

Details of Application

Application Number 2007/275
Variety Name 'MAC03'
Genus Species *Zoysia macrantha*
Common Name Prickly Couch
Synonym Nara
Accepted Date 30 Nov 2007
Applicant Ozbreed Pty Ltd, Clarendon, NSW
Agent N/A
Qualified Person Ian Paananen

Details of Comparative Trial

Location Clarendon, NSW.
Descriptor *Cynodon (Cynodon dactylon x C. transvaalensis)* PBR CYNO
Period Oct 2007 – Feb 2008.
Conditions Trial conducted in open beds, plants propagated from cuttings, planted into 200mm pots filled with soilless potting mix, nutrition maintained with slow release and liquid fertilisers, irrigation by overhead watering, pest and disease treatments not required. Plants trimmed 10 weeks before assessment.
Trial Design Thirty pots of each variety arranged in a completely randomised design.
Measurements From ten plants at random.
RHS Chart - edition 2001.

Origin and Breeding

Open pollination followed by seedling selection: seed parent *Zoysia macrantha*. 2000-2005: open pollination of *Zoysia macrantha* selections originally collected from NSW coastal areas including Central Coast and Wollongong. Each year, selections were made based on speed of growth and overall turf habit (density, ground coverage) and these were then the parents for the following year's selections. Slower varieties were discarded. The result was greatly improved growth rates more suited to lawn use. 2006-2007: the final selection was made from the parent selection 'T11'. This selection was considered to have a good turf habit, a broader leaf width, fast growth rate and good salt tolerance. The seed parent is characterised by narrow leaf width, medium growth vigour and medium salt tolerance. Selection took place in Clarendon, NSW in 2006. Selection criteria: broader leaf width, strong growth vigour, dense growth habit and strong salt tolerance. Propagation: vegetative, division is found to be uniform and stable. Breeder: Todd Layt, Clarendon, NSW. All work was carried out at Clarendon, NSW.

Choice of Comparators 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	medium
Inflorescence	length of peduncle	medium
Inflorescence	anthers	present
Leaf	colour	yellow green

Most Similar Varieties of Common Knowledge identified (VCK)

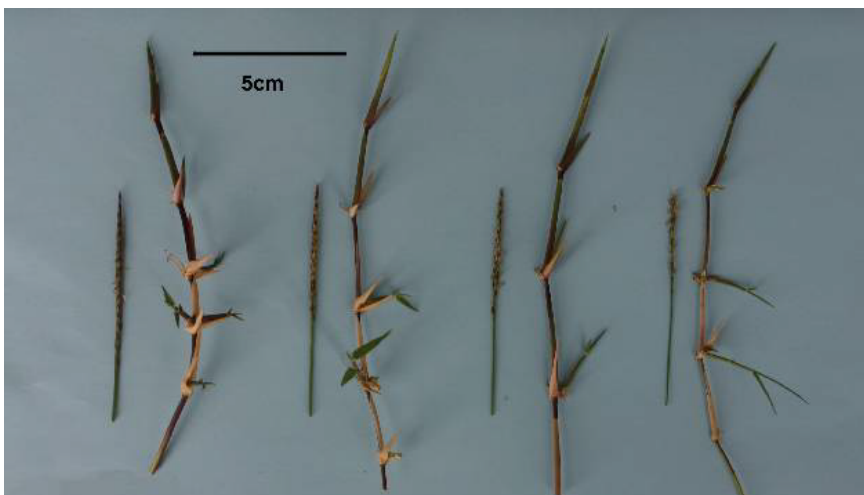
Name	Comments
'T11'	parent variety selected by Ozbreed.
Terrigal ecotype	
Wollongong ecotype	

Variety Description and Distinctness - Characteristics which distinguish the candidate from one or more of the comparators are marked with a tick.

Organ/Plant Part: Context	'MAC03'	'T11'	Terrigal ecotype	Wollongong ecotype
Plant: habit	stoloniferous	stoloniferous	stoloniferous	stoloniferous
Stolon: internode length	medium	medium	medium	medium
Stolon: internode thickness	broad	medium	medium	medium
Stolon: colour when exposed to sunlight	187A	187A	187A	187A
Leaf blade: shape	ligulate	ligulate	ligulate	ligulate
Leaf blade: length	long	medium to long	medium	medium
Leaf blade: width	broad	medium	medium	medium
Leaf blade: colour	146B	146A	146A	146A
Inflorescence: length of peduncle	medium	medium	medium	medium
Leaf blade: apex	narrow acute	narrow acute	narrow acute	narrow acute
Inflorescence: anthers	present	present	present	present

Characteristics Additional to the Descriptor/TG

Organ/Plant Part: Context	'MAC03'	'T11'	Terrigal ecotype	Wollongong ecotype
Plant: vigour	strong to very strong	medium to strong	medium	weak to medium
Stolon: length	long to very long	medium	medium	short to medium
Stolon: diameter of node	medium to broad	narrow to medium	medium	medium
Leaf blade: attitude	horizontal to semi-erect	horizontal to semi-erect	horizontal to semi-erect	horizontal to semi-erect
Leaf blade: profile in cross-section	flat	flat	flat	flat
Glume: predominant colour (RHS)	N186C	N186C	N186C	N186C
Inflorescence: length of spike	medium to long	medium to long	medium	medium
Peduncle: colour (RHS)	147B	147B	147B	147B



From left to right:
MAC03
T11
Terrigal Ecotype
Wollongong Ecotype

Image from Plant Breeders Rights Database online:

http://pbr.ipaustalia.plantbreeders.gov.au/image_detail.cfm?AID=2547966

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Inflorescence	anthers	present
Leaf	colour	yellow green

Statistical Table

Organ/Plant Part: Context	'MAC03'	'T11'	Terrigal ecotype	Wollongong ecotype
Stolon: length (cm)				
Mean	40.40	20.70	18.60	15.00
Std. Deviation	6.50	3.50	4.00	3.00
LSD/sig	7.06	P≤0.01	P≤0.01	P≤0.01
Stolon: length of internode (mm)				
Mean	28.80	27.70	30.10	26.00
Std. Deviation	7.20	6.80	6.50	5.60
LSD/sig	7.51	ns	ns	ns
Stolon: diameter of internode (mm)				
Mean	1.95	1.34	1.44	1.40
Std. Deviation	0.40	0.20	0.20	0.20
LSD/sig	0.32	P≤0.01	P≤0.01	P≤0.01
Stolon: diameter of node (mm)				
Mean	2.60	2.04	2.23	2.40
Std. Deviation	0.60	0.40	0.30	0.30
LSD/sig	0.48	P≤0.01	ns	ns
Leaf blade: length (mm)				
Mean	96.30	63.90	43.70	53.20
Std. Deviation	11.90	23.30	13.40	13.40
LSD/sig	17.72	P≤0.01	P≤0.01	P≤0.01
Leaf blade: width (mm)				
Mean	3.80	2.92	2.71	3.10
Std. Deviation	0.70	0.20	0.50	0.30
LSD/sig	0.49	P≤0.01	P≤0.01	P≤0.01
Inflorescence: length of spike (mm)				
Mean	52.20	49.90	45.50	40.10
Std. Deviation	3.90	4.90	4.70	9.60
LSD/sig	7.10	ns	ns	P≤0.01
Peduncle: length (mm)				
Mean	122.60	136.90	102.90	97.20
Std. Deviation	21.50	22.90	25.00	24.60
LSD/sig	26.73	ns	ns	ns

Prior Applications and Sales

Nil.

Description: **Ian Paananen**, Crop & Nursery Services, Central Coast, NSW.

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