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Nickson

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(54) **CYNODON DACTYLON PLANT NAMED**
'GRAND PRIX'

(50) Latin Name: *Cynodon dactylon*
Varietal Denomination: **Grand Prix**

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See application file for complete search history.

(56) **References Cited**

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(57) **ABSTRACT**

The new variety of *Cynodon dactylon* named 'Grand Prix'
exhibiting a dense stolon mat, fine textured leaves, low pro-
duction of seed heads and wear tolerance.

1 Drawing Sheet

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FIELD OF THE INVENTION

The present invention relates to a new and distinct variety
of *Cynodon dactylon* (L.) Pers. plant, botanically known as
Cynodon dactylon, and hereinafter referred to by the cultivar
name 'Grand Prix'.

Cynodon dactylon is a member of the grass family gener-
ally used for turf and has the common name of green couch
grass in Australia and Bermudagrass in the United States.
'Grand Prix' has demonstrated high turf quality, dense mat-
ting, improved wear tolerance and low seed head density
amongst other unique features. This new grass is useful for
golf course fairways, tees, residential and commercial lawns,
sports fields, recreational areas, such as parks, and other
similar applications.

BACKGROUND OF THE INVENTION

The new cultivar 'Grand Prix' is a selection from a cross
between 'Wintergreen' (female parent) and 'Couch 5' (male
parent) in 1998. 'Couch 5' is also known as C5. The resultant
seeds of that cross were germinated and 150 seedlings were
observed during 1998 and 1999. During the summer of 1999
to 2000, seedling plants were culled based on their shoot
density, leaf texture, internode length and colour. The
remaining 20 plants were planted in pots at Pakenham,
Victoria, Australia in Spring of 2000. The final selection of
Seedling 12 in 2002 was based on shoot density, leaf colour,
turf quality and reduced thatch accumulation.

To ensure the unique characteristics of the new cultivar
remained stable and reproduced true-to-type, the original
selected plant was asexually propagated by dividing the sto-
lon into nodal cuttings at Pakenham, Victoria, Australia and
has been multiplied through four vegetative expansions
without showing any discernible off types.

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Internode length and branching, length and width of the
leaf blade, inflorescence raceme length and culm length
were characteristics which were used for determine the most
similar varieties of common general knowledge. 'C1',
'Hatfield', 'Riley's Evergreen', 'Winter Gem' and 'Winter-
green' were identified.

'C1' is the variety not protected by any plant variety rights
and is sold under the Australian registered trade mark Leg-
end®. 'Hatfield' is disclosed in Australian PBR No. 2565.
'Riley's Evergreen' is disclosed in Australian PBR No. 1506
and is sold under the Australian registered trade mark Con-
quest®. 'Winter Gem' is disclosed in Australian PBR No.
3132 and 'Wintergreen' is disclosed in U.S. Plant Pat. No.
6,278.

SUMMARY OF THE INVENTION

Plants of the new cultivar 'Grand Prix' have not been
observed under all possible environmental conditions. The
phenotype may differ somewhat with variations in environ-
ment such as temperature, light intensity and day length
without, however, any variance in genotype.

The following traits have been repeatedly observed and
are determined to be the unique characteristics of 'Grand
Prix'. These characteristics in combination distinguish
'Grand Prix' as a new and distinct cultivar:

1. low inflorescence density,
2. short inflorescence spike length;
3. short leaf blade length,
4. medium leaf blade width,
5. short stolon internode length,
6. thick stolon

These characteristics contribute the advantageous features in 'Grand Prix' of forming a dense stolon mat that has finely textured leaves, low numbers of seed heads reducing the mowing requirement and improving wear tolerance of the turf.

The new variety is propagated vegetatively by sod, plugs, sprigs, tillers, rhizomes or stolons. Vegetative propagation has established that the characteristics have been passed through at least four generations without showing any discernible off types.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 shows a comparison of the new variety (left) with comparators (from left to right) 'Winter Gem', 'Wintergreen', 'Hatfield', 'Legend®' (C1) and 'Conquest®' (Riley's Evergreen).

DETAILED BOTANICAL DESCRIPTION

Latin name of the genus and species of the plant claimed: The present invention relates to the genus and species *Cynodon dactylon* (L.) Pers, Variety denomination: 'Grand Prix'.

Plants of the cultivar 'Grand Prix' have not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as temperature, light intensity and day length without, however, any variance in genotype.

1. Origin and Breeding

'Grand Prix' resulted from controlled pollination followed by selection. The new variety is a selection from a cross between 'Wintergreen' (female parent) and 'Couch 5' (male parent). 'Couch 5' also known as C5. was a selection from an earlier series of crosses by the breeder between 'Wintergreen' and a number of *Cynodon dactylon* accessions, which were collected by the breeder from the Mornington Peninsula area of Victoria, Australia between 1986 and 1990. C5 was an experimental breeding line, and was not subsequently reserved as vegetative germplasm. Living material of C5 is no longer in existence.

Following the crossing of 'Couch 5' and 'Wintergreen' in 1998, the resultant seed was germinated on moist blotting paper. Individual seedlings, a total of 150 in number, were planted into 150 mm pots and these plants observed during 1998 and 1999. During the summer of 1999–2000, the majority of the seedling plants were culled on the basis of their shoot density, leaf texture, internode length, and colour. In the spring of 2000, the remaining 20 potted seedlings were planted individually into 4m² plots at a turf farm at Pakenham, Victoria, Australia and allowed to expand fully across these plots.

The final selection of Seedling 12 (later designated DN12) in late 2002 was based on shoot density, leaf colour, turf quality, and reduced thatch accumulation as expressed in these plots. The original selected plant was asexually propagated vegetatively by dividing the stolons into nodal cuttings which were struck on the turf farm at Pakenham. The selected plant has been multiplied through at least four (4) such vegetative expansions without showing any discernible off types.

2. Characteristics

The description of the variety is taken from the comparative trials conducted in the period of May 31, 2005–Dec. 16, 2005 at Cleveland, Queensland, Australia (Latitude 27°32' South, Longitude 153°15' East, elevation 25 masl). The char-

acteristics of the new variety are as follows, with all R.H.S. colour chart numbers referring to 2001 edition.

Classification: *Cynodon dactylon* 'Grand Prix'.

Parentage: Cross between 'Wintergreen' (female parent) and 'Couch 5' (male parent).

Propagation. Vegetative propagation (asexual) by sod, plugs, sprigs, tillers and pieces of rhizomes or stolons.

Growth habit: Type low growing, creeping, dense mat-forming, spreading laterally by stolons and rhizomes.

Leaf blade: Shape linear-triangular, length short, width medium.

Stolon: Compound nodes with up to 3 leaves, internode length short-medium, internode thickness medium-thick.

Culms: Length short.

Ligule: Dense row of short white hairs.

Inflorescence: Digitate with (2-)3–4 short spicate racemes.

Vegetative leaf:

Mean blade length on fourth leaf of flowering tillers.—34.41 mm.

Mean blade length on fourth node from stolon tip.—3.03 mm.

Mean sheath width on fourth leaf of flowering tillers.—2.61 mm.

Mean blade width on fourth node from stolon tip.—1.46 mm.

Mean sheath length on fourth leaf of flowering tillers.—15.42 mm.

Mean blade length on fourth node from stolon tip.—9.16 mm.

Inflorescence characters:

Mean length of peduncle on flowering tiller.—69.29 mm.

Mean diameter of peduncle on flowering tiller.—0.53 mm.

Mean flag leaf length on flowering tiller.—19.24 mm.

Mean flag leaf width on flowering tiller.—2.01 mm.

Mean length of inflorescence spikes.—34.15 mm.

Mean number of spikes per inflorescence.—3.45. Mean inflorescence density (number per 0.01m²) 16.10.

Colour notations, vegetative characters, based The R.H.S. Colour Chart (edition 2001):

Leaf blade color.—Dark Green 137B (Taken at end of Spring).

Stolon color.—Grey-brown N199A (Taken at end of Spring when exposed to sunlight).

Wear Tolerance: Very high.

Disease susceptibility: The new variety has not shown any unusual susceptibility to diseases or diseases when compared to the species.

3. Comparative Trial

Conditions: Individual propagules were grown in 40×40 mm tubes from Mar. 8, 2005. All varieties were planted on a 1 m×1 m spacing in ferrosol soil (Isbell, R. F. (2002) 'The Australian Soil Classification'. Revised Edition. CSIRO Publishing. Collingwood, Victoria, Australia) on May 31, 2005. The plants were not defoliated and weed control by pre-emergence oxadiazon was conducted on May 31, 2005 and Aug. 10, 2005. Pest and disease control was conducted with cyfluthrin (armyworm) on (Jun. 7, 2005, with dimethoate (couch tip maggot) on Oct. 17, 2005 and with propiconazole (leaf spot) on Oct. 17, 2005. Nutrition was maintained by slow release starter fertiliser (18-10-9) from May 31, 2005.

Trial Design: The trials composed of thirty (30) plants per variety, with five (5) plants per plot in six (6) randomised blocks.

Measurements: Four (4) diameter of spread measurements per plant were taken on Jul. 12, 2005, Jul. 24, 2005, Aug. 9, 2005, Aug. 23, 2005, Sep. 6, 2005 and the final at 173 days on Sep. 20, 2005. Two (2) stolon leaf, internode and colour measurements were taken on spaced plants on Nov. 15,–Nov. 21, 2005. Two (2) shoot and inflorescence measurements were taken on Dec. 14–16, 2005 on spaced plants. The inflorescence density (0.01 m²) per plant was collected Dec. 19–23, 2005.

In order to choose the trial comparators, the following characteristics used for grouping varieties to identify the most similar variety of common knowledge:

Organ/Plant Part	Context	State of Expression in Group of Varieties
Stolon	internode length	short to medium
Stolon	internode branching	medium to strong
Leaf blade	length	medium to long
Leaf blade	width	medium
Inflorescence	raceme length	short
Culm	length	short

The most similar varieties of common knowledge identified (VCK).

Name	Comments
'C1'	'C1' is the closest Variety of Common Knowledge. Material planted was the truest to type available of this cultivar. This variety is marketed as Legend ®
'Riley's Evergreen'	The variety is marketed as Conquest ®
'Winter Gem'	Planting material obtained from the breeder, derived from the same cross as 'Grand Prix'
'Hatfield'	Planting material obtained from the breeder
'Wintergreen'	Samples were obtained from breeder Peter McMaugh's 'Wintergreen' nursery block that has been planted for 7-8 years. This material is the truest to type available for this cultivar.

Table 1 shows the characteristics of the chosen comparative varieties and Table lists the statistical measurements.

TABLE 1

'Grand Prix'	'C1'	'Hatfield'	'Riley's Evergreen'	'Winter-Gem'	'Winter-green'
<u>PLANT: GROWTH TYPE</u>					
Creeping	Creeping	Creeping	Creeping	Creeping	Creeping
<u>PLANT: HEIGHT</u>					
Short	Short	Short	Short	Short	Short
<u>LEAF: PRIMARY COLOUR (RHS COLOUR CHART)</u>					
137B	137B	137B	137B	137B	137B
<u>INFLORESCENCE SPIKES: MAXIMUM NUMBER</u>					
4	5	5	5	4	5
<u>INFLORESCENCE SPIKES: MINIMUM NUMBER</u>					
2	3	3	2	3	3
<u>STOLON: EXPOSED COLOUR (RHS COLOUR CHART)</u>					
N199A	N199A	N199A	N199A	148A	N199B

TABLE 1-continued

'Grand Prix'	'C1'	'Hatfield'	'Riley's Evergreen'	'Winter-Gem'	'Winter-green'
<u>PLANT: LONGEVITY</u>					
perennial	perennial	perennial	perennial	perennial	perennial
<u>PLANT: TYPE</u>					
mat-forming	mat-forming	mat-forming	mat-forming	mat-forming	mat-forming
<u>PLANT: PROLIFERATION</u>					
stolons and rhizomes	stolons and rhizomes	stolons and rhizomes	stolons and rhizomes	stolons and rhizomes	stolons and rhizomes
<u>STOLON: INTERNODE LENGTH</u>					
short to medium	short to medium	short to medium	short to medium	short to medium	short to medium
<u>CULM: LENGTH</u>					
short	short	short	short	short	short
<u>LEAF BLADE: LENGTH</u>					
short	short to medium	short	short	short to medium	short to medium
<u>INFLORESCENCE: PEDUNCLE LENGTH</u>					
short to medium	short	short	short	short to medium	short to medium
<u>STOLON: COMPOUND NODES</u>					
with = 3 leaves	with = 3 leaves	with = 3 leaves	with = 3 leaves	with = 3 leaves	with = 3 leaves
<u>STOLON: INTERNODE THICKNESS</u>					
medium to thick	medium	medium	medium	medium	medium
<u>LEAF BLADE: WIDTH</u>					
medium	medium	medium	medium	medium	medium
<u>LEAF BLADE: SHAPE</u>					
linear-triangular	linear-triangular	linear-triangular	linear-triangular	linear-triangular	linear-triangular
<u>LIGULE: TYPE</u>					
hairs	hairs	hairs	hairs	hairs	hairs
<u>LIGULE: HAIR PLACEMENT</u>					
dense	dense	dense	dense	dense	dense
<u>INFLORESCENCE: SHAPE</u>					
digitate	digitate	digitate	digitate	digitate	digitate
<u>INFLORESCENCE: BRANCHING</u>					
spicate	spicate	spicate	spicate	spicate	spicate
<u>INFLORESCENCE: RACEME LENGTH</u>					
short	short	short	short	short	short
<u>INFLORESCENCE: DENSITY</u>					
low	medium to high	medium to high	medium to high	medium to high	medium to high
<u>LIGULE: SIZE</u>					
short	short	short	short	short	short

TABLE 2

	'Grand Prix'	'Winter Gem'	'Winter- green'	'Hat- field'	'C1'	'Riley's Ever- green'
<u>MEAN PLANT DIAMETER AFTER 173 DAYS (cm)</u>						
mean	72.1	40.3	78.1	64.5	69.9	47.2
std	12.1	6.2	20.4	16.2	8.7	10.3
deviation						
LSD/sig	12.2	P ≤ 0.05	ns	ns	ns	P ≤ 0.05
<u>FIRST STOLON NODE WITH A SECOND LATERAL BRANCH (SPACED PLANTS)</u>						
mean	0.80	0.80	0.82	0.50	1.25	1.23
std	0.18	0.17	0.19	0.15	0.26	0.10
deviation						
LSD/sig	0.22	ns	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>FIRST STOLON NODE WITH A THIRD LATERAL BRANCH (SPACED PLANTS)</u>						
mean	1.08	0.98	1.28	1.02	2.02	2.18
std	0.10	0.04	0.21	0.10	0.32	0.32
deviation						
LSD/sig	0.25	ns	ns	ns	P ≤ 0.05	P ≤ 0.05
<u>FIRST STOLON NODE WITH A FOURTH LATERAL BRANCH (SPACED PLANTS)</u>						
mean	1.65	1.38	1.95	1.22	3.23	3.33
std	0.36	0.12	0.35	0.34	0.50	0.32
deviation						
LSD/sig	0.36	ns	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>FIRST STOLON NODE WITH A FIFTH LATERAL BRANCH (SPACED PLANTS)</u>						
mean	2.45	1.98	2.72	1.52	3.95	3.97
std	0.45	0.26	0.43	0.36	0.48	0.44
deviation						
LSD/sig	0.40	P ≤ 0.05	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>FIRST STOLON NODE WITH A SIXTH LATERAL BRANCH (SPACED PLANTS)</u>						
mean	2.83	2.68	3.65	2.25	4.20	4.73
std	0.22	0.17	0.75	0.37	0.48	0.45
deviation						
LSD/sig	0.54	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH OF FOURTH INTERNODE (mm) FROM STOLON TIP</u>						
mean	33.27	30.51	44.68	44.88	49.20	41.73
std	1.88	1.36	2.88	2.66	4.04	1.67
deviation						
LSD/sig	3.17	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>DIAMETER OF FOURTH INTERNODE (mm) FROM STOLON TIP</u>						
mean	1.75	1.36	1.41	1.52	1.59	1.28
std	0.05	0.06	0.04	0.09	0.13	0.06
deviation						
LSD/sig	0.09	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH OF LEAF SHEATH (mm) ON FOURTH VISIBLE NODE FROM STOLON TIP</u>						
Mean	9.16	7.40	9.84	10.74	10.26	7.30
std	0.61	0.32	0.63	0.69	0.47	0.26
deviation						
LSD/sig	0.63	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH OF LEAF BLADE (mm) ON FOURTH VISIBLE NODE FROM STOLON TIP</u>						
mean	3.03	3.28	8.00	6.39	7.97	4.91
std	0.75	0.31	2.00	1.57	1.88	1.01

TABLE 2-continued

	'Grand Prix'	'Winter Gem'	'Winter- green'	'Hat- field'	'C1'	'Riley's Ever- green'
<u>deviation</u>						
LSD/sig	1.21	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>WIDTH OF LEAF BLADE (mm) ON FOURTH VISIBLE NODE FROM STOLON TIP</u>						
mean	1.46	1.35	2.02	1.85	2.31	1.77
std	0.20	0.10	0.21	0.21	0.26	0.13
deviation						
LSD/sig	0.17	ns	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH:WIDTH RATIO OF LEAF BLADE ON FOURTH VISIBLE NODE FROM STOLON TIP</u>						
mean	1.89	2.37	3.80	3.34	3.31	2.66
std	0.19	0.24	0.72	0.46	0.53	0.36
deviation						
LSD/sig	0.44	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH OF SHEATH (mm) ON FLAG LEAF ON FLOWERING TILLERS</u>						
mean	53.03	63.70	63.93	56.27	57.33	48.27
std	4.25	8.17	4.14	2.67	4.26	2.92
deviation						
LSD/sig	5.58	P ≤ 0.05	P ≤ 0.05	ns	ns	ns
<u>LENGTH OF BLADE (mm) ON FLAG LEAF ON FLOWERING TILLERS</u>						
mean	19.24	11.86	18.16	16.52	14.76	11.52
std	4.87	3.60	4.08	3.02	1.54	1.49
deviation						
LSD/sig	3.92	P ≤ 0.05	ns	ns	P ≤ 0.05	P ≤ 0.05
<u>WIDTH OF BLADE (mm) ON FLAG LEAF ON FLOWERING TILLERS</u>						
mean	2.01	1.24	1.55	1.55	1.59	1.27
std	0.61	0.13	0.16	0.09	0.13	0.07
deviation						
LSD/sig	0.30	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>LENGTH:WIDTH RATIO OF FLAG LEAF BLADE ON FLOWERING TILLERS</u>						
mean	10.33	8.97	11.35	10.52	9.20	8.75
std	2.09	1.87	2.02	1.61	1.12	0.93
deviation						
LSD/sig	2.07	ns	ns	ns	ns	ns
<u>LENGTH OF SHEATH (mm) ON FOURTH LEAF ON FLOWERING TILLERS</u>						
mean	15.42	16.27	17.93	16.94	16.00	14.67
std	1.88	3.12	1.16	1.16	1.05	1.05
deviation						
LSD/sig	2.14	ns	P ≤ 0.05	ns	ns	ns
<u>LENGTH OF BLADE (mm) ON FOURTH LEAF ON FLOWERING TILLERS</u>						
mean	34.41	29.93	40.34	33.77	26.97	29.26
std	3.93	5.92	7.93	3.25	3.82	5.11
deviation						
LSD/sig	6.46	ns	ns	ns	ns	ns
<u>WIDTH OF BLADE (mm) ON FOURTH LEAF ON FLOWERING TILLERS</u>						
mean	2.61	2.22	2.60	2.50	2.53	2.17
std	0.14	0.14	0.12	0.07	0.17	0.12
deviation						
LSD/sig	0.14	P ≤ 0.05	ns	ns	ns	P ≤ 0.05

TABLE 2-continued

	'Grand Prix'	'Winter Gem'	'Winter- green'	'Hat- field'	'C1'	'Riley's Ever- green'
<u>LENGTH:WIDTH RATIO OF FOURTH LEAF BLADE ON FLOWERING TILLERS</u>						
mean	13.26	11.17	15.47	13.56	10.76	13.53
std deviation	1.35	2.23	2.56	1.32	1.75	2.11
LSD/sig	2.47	ns	ns	ns	0.05	ns
<u>LENGTH OF PEDUNCLE (mm) ON FLOWERING TILLERS</u>						
mean	69.29	106.94	104.49	78.92	79.83	84.42
std deviation	5.90	16.43	5.85	4.85	8.24	8.94
LSD/sig	10.47	P ≤ 0.05	P ≤ 0.05	ns	P ≤ 0.05	P ≤ 0.05
<u>DIAMETER OF PEDUNCLE (mm) ON FLOWERING TILLERS</u>						
mean	0.53	0.48	0.63	0.55	0.59	0.50
std deviation	0.04	0.03	0.05	0.04	0.03	0.04
LSD/sig	0.04	P ≤ 0.05	P ≤ 0.05	ns	P ≤ 0.05	ns
<u>MEAN LENGTH OF SPIKES (mm)</u>						
mean	34.15	42.27	44.45	44.14	41.22	32.02
std deviation	2.32	6.00	1.54	1.81	2.63	2.18
LSD/sig	3.79	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	ns
<u>NUMBER OF SPIKES PER INFLORESCENCE</u>						
mean	3.45	3.72	4.00	4.07	3.88	3.17
std deviation	0.00	0.00	0.41	0.55	0.41	0.82
LSD/sig	0.25	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>INFLORESCENCE DENSITY (NUMBER PER 0.1 M²): 23 DEC. 2005 (UNMOWN SWARDS)</u>						
mean	16.10	111.90	94.90	112.50	109.50	118.90
std deviation	7.45	46.66	26.34	19.87	57.16	69.88
LSD/sig	57.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05	P ≤ 0.05
<u>MAXIMUM NUMBER OF SPIKES PER INFLORESCENCE</u>						
	4	4	5	5	5	5
<u>MINIMUM NUMBER OF SPIKES PER INFLORESCENCE</u>						
	2	3	3	3	3	2
<u>STOLON COLOUR EXPOSED TO SUNLIGHT (RHS, 2001)</u>						
	N199A	148A	N199B	N199A	N199A	N199A
<u>LEAF COLOUR (RHS, 2001)</u>						
	137B	137B	137B	137B	137B	137B

Statistical differences among the cultivars were determined according to standard statistical tests.

After 173 days, 'Grand Prix' demonstrated a similar rate of lateral spread to all varieties except a 'Riley's Evergreen' and 'Winter Gem' which were relatively slower growing. The length of the fourth stolon internode of the new variety was relatively short with only 'Winter Gem' being smaller but not significantly. Short internodes enable greater shoot density as the shoots are produced from nodes on the stolons that are closer together forming a tight mat. In combination with its prostrate spreading habit, 'Grand Prix' forms a dense turf with good ground coverage.

The leaf length on the fourth internode of 'Grand Prix' was shorter than all comparators and the leaf width was less than the other comparators, except for 'Winter Gem'. The

new variety significantly had the lowest leaf length:width ratio and as such these leaf measurements indicate that 'Grand Prix' has fine textured leaves.

Of particular note, seed head production by 'Grand Prix' was significantly lower than all the other comparative varieties. This is shown by the inflorescence density where the new variety had an average 16.10 inflorescences per 0.1 m² area compared to the comparators having over 90. The very low seed head production of 'Grand Prix' provides an attractive appearance to the turf and reduces the need mow as regularly as the other varieties. The inflorescence spike length is similar to 'Riley's Evergreen', but significantly shorter against all comparators. Short spikes are less intrusive visually in the turf.

The diameter of the fourth stolon internode of 'Grand Prix' is significantly larger than that of all the comparators. This characteristic assists in providing wear tolerance as a thicker stolon is able to provide more resistance to wear stress.

A wear trial was conducted at Cleveland, Queensland, Australia. 'Grand Prix' showed significantly greater tolerance to weekly and fortnightly wear treatments applied with a Brinkman Traffic Simulator (Cockerham, S. T. and D. J. Brinkman. (1989). A simulator for cleated-shoe sports traffic on turfgrass research plots. California Turfgrass Culture 39 (3, 4), 9-12.) fitted with smooth rubber rollers rotating at different speeds to give a scuffing action. 'Grand Prix' maintained higher turf quality and a lower percentage of bare ground under wear than the other cultivars. Table 3 shows the wear tolerance ratings for seven *Cynodon dactylon* cultivars based on turf quality and percentage of bare ground 35 days after commencing weekly and fortnightly wear treatments. The wear test started Jul. 14, 2006 and the data presented in Table 3 was recorded Aug. 18, 2006 after 5 weeks of wear treatment. The varieties 'Princess' and 'JTI' were included in the wear trial, but are not considered to be similar varieties of common general knowledge to 'Grand Prix'.

TABLE 3

Cultivar	Wear Tolerance Rating	Turf Quality Rating (0-9)		
		No Wear (Control)	Fortnightly Wear	Weekly Wear
Grand Prix	1	7.8	5.0	4.1
C1	2	6.8	3.6	3.4
Riley's Evergreen	3	6.3	3.4	3.0
Wintergreen	4	6.4	2.9	2.3
Princess	5	7.4	3.3	1.9
Hatfield	6	6.5	2.5	1.4
JTI	7	6.0	1.4	1.1
LSD (P = 0.05)	—	0.8	0.9	0.7
		Bare Ground (%)		
	Cultivar	No Wear (Control)	Fortnightly Wear	Weekly Wear
	Grand Prix	0.0	17.5	33.8
	C1	0.0	41.3	52.5
	Riley's Evergreen	0.0	40.0	53.8
	Wintergreen	0.0	47.5	66.3
	Princess	0.0	47.5	75.0
	Hatfield	0.0	50.0	78.8
	JTI	0.0	83.8	87.5
	LSD (P = 0.05)	—	22.2	13.4

Analyses of samples of leaf and thatch from this experiment showed higher Lignin, Neutral Detergent Fiber (NDF)

and Total Cell Wall (TCW) contents in 'Grand Prix' than in the other bermudagrass cultivars. Table 4 indicates the chemical analysis of structural components in samples of leaf and thatch taken from seven *Cynodon dactylon* cultivars mown to 25 mm. All results expressed as percentages (w/w) on a dry matter basis.

TABLE 4

Cultivar	Lignin (%)	TCW (%)	NDF (%)
Grand Prix	5.83	38.62	66.55
C1	4.73	36.95	63.58
Riley's Evergreen	4.53	37.02	64.73
Wintergreen	4.38	35.97	64.23
Princess	5.28	35.20	62.75
Hatfield	4.15	34.82	61.68

TABLE 4-continued

Cultivar	Lignin (%)	TCW (%)	NDF (%)
JT1	4.20	33.62	59.45
LSD (P = 0.05)	0.81	2.86	4.05

'Grand Prix' is a turf grass having distinguishing features from 'C1', 'Hatfield', 'Riley's Evergreen', 'Winter Gem' and 'Wintergreen'.

What is claimed is:

1. A new and distinct variety of *Cynodon dactylon* plant, substantially as described and illustrated herein, characterized particularly by a unique combination of morphological characters.

* * * * *

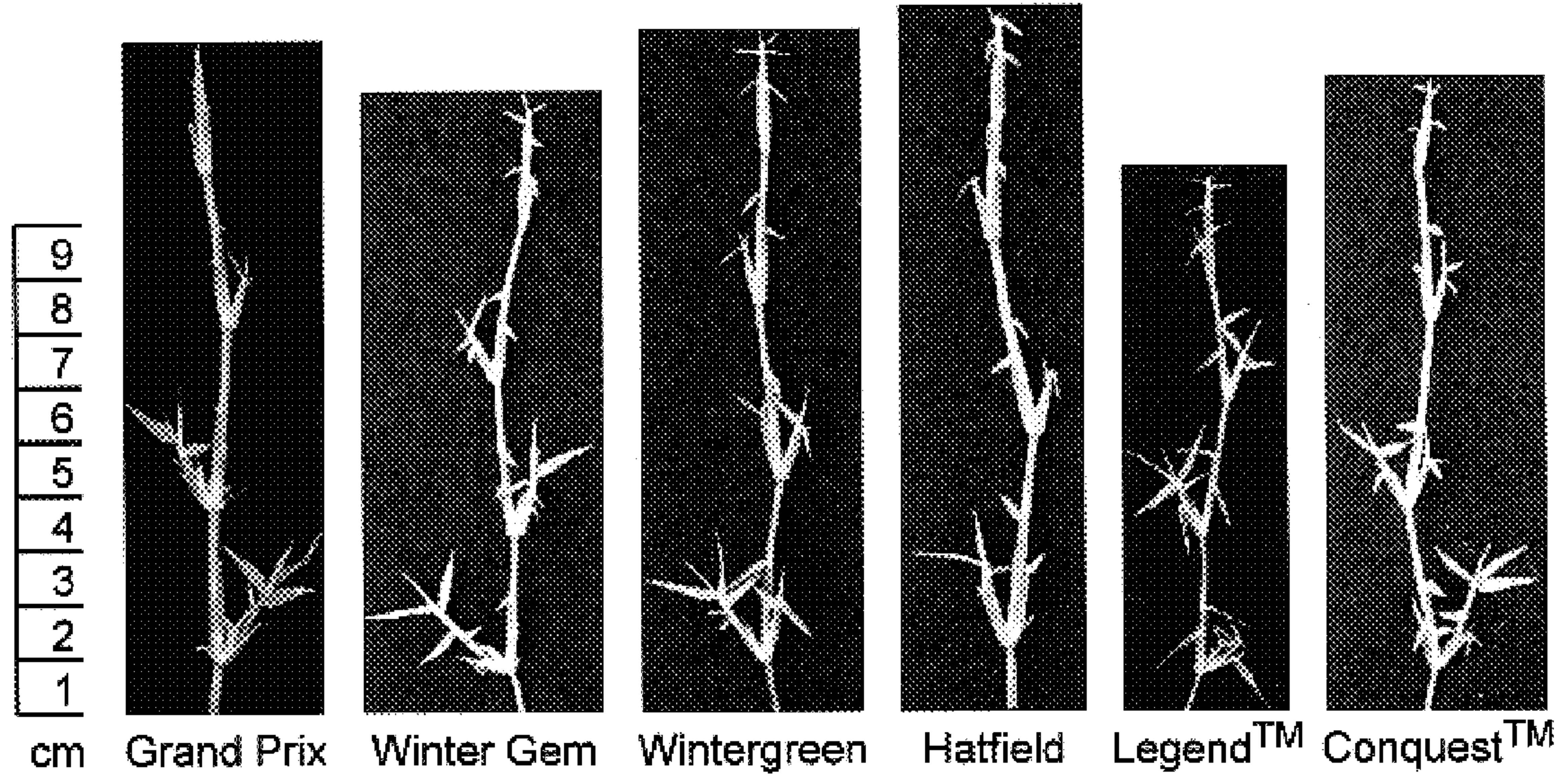


FIG. 1