.9	2.8
Viva	82.5	46.6	8.0	3.4	3.0
LSD (.05)	8.03	8.83	0.65	0.71	0.59

TABLE 4

Morphological Comparison of Spikelets and Florets of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

	Spikelet*				Number of Florets	
	Lowest Whorl		Third Whorl		Per Spikelet	
Variety	Length mm	Width mm	Length mm	Width mm	Lowest Whorl	Third Whorl
Ba 78-165	4.3	2.1	4.5	2.2	2.8	2.9
Ba 77-700	4.6	2.1	4.5	2.2	2.9	3.2
Abbey	5.0	2.3	4.9	2.3	3.3	3.3
Ascot	5.3	2.3	5.5	2.5	3.2	3.6
Cannon	4.7	2.0	4.8	2.1	3.2	3.1
Gnome	4.5	2.3	4.7	2.2	3.2	3.0
Merit	5.0	2.5	5.2	2.5	3.9	3.8
Viva	4.9	1.9	5.0	2.0	3.3	3.3
LSD (.05)	0.43	0.35	0.46	0.34	0.52	0.59

TABLE 5

Morphological Comparison of Glumes of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

	Glume Length (mm)			
	Outer		Inner	
Variety	Lowest Whorl	Third Whorl	Lowest Whorl	Third Whorl
Ba 78-165	2.9	2.7	3.2	3.4
Ba 77-700	3.0	2.9	3.4	3.5
Abbey	2.9	3.0	3.4	3.5
Ascot	3.9	4.0	4.3	4.5
Cannon	3.2	3.1	3.5	3.5
Gnome	2.8	2.9	3.3	3.3
Merit	3.0	3.0	3.4	3.5
Viva	3.1	3.1	3.8	3.6
LSD (.05)	0.29	0.29	0.29	0.28

	Glume Width			
	Outer		Inner	
Variety	Lowest Outer	Whorl Inner	Third Outer	Whorl Inner
Ba 78-165	0.6	0.5	0.6	0.6
Ba 77-700	0.6	0.6	0.7	0.7
Abbey	0.6	0.7	0.9	0.8
Ascot	0.6	0.7	0.7	0.9
Cannon	0.7	0.6	0.8	0.8
Gnome	0.6	0.6	0.8	0.8
Merit	0.6	0.6	0.8	0.9
Viva	0.5	0.5	0.7	0.7
LSD (.05)	0.12	0.13	0.13	0.14

TABLE 6

Morphological Comparison of Flag Leaves of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Length (cm)	Width (mm)	Thickness (mm)	Ligule Length (mm)
Ba 78-165	4.0	3.5	0.12	1.45
Ba 77-700	4.1	3.0	0.08	1.35
Abbey	4.7	3.6	0.12	1.53
Ascot	4.4	2.9	0.11	1.52
Cannon	5.3	3.7	0.12	1.75
Gnome	4.6	3.2	0.10	1.40
Merit	4.2	2.3	0.08	0.98
Viva	3.4	2.5	0.11	1.45
LSD (.05)	1.14	0.61	0.02	0.24

TABLE 7

Morphological Comparison of the Levels of Hairs on the Flag Leaves of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

	Hairs*			
Variety	Ligule Dorsal	Leaf Margin	Leaf Sheath Margin	Leaf Sheath Dorsal
Ba 78-165	2.0	0.2	0.1	0.0
Ba 77-700	1.3	1.8	0.8	0.0
Abbey	1.9	2.2	1.3	0.6
Ascot	0.8	1.9	0.5	1.2
Cannon	1.4	2.4	0.8	0.0
Gnome	1.8	1.3	1.0	0.4
Merit	1.0	1.8	0.9	1.4

TABLE 7-continued

Morphological Comparison of the Levels of Hairs on the Flag Leaves of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

	Hairs*			
Variety	Ligule Dorsal	Leaf Margin	Leaf Sheath Margin	Leaf Sheath Dorsal
Viva	2.5	1.5	0.4	0.0
LSD (.05)	0.83	0.72	0.79	0.62

*Rating Scale: 0–9; 0 = none; 9 = many

TABLE 8

Morphological Comparison of Peduncles, Culms, Number of Nodes per Culm, and Internode Length and Color of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Peduncle Length cm	Peduncle Width mm	Culm Length cm
Ba 78-165	22.4	0.73	47.5
Ba 77-700	21.6	0.68	50.6
Abbey	21.5	0.77	40.6
Ascot	17.5	0.68	41.9
Cannon	20.0	0.74	48.3
Gnome	17.3	0.69	40.6
Merit	23.6	0.66	44.1
Viva	19.7	0.55	50.7
LSD (.05)	2.6	0.08	2.6

Variety	Number of Nodes Per Culm	Top Internode Length (cm)	Top Internode Color*
Ba 78-165	3.1	14.8	1.9
Ba 77-700	3.2	14.7	0.2
Abbey	2.6	10.7	0.1
Ascot	3.1	14.6	1.6
Cannon	3.6	13.4	0.0
Gnome	3.2	10.6	7.2
Merit	3.0	11.8	0.8
Viva	3.5	14.9	0.0
LSD (.05)	0.5	1.2	0.8

*Rating Scale; 1–9, 9 = dark purple color

TABLE 9

Morphological Comparison of Vegetative Leaves of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Length cm	Width mm	Thickness mm	Length mm
Ba 78-165	24.2	3.9	0.23	0.35
Ba 77-700	23.2	3.5	0.23	0.50
Abbey	19.3	3.5	0.21	0.45
Ascot	20.4	3.2	0.21	0.42
Cannon	24.6	3.6	0.40	0.46
Gnome	19.5	3.8	0.24	0.48
Merit	21.8	3.6	0.23	0.41
Viva	25.0	3.2	0.24	0.40
LSD (.05)	3.67	0.42	0.14	0.06

TABLE 10

Morphological Comparison of the Level of Hair on the Vegetative Leaves of Ba 78-165 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH.

Variety	Leaf Sheath Margin	Leaf Sheath Dorsal	Ligule Upper Margin	Leaf Mar-gin	Collar Margin	Leaf Vent-ral	Leaf Dorsal
Ba 78-165	3.3	3.9	4.5	1.3	2.0	0.2	1.7
Ba 77-700	3.1	5.3	7.3	1.5	2.9	0.2	0.1
Abbey	2.1	3.3	3.9	0.4	2.9	1.0	0.2
Ascot	3.0	3.2	4.1	0.9	3.5	0.0	0.9
Cannon	3.2	3.7	6.2	0.4	2.9	0.9	0.7
Gnome	2.9	3.1	5.6	1.0	3.9	0.9	0.5
Merit	3.7	3.0	5.4	0.1	3.2	0.5	0.0
Viva	4.3	3.9	6.6	1.5	4.5	0.2	0.2
LSD (.05)	1.21	0.98	1.10	0.75	0.87	0.61	0.54

*Rating Scale: 0–9; 0 = none; 9 = many

Ba 78-165 has performed well throughout the U.S. as exhibited by medium to high turf quality ratings in comparison with other Kentucky Bluegrass varieties. In addition, it has a dark green color which can be maintained throughout the growing season.

With regard to a comparative analysis conducted for purposes of determining color of Ba 78-165 plants relative to other Kentucky Bluegrass varieties, readings were taken of the vegetative color of Ba 78-165 during mid-October while the turf was actively growing with adequate nutrient and water availability. The readings were taken in full sun with several actively growing leaves being compared, one at a time, utilizing color chips from the Munsell Book of Color as a reference. On this basis, the color of Ba 78-165 was determined to be 7.5 GY 4/4. During the same time period, the color of similar leaves of other Kentucky Bluegrass varieties were determined by the same procedure to be as follows: Ascot — 5 GY 4/4; Buckingham — 7.5 GY 4/4; Ba 77-700 — 5 GY 4/6; Midnight — 7.5 GY 4/4; Abbey — 5 GY 4/6; and Victa — 5 GY 4/4. However, it should be noted that the general apparent color of turf does not always correlate directly with the color of the individual actively growing leaves within the turf and that turf color varies with nutrient level and time of year with some varieties being darker or lighter green depending on such factors.

Comparisons of Ba 78-165 with other Kentucky Bluegrass varieties for quality, genetic color, spring greening, summer greenup after dormancy, seedling vigor, density, fall recovery, vertical growth, heat stress, and winter color are set forth hereinafter in Tables 11–25 as follows:

TABLE 11

A Comparison of Quality in Three Test (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, Ohio

Variety	TEST A	TEST B	TEST C
Ba 78-165	3.5	2.7	2.0
Abbey	1.8	2.0	1.5
Banff	2.9	2.1	1.6
Bonnieblue	1.6	2.0	1.6
Bristol	3.3	2.0	1.6
Chateau	3.5	2.0	1.5
Coventry	3.3	2.3	1.6
Estate	3.5	2.0	1.7
Glade	2.4	2.0	1.5
Kelly	1.5	1.9	1.7
Monopoly	3.3	3.0	1.7
Newport	1.4	2.4	1.7

TABLE 11-continued

A Comparison of Quality in Three Test (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, Ohio

Variety	TEST A	TEST B	TEST C
Victa	1.4	2.0	1.7
LSD (.05)	0.82	0.62	0.29

Rating Scale: 1–5; 5 = Ideal Turf

TABLE 12

A Comparison of Quality in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	TEST A*	TEST B*	TEST C**
Ba 78-165	2.2	2.6	5.0
Allure	1.3	2.4	4.3
Adelphi	1.7	2.1	5.0
Bonnieblue	2.0	2.5	4.0
Bristol	1.9	2.1	4.3
Chateau	1.1	2.3	4.0
Estate	1.3	2.5	4.3
Glade	1.8	2.1	3.7
Merit	2.0	2.1	3.3
Park	1.3	1.9	4.3
Vantage	1.2	2.0	4.0
Victa	1.8	2.2	5.0
LSD (.05)	0.39	0.30	1.67

*Rating Scale: 1–5; 5 = Ideal Turf
**Rating Scale: 1–9; 9 = Ideal Turf

TABLE 13

A Comparison of Quality in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties ay Marysville, OH.

Variety	TEST A	TEST B	TEST C
Ba 78-165	2.5	2.5	2.1
Adelphi	2.3	1.8	1.8
Bristol	2.7	2.9	1.9
Glade	1.8	1.8	1.6
Newport	1.4	1.0	1.8
Ram I	2.0	2.3	2.0
Victa	2.2	1.8	1.4
LSD (.05)	0.95	1.23	0.42

Rating Scale: 1–5; 5 = Ideal Turf

TABLE 14

A Comparison of Quality in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH.

Variety	TEST A	TEST B	TEST C
Ba 78-165	6.0	7.0	7.0
Abbey	3.0	3.0	6.0
Adelphi	6.0	5.0	7.0
Baron	4.5	4.5	5.5
Bristol	5.5	5.5	7.5
Chateau	7.0	6.0	6.5
Classic	4.0	4.0	6.0
Coventry	5.0	4.5	6.5
Estate	6.5	5.5	6.5
Georgetown	6.0	2.0	6.0
Glade	5.5	6.0	6.5
Gnome	4.5	4.5	5.5
Kelly	5.0	4.0	6.0
Kenblue	5.0	6.0	5.0
Merion	4.0	5.0	7.0
Merit	4.0	4.0	5.5

TABLE 14-continued

A Comparison of Quality in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH.

Variety	TEST A	TEST B	TEST C
Nassau	5.5	5.0	6.0
Ram I	5.0	4.5	6.5
Victa	5.0	4.5	6.0
LSD (.05)	2.23	3.36	1.50

Rating Scale: 1–9; 9 = Ideal Turf

TABLE 15

A Comparison of Color of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH

Variety	Color
Ba 78-165	7.5
Abbey	7.0
Adelphi	7.0
Baron	7.0
Bristol	7.0
Chateau	7.5
Classic	6.5
Coventry	7.0
Estate	7.5
Georgetown	7.0
Glade	7.0
Gnome	7.0
Kelly	6.5
Kenblue	7.0
Merion	7.0
Merit	7.0
Nassau	7.0
Ram I	7.0
Victa	7.0
LSD (.05)	0.77

Rating Scale: 1–9; 9 = Dark Green

TABLE 16

A Comparison of Color in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, Oh.

Variety	TEST A	TEST B
Ba 78-165	7.3	7.3
Abbey	6.3	7.0
Able I	7.6	8.0
Allure	6.3	7.0
Ascot	8.0	7.3
A-34	6.0	6.3
Banff	6.7	6.3
Baron	7.0	7.3
Bristol	7.7	7.0
Buckingham	8.0	8.0
Cannon	7.0	7.7
Challenger	7.3	6.7
Classic	6.7	6.7
Coventry	6.3	7.0
Eclipse	7.0	8.0
Estate	6.0	7.0
Georgetown	7.0	6.7
Glade	7.0	7.0
Gnome	7.3	7.3
Haga	7.0	6.7
Kelly	6.7	7.0
Kenblue	7.0	7.0
Liberty	7.0	7.3
Merion	6.7	7.0
Merit	6.3	7.0
Midnight	7.7	9.0
Monopoly	6.0	6.0

TABLE 16-continued

A Comparison of Color in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, Oh.

Variety	TEST A	TEST B
Nassau	8.0	7.0
Ram I	7.3	7.0
South Dakota	7.0	7.0
Touchdown	7.0	7.0
Victa	7.0	7.0
Viva	6.7	7.0
LSD (.05)	0.72	0.62

Rating Scale: 1–9; 9 = Dark Green

TABLE 17

A Comparison of Color in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B
Ba 78-165	6.8	7.7
Ba 78-372	7.3	7.3
Ba 77-700	8.0	8.0
Abbey	7.7	8.0
Able I	7.0	8.7
A-34	6.7	6.3
Allure	7.2	7.0
Ascot	7.5	8.0
Baron	8.0	7.3
Banff	7.0	7.0
Bristol	7.7	7.7
Buckingham	8.0	8.7
Cannon	8.0	8.0
Classic	6.2	7.0
Challenger	6.8	7.0
Coventry	7.5	7.0
Eclipse	6.8	7.3
Estate	7.5	7.0
Fairfax	6.7	7.0
Glade	7.3	8.0
Gnome	8.0	7.3
Georgetown	6.7	6.7
Haga	7.0	7.0
Kelly	7.8	7.3
Kenblue	4.3	8.3
Liberty	7.2	7.3
Merion	6.0	6.7
Merit	7.8	7.7
Midnight	6.2	9.0
Monopoly	7.0	6.7
Nassau	7.7	8.0
Ram I	5.5	8.0
South Dakota	4.3	7.7
Touchdown	7.0	6.7
Viva	7.7	7.7
LSD (.05)	0.74	0.69

Rating Scale: 1–9; 9 = Dark Green

TABLE 18

A Comparison of Spring Greenup of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	SPRING GREENUP
Ba 78-165	5.0
Abbey	3.7
Adelphi	4.3
Allure	3.3
Ascot	5.0
Baron	4.0
Bristol	4.7

TABLE 18-continued

A Comparison of Spring Greenup of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	SPRING GREENUP
Buckingham	3.7
Chateau	3.3
Classic	3.0
Coventry	3.5
Estate	3.0
Fairfax	3.3
Georgetown	4.0
Glade	3.0
Gnome	4.3
Kelly	3.7
Kenblue	4.0
Merion	3.5
Merit	3.7
Nassau	3.0
Ram I	3.3
Victa	3.7
LSD (.05)	1.16

Rating Scale: 1–9; 9 = Actively Growing

TABLE 19

A Comparison of Summer Greenup of Ba 78-165 and Other Kentucky Bluegrass Varieties after Summer Dormancy Due to Drought and under Low Maintenance at North Brunswick, NJ.

Variety	Summer Greenup
Ba 78-165	6.0
Baron	5.3
Eclipse	5.7
Georgetown	3.3
Glade	6.3
Gnome	5.0
Haga	4.0
Kenblue	5.0
Liberty	5.7
Merion	5.3
Merit	5.3
Midnight	4.7
Monopoly	5.3
Nassau	5.7
Ram I	5.7
South Dakota	5.7
LSD (.05)	1.9

Rating Scale: 1–9; 9 = Fastest Greenup after Summer Dormancy

TABLE 20

A Comparison of Winter Color in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	TEST A	TEST B
Ba 78-165	5.0	4.0
Baron	3.7	2.3
Eclipse	4.3	3.3
Georgetown	6.0	6.3
Glade	4.3	1.7
Gnome	2.7	2.0
Haga	5.3	5.0
Kenblue	3.3	1.0
Liberty	7.0	5.7
Merion	3.0	1.7
Merit	2.7	1.7
Midnight	6.3	4.3
Monopoly	6.7	3.3

TABLE 20-continued

A Comparison of Winter Color in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	TEST A	TEST B
Nassau	5.3	3.0
Ram I	7.3	1.7
South Dakota	2.0	2.7
LSD (.05)	1.6	1.5

Rating Scale: 1–9; 9 = Brightest Green Color

TABLE 21

A Comparison of Turf Density in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties under Shade Conditions at Marysville, OH.

Variety	TEST A	TEST B	TEST C
Ba 78-165	6.5	6.5	8.0
Abbey	3.5	6.0	7.0
Adelphi	6.5	6.0	7.5
Baron	5.5	5.5	6.3
Bristol	5.5	6.0	8.0
Chateau	7.0	6.0	7.0
Classic	4.0	6.0	7.0
Coventry	6.0	6.0	7.0
Estate	6.5	7.0	7.5
Georgetown	6.0	5.0	6.0
Glade	5.5	6.5	7.5
Gnome	4.0	6.0	6.5
Kelly	4.5	6.0	7.0
Kenblue	6.0	6.0	6.0
Merion	5.0	6.0	8.0
Merit	4.5	5.0	7.0
Nassau	6.0	5.5	6.5
Ram I	5.5	4.5	7.0
Victa	4.5	5.5	6.5
LSD (.05)	2.18	1.82	1.47

Rating Scale: 1–9; 9 = maximum density.

TABLE 22

A Comparison of Fall Recovery of Ba 78-165 and Other Kentucky Bluegrass Varieties after Summer Dormancy due to Drought under Low Maintenance at North Brunswick, NJ.

Variety	FALL RECOVERY
Ba 78-165	6.0
Baron	4.0
Eclipse	6.7
Georgetown	6.0
Glade	4.7
Gnome	3.3
Haga	4.3
Kenblue	3.7
Liberty	6.7
Merion	4.7
Merit	5.0
Midnight	7.7
Monopoly	5.3
Nassau	6.3
Ram I	5.7
South Dakota	3.3
LSD (.05)	2.1

Rating Scale: 1–9; 9 = Fastest Turf Recovery after Summer Dormancy.

TABLE 23

A Comparison of Seedling Vigor of Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	SEEDLING VIGOR
Ba 78-165	7.8
Baron	8.5
Eclipse	2.3
Georgetown	4.3
Glade	7.8
Gnome	7.3
Haga	7.2
Kenblue	8.2
Liberty	7.3
Merion	1.0
Merit	7.2
Midnight	5.5
Monopoly	7.7
Nassau	6.5
Ram I	3.3
South Dakota	7.3
LSD (.05)	1.3

Rating Scale: 1–9; 9 = Best Seedling Vigor

TABLE 24

A Comparison of Vertical Growth of Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	VERTICAL GROWTH
Ba 78-165	3.0
Baron	4.0
Eclipse	2.7
Georgetown	5.3
Glade	3.3
Gnome	4.0
Haga	6.7
Kenblue	8.0
Liberty	5.7
Merit	4.0
Midnight	3.3
Monopoly	8.0
Nassau	5.0
Ram I	3.7
South Dakota	7.0
LSD (.05)	1.2

Rating Scale: 1–9; 9 = Most Vertical Growth 37 Days after Seeding

TABLE 25

A Comparison of Heat Stress of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	HEAT STRESS
Ba 78-165	6.0
Abbey	6.3
Adelphi	5.7
Allure	5.3
Ascot	7.0
Baron	6.0
Bristol	6.0
Buckingham	5.7
Chateau	6.0
Classic	5.3
Coventry	6.0
Estate	6.0
Fairfax	6.0
Georgetown	4.7
Glade	6.3
Gnome	6.3

TABLE 25-continued

A Comparison of Heat Stress of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	HEAT STRESS
Kelly	6.3
Kenblue	4.3
Merion	5.0
Merit	6.0
Nassau	6.0
Ram I	6.0
Victa	4.0
LSD (.05)	0.89

Rating Scale: 1–9; 9 = Least Heat Stress

Turf diseases are one of the major causes of inconsistent and poor turf performance. Ba 78-165 has been found to have a medium to high level of resistance to the following diseases: (1) leaf spot and melting out caused by *Drechslera poae* (formerly called *Helminthosporium vagans*); (2) powdery mildew caused by *Erysiphe graminis*; and (3) red thread caused by *Laetisaria fuciformis*. Ba 78-165 has displayed tolerance to turf damage due to billbugs.

Comparisons of disease incidence of Ba 78-165 as compared with other Kentucky Bluegrass varieties in regard to leaf spot, rusts, powdery mildew, red thread, and billbugs are presented in Tables 26–31.

TABLE 26

A Comparison of Leaf Spot Incidence in Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	LEAF SPOT
Ba 78-165	35.0
Allure	66.7
Adelphi	68.3
Bonnieblue	73.3
Bristol	43.3
Chateau	71.0
Estate	60.0
Glade	60.0
Merit	55.0
Park	95.0
Vantage	95.0
Victa	60.0
LSD (.05)	26.9

Rating Scale: % Disease

TABLE 27

A Comparison of Powdery Mildew Incidence in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH.

Variety	TEST A	TEST B
Ba 78-165	8.0	6.5
Abbey	6.5	2.0
Adelphi	7.0	4.5
Baron	6.0	3.0
Bristol	6.0	6.0
Chateau	6.0	4.0
Classic	6.5	3.5
Coventry	6.0	4.6
Estate	6.5	4.5
Georgetown	6.0	4.0
Glade	7.0	5.5
Gnome	6.5	2.5
Kelly	5.5	2.5
Kenblue	6.0	6.0

TABLE 27-continued

A Comparison of Powdery Mildew Incidence in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH.

Variety	TEST A	TEST B
Merion	5.0	2.0
Merit	5.5	3.0
Nassau	6.0	3.5
Ram I	6.5	4.0
Victa	6.0	2.5
LSD (.05)	1.93	2.68

TABLE 28

A Comparison of Leaf Spot Incidence in Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	LEAF SPOT
Ba 78-165	5.0
Baron	4.7
Eclipse	7.0
Georgetown	4.0
Glade	3.0
Gnome	3.7
Haga	2.7
Kenblue	1.0
Liberty	4.7
Merion	4.3
Merit	5.7
Midnight	7.7
Monopoly	3.3
Nassau	6.3
Ram I	4.3
South Dakota	1.0
LSD (.05)	1.4

Rating Scale: 1–9; 9 = No disease.

TABLE 29

A Comparison of Powdery Mildew Incidence in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties Grown in Shade at Marysville, OH.

Variety	TEST A	TEST B
Ba 78-165	0	0
Abbey	75	40
Banff	45	0
Bristol	30	0
Chateau	50	5
Coventry	15	0
Estate	10	0
Glade	65	40
Kelly	60	20
Kenblue	10	0
Monopoly	5	0
Newport	75	25
Victa	60	65
LSD (.05)	31.3	29.1

Rating Scale: % Disease

TABLE 30

A Comparison of Red Thread Incidence in Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	RED THREAD
Ba 78-165	8.0
Abbey	7.7
Ascot	8.0
Baron	7.7

TABLE 30-continued

A Comparison of Red Thread Incidence in Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	RED THREAD
Bristol	7.3
Buckingham	7.7
Cannon	8.0
Coventry	6.3
Fairfax	8.0
Gnome	8.0
Haga	8.0
Kenblue	4.7
Liberty	8.0
Merion	7.7
Merit	8.0
Midnight	7.7
Monopoly	7.7
Park	6.0
Ram I	7.3
South Dakota	7.7
Victa	8.0
Viva	7.7
LSD (.05)	1.14

Rating Scale: 1–9; 9 = No disease.

TABLE 31

A Comparison of Billbug Tolerance of Ba 78-165 and Outer Kentucky Bluegrass Varieties at Marysville, OH.

Variety	BILLBUG TOLERANCE
Ba 78-165	4.5
Abbey	4.0
Allure	1.5
Bristol	3.3
Challenger	2.7
Chateau	1.2
Classic	3.7
Coventry	2.3
Eclipse	3.0
Estate	2.3
Gnome	3.7
Kelly	3.7
Liberty	3.0
Merit	3.3
Midnight	3.7
Nassau	3.3
Newport	4.0
Victa	3.7
Viva	3.0
LSD (.05)	1.33

Rating Scale: 1–9; 9 = No damage from insect.

Comparisons of Ba 78-165 with other Kentucky Bluegrass varieties for seed head density, plant height, maturity, and seed yields are shown in Table 32–42 as follows:

TABLE 32

A Comparison of Seed Head Density in Mowed Turf of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	SEED HEAD DENSITY
Ba 78-165	93
Adelphi	50
Allure	70
Ascot	30
Baron	85
Bristol	97
Buckingham	67
Chateau	63

TABLE 32-continued

A Comparison of Seed Head Density in Mowed Turf of Ba 78-165 and Other Kentucky Bluegrass Varieties at Marysville, OH.

Variety	SEED HEAD DENSITY
Classic	43
Coventry	40
Estate	73
Fairfax	93
Georgetown	53
Glade	73
Gnome	60
Kelly	80
Kenblue	7
Merion	75
Merit	83
Nassau	73
Ram I	77
Victa	22
LSD (.05)	25.2

Rating Scale: % Seed Head Density.

TABLE 33

A Comparison of Seed Head Density in Mowed Turf of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	SEED HEAD DENSITY
Ba 78-165	6.0
Ba 76-372	6.0
Ba 77-700	6.3
Abbey	6.0
Able I	7.7
A-34	9.0
Allure	7.7
Ascot	7.7
Baron	6.3
Banff	8.3
Bristol	5.7
Buckingham	6.7
Cannon	6.3
Classic	8.7
Challenger	8.0
Coventry	8.0
Eclipse	8.6
Estate	8.0
Fairfax	8.0
Georgetown	8.3
Glade	9.0
Gnome	7.0
Haga	8.3
Kelly	6.7
Kenblue	9.0
Liberty	8.3
Merion	6.3
Merit	6.0
Midnight	8.0
Monopoly	7.7
Nassau	8.0
Ram I	8.3
South Dakota	8.0
Touchdown	9.0
Viva	6.3
LSD (.05)	0.95

Rating Scale: 1–9; 9 = No Seed Heads.

TABLE 34

A Comparison of Seed Head Density in Mowed Turf of Ba 78-165 and Other Kentucky Bluegrass Varieties under Low Maintenance at North Brunswick, NJ.

Variety	SEED HEAD DENSITY
Ba 78-165	8.3
Baron	7.0
Eclipse	1.7
Georgetown	5.3
Glade	1.7
Gnome	6.3
Haga	5.3
Kenblue	1.0
Liberty	6.0
Merion	6.0
Merit	8.0
Midnight	1.0
Monopoly	4.0
Nassau	7.0
Ram I	3.7
South Dakota	1.3
LSD (.05)	1.7

Rating Scale: 1–9; 9 = Most Seed Heads.

TABLE 35

A Comparison of Plant Height (cm) in Early Spring of Ba 78-165 and Other Kentucky Bluegrass Varities at Gervais, OR.

Variety	PLANT HEIGHT
Ba 78-165	17.8
Ba 76-372	10.6
Ba 77-700	10.9
Abbey	9.4
Allure	12.4
Ascot	8.6
Bristol	9.6
Buckingham	8.6
Cannon	11.7
Chateau	8.9
Coventry	6.4
Estate	8.9
Fairfax	8.4
Gnome	7.9
Kelly	11.4
Newport	13.7
Victa	8.1
Viva	10.2
LSD (.05)	2.09

TABLE 36

A Comparison of Mature Plant Height (cm) in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B
Ba 78-165	48.0	53.4
Ba 76-372	60.5	68.4
Ba 77-700	49.2	60.0
Abbey	45.0	65.0
Allure	49.2	53.0
Ascot	48.4	56.0
Bristol	62.2	69.4
Buckingham	56.8	66.8
Cannon	50.6	68.4
Chateau	45.6	60.2
Coventry	51.4	62.4
Estate	50.6	57.4
Fairfax	56.4	60.6
Gnome	42.6	60.8
Kelly	48.4	65.2
Newport	61.6	74.9

TABLE 36-continued

A Comparison of Mature Plant Height (cm) in Two Tests (A–B) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B
Victa	49.8	68.2
Viva	55.0	61.6
LSD (.05)	8.06	8.72

TABLE 37

A Comparison of Mature Plant Height (cm) in Three Tests (A–C) Conducted in Late June of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B	TEST C
Ba 78-165	68.8	60.5	59.0
Abbey	65.3	60.4	50.3
Buckingham	68.0	43.9	56.5
Coventry	60.3	42.1	51.5
Midnight	75.0	39.2	45.0
Vantage	73.0	81.8	73.5
LSD (.05)	7.45	4.54	7.09

TABLE 38

A Comparison of Seed Head Density of Mature Plants of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR

Variety	SEED HEAD DENSITY
Ba 78-165	8.5
Abbey	4.0
Buckingham	6.0
Coventry	4.5
Midnight	5.8
Vantage	7.8
LSD (.05)	1.25

Rating: 1–9; 9 = Most Seed Heads

TABLE 39

A Comparison of Maturity (1%, 50% and 100% Anthesis) in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

	TEST A	TEST B			TEST C		
Variety	1%	1%	50%	100%	1%	50%	100%
Ba 78-165	144	124	126	132	120	133	138
Ba 76-372	152	126	129	133	122	132	139
Ba 77-700	151	129	134	138	130	137	141
Abbey	150	129	132	137	130	138	141
Allure	144	128	131	135	127	136	140
Ascot	140	119	124	132	120	134	140
Bristol	144	125	127	132	122	132	139
Buckingham	141	123	128	134	117	131	138
Cannon	153	129	132	136	130	138	141
Chateau	144	128	131	135	130	137	140
Coventry	144	127	129	134	130	137	140
Estate	143	127	129	135	130	137	140
Fairfax	144	126	129	133	124	135	139
Gnome	150	129	133	137	130	138	142
Kelly	150	129	133	137	127	137	141
Newport	145	120	123	131	119	131	139
Victa	151	129	132	136	130	139	143
Viva	150	129	133	137	130	138	142
LSD (.05)	2.6	2.1	2.5	1.8	5.2	3.1	2.7

Ratings: Days to Reach Percentage Rates of Maturity (1%, 50% or 100%) from Planting Date

TABLE 40

A Comparison of Maturity (1%, 50% and 100% Heading) in Three Tests (A–C) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

	TEST A			TEST B			TEST C		
Variety	1'%	50%	100%	1%	50%	100%	1%	50%	100%
Ba 78-165	105	118	135	100	119	122	120	133	138
Ba 76-372	117	139	145	99	120	122	122	132	139
Ba 77-700	123	141	146	110	125	127	130	137	141
Abbey	123	139	147	108	124	127	130	138	141
Allure	118	134	142	111	125	126	127	136	140
Ascot	106	120	137	88	112	119	120	134	140
Bristol	112	130	140	95	119	122	122	132	139
Buck-ingham	107	124	137	94	112	120	117	131	138
Cannon	124	142	150	113	125	127	130	138	141
Chateau	118	135	142	106	124	126	130	137	140
Cov-entry	116	132	142	106	122	125	130	137	140
Estate	118	134	142	106	124	126	130	137	140
Fairfax	114	131	142	103	122	124	124	135	139
Gnome	127	137	148	110	125	127	130	138	142
Kelly	123	135	146	112	125	127	127	137	141
New-port	111	124	140	85	110	118	119	131	139
Victa	123	139	146	112	125	127	130	139	143
Viva	123	140	148	109	125	127	130	138	142
LSD (.05)	5.3	4.5	3.5	5.3	4.1	1.8	5.2	3.1	2.7

Ratings: Days to Reach Percentage Rates of Maturity (1%, 50% or 100%) from Planting Date

TABLE 41

A Comparison of Seed Yields in Four Tests (A–D) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B	TEST C	TEST D	Mean
Ba 78-165	992	1218	1197	1053	1115
Cannon	970	1306	558	215	760
Viva	920	1258	521	199	725
Abbey	1124	1314	629	319	847
Coventry	786	914	649	352	675
Newport	1165	1002	1177	805	1037
LSD (.05)	209	176	158	140	

Ratings: Pounds per Acre.

TABLE 42

A Comparison of Seed Yields in Four Tests (A–D) of Ba 78-165 and Other Kentucky Bluegrass Varieties at Gervais, OR.

Variety	TEST A	TEST B	TEST C	TEST D
Ba 78-165	1196	982	673	638
Abbey	516	848	483	249
Buckingham	457	1071	555	328
Coventry	480	429	111	268
Midnight	112	618	251	233
Vantage	328	663	400	227
LSD (.05)	100	130	81	59

Ratings: Pounds per Acre.

What is claimed is:

1. A variety of Kentucky Bluegrass plant, substantially as shown and described, characterized by a medium to high level of resistance to a broad spectrum of diseases, including

leaf spot and melting out disease, red thread and powdery mildew; a moderate tolerance to billbugs; a medium deep green color throughout the growing season; medium to high quality turf formation under a wide variety of environmental conditions; a moderately wide leaf blade; a low growth habit; and a high level of seed yielding capacity.

* * * * *

FIG. 1

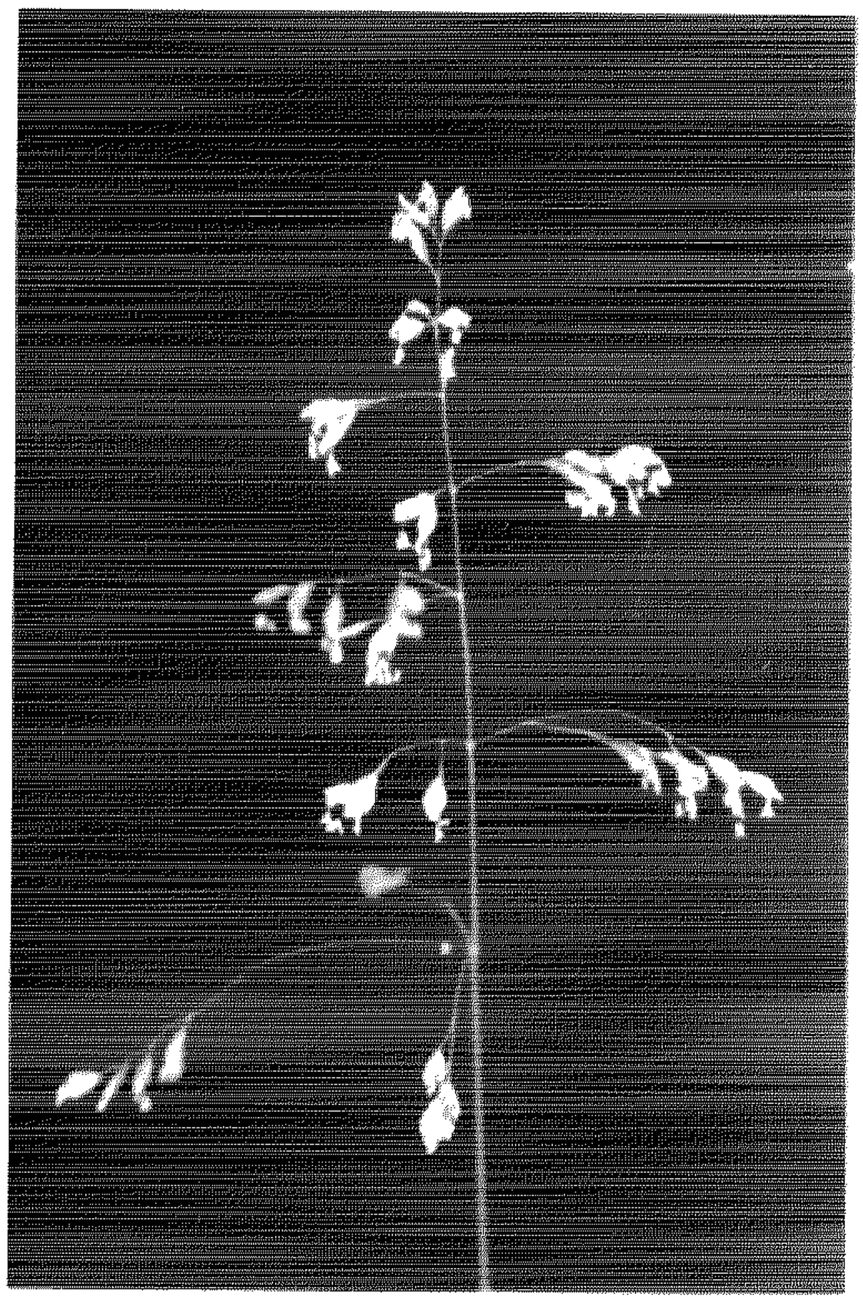

FIG. 2

FIG. 3