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[54] **'BA 73-381' KENTUCKY BLUEGRASS**

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[57] **ABSTRACT**

A variety of Kentucky bluegrass having a medium to high level of resistance to leaf spot, melting out disease, rust diseases, and stripe smut; a desirable green color throughout the growing season; the ability to form a turf of good quality under a wide variety of environmental conditions; a moderately wide blade 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 pratensis that has been designated Ba 73-381 Kentucky bluegrass.

2. Description of Related Art

Kentucky bluegrasses have been disclosed in U.S. Plant Pat. Nos. 3,156, issued May 9, 1972; 3,186, issued May 23, 1972; 4,336, issued Nov. 28, 1978; 6,280, issued Sep. 6, 1988; 6,537 and **6,538**, issued Jan. 17, 1989; 6,585, issued Feb. 7, **1989**, **7,831**, issued Mar. 17, 1992; 8,490, issued Dec. 7, 1993 and pending U.S. Plant patent application Ser. No. 08/125,564, filed Sep. 23, 1993.

SUMMARY OF THE VARIETY

Ba 73-381 Kentucky bluegrass plant material originated by crossing an unreleased Kentucky bluegrass selection (Bd65-26-1) from the O. M. Scott and Sons breeding program with a Merion Kentucky bluegrass plant 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 73-381 was produced first at Marysville, Ohio and later at Gervais, Oreg. This seed was used to plant turf performance evaluation trails and later seed production fields. Asexual production of Ba 73-b **381** 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 73-381 is approximately 99% based upon examining seedling characteristics of approximately 100 to 150 seedlings from six different crop years in a growth chamber.

Ba 73-381 has a number of highly desirable characteristics including a medium to high level of resistance to Drechslera spp. formerly called Helminthosporium spp. that causes leaf spot, melting out and crown rot, Puccinia spp. that causes several tupes of rust infections, and *Ustilago striiformis* that causes strip smut. Ba 73-381 has an attractive leafy turf type growth habit, moderately wide leaf blades, attractive green color which can be maintained throughout the entire growing season, and good turf performance as evidenced by consistently good scores for quality and color. Ba 73-381 has a high seed yield potential in the bluegrass seed production region of northwestrn U.S.A.

In comparison with a number of other Kentucky bluegrasses, Ba 73-381 differs significantly in regard to

the following morphological characteristics: (1) seed width, (2) floret number, (3) flag leaf ligule hair, (4) vegetative leaf margin hair, (5) peduncle width and (6) vegetative leaf ligule length.

Ba 73381 has a large seed, below average seed count and a long rachilla, a short and narrow panicle, a high whorl and branch count, average size spikelets, a low floret count and average size glumes. Ba 73-381 has a medium length culm, a low node count, an average internode length, a medium length but above averge peduncle width. The flag leaf is average in length and width but above average in thickness, has a long ligule and a statistically higher ligule hair content than most other bluegrasses in the evaluation. The vegetative leaf of Ba 73-381 is long, slightly below average in width but average in thickness, a short ligule and a low population of leaf margin hairs. The vegetative leaf under close mowing practiced under lawn maintenance conditions has a statistically broader leaf than a number of other Kentucky bluegrasses.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1**. is a Ba 73-381 Kentucky bluegrass panicle;

FIG. **2** is Ba 73-381 Kentucky bluegrass seed; and

FIG. **3** is a ba 73-381 Kentucky bluegrass plant during anthesis.

DETAILED DESCRIPTION OF THE VARIETY

Ba 73-381 Kentucky bluegrass (*Poa pratensis* L.) is a perennial with creeping rhizomes forming a dense turf. When plants overwinter in the filed 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 39.5 mm in length, 3.1 nodes per culm, an uppermost internode length of 10.8 cm and a peduncle averaging 24.3 cm in length, and 0.808 mm in width. The vegetative leaf averages 22.1 cm in length, 3.3 mm in width, 0.300 mm in thickness, 0.16 mm in ligule length and a low leaf margin hair count. The flag leaf averages 4.3 cm in length, 3.5 mm in width, 0.223 mm in thickness, a ligule length of 1.3 mm and a high ligule hair count. The panicle averages 80.2 mm in length, 55.3 mm in width and 9.8 whorls. The lowest whorl averages 4.1 branches and the third whorl from the bottom of the panicle 3.9 branches (Table 3). The spikelets in the lowest whorl average 4.7 mm in

length, 2.4 mm in width and 2.7 florets. The outer glume from the lowerst whorl averages 2.8 mm in length and the inner glume 3.2 mm in length. The spikelet from the third whorl averages 4.6 mm in length, 2.6 mm in width, and 2.7 florets.

The outer glume from the third whorl averages 2.9 mm in length and the inner glume 3.1 mm in length. Conditioned seed of Ba 73-381 averages 3.00 mm in length, 0.94 mm in width, a rachilla length of 0.86 mm and approximately 1,171,000 seeds per pound. The dorsal side of the lemma keel contained an average population of hairs.

Comparisons of Ba 73-381 with other varieties in terms of seed dimensions and seed numbers per pound are shown in Tables 1 and 2 as follows:

TABLE 1

Seed and Rachilla Measurements and Lemma Hair of Ba 73-381 and Other Kentucky Bluegrass Varieties After Conditioning

Variety	Length (mm)	Width (mm)	Rachilla (mm)	Lemma* Hair
Ba 73-381	3.00	0.94	0.86	4.9
Ba 73-366	3.04	0.91	0.80	4.4
Abbey	2.97	0.89	0.80	3.8
Adelphi	2.70	0.84	0.65	4.4
America	2.40	0.68	0.68	2.8
Baron	3.08	0.81	0.71	5.0
Bristol	2.94	0.88	0.73	4.3
Chateau	2.81	0.86	0.71	4.5
Coventry	2.71	0.81	0.70	4.0
Eclipse	2.77	0.83	0.68	3.5
Georgetown	2.94	0.82	0.74	4.9
Gnome	2.78	0.83	0.75	4.1
Kelly	3.07	0.89	0.75	4.2
Marquis	2.97	0.87	0.83	4.7
Midnight	2.94	0.76	0.78	5.7
Nassau	3.07	0.86	0.68	3.4
Ram I	3.23	0.89	0.80	6.0
Touchdown	2.93	0.88	0.71	4.6
Victa	3.00	0.80	0.82	3.5
LSD (.05)	0.16	0.05	0.13	0.86

*Rating Scale 0–9: 9 = abundant row of hairs along keel.

TABLE 2

Comparison of Seed Numbers Per Pound of Ba 73-381 and Other Kentucky Bluegrass Varieties After Conditioning

Variety	Seeds per Pound
Ba 73-381	1,171,000
Ba 73-366	1,025,586
Abbey	1,003,037
Adelphi	1,383,976
America	1,659,824
Baron	1,051,693
Bristol	1,270,821
Chateau	1,300,105
Coventry	1,246,200
Eclipse	1,335,668
Georgetown	1,431,000
Gnome	1,017,641
Kelly	921,166
Marquis	1,054,642
Midnight	1,227,000
Nassua	1,127,130
Ram 1	1,214,000
Touchdown	1,211,000
Victa	1,038,298

Since environmental conditions such as soil and climate may influence morphological characters to some extent, comparisons of morphological characteristics of Ba 73-381 are made with other Kentucky bluegrass varieties are given in Tables 3–8.

TABLE 3

Morphological Comparison of Panicles of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Panicle Nodding*	Panicle Length (mm)	Panicle Width (mm)	Number Whorls/ Panicle	Number of Branches Lower Whorl	Number of Branches Third Whorl
Ba 73-381	1.1	80.2	55.3	9.8	4.1	3.9
Ba 73-366	1.6	88.8	68.4	8.8	4.3	3.7
Abbey	1.6	80.4	59.3	9.3	3.8	3.3
Adelphi	1.8	106.8	76.4	10.0	3.6	3.0
America	2.3	67.7	51.1	8.8	3.3	3.5
Baron	2.2	92.6	71.0	10.0	3.4	2.8
Bristol	2.0	85.5	61.5	8.4	2.8	2.7
Chateau	2.9	65.2	57.3	8.5	3.3	2.8
Coventry	2.5	64.0	54.2	8.4	3.3	2.5
Eclipse	1.3	89.2	74.0	10.7	3.3	2.1
Georgetown	1.0	80.0	57.0	7.4	2.1	2.6
Gnome	1.1	80.6	56.0	10.6	4.6	3.9
Kelly	2.0	88.0	70.2	9.8	4.6	3.7
Marquis	1.1	82.0	63.0	10.3	3.9	3.6
Midnight	2.0	75.8	48.4	7.1	2.9	3.0
Nassau	2.2	91.2	68.6	10.0	2.5	2.1
Ram I	1.3	67.7	47.0	7.3	3.0	3.2
Touchdown	1.1	73.1	75.0	7.6	2.1	2.3
Victa	1.7	74.9	58.3	10.0	4.7	3.5
LSD (.05)	0.68	7.35	8.62	0.66	0.72	0.50

*Panicle Nodding Rating Scale: 1–9; 9 = most nodding

TABLE 4

Morphological Comparison of Spikelets of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, Ohio

Variety	Spikelet Lower Whorl Length (mm)	Spikelet Lower Whorl Width (mm)	Spikelet Third Whorl Length (mm)	Spikelet Third Whorl Width (mm)	Number of Florets Per Spikelet Lower Whorl	Number of Florets Per Spikelet Third Whorl
Ba 73-381	4.7	2.4	4.6	2.6	2.7	2.7
Ba 73-366	4.6	2.5	4.7	2.6	2.6	2.8
Abbey	4.4	2.2	4.5	2.2	3.0	3.0
Adelphi	4.6	2.2	4.8	2.2	4.4	4.4
America	4.6	2.2	4.4	2.3	4.5	4.3
Baron	5.4	2.8	5.4	3.1	4.0	4.2
Bristol	4.9	2.4	5.0	2.5	4.2	4.5
Chateau	4.4	2.4	4.4	2.4	3.4	3.5
Coventry	4.4	2.2	4.5	2.4	3.2	3.5
Eclipse	4.6	2.4	4.6	2.4	3.6	3.6
Georgetown	5.0	2.3	5.0	2.6	4.8	4.9
Gnome	4.6	2.5	4.6	2.9	3.2	3.2
Kelly	5.1	2.5	5.2	2.8	3.7	3.8
Marquis	4.3	2.2	4.4	2.3	3.1	2.9
Midnight	5.3	2.5	5.5	2.4	4.4	4.7
Nassau	4.7	2.6	4.8	3.0	4.2	4.3
Ram I	5.4	2.6	5.3	2.8	3.6	3.4
Touchdown	5.1	2.9	4.8	2.8	4.1	4.0
Victa	4.5	2.5	4.5	2.4	3.3	3.2
LSD (.05)	0.41	0.35	0.38	0.35	0.58	0.53

TABLE 5

Morphological Comparison of Glumes of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, Ohio

Variety	Glume Length (mm) Outer Lowest Whorl	Outer Third Whorl	Inner Lowest Whorl	Inner Third Whorl
Ba 73-381	2.8	2.9	3.2	3.1
Ba 73-366	2.8	2.8	3.2	3.1
Abbey	2.7	2.7	3.1	3.1
Adelphi	2.7	2.6	3.0	3.1
America	2.1	2.1	2.5	2.5
Baron	3.1	3.2	3.6	3.7
Bristol	2.8	3.0	3.3	3.4

TABLE 5-continued

Morphological Comparison of Glumes of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, Ohio

Chateau	2.8	2.9	3.1	3.2
Coventry	2.7	2.8	3.1	3.1
Eclipse	3.0	3.0	3.4	3.4
Georgetown	2.8	2.8	3.1	3.1
Gnome	2.8	2.9	3.3	3.3
Kelly	3.0	3.1	3.4	3.5
Marquis	2.8	2.7	3.1	3.1
Midnight	2.6	2.6	3.0	3.1
Nassau	2.6	2.7	2.9	3.0
Ram I	2.9	3.0	3.6	3.5
Touchdown	3.3	3.3	3.8	3.8
Victa	2.8	2.7	3.1	3.1
LSD (.05)	0.23	0.22	0.22	0.23

	Glume Hairs			
Variety	Lowest Outer	Whorl Inner	Third Outer	Whorl Inner
Ba 73-381	1.7	2.3	2.1	2.3
Ba 73-366	1.7	1.3	1.3	2.0
Abbey	0.6	0.9	1.0	1.0
Adelphi	0.6	2.7	1.1	1.9
America	0.2	0.5	0.3	0.3
Baron	4.8	4.4	4.2	4.6
Bristol	1.0	2.2	0.8	2.2
Chateau	1.5	2.6	2.0	1.8
Coventry	1.5	2.7	1.6	2.4
Eclipse	1.5	1.9	1.8	1.9
Georgetown	1.7	2.7	1.2	2.5
Gnome	1.0	1.9	1.2	1.6
Kelly	1.3	1.5	1.1	0.8
Marquis	0.9	1.1	1.7	1.8
Midnight	1.8	2.8	1.0	2.4
Nassau	2.1	2.6	4.2	4.4
Ram I	1.1	2.3	0.7	1.2
Touchdown	0.7	2.1	1.1	1.4
Victa	0.8	1.1	1.1	1.3
LSD (.05)	0.9	0.9	0.9	0.9

TABLE 6

Morphological Comparison of Flag Leaves of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, Ohio

Sheath[4]	Length	Width	Thickness	Leaf	
Variety	(cm)	(mm)	(mm)	Angle[1]	Curve[2]
Ba 73-381	4.3	3.5	0.223	1.9	5.0
Ba 73-366	4.5	3.6	0.180	5.1	4.4
Abbey	3.8	3.4	0.145	2.7	4.1
Adelphi	5.7	3.4	0.178	5.2	5.0
America	4.3	2.6	0.211	4.6	5.0
Baron	7.0	4.2	0.152	9.2	4.4
Bristol	4.3	3.2	0.211	2.3	5.0
Chateau	4.0	2.7	0.193	3.4	2.0
Coventry	3.7	3.0	0.140	0.7	4.3
Eclipse	3.9	3.2	0.193	8.7	5.0
Georgetown	5.7	2.8	0.221	1.9	5.0
Gnome	4.5	3.5	0.185	4.3	5.0
Kelly	4.8	4.1	0.178	3.1	4.4
Marquis	5.5	3.6	0.241	2.7	4.6
Midnight	3.8	2.6	0.189	1.1	5.0
Nassau	6.0	3.7	0.191	5.9	4.7
Ram I	3.4	3.1	0.191	1.0	4.8
Touchdown	4.1	2.7	0.163	3.4	4.1
Victa	3.9	3.7	0.267	2.1	4.6
LSD (.05)	1.0	0.4	0.02	2.5	0.4

		Hairs[3] on Leaf		
Sheath[4] Variety	Ligule (mm)	Margin	Ligule	Color
Ba 73-381	1.3	0.4	3.6	1.5
Ba 73-366	1.5	0.4	2.2	0.5
Abbey	1.3	0.8	1.6	0.2
Adelphi	1.1	1.8	1.6	0.4
America	0.6	0.4	0.7	1.9
Baron	1.2	1.0	3.8	2.6
Bristol	0.6	0.4	1.9	2.0

TABLE 6-continued

Morphological Comparison of Flag Leaves of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, Ohio

Chateau	0.9	1.1	3.1	0.3
Coventry	0.9	0.8	1.7	2.0
Eclipse	1.1	1.0	1.0	0.2
Georgetown	0.6	0.6	2.0	2.0
Gnome	0.8	0.9	3.2	1.5
Kelly	1.5	1.1	2.5	2.2
Marquis	0.8	0.5	3.8	1.5
Midnight	0.4	0.4	0.3	2.0
Nassau	1.1	2.6	2.4	0.8
Ram I	0.7	0.5	1.3	2.0
Touchdown	1.1	1.0	1.0	7.7
Victa	1.3	1.0	0.8	0.5
LSD (.05)	0.17	0.47	0.7	0.76

[1]Degrees from the stem
[2]Rating Scale: 1–9; 1 = curves up; 5 = no curve; 9 = curves down
[3]Rating Scale: 0–9; 0 = none; 9 = many
[4]Rating Scale: 0–9; 0 = no color; 9 = dark purple

TABLE 7

Morphological Comparison of Peduncles, Culms, Node Numbers Per Culm and Internode Length of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety (cm)	Peduncle Length (cm)	Peduncle Width (mm)	Culm Length (cm)	Nodes Per Culm	Top Internode Length
Ba 73-381	24.3	0.808	39.5	3.1	10.8
Ba 73-366	26.4	0.704	42.7	4.1	9.2
Abbey	23.2	0.655	41.3	4.1	11.0
Adelphi	24.5	0.665	40.0	4.0	10.4
America	16.2	0.622	31.8	3.1	11.0
Baron	34.0	0.701	52.8	4.2	12.8
Bristol	22.9	0.734	43.5	4.0	12.6
Chateau	20.7	0.607	38.9	4.4	9.9
Coventry	19.6	0.487	34.7	4.5	7.9
Eclipse	23.7	0.658	39.2	4.9	9.9
Georgetown	21.7	0.683	37.5	3.2	11.1
Gnome	19.4	0.836	35.3	3.1	9.2
Kelly	29.4	0.752	46.6	3.6	11.8
Marquis	27.1	0.831	34.1	3.4	7.8
Midnight	20.5	0.722	29.5	2.8	7.6
Nassau	25.0	0.663	36.0	3.9	7.4
Ram I	22.2	0.694	30.5	2.5	6.6
Touchdown	23.6	0.519	38.0	4.0	8.4
Victa	21.2	0.808	37.9	3.7	10.3
LSD (.05)	3.2	0.08	3.3	0.4	1.9

TABLE 8

Morphological Comparison of Vegetative Leaves of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Length (cm)	Width (mm)	Thickness (mm)	Leaf Angle[1]	Leaf Curve[2]
Ba 73-381	22.1	3.3	0.300	62.5	8.2
Ba 73-366	22.9	3.8	0.401	53.0	7.1
Abbey	20.7	3.6	0.277	51.3	7.4
Adelphi	19.4	3.7	0.279	67.0	4.6
America	21.4	3.1	0.325	66.0	6.4
Baron	18.2	4.3	0.290	35.0	4.4
Bristol	18.2	3.7	0.320	65.5	6.9
Chateau	23.1	3.3	0.328	39.7	5.4
Coventry	23.4	3.6	0.249	63.0	7.3
Eclipse	20.3	4.4	0.302	65.5	5.4
Georgetown	19.5	3.6	0.287	56.7	5.8
Gnome	18.2	2.9	0.290	43.2	6.6
Kelly	22.8	3.9	0.300	55.5	7.0
Marquis	19.7	3.7	0.376	46.8	7.8
Midnight	19.5	3.5	0.310	63.3	5.0
Nassau	16.3	3.7	0.292	63.2	4.9
Ram I	19.1	3.6	0.271	70.8	6.5
Touchdown	16.7	3.7	0.243	51.3	4.0
Victa	21.5	3.6	0.360	56.3	6.7
LSD (.05)	3.5	0.43	0.04	15.9	1.5

TABLE 8-continued

Morphological Comparison of Vegetative Leaves of Ba 73-381 and Other Kentucky Bluegrass Varieties in the Greenhouse at Marysville, OH

Variety	Ligule (mm)	Hairs[3] Ligule	Hairs[3] Leaf Margin	Leaf Roughness[4]	Sheath Color[5]
Ba 73-381	0.16	3.2	0.7	8.2	2.0
Ba 73-366	0.23	5.2	4.2	8.5	0.0
Abbey	0.32	4.4	2.8	7.7	0.0
Adelphi	0.34	2.6	3.4	8.8	0.0
America	0.12	1.7	2.1	8.4	2.0
Baron	0.33	4.6	3.6	7.4	0.4
Bristol	0.12	2.6	3.0	8.9	2.0
Chateau	0.22	3.3	3.1	7.8	0.5
Coventry	0.32	3.1	2.4	8.1	0.3
Eclipse	0.38	2.8	2.6	9.0	0.2
Georgetown	0.14	2.5	2.4	8.5	2.0
Gnome	0.23	1.6	0.8	7.5	1.4
Kelly	0.34	4.6	2.4	8.8	0.0
Marquis	0.21	3.6	1.1	6.8	1.1
Midnight	0.10	1.3	1.6	7.7	2.0
Nassau	0.34	2.5	3.3	8.5	1.4
Ram I	0.09	1.8	2.0	7.7	2.0
Touchdown	0.29	1.4	1.3	7.9	8.0
Victa	0.26	2.3	1.7	7.9	0.1
LSD (.05)	0.04	0.79	0.70	0.89	0.57

[1]Degrees from stem
[2]Rating Scale: 1–9; 1 = curve up; 5 = no curve; 9 = curve down
[3]Rating Scale: 0–9; 0 = none; 9 = many
[4]Rating Scale: 1–9; 1 = rough; 9 = smooth
[5]Rating Scale: 0–9; 0 = no color; 9 = dark purple

Ba 73-381 has performed well throughout the U.S.A. as exhibited by medium to high turf quality ratings in a number of locations across the U.S.A. in comparison to other Kentucky bluegrass varieties. In addition, it has a pleasant medium green color which can be maintained throughout the growing season, a substantial level of living ground cover and a medium wide leaf.

Comparisons of Ba 73-381 with other Kentucky bluegrass varieties for quality are set forth hereinafter in Tables 9–12:

TABLE 9

Comparison of Turfgrass Quality of Ba 73-381 and Other Kentucky bluegrass Varieties at Various Locations in the U.S.A.

Variety	Locations[1] A	B	C	D	E	F	G
Ba 73-381	8.0	6.9	5.4	6.5	5.3	6.8	5.1
Ba 73-366	7.7	7.2	5.3	6.5	5.0	6.6	4.9
Abbey	7.0	6.9	5.5	5.4	4.9	6.8	5.0
Able I	7.7	7.5	5.9	7.0	5.7	6.5	5.0
A-34	8.7	6.8	4.6	7.0	5.4	6.2	4.9
Banff	8.7	6.6	6.1	6.8	4.6	6.7	5.1
Baron	7.7	7.2	5.7	7.0	5.7	7.0	5.7
Classic	8.3	6.9	6.2	6.8	4.3	6.7	4.8
Coventry	8.7	6.3	5.9	6.7	5.8	7.0	4.7
Eclipse	8.3	6.7	6.5	6.2	5.1	7.3	5.0
Estate	8.7	7.0	5.5	7.0	6.0	6.4	5.0
Georgetown	8.0	6.6	6.6	6.5	4.9	6.9	4.4
Glade	9.0	7.4	7.5	7.0	5.6	7.6	4.3
Gnome	8.0	6.8	5.0	7.0	5.0	7.0	3.9
Haga	8.0	6.7	6.3	7.0	5.1	6.8	4.5
Kelly	7.7	7.2	5.8	6.5	5.0	6.8	5.0
Kenblue	7.7	6.4	3.3	7.0	3.8	6.2	3.9
Marquis	8.0	6.8	5.3	6.7	5.5	6.5	4.9
Merion	6.7	5.1	2.7	5.2	4.2	4.8	3.2
Merit	8.0	6.9	4.9	6.5	4.1	6.6	5.0
Midnight	8.0	7.1	8.3	6.7	4.7	7.7	4.9
Monopoly	7.7	6.5	5.0	7.3	4.8	6.1	5.1
Nassau	8.0	6.9	6.4	6.0	5.5	6.3	4.8
Ram I	8.0	7.8	6.0	7.3	5.2	7.0	5.3
South Dakota	7.0	6.6	3.0	6.2	2.1	4.9	3.0
Touchdown	9.0	7.2	4.2	6.7	3.3	6.5	4.7

TABLE 9-continued

Comparison of Turfgrass Quality of Ba 73-381 and Other Kentucky bluegrass Varieties at Various Locations in the U.S.A.

Variety	Locations[1] A	B	C	D	E	F	G
LSD (.05)	1.2	0.8	0.9	1.1	1.1	0.5	0.9

Rating Scale 1–9; 9 = ideal turf
[1]Locations:
A. Fort Collins, CO;
B. Ames, IA;
C. Adelphia, N.J.;
D. Marysville, OH;
E. Hubbard, OR;
F. Beltsville, MD;
G. Blacksburg, Va.

TABLE 10

A Comparison of Quality of Ba 73-381 and other Kentucky Bluegrass Varieties at Prince Fredrick, Maryland Determined at Various Time Periods A–E

Variety	Quality[1] A	B	Mean of A and B	C	D	E	Mean of C–E
Ba 73-381	2.2	2.4	2.3	2.9	2.6	3.1	2.8
Adelphi	2.0	1.9	1.9	2.7	2.6	3.1	2.8
Bristol	1.9	1.8	1.9	2.6	2.6	3.0	2.8
Glade	1.9	1.7	1.8	2.5	1.4	2.5	2.1
Kelly	2.0	1.9	1.9	2.8	2.5	3.0	2.8
Merion	2.0	2.1	2.0	2.1	1.6	2.5	2.1
Merit	2.7	1.9	2.0	1.6	1.4	2.1	1.7
Nugget	1.8	1.8	1.8	1.0	1.0	1.0	1.0
Park	2.1	2.2	2.2	1.5	1.4	2.3	1.7
Vantage	2.1	2.2	2.2	2.8	2.7	3.0	2.8
Victa	1.7	1.8	1.8	2.9	2.8	3.1	2.9
Mean	1.9	1.9	1.9	2.5	2.3	2.8	2.5
LSD (.05)	1.3	1.3	0.72	1.0	0.62		

[1]Rating Scale: 1–5; 5 = best

TABLE 11

A Comparison of Quality of Ba 73-381 and Other Kentucky Bluegrass Varieties at Marysville, OH Determined at Times A and B

Variety	Quality A	B
Ba 73-381	6.0	7.3
Ba 73-366	7.0	7.3
Abbey	6.3	7.0
Amazon	5.3	5.3
Baron	6.0	6.3
Bristol	5.0	6.0
Coventry	6.0	6.7
Cynthia	5.7	6.7
Gnome	6.0	6.7
Haga	6.7	7.0
Kenblue	6.3	6.3
Merion	5.0	6.3
Merit	6.3	6.7
Midnight	6.0	6.0
Monopoly	6.7	7.7
Park	6.3	6.0
Ram I	6.3	7.7
South Dakota	4.7	6.0
Victa	6.0	7.3
Mean	5.9	6.5
LSD (.05)	1.0	1.0

Rating Scale: 1–9; 9 = ideal turf

TABLE 12

A Comparison of Quality of Ba 73-381 and Other Kentucky Bluegrass Varieties Grown Under Shade Conditions at Marysville, OH at Various Time Periods A–F

Variety	Quality A	B	C	D	E	F
Ba 73-381	2.5	2.0	2.4	2.1	2.4	2.6

TABLE 12-continued

A Comparison of Quality of Ba 73-381 and Other Kentucky Bluegrass Varieties Grown Under Shade Conditions at Marysville, OH at Various Time Periods A–F

	Quality					
Variety	A	B	C	D	E	F
Ba 73-366	2.1	2.0	2.2	2.1	2.2	2.5
Adelphi	2.1	2.0	2.2	2.1	2.2	2.3
Bristol	2.0	2.1	2.2	2.2	1.9	2.3
Merion	2.2	1.9	2.2	2.0	2.3	2.5
Newport	2.0	2.0	2.0	1.8	2.1	2.1
Nugget	1.8	1.8	1.9	1.9	2.0	2.1
Park	1.7	1.8	1.9	1.9	2.0	2.1
Vantage	1.7	1.9	2.1	2.1	2.1	2.3
Victa	2.2	2.0	2.3	2.1	2.1	2.5
Mean	1.9	2.0	2.0	2.0	2.0	2.2
LSD (.05)	0.3	0.13	0.14	0.19	0.19	0.2

Rating Scale: 1–5; 5 = best

With regard to a comparative analysis conducted for purposes of determining color of Ba 73-381 plants relative to other Kentucky bluegrass varieties, readings were taken of the the vegetative color of Ba 73-381 during mid-May 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 73-381 was determined to be 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: Ba 73-366 -5 GY 4/4; Ba 73-540 - 5 GY 4/4; Abbey - 5 GY $\frac{3}{4}$; and Coventry - 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.

Further comparisons of Ba 73-381 with other Kentucky bluegrass varieties for genetic color are set forth hereinafter in Table 13:

TABLE 13

A Comparison of Genetic Color of Ba 73-381 and Other Kentucky Bluegrass Varieties at Various Locations in the U.S.A.

	Locations[1]							
Variety	A	B	C	D	E	E	F	Mean
Ba 73-381	5.0	6.7	5.0	5.4	7.7	6.7	5.7	6.0
Ba 73-366	4.7	5.7	4.3	4.3	7.0	7.0	5.7	5.5
Abbey	4.0	6.2	5.3	4.3	7.0	6.0	6.7	5.6
Able I	4.7	7.3	8.0	6.0	7.3	7.0	6.0	6.6
A-34	4.0	5.0	3.7	4.3	7.0	6.0	5.3	5.0
Banff	5.7	4.7	4.0	5.0	6.7	6.0	4.0	5.1
Baron	4.0	6.0	6.0	5.0	7.3	7.3	6.3	6.0
Classic	5.3	5.2	4.3	5.0	6.7	5.7	4.3	5.2
Coventry	5.3	5.8	5.7	4.3	7.0	6.7	6.3	5.9
Eclipse	5.0	7.0	6.3	5.3	7.3	6.3	7.0	6.3
Estate	4.7	6.2	5.7	5.3	6.7	6.7	5.7	5.8
Georgetown	4.0	5.0	4.7	5.0	7.0	6.0	5.0	5.2
Glade	5.3	7.3	7.0	6.0	7.0	7.0	7.3	6.7
Gnome	5.3	5.5	5.7	4.7	7.3	7.0	6.7	6.0
Haga	4.3	5.0	4.0	5.0	7.0	6.0	4.3	5.1
Kelly	4.7	6.2	4.7	4.0	7.0	6.3	6.3	5.6
Kenblue	3.7	4.3	3.7	3.7	7.0	6.0	4.0	4.6
Marquis	5.0	6.5	5.3	5.0	7.3	7.0	6.7	6.1
Merion	4.3	6.7	6.3	4.3	7.0	5.3	6.0	5.7
Merit	5.0	6.3	4.7	4.3	7.0	7.0	5.3	5.7
Midnight	6.0	7.7	8.3	6.3	8.0	7.7	6.0	7.1
Monopoly	4.7	4.2	4.0	4.0	6.0	6.7	4.0	4.8
Nassau	5.7	6.7	5.7	5.0	8.0	6.7	4.7	6.0
Ram I	6.0	7.0	7.0	6.0	7.3	7.0	6.7	6.7
South Dakota	4.0	5.2	3.0	3.0	7.0	5.3	4.0	4.5

TABLE 13-continued

A Comparison of Genetic Color of Ba 73-381 and Other Kentucky Bluegrass Varieties at Various Locations in the U.S.A.

	Locations[1]							
Variety	A	B	C	D	E	E	F	Mean
Touchdown	4.7	6.3	4.3	4.7	7.3	6.3	5.0	5.5
LSD (.05)	1.3	1.3	0.9	0.7	0.7	0.7	1.4	0.5

Ratings Scale: 1–9; 9 = dark green

[1]Locations:
A. Fort Collins, CO;
B. Post Falls, ID;
C. North Brunswick, NJ;
D. Marysville, OH;
E. Pooled data from Halsey, Hubbard and Gervais, OR;
F. Haymarket, VA

Ba 73-381 developes good density and a high degree of living ground cover. It has a moderately wide blade as identified by leaf texture data. Also, Ba 73-381 has good seedling vigor. Data for these performance characteristics are presented in Tables 14–17 as follows:

TABLE 14

Comparison of Density of Ba 73-381 and Other Kentucky Bluegrass Varieties at Marysville, OH

Variety	Density
Ba 73-381	6.6
Ba 73-366	6.3
Abbey	6.0
Aspen	5.7
A-34	6.0
Banff	6.3
Baron	6.3
Bristol	5.3
Classic	6.7
Coventry	6.7
Eclipse	6.3
Estate	7.3
Georgetown	6.3
Glade	6.7
Gnome	6.3
Haga	6.3
Kelly	6.0
Kenblue	6.0
Marquis	6.3
Merion	4.7
Merit	6.7
Midnight	6.3
Monopoly	6.7
Nassau	5.7
Ram I	7.0
Touchdown	6.0
Victa	6.7
Mean	6.1
LSD (.05)	1.2

Rating Scale: 1–9; 9 = most dense cover

TABLE 15

Comparison of Percent Living Ground Cover in the Fall of Ba 73-381, and other Kentucky Bluegrass Varieties at Haymarket, VA

Variety	% Living Ground Cover
Ba 73-381	50.0
Ba 73-366	21.7
Abbey	31.7
Able I	36.7
A-34	46.7
Banff	46.7
Baron	30.0
Classic	40.0
Coventry	43.3
Eclipse	33.3
Estate	38.3
Georgetown	55.0
Glade	43.3
Gnome	38.3

TABLE 15-continued

Comparison of Percent Living Ground Cover in the Fall of Ba 73-381, and other Kentucky Bluegrass Varieties at Haymarket, VA

Variety	% Living Ground Cover
Haga	58.3
Kelly	43.3
Kenblue	11.7
marquis	35.0
Merion	40.0
Merit	28.3
Midnight	11.7
Monopoly	43.3
Nassau	43.3
Ram I	28.3
South Dakota	30.0
Touchdown	26.7
LSD (.05)	27.4

TABLE 16

Comparison of Leaf Texture of Ba 73-381 and Other Kentucky Bluegrass Varieties at Martinsville, NJ

Variety	Leaf Texture
Ba 73-381	4.0
Ba 73-366	4.3
Abbey	5.0
Able I	5.7
A-34	4.3
Banff	5.3
Baron	5.0
Classic	5.3
Coventry	5.0
Eclipse	5.7
Estate	4.3
Georgetown	6.0
Glade	5.0
Gnome	5.3
Haga	5.7
Kelly	4.3
Kenblue	6.0
Marquis	4.3
Merion	4.0
Merit	4.7
Midnight	6.7
Monopoly	5.0
Nassau	5.0
Ram I	5.0
South Dakota	3.7
Touchdown	5.3
LSD (.05)	0.9

Rating Scale: 1–9; 9 = very fine

TABLE 17

A Comparison of Seedling Vigor of Ba 73-381 and Other Kentucky Bluegrass Varieties at Various Locations[1] in the U.S.A. and Canada

Variety	Seedling Vigor Mean
Ba 73-381	6.3
Ba 73-366	6.3
Abbey	6.4
Able I	6.3
A-34	6.0
Banff	7.7
Baron	6.7
Classic	7.1
Coventry	6.1
Eclipse	6.1
Estate	6.1
Georgetown	7.0
Glade	6.7
Gnome	6.3
Haga	7.1
Kelly	6.6
Kenblue	7.4
Marquis	6.3

TABLE 17-continued

A Comparison of Seedling Vigor of Ba 73-381 and Other Kentucky Bluegrass Varieties at Various Locations[1] in the U.S.A. and Canada

Variety	Seedling Vigor Mean
Merion	2.6
Merit	6.4
Midnight	5.4
Monopoly	7.1
Nassau	6.4
Ram I	6.5
South Dakota	6.7
Touchdown	5.8
LSD (.05)	0.7

Rating Scale: 1-9; 9 = Maximum vigor
[2]Locations: Fort Collins, CO; Post Falls, ID; North Brunswick, NJ; Adelphia, NJ; Richmond Hill, Ontario; pooled data Halsey, Hubbard and Gervais, OR.

Turf diseases are one of the major causes of inconsistent and poor turf performance among locations and years. Ba 73-381 has been found to have a medium to high level of resistance to leaf spot, melting out and crown rot caused by *Drechslera poae* (formerly called *Helminthosporium vagans*); a medium to high level of resistance to several rust diseases caused by Puccinia spp., and to stripe smut caused by *Utilago striiformis.*

Comparisons of disease incidence of Ba 73-381 as compared with other bluegrass varieties in regard to leaf spot, rusts, dollarspot, and stripe smut are set forth in Tables 18–23. Additional comparisons are presented in Table 24–26 identifying high speed yields relative to other bluegrasses.

TABLE 18

Ccomparison of Leaf Spot Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties Grown Under Shade Conditions at Marysville, OH

Variety	% Leaf Spot
Ba 73-381	0.0
Ba 73-366	0.0
Adelphi	5.0
America	40.0
Banff	2.5
Bristol	0.0
Classic	5.0
Eclipse	2.5
Georgetown	7.5
Glade	7.5
Kenblue	10.0
Merion	0.0
Merit	0.0
Nassau	0.0
Newport	0.0
Park	50.0
Ram I	40.0
Sydsport	27.5
Vantage	2.5
Victa	2.5
Mean	9.8
LSD (.05)	26.7

TABLE 19

Comparison of Leaf Spot Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties at Marysville, OH

Variety	Leaf Spot
Ba 73-381	7.3
Ba 73-366	6.7
Adelphi	6.3
Banff	6.5
Baron	7.0
Bonnieblue	7.0
Bristol	7.3
Classic	6.0
Eclipse	7.0

TABLE 19-continued

Comparison of Leaf Spot Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties at Marysville, OH

Variety	Leaf Spot
Georgetown	6.3
Glade	5.3
Kelly	7.0
Kenblue	7.0
Merion	6.7
Merit	7.0
Nassau	7.0
Newport	6.7
Park	6.3
Ram I	6.0
Vantage	6.7
Victa	7.0
Mean	6.8
LSD (.05)	1.1

Ratings Scale: 1–9; 9 = no disease.

TABLE 20

Comparison of Powdery Mildew Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties Grown Under Shade Conditions at Marysville, OH During Time Periods A and B

	% Powdery Mildew	
Variety	A	B
Ba 73-381	75.0	55.0
Ba 73-366	80.0	27.5
Adelphi	35.0	37.5
Bristol	30.0	17.5
Glade	35.0	45.0
Merion	75.0	67.5
Monopoly	7.5	15.0
Nassau	27.5	45.0
Park	50.0	35.0
Ram I	50.0	42.5
Vantage	37.5	10.0
Victa	87.5	50.0
Mean	48.0	35.6
LSD (.05)	43.0	22.0

TABLE 21

Comparison of Stem Rust and Leaf Rust Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties at Kingston, R.I.

Variety	Stem Rust	Leaf Rust
Ba 73-381	7.3	6.3
Ba 73-366	6.7	5.7
Abbey	7.0	6.3
Able I	3.3	7.0
A-34	4.3	6.0
Banff	7.7	7.0
Baron	7.0	8.3
Classic	8.0	8.7
Coventry	6.7	7.0
Eclipse	4.0	5.7
Estate	6.3	6.3
Georgetown	8.7	7.7
Glade	7.7	7.0
Gnome	7.0	6.7
Haga	8.0	7.0
Kelly	8.0	5.0
Kenblue	5.7	6.7
Marquis	6.7	6.3
Merion	1.0	2.3
Merit	6.3	6.0
Midnight	8.0	6.0
Monopoly	6.3	5.3
Nassau	8.0	7.0
Ram I	8.0	6.7
South Dakota	4.3	6.7
Touchdown	2.3	3.7
LSD (.05)	1.4	2.4

Rating Scale: 1–9; 9 = no disease

TABLE 22

Comparison of Stripe Rust Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties developed from pooled data at Halsey, Hubbard and Gervais, OR

Variety	Strive Rust
Ba 73-381	4.7
Ba 73-366	5.0
Abbey	4.3
Able I	6.0
A-34	5.0
Banff	6.0
Baron	6.0
Classic	6.3
Coventry	5.0
Eclipse	6.0
Estate	5.7
Georgetown	6.3
Glade	3.0
Gnome	4.7
Haga	6.3
Kelly	5.0
Kenblue	3.3
Marquis	5.3
Merion	3.7
Merit	5.0
Midnight	4.7
Monopoly	5.3
Nassau	5.3
Ram I	6.0
South Dakota	4.0
Touchdown	3.0
LSD (.05)	1.2

Rating Scale: 1–9; 9 = no disease

TABLE 23

Comparison of Stripe Smut Incidence in Ba 73-381 and Other Kentucky Bluegrass Varieties at Marysville, OH

Variety	Strive Smut
Ba 73-381	7.0
Ba 73-366	6.3
Adelphi	7.7
America	6.7
Banff	8.0
Baron	8.0
Bonnieblue	8.0
Bristol	7.7
Classic	8.0
Eclipse	7.3
Georgetown	7.7
Glade	7.7
Kelly	6.3
Kenblue	7.0
Merion	7.7
Merit	5.7
Nassau	7.7
Newport	7.3
Park	6.7
Ram I	7.3
Vantage	7.3
Victa	5.0
Mean	7.0
LSD (.05)	1.2

Rating Scale: 1–9; 9 = least disease

TABLE 24

Comparison of Seed Yields of Ba 73-381 and Other Kentucky Bluegrass Varieties at Gervais, Oregon During Consecutive Growing Years A–D

	Lbs/Acre			
Variety	A	B	C	D
Ba 73-381	626	1196	740	1261
Bristol	347	808	627	684
Julia	296	1016	—	—
Kelly	672	1136	760	1265
Mosa	322	1060	—	—
Newport	435	1256	—	—
Victa	780	1394	855	1287

TABLE 24-continued

Comparison of Seed Yields of Ba 73-381 and Other Kentucky Bluegrass Varieties at Gervais, Oregon During Consecutive Growing Years A–D

	Lbs/Acre			
Variety	A	B	C	D
LSD (.05)	140	134	105	—

TABLE 25

Comparison of Seed Yields in Pounds Per Acre for Ba 73-381 and Other Kentucky Bluegrass Varieties Over a 3 year Period at Gervais, Oregon

	Lbs/Acre		
Variety	Year 1	Year 2	Year 3
Ba 73-381	970	1306	558
Ba 73-366	920	1258	521
Abbey	1124	1314	629
Apart	1244	851	812
Coventry	786	914	649
Newport	1165	1002	1177

TABLE 25-continued

Comparison of Seed Yields in Pounds Per Acre for Ba 73-381 and Other Kentucky Bluegrass Varieties Over a 3 year Period at Gervais, Oregon

	Lbs/Acre		
Variety	Year 1	Year 2	Year 3
LSD (.05)	209	176	158

TABLE 26

Comparison of Seed Yields in Pounds Per Acre for Ba 73-381 and Other Kentucky Bluegrass Varieties at La Grande, Oregon

Variety	Lbs/Acre
Ba 73-381	1,551
Ba 73-366	1,612
Abbey	1,549
Coventry	1,046
LSD (.05)	160

What is claimed is:

1. A variety of Kentucky bluegrass, substantially as shown and described, characterized by a medium to high level of resistance to several serious diseases, including leaf spot and melting out disease, several rust diseases, and stripe smut, a desirable green color throughout the growing season, forms a turf of good quality under a wide variety of environmental conditions, has a moderately wide blade and a high level of seed yielding capacity.

* * * * *

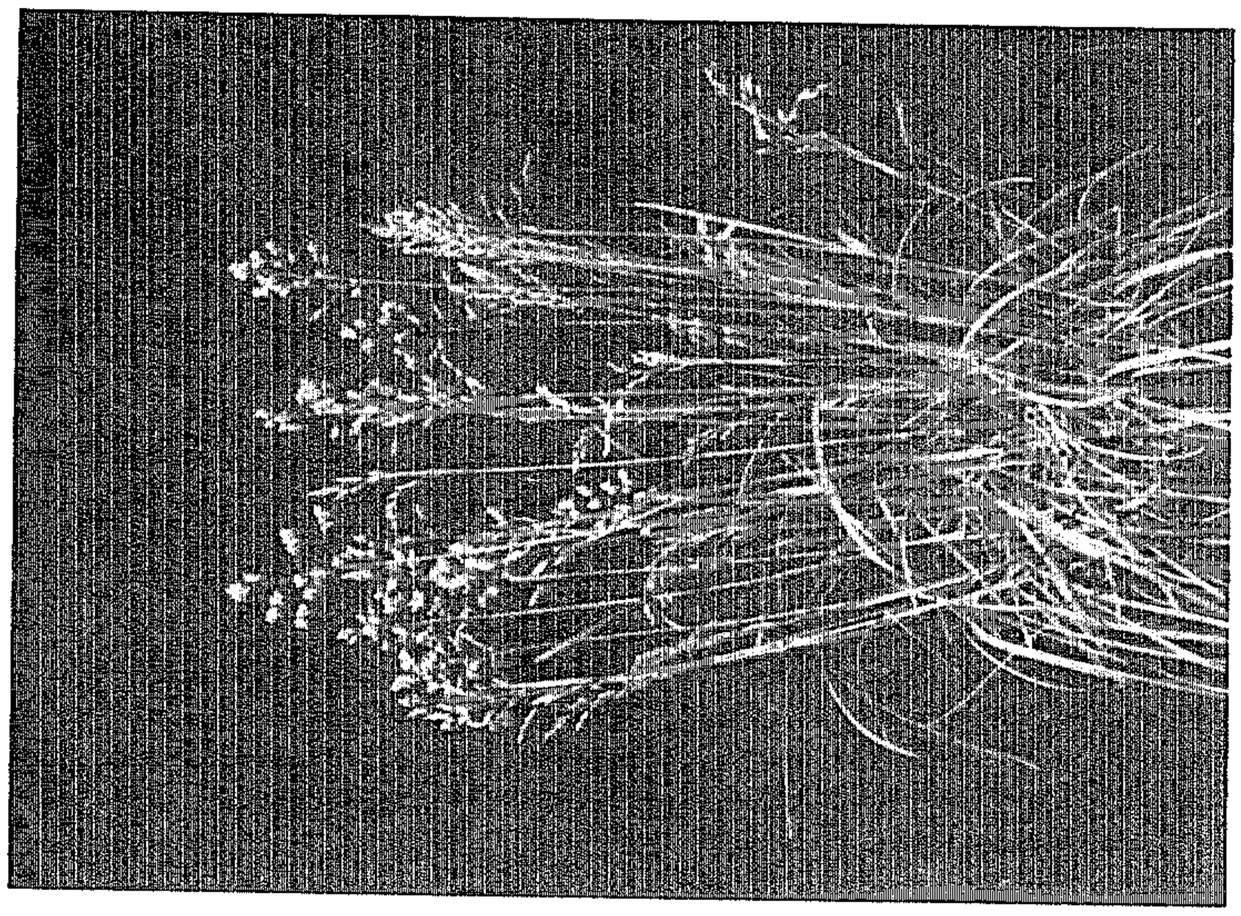

FIG. 3

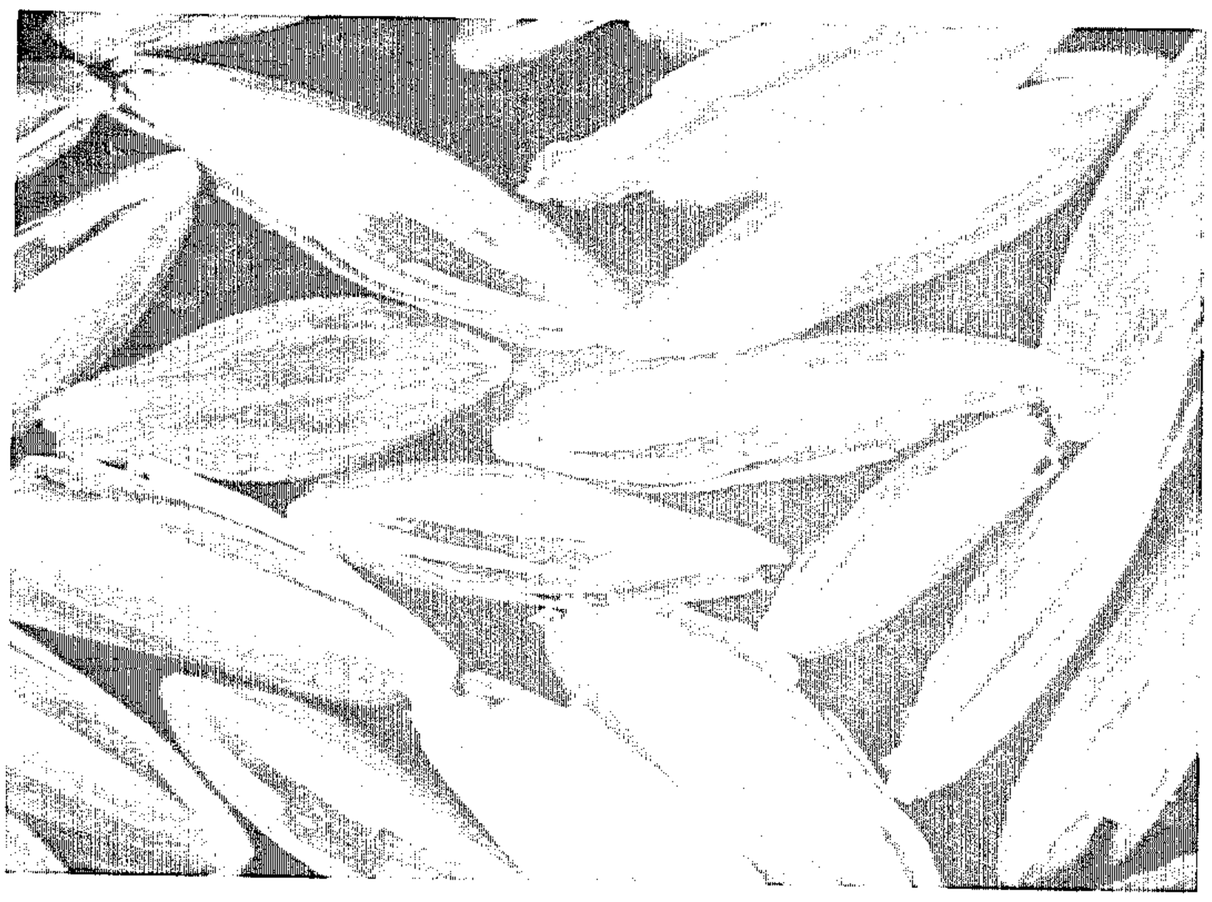

FIG. 2

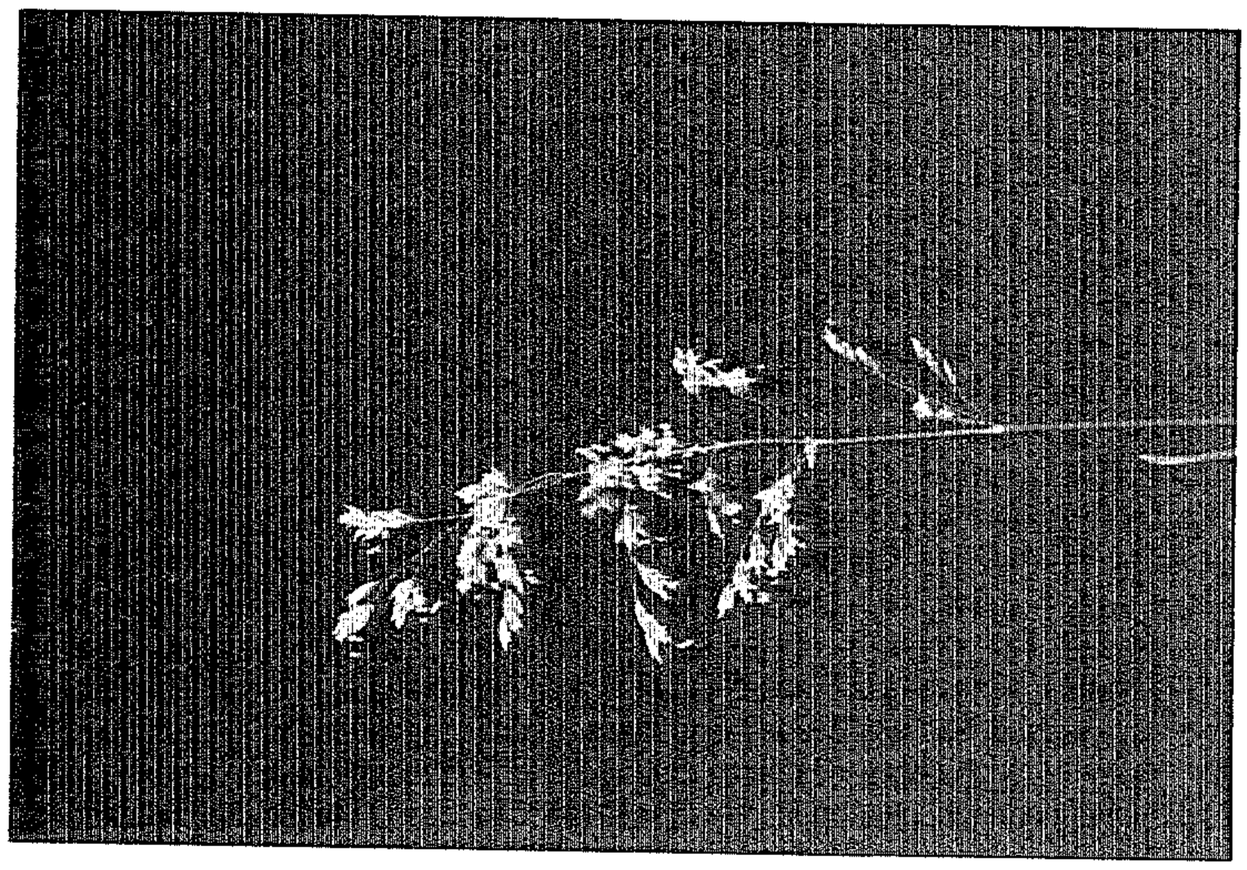

FIG. 1