



# Plant Varieties Journal

March 1992 Volume 5 Number 1



Official Journal of the Australian Plant Variety Rights Office

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# **Editorial**

1992 is the fifth anniversary year of the opening of the Plant Variety Rights Office. During this year the Office will process its 500th application for PVR in Australia. More than half the applications will be for new introductions from overseas most of which will not have been introduced without PVR in Australia. After an initial lag it is pleasing to note that the number of applications for food crop varieties is rising appreciably. These statistics are evidence that PVR in Australia is, in a modest way, stimulating breeding and introduction of new varieties which is the goal of the PVR scheme.

The present total running cost of the PVR Office amounts to less than the average cost of breeding and developing *one* new crop variety. Furthermore the Office's operating costs have not increased for two years and will not do so in the present financial year. There has, however, been a downturn in applications for PVR in the past year; prevailing recessionary conditions may exacerbate the declining trend.

The PVR Office announces in this issue remedies to correct distortions in the PVR scheme caused by the abuse by some of both provisional protection and the payment of examination fees by instalments.

Formal channels of communication between the office and PVR interest groups were forged by the Minister's appointment in December 1991 of a new PVR Advisory Committee. Details of its membership are given in the following pages. The Advisory Committee forms an important and particularly valuable link between the PVR Office and breeders, producers and consumers. The PVRAC will play a decisive role in the drafting of substantial changes to the PVR Act in 1992 which will precede Australia's accession to the new UPOV convention expected to take place at the end 1992.

The pivotal role played and reliance placed on the 'Qualified Person' in Australia's breeder testing PVR scheme by the PVR Office is being recognised and strengthened by the introduction of a scheme for the accreditation of persons who may act as qualified persons. Details of the scheme are given in this issue. The attention of applicants is drawn to the accreditation process because:

- applicants will have a wider choice of accredited persons in whom they can place more confidence to provide a recognised standard of PVR consultancy services; and,
- it will be mandatory after mid-1992 to have applications certified by an *accredited* qualified person before they will be examined by the PVR Office.

**Dr Mick Lloyd** DIRECTOR: PLANT VARIETY RIGHTS OFFICE

# CLOSING DATE FOR JUNE ISSUE 22 APRIL 1992

**Editorial Panel:** 

Registrar:

Dr Mick Lloyd

Examiners:

David Thearle

Mark Kethro Libby Pulsford

Administration:

Margaret Winsbury

The editors welcome comments and short articles from all sectors of the plant breeding industry for publication in the Plant Varieties Journal. Authors should follow the guide on the inside back cover.



Dr Mick Lloyd



Libby Pulsford



Mark Kethro



Margaret Winsbury



David Thearle

## Part 1—General

# Plant Variety Rights Advisory Committee (PVRAC)

The Minister for Primary Industries and Energy, Simon Crean, recently announced the appointment of new members of the PVRAC. The new members have been appointed for a period of two years commencing on 1 January 1992. Dr H L Lloyd remains Chairman.

The PVRAC has an appropriately wide range of expertise among its members. Each member is appointed in their own right or they represent the interest groups specified in Section 45 of the PVR Act:

- Dr Robert Boden was appointed for his experience and qualifications. Dr Boden has particular expertise in Australian native species, is a consultant advising in the fields of horticulture and arboriculture and is a former Director of the Australian National Botanic Gardens;
- Dr K G (Kevin) Boyce is the public sector breeder representative. Dr Boyce is well known nationally and internationally for his contributions to plant genetic resources policy, seed industry administration, and seed science and technology;
- Mr R G (Rodney) Field was nominated by the NFF. He is a member with appropriate qualifications and experience. As a member of the first PVRAC he will provide valuable continuity of membership. Mr Field has for many years been an active member of the research, education, seeds, levy committees of WAFF, GCA and NFF. He is a pastoralist and agricultural consultant and former President of the Grains Council of Australia;
- Dr D P (David) Godden is the consumer representative. Dr Godden is a Senior Lecturer in Agricultural Economics at the University of Sydney and was formerly Senior Research Scientist with the New South Wales Department of Agriculture. He has studied and published widely on the economic impact of research policy and intellectual property rights.
- Dr B W (Brian) Hare represents the private breeding sector. Dr Hare was a nominee of the Seed Industry Association of Australia. He has considerable experience as a plant breeder and Director of Research with Pacific Seeds:
- Dr H L (Mick) Lloyd, Director of the Plant Variety Rights Office (Chairman); and
- Mr E N (Ben) Swane was nominated by the Nursery Industry Association of Australia. Mr Swane is the producer representative on the committee and was a member of the first PVRAC. The nursery industry is the largest participating sector in PVR. Ben Swane has been actively representing the nursery industry on national committees including breeders rights for many years.

PVRAC members' contact details are in Appendix 3.

# New payment deadlines for the PVR examination fee

In 1989 the PVR Office introduced the option for applicants to spread the payment of the examination fee as 25% annual

instalments if there was a genuine case for extension of provisional protection for longer than 12 months. The PVR Office is faced with two problems directly attributable to the introduction of payments by instalments and a subsequent amendment to the PVR Act which allows sale of a variety during provisional protection.

Firstly, the total number of applications for PVR is approaching 450 and this number is projected to increase at a rate of approximately 150pa. Maintaining an application tracking system, invoicing and accounting procedures for clients who pay by instalments is becoming prohibitively complex, time consuming and costly at a time when the PVR Office is attempting to contain costs to avoid fee increases.

Secondly, the combination of delayed payment of examination fees and the deletion from the Act of paragraph 22 (2) (b) in 1990 has introduced hitherto unexpected distortions into the PVR scheme and abuses of PVR in some quarters. Thus, it is feasible for varieties with an expected high return, but short market life to extend provisional protection for an additional year. By so doing an applicant can fully exploit exclusive marketing rights under provisional protection then withdraw the variety from PVR prior to paying the next instalment. Using the above loophole an applicant can secure full marketing rights for, say, 20 months or more for \$1100 or less. There is an increasing trend towards this form of abuse of the PVR scheme.

Persons intentionally perpetrating this deception are, in effect, contributing to the pressure on the PVR Office to increase fees and are at present being subsidised by those that pay full fees for the same protection.

Faced with reduced cash flow caused by an abuse of these provisions introduced to financially assist applicants, the PVR Office can either increase fees and/or re-instate paragraph 22 (2) (b) and/or abolish the fees-by-instalment scheme. Adopting the latter option is expected to inconvenience a small number of applicants who genuinely have cash flow problems. Increasing fees or re-instating the prohibition on sales during provisional protection will disadvantage all applicants and are not feasible options at this stage.

The new payment provisions will come into effect immediately and are detailed in Appendix 1 under "FEES". Basically the \$1400 examination fee must be paid before the expiry of 12 months from the date of acceptance of the application otherwise the application will be refused. It will only be possible to extend provisional protection beyond the 12 month limit if:

- -the full examination fee has been paid; and,
- —a complete set of DUS data from the comparative test is unavailable due to test failure or the comparative test needs to be repeated to substantiate DUS data.

# Use and standardisation of the PVR logo for provisional protection

The PVR Office has received strong representation from its clientele about the commercial advantages of using the PVR logo to provide a clearly visible indication on labels and other promotional material that a variety is *provisionally* protected. This is in addition to its use on those varieties that have been granted PVR. It has been brought to the Office's attention that it is already common practice for the logo to be used for both forms of protection.

Under the circumstances and contrary to our previous notice, PVR Office is formally extending the right to the use of the PVR logo on labelling for *provisionally* protected varieties.

To avoid confusion and fraudulant use of the logo in the marketplace the PVR Office will require in future that the logo and associated warning be *standardised* and the appropriate application number or certificate number be used in conjunction with the logo at all times as illustrated below.

The use of the logo in both cases must be accompanied by an indication of the state of the application, despite the fact that the protection afforded during provisional protection is the same as for varieties that have been granted PVR. To achieve this it is essential to use "Australia" and the following standard phrases in conjunction with the logo and, as appropriate, the application number or certificate number:





PVR PENDING: No..... or

PVR GRANTED: No......

Unauthorised commercial propagation or any sale of propagating material of this variety is an infringement under the Plant Variety Rights Act 1987.

To ensure that the public generally and the trade is informed about the extent of the protection provided by PVR it is imperative that the label clearly states that protection extends only to propagation for commercial purposes and the sale of the propagating material. The label should not imply that exclusive marketing rights extend to the product (ie. to grain, fruit or flowers of a protected variety)

It is an offence under section 52 of the PVR Act 1987 to use the PVR logo on a variety label or in any other manner to falsely claim or imply that a variety is protected by PVR if the variety does not have provisional protection, has been refused, or has not been granted PVR in Australia.

#### **Accreditation for 'Qualified Persons'**

The PVR Office is to introduce an accreditation scheme for 'Qualified Persons' who are available to act as applicants' technical consultants or to undertake testing on behalf of applicants for PVR.

The initial listing of accredited persons will be completed by mid-1992. Thereafter, the PVR Office will only accept applications that have been certified by an *accredited* qualified person.

Agencies who provide comparative varietal testing services on behalf of applicants must have the application certified by an accredited qualified person. All persons who wish to be accredited as PVR consultants and act as qualified persons for PVR applicants are invited to apply to the PVR Office for accreditation. The justification for the accreditation scheme and the application procedure are outlined below.

#### Role of qualified persons

The 'Qualified Person' plays an important role in the PVR scheme in Australia. As the applicant's technical consultant on the choice of comparative varieties, field plot layout or test design, statistical analysis, DUS criteria and their measurement and the completion of application forms and varietal descriptions, the Qualified Person is instrumental in ensuring that applications for PVR are technically rigorous. The qualified person's technical role is complementary to that of PVR Office examiners in ensuring that PVR grants are legally sustainable in the event of infringement and litigation. The PVR Office, recognising the applicant's dependence on the Qualified Person for good quality PVR applications and the long term credibility of the PVR scheme, will in future accept applications only if they have been certified by an accredited qualified person.

#### **DUS** testing agencies

Agencies that perform comparative varietal DUS tests on behalf of applicants must have the test protocol approved and the application (Part 2) certified by an accredited qualified person who can be from within the agency or an independent consultant who is accredited by the PVR Office. Agencies *per se* will not be eligible for accreditation. Accreditation cannot be ceded or delegated. The accredited person can, of course, be on the staff of the testing agency.

Private or government agencies who provide centralised testing for a number of applicants on contract in response to tenders are also required to have their work certified by an accredited qualified person. Individual applicants participating in a centralised testing scheme must similarly have their separate applications certified.

#### Who should apply for accreditation?

The PVR wishes to advise all persons who intend to offer their services to applicants for PVR to apply for accreditation, whether or not they have previously acted as qualified persons or consultants to PVR applicants. Including:

- nursery owner/managers or their employees who have the qualifications and/or experience to conduct their own comparative tests for PVR;
- · private consultants;
- persons who undertake private consulting work as employees or in their own right from faculties, schools and colleges of agriculture/ horticulture/ forestry, botany departments, botanical gardens, and research institutions;
- persons who will be the nominated 'qualified persons' employed by private or public research/consulting agencies who provide comparative varietal testing services for PVR applicants.

#### **Applications**

The accreditation program will commence immediately. Any person wishing to be accredited as a PVR CONSULTANT

(Qualified Person) should apply in writing to the Registrar, PVR Office, DPIE, GPO Box 858, Canberra, ACT 2601 Australia. Please attach your resume. The application should, as far as possible, include, specify or address each of the following:

- · full name, address and all contact numbers;
- · affiliations,
  - —current employment details and length of time in present employment or occupation
  - -position in firm, institution or agency
  - ---membership of professional bodies
- qualifications and awarding institutions (copies of certificates)
- relevant experience (including publications where appropriate)
  - —in planning, establishment and/or supervision of field and/or glasshouse trials and their statistical evaluation,
  - demonstrating a knowledge of the anatomy, structure and/or taxonomy of horticultural or agricultural or native plants
  - in DUS testing, PVR applications and UPOV technical guidelines,
- geographical area in which you are able/prepared to function as a consultant to:
  - -conduct comparative DUS tests
  - —plan, supervise and analyse comparative varietal tests as a consultant,
- families, genera, species of crops, ornamentals, fruit, native plants, etc. for which you will offer a consultancy service as a qualified person should your application for accreditation be successful;
- familiarity with the PVR Act 1987 and the UPOV Convention;
- Names, addresses and telephone numbers of three referees.

#### Lists of agencies and accredited persons

As a service to applicants future issues of the Journal will publish separate lists of:

- names of accredited qualified persons, the PVR services for which they are accredited and in which geographical area they will provide a consultancy and/ or DUS testing service;
- agencies willing to provide a DUS testing service for applicants whose services must be certified by an accredited qualified person.

#### **Photographs**

As reported in PVJ Vol 4 No 4, photographs now form part of the minimum requirements for a valid application. They must show the distinguishing characteristics of the new variety compared to the old. Anyone who has attempted to photograph botanical subjects will know how difficult it can be to achieve good results.

There are many qualities which go to making a good photograph. They include clarity, colour, contrast and composition. Each of these elements requires attention to detail. If done carefully, setting up a photograph will take a long time and require some specialised equipment. Few of you in business would attempt taking your own catalogue photographs because it is specialised work and you want the best results. The same is true for PVR applications.

It is now more important than ever to provide the best photographs that you can because the space available in the journal for your photograph is limited. There are a number of reasons for this: design time, equity and overall cost but most important is the need for efficiency in our operations.

Your photograph may be landscape or portrait but will be limited in dimensions by column width (85mm) and height (at the editor's discretion). If necessary the photograph will be reduced, or enlarged and masked, to give readers the best possible view of the subject within the limits.

Reproduction for the Plant Varieties Journal is done from transparency. Applicants should aim, as previously, to illustrate important differences on the one transparency. It should be composed of plants or, preferably, parts of plants. (Parts are much easier to arrange, photograph and they are more revealing.) It is good practice to include a scale, a colour reference and labels on dark coloured card. A matt black background will give the most pleasing results but is for experts only. Dark grey background is easier and next best. Never use white because it invariably results in loss of colour and detail.

Accept only the best work. The printing process cannot improve your photograph.

#### **Descriptions**

The format for writing a description for publication has changed. The old sub-headings 'Diagnosis' and 'Morphology' have been combined under the one heading 'Description'. There are a number of reasons for the change including brevity and precision but mainly to avoid duplication of information. Information given under 'Description' includes as much as can be described in absolute terms. You will find all comparisons with existing varieties in the 'Table of Comparison'. Consultants to applicants ('Qualified Persons') should note the change when preparing their drafts for the journal.

# Part 2—Public Notices

The following varieties are included in this Journal

	Variety	page number
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Alstroemeria	'Staranlo'	26
	'Stasilva'	26
	'Stajured'	26
Apple	'Big Time'	26
Avocado	'Esther' 'Whitsell'	26 26
Azalea	'Harlequin'	26
<i>rizaica</i>	'Sydney's Sesqui'	24
Bean	'Jade'	25
Callistemon	'Great Balls of Fire'	7
Candytuft	'Candy Glow'	24
Canola	'Monola-31'	26
	'Monola-32'	26
Carnation	'Stagibrig'	6
	'Stagidark' 'Stagilac'	7
	'Stagiten'	7
Cherry	'Lapins'	7
,	'Winter Sun'	7
Christmas Cactus	'Gold Fantasy'	6
Cotton	'CS 50'	24
	'CS 7S'	25 25
	'Sicala 34' 'Siokra L23'	25
Cuphea	'Golden Ruby'	7
Diffenbachia	'Golden Sunset'	25
Dipladenia	'My Fair Lady'	21
Golden Cypress	'Golden Halo'	7
Grazing Brome	'Grasslands Gala'	12
Guinea Grass	'Natsukaze'	6
Hardenbergia	'Purple Falls'	11
Indian blue grass	'Dawson'	7
	'Medway'	8
Kalanchoe	'Blues' 'Mazurka'	7
Lechenaultia	'Autumn Blue'	26
Lettuce	'Impact'	23
Leucadendron	'Katie's Blush'	7
Oat	'Riel'	22
Onion	'Orbex'	25
Potato	'Morene'	6
Totalo	'Panda'	25
Rose	'Tineke'	7
	'Kimba'	24
	'Crimson Minijet'	25
	'Orange Minijet' 'Candy Meillandina	25 25
	Curry Michiganulla	
	'Selstar'	24
	_	24 25 25

	'White Simplicity' 'Class Act' 'Brigadoon'	25 25 25
Ryegrass	'Grasslands Greenstone' 'Jackaroo'	6 9
Soybean	'PNR2' 'PNR3' 'PNR6' 'PNR7' 'PNR10'	25 25 25 25 25 25
Spathiphyllum	'Caroline'	26
Stylo	'Amiga'	7
Triticale	'Abacus'	17
Wallaby Grass	'Bunderra' 'Taranna'	20 18
Wax flower	'Niribi'	11
Xanthostemon	'Tropic Splendor'	24

#### **PVR Granted**

Plant Variety Rights have been granted under Section 26 of the *Plant Variety Rights Act 1987*, and entry has been made in the Plant Varieties Register for the following varieties:

#### **GUINEA GRASS**

Panicum maximum

1. 'Natsukaze' Application No. 89/017

Grantee: Kyushu National Agricultural Experimental

Station

Certificate No. 119

Expiry Date: 15 March 2009

#### **CHRISTMAS CACTUS**

Schlumbergera hybrid

2. 'Gold Fantasy' Application No. 89/096

Grantee: BL Cobia Inc

Certificate No. 141

Expiry Date: 31 October 2009

#### **RYEGRASS**

Lolium perenne x multiflorum

3. 'Grasslands Greenstone' Application No 90/080

Grantee: DSIR Grasslands

Certificate No. 142

Expiry Date: 10 August 2010

#### **POTATO**

Solanum tuberosum

4. 'Morene' Application No. 88/005

Grantee: Eurogrow Potatoes Ltd

Certificate No. 143

Expiry Date: 31 August 2008

#### **CARNATION**

Dianthus hybrid

5. 'Stagibrig' Application No. 90/122 Grantee: Van Staaveren BV Certificate No. 144

Expiry Date: 11 December 2010

6. **'Stagiten'** Application No. 90/123

Grantee: Van Staaveren BV

Certificate No. 145

Expiry Date: 11 December 2010

7. 'Stagidark' Application No. 90/124

Grantee: Van Staaveren BV

Certificate No. 146

Expiry Date: 11 December 2010

8. 'Stagilac' Application No. 90/125

Grantee: Van Staaveren BV

Certificate No. 147

Expiry Date: 11 December 2010

#### **LEUCADENDRON**

Leucadendron hybrid

9. 'Katies Blush' Application No. 90/061

Grantee: Roger A Eggleton

Certificate No. 148 Expiry Date: 1 June 2010

#### **STYLO**

Stylosanthes hamata

10. 'Amiga' Application No. 90/078

Grantee: CSIRO Division of Tropical Crops and Pastures, and Queensland Department of Primary Industries

Certificate No. 149 Expiry Date: 31 July 2010

#### **CALLISTEMON**

Callistemon salignus

'Great Balls of Fire' Application No. 90/115
 Grantee: Stephen Membrey & Rex Trimble

Certificate No. 150

Expiry Date: 7 November 2010

#### **GOLDEN CYPRESS**

Cupressus macrocarpa

12. 'Golden Halo' Application No.90/035

Grantee: **Donald J Liddle** Certificate No. 151

Expiry Date: 28 February 2010

#### **KALANCHOE**

Kalanchoe blossfeldiana

13. 'Blues' Application No. 90/041

Grantee: **Kientzler KG**Certificate No. 152

Expiry Date: 30 March 2010

14. 'Mazurka' Application No. 90/042

Grantee: **Kientzler KG**Certificate No. 153

Expiry Date: 30 March 2010

#### **PVR Refused**

'Golden Ruby' commercial synonym: 'Cocktail' Cuphea hyssopifolia Application No. 90/071 Applicant: Ronald Graham Nurseries, New Zealand

Australian Agent: Glenfield Wholesale Nursery, Macquarie

Fields, NSW

Date of refusal: 2 December 1991

#### 'Tineke'

Rosa hybrida Application No. 90/096 Applicant: Select Roses BV, Holland

Australian Agent: Grandiflora Nurseries Pty Ltd, Cranbourne,

Victoria

Date of Refusal: 3 October 1991

#### 'Winter Sun'

Prunus subhirtella Application No. 90/098

Applicant: Russell Sebire, of Wandin North, Victoria

Date of Refusal: 8 November 1991

#### 'Lapins'

Prunus avium Application No. 90/117

Applicant: Her Majesty the Queen, in right of Canada

Australian Agent: South Australian Cherry Improvement

Committee of Adelaide, SA

Date of Refusal: 16 December 1991

#### **Applications Accepted**

The PVR applications listed below have been accepted under S18 of the *Plant Variety Rights Act 1987*.

#### (a) Descriptions Finalised

#### **INDIAN BLUE GRASS**

Bothriochloa pertusa

#### **Comparative Growing Trials**

All characteristics described are from comparative growing trials at Queensland Department of Primary Industries, Gympie, Queensland in 1989/90. Single germinated seeds were sown on November 28, 1989 in dibbling tubes and transplanted on December 21, 1989 into nursery beds in 3 replicates each comprising 5 plants of each variety.

Variety: 'Dawson'. Application No. 90/024 See fig. 1 in colour section

Application Received: 5 February 1990

Applicant: **The Minister for Primary Industries** for and on behalf of the Crown in right of the State of Queensland, Brisbane, Queensland.

#### **Description**—see comparison tables

'Dawson' is a weakly tufted, sward forming perennial with a dense mat of fine, red stolons and upright culms to 70cm. Calaphylls present, glabrous. Flowering culms 4–8 noded, 1–2 branched. Nodes hairy on every node, with dense hairs to 1.5mm. Internodes glabrous, longer than the associated leaf sheaths. Blades 1.5–8.5 cm x 1.5–2.5 mm, with fine sparse hairs adaxially, with moderately dense hairs abaxially, glabrous on margin, with hairs to 1mm long at blade sheath junction, flat, linear–lanceolate, smooth, narrowly acute, attenuate at the base, with serrulate margins. Ligule *ca.* 0.5 mm long, a fringed membrane, apically rounded. Collar hairy on a pale band.

Sheaths glabrous at margin, rounded on the back, glabrous. with smooth nerves. Inflorescence subdigitate or digitate. Axis 4–6 mm long, smooth with small cushion of hairs on pulvinus at raceme bases. Peduncles 3-5 mm long. Racemes 1-5, 8-18 jointed, 3-4.5 cm long. Joints slightly shorter than pedicels, ca 2 mm long, with densely ciliate margins and a translucent midline. Sessile spikelet dorsally compressed, lanceolate-oblong. to 3.3 x 0.8–1 mm. Lower glume very narrowly truncate, pitted in upper part, spinulose-scabrous on keels towards apex, loosely hairy in lower third, 7 nerved, 2-keeled. Upper glume 3-nerved, lanceolate, spinulose-scabrous on keel. Lower lemma lanceolate-oblong, glabrous. Upper lemma stipe-like, entire, ca 2mm with awn 15-18 mm long. Pedicelled spikelet ± similar to sessile spikelet in size and shape, but unawned. neuter, ca 3mm long, lanceolate. Lower glume mostly not pitted. Flowering commencing early May.

#### Origin

'Dawson' was one of ten lines selected from a set of 128 lines of *Bothriochloa pertusa* for multisite evaluation throughout Queensland. It was selected from this evaluation program for its potential as a turf variety with its low growth, rapid stolon development giving dense ground cover, late flowering and wide adaptation.

#### Varieties used for comparison

'Medway', 'Emerald', 'Bowen', 'Yeppon', being the most common varieties in Queensland.

#### **Agronomy**

'Dawson' is a warm season turf grass well adapted to a wide range of well drained soils in subhumid tropical and subtropical environments.

Variety: 'Medway'. Application No.91/108 See fig. 1 in colour section.

Application Received: 11 November 1991

Applicant: **The Minister for Primary Industries** for and on behalf of the Crown in right of the State of Queensland, Brisbane, Queensland.

#### Description—see comparison tables

'Medway' is a weakly tufted, sward forming perennial with pink to red stolons; upright culms to 90cm. Cataphylls present, glabrous. Flowering culms 4-8 noded, 2-3 branched. Nodes and internodes glabrous. Leaf blades 2.5-1.4 mm x 2-5 mm, almost glabrous adaxially with few sparse hairs at base. Ligule 0.3 mm long, a fringed membrane. Collar glabrous forming a pale band. Sheaths glabrous at margin, rounded on the back, with smooth nerves. Inflorescence subdigitate, or digitate. Axis 5-15 mm long, smooth with a small cushion of hairs on pulvinus at raceme bases. Peduncles 12-29 cm long. Racemes 5-9, 10-20 jointed, 3.0-6.6 cm long. Joints and pedicels the same length, 2-2.3 mm long, with ciliate margins and a translucent mid-line. Sessile spikelet dorsally compressed, lanceolate-linear, 3.5 x 1 mm. Lower glume narrowly obtuse, pitted in upper part, spinulose-scabrous on keels toward apex, pilose on back in lower third, 7 nerved, 2 keeled. Upper glume 3 nerved, lanceolate. Lower lemma lanceolate-oblong, glabrous. Upper lemma stipe-like, entire, 1.5 mm long with awn to 18 mm long. Pedicelled spikelet ± similar to sessile spikelet in size and shape but unawned, neuter, <u>ca</u> 3.5 mm long, lanceolate. Lower glume with 1 pit in apical third. Flowering commencing late March.

#### Origin

'Medway' was initially selected from six *B. pertusa* varieties on the basis of leafiness, robustness and flowering time. In a follow-up morphological and agronomic comparison involving 128 varieties, it showed a desirable combination of attributes for a pasture grass in central and southern Queensland.

#### Varieties used for comparison

'Dawson', 'Emerald', 'Bowen', 'Yeppon', being the most common varieties in Queensland.

#### Agronomy

'Medway' is a warm season pasture grass adapted to infertile to moderately fertile earths and duplex soils in areas of central and southern Queensland with an average annual rainfall of 600–900mm.

#### Table of Comparison of Bothriochloa Varieties

(\* = varieties used for comparison)

	'Dawson'	'Medway'	*'Emerald'	*'Bowen'	*'Yeppon'
NO. PRIMARY & S	ECONDARY STOLONS	PER PLANT (18 Janua	ry 1990, 51 days after so	owing)	-
mean	33.1	14.0	26.5	16.1	19.1
range	9–70	9–21	5-39	3–29	11–27
std deviation	15.98	4.52	9.02	7.15	4.90
LONGEST STOLO	N LENGTH (18 January	1990, 51 days after sow	ving)		
mean	701 mm	431 mm	588 mm	613 mm	827 mm
range	540-800	200-540	420-720	290-730	580-1000
std deviation	88.4	80.8	95.6	116.3	135.4
LENGTH OF STOL	ON INTERNODE—2nd	from crown, 18 January	1990, 51 days after sow	ing	
mean	36.5 mm	68.9 mm	44.4 mm	78.7 mm	55.5 mm
range	20-67	44–113	25-74	45110	30-87
std deviation	11.5	17.3	12.0	20.6	13.0
THICKNESS OF ST	TOLON INTERNODE—2	and from crown, 18 Janu	ary 1990, 51 days after s	sowing	
mean	1.04 mm	1.66 mm	1.23 mm	1.56 mm	1.37 mm
range	0.9-1.2	1.3-1.9	1.0-1.4	1.3–1.8	1.1-1.7
std deviation	0.10	0.16	0.09	0.15	0.15

TABLE OF COMPARISON OF BOTHRIOCHLOA VARIETIES—Continued

	'Dawson'	'Medway'	*'Emerald'	*'Bowen'	*'Yeppon'
MATURE CULM LENGT	H—peduncle + internode	9	-		
mean	519 mm	793 mm	675 mm	616 mm	748 mm
range	416-667	606-952	548-770	475-804	553-945
std deviation	58	88	54	75	84
NUMBER OF RACEMES	PER INFLORESCENC	E			
mean	3.6	6.7	4.4	4.6	4.9
range	3-5	5-9	3-6	3–7	4–7
std deviation	0.8	1.4	0.7	1.2	0.7
RACEME LENGTH (ove	rall mean)				
mean	37.4 mm	46.8 mm	44.1 mm	48.1 mm	48.7 mm
range	28-45	26-66	29-58	20–65	35–59
std deviation	3.7	8.0	4.8	7.4	4.6
WEIGHT PER 1000 MAT	URE SEED UNITS (one	e unit = fertile spikelet + s	sterile spikelet + awn)		
mean	0.852 g	0.636 g	0.870 g	0.648 g	0.922 g
range	0.821-0.877	0.616-0.664	0.836-0.898	0.612-0.692	0.903-0.952
NODAL HAIRS					
	dense ring of hairs	absent on every	dense ring of hairs	dense ring of hairs	lower-mostly
	to 1.5 mm on	node	to 1.5 mm on	to 1.5 mm on	absent; if present
	every node		every node	every node	very short, &
					sparse to 1 mm
					long; upper nodes
					—present but not
					dense
LEAF PUBESCENCE—	upper surface				
	short (< 0.5 mm),	very small, barely	present, fairly dense	present, fairly dense	fine and sparse
	fairly sparse, long	detectable; few at	spreading to 0.5 mm;	spreading to 0.5 mm;	to absent
	tuberculate hairs	base of blade	sparse tuberculate, to	sparse tuberculate, to	
	rare		5 mm in lower third	5 mm in lower third	
LEAF PUBESCENCE—I	ower surface				
	present, moderately	absent	present, moderately	present, moderately	fine and sparse
	dense		dense	dense	to absent
LEAF PUBESCENCE—I	olade margin				
	absent, serrulate	absent, serrulate	serrulate with few	serrulate with few	absent, serrulate
	about, contains		long tuberculate	long tuberculate	
			hairs in lower third	hairs in lower third	
LEAF PUBESCENCE—I	olade/sheath junction				
	tuft to 1.5 mm band	sparse tuft to 1.5 mm,	dense tuft to 2.5 mm,	dense tuft to 2.5 mm,	tuft to 1 mm,
	on lower surface	sometimes a few on	glabrous band on	glabrous band on	glabrous band on
		lower surface	lower surface	on lower surface	on lower surface
LEAF PUBESCENCE—	sheath margin				
LLAT TODEOULINOL—	sometimes present	absent	mostly present	sometimes present	absent
	near blade	aboont	mostly present	Sometimes present	absent
EL OWEDING THE					
FLOWERING TIME—DA	ATE OF FIRST FLOWER 6.5.91	IS 25.3.91	28.2.91	30.1.91	6.5.91

#### PERENNIAL RYEGRASS

Lolium perenne

Variety: 'Jackaroo'. See photograph of electrophoretic gel.

Application No. 90/119 Application Received: 30 November 1990

Applicant: Department of Primary Industry Tasmania of

Kings Meadows, Launceston, Tasmania

#### Description—see also comparison tables

'Jackaroo' is a medium heading perennial ryegrass; flag leaf width 6-11 mm; flag leaf length 11-23.5 mm; 13-26 spikelets

in spikes 13.5-29.0 mm long; 5-13 seeds per spikelet; 1% of seedlings produce fluorescent roots under ultraviolet light.

#### Origin

This variety arises from the open crossing of 24 parent plants. Subsequent multiplication is by open crossing through 3 generations to produce 'certified' seed. The parent plants were selected from a collection taken from Elliott Research Station near Burnie in North-West Tasmania. The collection was made from plots originally sown to the varieties 'Tasmanian No. 1', 'Grasslands Nui' and a breeding population 'polycross M'. The plants had survived as perennials through drought periods and infestation with corbie grubs (Oncopera spp) and pasture cockchafers (Aphodius spp, Adoryphorus couloni). The 24 parent plants of Jackaroo were selected on the basis of uniformity

of type, resistance to crown rust (*Puccinia coronata*) and autumn and winter vigour.

The parents are maintained by the applicant as vegetatively propagated clones at Mt. Pleasant Laboratories, Launceston Tasmania.

#### Varieties used for comparison

'Ellett', 'Grasslands Nui', 'Yatsyn 1', 'Martlet', 'Tasdale', 'Droughtmaster', 'Brumby', 'Roper', 'Victorian', 'Kangaroo Valley'.

#### Comparative growing trial

All characteristics described are from a comparative growing trial conducted at Cressy Research Station, near Launceston, Tasmania, in 1990 and 1991. 100 spaced plants of each variety were planted in a randomised complete block design with 10 blocks. Each plot contained 10 plants (2 rows x 5 plants) of a particular variety with a between plant spacing of 60cm. A similar trial was also planted in 1990 at Cressy Research Station which included only the varieties 'Jackaroo' and 'Roper'.

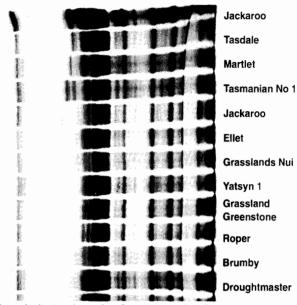
In addition to evidence of distinctness and stability, the applicant has submitted photographic prints of the results of SDS-polyacrylamide gel electrophoresis of extracted seed proteins. These demonstrate a difference in banding pattern between the varieties analysed and consistency between the two samples of 'Jackaroo'. The analytical method used is essentially as described in Gardiner, SE and Forde MB (1987), Seed Science and Technology 15, 663–674, modified by the use of the extraction medium described by Smith, DB and Payne, PI (1984), J. natn. Inst. agric. Bot. 16,487–498. The method is fully described in 'Identification of cultivars

of grasses and forage legumes by SDS-PAGE of seed proteins', Gardiner SE and Forde MB, in 'Modern Methods of Plant Analysis', 14 (In press) eds. Linskens, H-F and Jackson, JF, Springer.

Seed protein analysis performed by Dr SE Gardiner of DSIR Fruit and Trees, Palmerston North, New Zealand.

#### Agronomy

'Jackaroo' is best suited to high fertility soils in medium to high rainfall (>600mm annual rainfall) humid temperate regions.



SDS polyacrylamide gel electrophoresis of seed protein of ryegrass varieties. (Photograph supplied by DSIR Fruit and Trees).

#### **Table of Comparison of Perennial Ryegrass Varieties**

(\* = variety used for comparison)

	'Jackaroo'	*'Ellet'	*'Grasslands Nui'	*'Yatsyn 1'	*'Martlet'	*'Tasdale'	*'Drought- master'	*'Brumby
MATURITY (	no. of days from O	ct 1 until 3 hea	d tips visible per p	olant)				
mean	30.7	30.8	33.3	34.6	34.4	30.0	35.3	28.1
std dev	4.4	4.8	5.3	6.8	5.2	5.3	7.1	3.6
FLAG LEAF	LENGTH			-				
mean	18.0 cm	19.1 cm	19.7 cm	18.3 cm	19.1 cm	17.8 cm	19.0 cm	16.5 cm
range	11.0-23.5	12.5-28.0	13.5-29.0	11.0-27.5	10.0-27.5	10.0-28.0	10.5-28.0	8.5-30.0
std dev	2.9	3.3	3.2	3.4	3.3	3.7	3.3	4.4
FLAG LEAF	WIDTH							
mean	7.6 mm	8.0 mm	8.6 mm	8.3 mm	7.7 mm	8.1 mm	7.6 mm	7.3 mm
range	6–11	3-11	5–11	5–11	6-11	5-10	6–11	4-11
std dev	1.0	1.2	1.1	1.4	1.0	1.1	1.1	1.4
SPIKELET N	O. PER SPIKE							
mean	19.2	20.3	19.7	19.3	20.5	19.4	21.7	18.8
range	13-26	14-27	13-27	14-27	15-28	14-27	14-29	10-28
std dev	2.65	2.90	2.83	2.61	2.95	3.06	3.12	3.53
SPIKELET LI	ENGTH							
mean	14.3 mm	15.4 mm	16.0 mm	15.1 mm	14.9 mm	15.3 mm	14.4 mm	13.5 mm
range	10-19	10-20	10-22	10-20	11–19	10-20	10-19	8-20
std dev	3.3	3.5	4.1	3.7	2.9	3.7	3.3	3.3
SEEDS PER	SPIKELET							
mean	8.9	9.5	10.1	9.4	9.2	9.8	8.7	8.0
range	5–13	6-13	5-15	6-14	6-13	6-13	5–1 <b>1</b>	4-12
std dev	1.8	1.6	1.7	1.6	1.7	1.9	1.3	1.9

#### TABLE OF COMPARISON OF PERENNIAL RYEGRASS VARIETIES—Continued

	'Jackaroo'	*'Ellet'	*'Grasslands Nui'	s *'Yatsyn 1'	*'Martlet'	*'Tasdale'	*'Drought- master'	*'Brumby'
SEEDLING FLUO	RESCENCE-	-%						
	1	0	4	1	1	13	1	22
GROWTH HABIT	(1=prostrate,	5=erect)						
	3.8	3.7	3.7	3.5	3.4	3.7	3.6	3.6

#### **HARDENBERGIA**

#### Hardenbergia violaceae

Variety: **'Purple Falls'.** See fig. 2 in colour section.

Application No. 91/055

Application Received: 27 June 1991

Applicants: Stephen Membrey and Rex Trimble, of Facey's

Nursery Pty. Ltd., Five Ways, Victoria

#### **Description**—see also comparison tables

This variety is a compact heavily branched trailing shrub. It has a dwarf, trailing growth habit; dense foliage with small, glabrous lanceolate leaves; anthocyanin in the young foliage: short internodes; violet blue flowers corresponding to RHS 90A on the standard petal and RHS 89A on the wing petals.

Leaves are stipulate and arranged in distichous fashion along the stem. New stems and leaves show anthocyanin pigmentation. The stems are ribbed and have a trailing tendency. 'Mini Haha' differs from 'Purple Falls' in having an upright growth habit and larger flowers which correspond to RHS 88A on the standard petal and to RHS 86A on the wing petals. 'Happy Wanderer' has much larger leaves, fewer stems and violet flowers corresponding to RHS 84A on the standard petal and to RHS 87A on the wing petals.

#### Origin

This variety arose from a chance seedling found in a collection of Hardenbergia violaceae at the applicant's nursery. Selection was based on growing habit and flower density.

#### Varieties used for comparison

'Mini-Haha', the closest known variety and 'Happy Wanderer' an industry standard variety.

#### **Comparative Growing Trials**

All characteristics described below are from comparative growing trials conducted at Five Ways in south-eastern Victoria. Plants of all varieties were propagated by cuttings. Fifteen plants of each variety were grown in 150 mm pots in a standard potting mixture. Growth measurements were made in January 1992. Flower colours were assessed on an older generation in September 1991.

#### Table of Comparison of Hardenbergia Varieties

(\* = variety used for comparison)

	'Purple Falls'	*'Mini-Haha'	*'Happy Wanderer'
PLANT HEIGHT			
mean	14.0 cm	23.27 cm	45.73 cm
range	12-17	19–26	29-58
std. deviation	1.65	2.58	9.39

#### TABLE OF COMPARISON OF HARDENBERGIA VARIETIES—Continued

	'Purple Falls'	*'Mini-Haha'	*'Happy Wanderer'
PLANT WIDTH			
mean	27.0 cm	20.53 cm	39.87 cm
range	18–33	15–26	16–60
std. deviation	3.48	3.04	14.76
BRANCH NUMB	ER (over 10 cm)		
mean	24.13	19.47	4.13
range	17–37	15–28	2–6
std. deviation	6.02	3.74	1. <b>1</b> 3
LEAF LENGTH			
mean	31.2 mm	36.27 mm	100.53 mm
range	25-36	32-46	78-121
std. deviation	2.83	4.68	13.46
LEAF WIDTH			
mean	12.87 mm	18.13 mm	47.07 mm
range	12-15	14-22	30-60
std. deviation	1.25	4.03	8.21
PETIOLE LENGT			
mean	7.93 mm	10.07 mm	26.47 mm
range	5-12	8-13	14-43
std. deviation	1.98	1.67	6.56
FLOWER COLO	JR		17 20 100 - 901
standard petal	RHS 90A	RHS 88A	RHS 84A
wing petals	RHS 89A	RHS 86A	RHS 87A

#### **WAX FLOWER**

Chamelaucium unicinatum

Variety:'Niribi'. See fig. 3 in colour section.

Application No. 91/071

Application Received: 5 August 1991

Applicant: AJ Newport & Son Pty Ltd of Winmalee, New

South Wales

#### **Description**—see also comparison tables

'Niribi' is a large flowered wax flower with a flowering time later than, although overlapping that of, 'Purple Pride'. Inflorescences are located distally and spread broadly on flowering branches. Mature flowers have purple petals and a greyed-red nectary; the style is white. Leaves are thick and waxy. Stomata occur at low frequency and are large.

#### Origin

This cultivar was originally selected in February 1989 by TP Angus and NF Derera from a population of over 1000 somaclones generated via somatic embryogenesis from callus cultures of 'Purple Pride'. The original selection was propagated to establish stock plants and to determine the stability of the mutant. Cuttings from these stock plants were used to propagate plants for comparison with 'Purple Pride'.

#### Varieties used for comparison

'Purple Pride', being the closest known variety.

#### **Comparative Growing Trials**

All characteristics described are from comparative growing trials conducted at Newports Nurseries, Winmalee, NSW between June 1991 and January 1992. Plants were propagated from tip cuttings in May 1991 and subsequently planted in 125 mm containers in a peat, sand, rice hull and perlite based medium. Plants were grown in a glasshouse arranged in 4 blocks with 25 cm spacing between containers. Plants were induced to flower in a short day environment. Measurements were taken from 26 plants of 'Niribi' and 40 plants of 'Purple Pride'.

Flower size varies with prevailing growing conditions. In glasshouse conditions, flowers of both 'Niribi' and 'Purple Pride' are approximately 20% to 25% larger in winter compared to summer.

#### Table of Comparison of Wax Flower Varieties

(\* = variety used for comparison)

	'Niribi'	*'Purple Pride'
FLOWER DIAMETER		
mean	15.88 mm	12.17 mm
range	14.4-18.4	10.7-14.0
std deviation	1.1	0.81
FLORAL TUBE DIAM	ETER	
mean	8.51 mm	6.44 mm
range	7.5-9.2	5.5-7.5
std deviation	0.49	0.43
PETAL COLOUR—MA	,	•
	purple	purple
RHS No.	80A	80A
FLOWER NECTARY of mature flower with pet	COLOUR—MATURE ( als removed)	from the top on a
	greyed-red	greyed-purple
RHS No.	178A	187A
STOMATA SIZE		
mean	45.5 um	37.2 um
range	40.6-56.3 um	31.5-43.8 um
std deviation	3.74	2.75
STOMATA DENSITY		
mean	100 mm <sup>-2</sup>	182.2 mm <sup>-2</sup>
range	67-133	133-213
std deviation	18.55	22.87
LEAF THICKNESS		
mean	1.63 mm	1.29 ram
range	1.4-1.8	1.1–1.5
std deviation	0.122	0.084

PREDOMINANT FLORAL TUBE OUTLINE

flared

conical

#### **GRAZING BROME**

Bromus stamineus

Variety: 'Grasslands Gala'. See fig. 4 in colour section and print of electrophoretic gel.

Application No. 91/090

Application Received: 2 September 1991

Applicant: Pyne Gould Guinness Limited, of Christchurch, New Zealand and Grasslands Division, Department of Scientific and Industrial Research, of Palmerston North, New Zealand, on behalf of her Majesty the Queen in Right of New Zealand

Australian Agent: **Mr A Stratton**, of Grasslands Division, DSIR, Rutherglen, Victoria.

#### **Description**—see also comparison tables

'Grasslands Gala' is a hexaploid (2n=42) grazing brome with dense tillering and semi-prostrate to intermediate growth habit. It is distinct from the closely-related *Bromus willdenowii* Kunth of which 'Grasslands Matua' is a variety, in having the following combination of characters: a shorter mature plant height producing more but thinner vegetative tillers; narrower vegetative leaves; shorter culms with shorter but wider flag leaves and greater leaf sheath pubescence; shorter panicles; more panicles per plant; shorter spikelets with longer awns. In New Zealand growing trials 'Grasslands Gala' was 3 days earlier heading than 'Grasslands Matua'.

In addition the applicant has submitted prints of gel electrophoresis of seed protein which display consistently different banding patterns. Extracts were obtained according to S E Gardiner and M B Forde: *Seed Science and Technology*, 1987, Vol. 15, pages 663–674. The extraction medium was modified as described by D B Smith and P I Payne in *Journal of Nat Inst Ag Bot* 1984, Vol 16, pages 487–498.

#### Origin

'Grasslands Gala' was bred by Dr Alan V. Stewart of Pyne, Gould, Guinness Ltd., Christchurch, New Zealand. This variety was selected from material obtained by the breeder from Santiago, Chile in 1983 and subsequently evaluated in New Zealand. Selections resulted in a base of 10 plants as parents code-named PG16. DSIR Grasslands later became a joint owner of 'Grasslands Gala'. Plant Variety Rights were granted under this name in New Zealand in July 1990.

#### Varieties used for comparison

There being no commercially available varieties of *Bromus stamineus*, a comparison was made with 'Grasslands Matua', a variety of *Bromus willdenowii* syn. *B catharticus*.

#### **Comparative Growing Trials**

The characteristics described below are from comparative growing trials conducted at Valley Seeds Pty. Ltd., Alexandra, Victoria in 1990/91. Measurements are from 68 'Grasslands Gala' and 69 'Grasslands Matua' plants. Comparative growing trials have also been conducted at Lincoln, Christchurch, in New Zealand.

#### Agronomy

'Grasslands Gala' is suited to moderate to cool temperate regions with annual rainfall of 600-800 mm.



Fig. 1. Top R to L: 'Medway', 'Yeppon', 'Bowen', Bottom R to L: 'Emerald', 'Dawson', Bottom left: Hairiness of top node, Top to bottom: 'Medway', 'Yeppon', 'Bowen', 'Emerald', 'Dawson', (Photograph supplied by applicant).



Fig. 2 'Purple Falls' (Photograph supplied by applicant).



**Fig. 3.** Flower, floral tube and leaf of 'Niribi' and 'Purple Pride'. (Photograph supplied by applicant).



**Fig. 4.** Mature plants of 'Grasslands Gala' (centre) with 'Grasslands Matua' (left and right). The plant at centre foreground is 'Grasslands Gala' with reproductive tillers removed. (Photograph supplied by applicant).

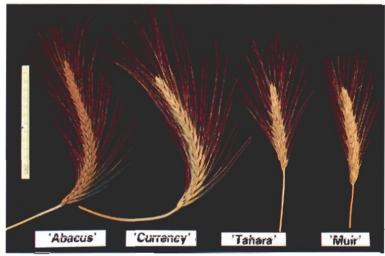


Fig. 5. Heads of 'Abacus', 'Currency', 'Tahara' and 'Muir'. (Photograph supplied by applicant).



Fig. 6. 'Taranna' (left) with the comparative variety 'Hume' and two native ecotypes. (Photograph supplied by applicant).



Fig. 7. 'Bunderra' (left) with the comparative native ecotypes. (Photograph supplied by applicant).



Fig. 8. 'My Fair Lady' (top), 'Scarlet Pimpernel' and 'Sanderii Pink'. (Photograph supplied by applicant).



Fig. 9. Panicles of 'Minhafer' (left), 'Riel' (centre) and 'Cluan' (right). (Photograph supplied by applicant).



Fig. 10. Lettuce varieties 'Impact' (right) showing no mildew infection, and 'Jackpot' (left) showing mildew. (Photograph supplied by applicant).



Fig. 11. Leaves of 'Tropic Splendor' (right) and X. chrysanthus seedling (left). (Photograph supplied by applicant).

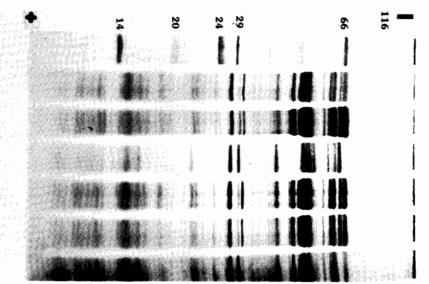


Fig 12. Bottom row—'Harlequin'; top row, from left—'Cleopatra'. 'Paradise Beauty', 'Agnes Neale'.(Photograph supplied by applicant).

#### **Table of Comparison of Grazing Brome Varieties**

(\* = variety used for comparison)

	'Grasslands Gala'	* 'Grasslands Matua'		'Grasslands Gala'	* 'Grasslands Matua'
AWN LENGTH			FLAG LEAF WID	TH	
mean	7.74 mm	4.09 mm	mean	10.8 mm	9.9 mm
range	3–10	2-10	range	7–14	8-12
std. deviation	1.51	1.46	std. deviation	1.46	1.21
significance		P=0.001	significance		P=0.001
PANICLE LENGT			VEGETATIVE LE	AF LENGTH	
mean	21.49 cm	24.42 cm	mean	232 mm	226 mm
range	15-32.5	14-32.8	range	121-345	120-520
std. deviation	3.95	3.56	std. deviation	52.8	63.5
significance		P=0.001	significance		NS
FLAG LEAF LEN	GTH		VEGETATIVE LE	AF WIDTH	
mean	169 mm	225 mm	mean	5.8 mm	6.5 mm
range	70–290	108-305	range	2–10	3–10
std. deviation	54.8	36.1	std. deviation	1.66	1.66
significance		P=0.001	significance		P=0.05



- molecular ref.
- 2. G.GALA (cb1486)
- 3. —(Experimental)
- 4. G.MATUA (cb1421) (Bromus willdenowii)
- 5. G.GALA (cb1486) breeders.
- 6. G.GALA (cb1485)nucleus.
- —cb1315. The original seed from which selections were made to produce the variety G.GALA.

Electrophoretic gel of seed proteins of two generations of 'Grasslands Gala' (bands 2 and 5) and 'Grasslands Matua' (band 4). (Photograph supplied by applicant).

#### **TRITICALE**

X Triticosecale

Variety: 'Abacus'. See fig. 5 in colour section. Application No. 91/092

Application Received: 25 November 1991

Applicant: Luminis Pty. Ltd., The University of Adelaide,

South Australia

#### **Description**—see also comparison tables

This variety is a late-maturing, spring type, hexaploid triticale. 'Abacus' has brown chaff, long tapering heads, strongly pigmented flag leaf auricles and pubescence present on the peduncle. 'Abacus' has a longer head than 'Muir' or 'Tahara' and a

denser head with shorter awns than 'Currency'. Unlike 'Currency' but like 'Muir' and 'Tahara', 'Abacus' has good resistance to *Puccinia graminis* ssp. *tritici* race 34–2, 12, 13.

#### Origin

The breeder is K V Cooper of the University of Adelaide, South Australia. 'Abacus' derives from a locally produced primary triticale topcrossed to advanced triticale varieties. The pedigree of 'Abacus' is K875/'Snoopy'//T2893/3/ 'Currency'. K875 (bread wheat), 'Anza'/'Raven'//'Olympic'/Siete Cerros 66 obtained from A.J. Rathjen was crossed with 'Snoopy' Rye, and amphiploids were obtained by embryo culture and colchicine treatment. The resulting primary triticale was topcrossed with T2898(BGL"s"/ARS—Mexipak Mut //BGL"s", entry 192 in 10th ITSN) and 'Currency'. 'Abacus'

derives from a single head selection from this cross at F2. Field testing in replicated field trials commenced at the F5 generation and lines were evaluated for yield, disease resistance and maturity.

#### Varieties used for comparison

'Currency' being the closest known variety and 'Muir' and 'Tahara' being industry standard varieties.

#### **Comparative Growing Trials**

All characteristics described and comparisons are from comparative growing trials conducted at Urrbrae Agricultural High

School, near Adelaide, South Australia, in 1991, on Bay of Biscay clay soil, with 620 mm annual rainfall. Varieties were grown in three replications at a density of 100 plants per square metre. Measurements were taken at random from at least 25 plants.

#### **Agronomy**

'Abacus' is intended for sowing in autumn and winter in the longer season, wetter areas (600–1000 mm annual rainfall) of the southern wheat belt. 'Abacus' has been observed to be tolerant of acid soil, and shows field resistance to stem, leaf and stripe rusts (*Puccinia graminis*, *P. recondita* and *P. striiformis*).

Table of Comparison of Tr	iticale Varieties		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
(* = variety used for comparison)				
	'Abacus'	*'Currency'	*'Tahara'	*'Muir'
CHAFF COLOUR	brown	white	white	white
DAYS TO 50% HEAD EMERGEN	NCE (sown 5 June 1991)	)		
	130	116	118	113
LEAF WIDTH (first below flag)			,,	-
mean	18.7 mm	21.0 mm	18.5 mm	20.6 mm
range	16-22	16–25	16–22	17–25
std. deviation	1.28	1.99	1.28	1.98
LEAF LENGTH (first below flag)				
mean	39.94 cm	39.32 cm	32.44 cm	33.06 cm
range	32-45	30-48	26-36	26–40
std. deviation	2.74	3.69	2.09	2.94
HEAD LENGTH (excluding awns	)			
mean	16.0 cm	16.7 cm	12.9 cm	13.6 cm
range	13.5-19	14–19	11-14.5	9–17
std. deviation	1.32	1.12	0.93	2.05
AWN LENGTH (above tip of head	(b			
mean	5.5 cm	6.5 cm	5.6 cm	5.2 cm
range	4–6	5–8	4.5-7.5	2.5-8
std. deviation	0.58	0.78	0.76	0.41
LENGTH OF 10 RACHIS SEGMI	ENTS			
mean	3.78 cm	5.02 cm	3.8 cm	4.2 cm
std. deviation	0.36	0.39	0.25	0.54
PLANT HEIGHT (excluding awns	; heads pulled up to full	extent)		
mean	117.4 cm	109.4 cm	113.9 cm	118.5 cm

7.71

#### **WALLABY GRASS**

Danthonia richardsonii

std. deviation

Variety: 'Taranna'. See fig. 6 in colour section.

Application No. 91/098

Application Received: 27 September 1991
Applicant: NSW Agriculture, Orange, NSW

#### **Description**—see also comparison tables

'Taranna' is a new variety of the native grass *Danthonia* richardsonii. It is distinct from the only other known variety 'Hume' in having a wider inflorescence and glumes, longer flag leaves and wider flag and tiller leaves. Although the culm heights of the two varieties are similar, 'Taranna' has a greater internodal distance between the first and second nodes on the culm. At flowering the leaves of 'Taranna' tend to be a darker colour than those of 'Hume'.

6.05

'Taranna' is distinct from naturally occurring ecotypes in that it has a wider and longer inflorescence, a longer interbranch distance between the first and second branches of the inflorescence. 'Taranna' also has a longer culm and longer flag and tiller leaves than the naturally occurring ecotypes.

8.38

#### Origin

'Taranna' was selected by Dr G.M. Lodge from an ecotype of the native grass *Danthonia richardsonii*. Selection over four successive generations was based predominantly on seed retention and production characteristics assessed on spaced plants. The original parent plant was collected in 1985 from a naturally occurring population of plants growing on a stock route on a red-brown earth soil, approximately 30 kilometres south of Tamworth in northern New South Wales.

#### Varieties used for comparison

6.11

'Hume' and two naturally occurring ecotypes.

#### **Comparative Growing Trials**

All characteristics and comparisons are from a comparative growing trial conducted at the Agricultural Research Centre, Tamworth in 1990 and 1991. Transplanted seedlings were sown in the field on 16 July 1990. Plants were sown on a 1 metre square grid in 30 metre rows. Rows were randomly allocated among lines and each consisted of 3 replicates of 10 plants of each line. Morphological characteristics were measured on either 20 or 30 plants of each type. Plots were maintained weed-free by cultivation, fertilised annually and watered by spray irrigation as required.

#### Agronomy

'Taranna' is a perennial grass native to Australia and so should be adapted to dry conditions and low soil fertility. It is intended for use in temperate areas either for aerial establishment into non-arable, hilly country or as a pasture grass in degraded cropping lands. It produces more growth in spring, early-summer than 'Hume' and has a high rate of seed retention.

This work was supported by a grant from the Wool Research and Development Corporation.

(* = variety used for comparison)				
(	'Taranna'	*'Hume'	*'Ecotype 1'	*'Ecotype 2
INFLORESCENCE WIDTH				
mean	33.4 mm	17.7 mm	14.5 mm	18.9 mm
	17.9–64.1	9.5–27.4	5.3–24.4	7.9–33.4
range				
std. deviation	12.8	4.3	3.7	5.7
significance		P=0.01	P=0.01	P=0.01
INFLORESCENCE LENGTH				
mean	75.6 mm	80.2 mm	63.3 mm	45.8 mm
range	41.6-100.1	55.6-104.1	27.1-95.2	30.1-80.6
std. deviation	12.3	10.9	10.8	8.9
significance	12.0	P=0.01	P=0.01	P=0.01
significance		7 =0.01	F=0.01	F=0.01
GLUME WIDTH (1st glume on 3rd t	oranch)			
mean	1.97 mm	1.73 mm	1.43 mm	2.07 mm
range	1.0-3.3	0.8-3.2	0.7-2.5	1.3-3.3
std. deviation	0.43	0.44	0.38	0.39
significance		P=0.01	P=0.01	
			0.01	
INFLORESCENCE INTERBRANCH				
mean	12.2 mm	12.3 mm	10.7 mm	7.3 mm
range	6.4-18.6	8.2-18.2	5.0-15.8	2.9-11.3
std. deviation	2.4	2.4	1.8	1.5
significance			P=0.01	P=0.01
NI IMPED OF PERPODUCTIVE TIL	LEBS (aver 10 day pe	ariod)		
NUMBER OF REPRODUCTIVE TIL mean	13.8	10.4	16.0	3.2
	5–24	4–20	6–27	0–13
range		·		
std. deviation	4.4	5.0	4.6	3.4
significance		P=0.05	P=0.01	P=0.01
CULM LENGTH				- 17 (A)
mean	56.0 cm	57.3 cm	46.4 cm	46.1 cm
range	37–69	40–70	32–61	28–59
std. deviation	7.0	6.0	7.4	8.0
significance	7.0	0.0	P=0.01	P=0.01
Signification			1 -0.01	F=0.01
NTERNODE LENGTH				
mean	149.3 mm	128.2 mm	145.8 mm	129.7 mm
range	82-192	76–180	60-194	43–189
std. deviation	22.6	22.3	27.7	31.0
significance		P=0.01		P=0.01
FLAG LEAF LENGTH	· · · · · · · · · · · · · · · · · · ·			
	0E 4 mm	01.0	40.0	46.0
mean	95.4 mm	81.0 mm	43.0 mm	46.0 mm
ange	46–170	33–150	15–80	25–79
std. deviation	28.2	27.8	19.1	12.5
significance		P=0.01	P=0.01	P=0.01
TILLER LEAF LENGTH (third tiller)				
mean	176.4 mm	172.3 mm	120.2 mm	100.3 mm
nou.	170.4 11111	1 2.0 11111	120.2 111111	100.5 11111

#### TABLE OF COMPARISON OF DANTHONIA VARIETIES—Continued

	'Taranna'	*'Hume'	*'Ecotype 1'	*'Ecotype 2	
range	103–257	90–249	70–225	53–184	
std. deviation	40.7	35.4	34.4	25.3	
significance			P=0.01	P=0.01	
TILLER LEAF WIDTH		·			
mean	3.65 mm	3.08 mm	2.57 mm	4.18 mm	
range	2.34-5.18	1.86-4.87	1.36-4.31	2.39-5.90	
std. deviation	0.70	0.52	0.55	0.79	
significance		P=0.01	P=0.01	P=0.01	

#### **WALLABY GRASS**

Danthonia linkii

Variety: 'Bunderra'. See fig 7 in colour section.

Application No. 91/099

Application Received: **27 September 1991**Applicant: **NSW Agriculture**, Orange, NSW

#### **Description**—see also comparison tables

'Bunderra' is a tall growing variety of the native grass *Danthonia linkii*. It is distinct from naturally occurring ecotypes in being a tall plant with longer and broader flag and tiller leaves. 'Bunderra' also has a larger basal area and a higher number of reproductive tillers than the ecotypes. In contrast with tall growing ecotypes it flowers earlier and has broader leaves.

#### Origin

'Bunderra' was selected by Dr G.M. Lodge from an ecotype of the native grass *Danthonia linkii*. Selection over four successive generations was based predominantly on seed retention and production characteristics assessed on spaced plants. The original parent plant was collected in 1985 from plants growing at the Agricultural Research Centre, Tamworth in northern New South Wales.

#### Varieties used for comparison

There are no known cultivars of *Danthonia linkii*. 'Bunderra' was compared with three naturally occurring ecotypes.

#### **Comparative Growing Trials**

All characteristics and comparisons are from a comparative growing trial conducted at the Agricultural Research Centre, Tamworth in 1990 and 1991. Transplanted seedlings were moved to the field on 16 July 1990. Plants were sown on a 1 metre square grid in 30 metre rows. Rows were randomly allocated among lines and each consisted of 3 replicates of 10 plants of each line. Morphological characteristics were measured on 20–30 plants of each type. Plots were maintained weed-free by cultivation, fertilised annually and watered by spray irrigation as required.

#### Agronomy

'Bunderra' is a perennial grass native to Australia and adapted to dry conditions and low soil fertility. It is intended for use in temperate areas either for aerial establishment into non-arable, hilly country or as a pasture grass in degraded cropping lands, particularly on heavy textured soils.

This work was supported by a grant from the Wool Research and Development Corporation.

#### Table of Comparison of Danthonia Varieties

(\* = variety used for comparison)

	'Bunderra'	*'Ecotype 1'	*'Ecotype 2'	*'Ecotype 3'
CULM LENGTH				
mean	90.1 cm	68.2 cm	91.1 cm	64.9 cm
range	70–105	47–85	59-150	49-80
std. deviation	7.4	7.9	16.2	7.4
significance		P=0.01		P=0.01
TIME TO FLOWER (no. da	ys from 23/10/90)			
mean	18.2	18.0	22.1	13.5
range	9–23	9–23	16–26	9–21
std. deviation	3.9	4.1	2.5	3.2
significance			P=0.01	P=0.01
FLAG LEAF LENGTH				· · · · · · · · · · · · · · · · · · ·
mean	100.9 mm	67.6 mm	86.3 mm	74.9 mm
range	50–148	28-120	41-168	43-109
std. deviation	24.5	18.0	23.1	16.8
significance		P=0.01	P=0.01	P=0.01
FLAG LEAF WIDTH				
mean	2.74 mm	2.53 mm	2.52 mm	2.20 mm
range	1.64-4.95	1.01-3.47	1.42-3.35	1.45-2.97

TABLE OF COMPARISON OF DANTHONIA VARIETIES—Continued

	'Bunderra'	*'Ecotype 1'	*'Ecotype 2'	*'Ecotype 3'
std. deviation	0.54	0.41	0.41	0.37
significance		P=0.01	P=0.01	P=0.01
TILLER LEAF WIDTH				
mean	4.14 mm	3.66 mm	3.89 mm	3.27 mm
range	2.24-5.36	2.41-4.44	2.44-4.86	2.01-4.14
std. deviation	0.57	0.41	0.51	0.40
significance		P=0.01	P=0.01	P=0.01
TOTAL NUMBER OF REPR	ODUCTIVE TILLERS			
mean	103.6	65.5	62.6	36.9
range	31-172	27-116	24-112	0-123
std. deviation	31.0	21.9	22.8	29.7
significance		P=0.01	P=0.01	P=0.01
BASAL AREA				
mean	47.8 cm <sup>2</sup>	22.1 cm <sup>2</sup>	35.7 cm <sup>2</sup>	9.9 cm <sup>2</sup>
range	18.2-121.4	12.5-43.3	14.3-74.6	0-24.6
std. deviation	20.4	6.9	16.4	6.9
significance		P=0.01	P=0.01	P=0.01

#### **DIPLADENIA**

Dipladenia sanderii

Variety: 'My Fair Lady'. See fig. 8 in colour section

Application No. 91/104

Applicant: Institute for Glasshouse Crops, Department of

Floriculture, Denmark

Agent in Australia: Redlands Greenhouses Holdings Pty

Ltd, of Redland Bay, Queensland Application Received: 22 October 1991

#### Description—see also comparison tables

'My Fair Lady' is a white flowered, bushy to upright climbing perennial which flowers almost continually except for a decrease during winter when plant growth slows. 'My Fair Lady' has strong stem waxiness, medium to dense foliage cover, and entire leaf margins. 'My Fair Lady' flowers are 5 petalled with a yellow fused corolla; funnel shaped in profile and stellate in plan view.

#### Origin

This cultivar was originally selected in 1986 by Mr Ole Voight Christensen, Research Centre of Horticulture, Aarslev, Denmark. Selection was based on colour, production period, number of shoots, flowers and buds, length of internodes and flower quality. The clone was then propagated asexually.

The plant was first sold in Denmark in 1991 under the name *Dipladenia* 'Helle'.

#### Varieties used for comparison

'Sanderii Pink' and 'Scarlet Pimpernel', plants of similar growth habit.

#### **Comparative Growing Trials**

All characteristics described are from comparative growing trials conducted at Redlands Greenhouses Holdings Pty Ltd, Redland Bay, Qld, during 1991. 'My Fair Lady' plants were propagated from original mother stock as single leaf node cuttings during summer 1989–1990. These were subsequently planted into 140 mm containers in a medium of 70% composted hardwood sawdust and 30% coarse washed river sand in April 1990. The plants were glasshouse grown through winter then transferred to 200 mm containers in February 1991. Plants were moved outside and grown in full sun with a 100 mm spacing between containers. The comparative varieties were grown with spacing of 150 mm between containers. All plants were supported by a stake. Irrigation was as necessary. Measurements were taken from 20 plants of each variety selected at random from plots of 200 plants.

Table of Comparison of Dipladeni	a Varieties				
(*=variety used for comparison)					
	'My Fair Lady'	*'Scarlet Pimpernel'	*'Sanderii Pink'		
PETAL COLOUR (inside) RHS No.	white 155B	red 45A	pink 55B		
COROLLA THROAT COLOUR RHS No.	yellow 14B	yellow 14B	yellow 14A		
FLOWER DIAMETER mean	69.3 mm	71.05 mm	66.6 mm		

TABLE OF COMPARISON OF DIPLADENIA VARIETIES—Continued

	'My Fair Lady'	*'Scarlet Pimpernel'	*'Sanderii Pink'
range	5876	59–78	57–73
std deviation	5.2	3.9	4.4
FLOWER LENGTH (length of fused corolla)	-		
mean	51.5 mm	48.55 mm	54.05 mm
range	49–53	45–51	51–58
std deviation	1.04	1.50	2.11
LEAF LENGTH			
mean	58.7 mm	63.35 mm	70.6 mm
range	52-68	56–74	64–78
std deviation	4.32	4.34	4.04
PETIOLE LENGTH			
mean	8.3 mm	6.85 mm	6.9 mm
range	5–1 <b>1</b>	6–9	6–9
std deviation	1.42	0.81	0.92
STEM COLOUR—RHS No.			
growing tip	144A	144C	144B
4–5 leaves below tip	144A	144A	144C
12-13 leaves below tip	165B	199C	164A

### OAT

### Avena sativa

Variety: 'Riel'. See fig. 9 in colour section.

Application No. 91/109

Application Received: 12 November 1991

Applicant: Agriculture Canada, of Winnipeg, Canada Australian Agent: Queensland Department of Primary

Industries, Brisbane

#### Description—see also comparison tables

This variety is a tall spring forage oat of intermediate growth habit. It has panicles with equilateral branches which often hang to one side at maturity; a long rachilla on the primary grain; flag leaf attitude very strongly recurved; hairs absent on the top node; hairs absent on the margins of the leaf below flag; glume glaucosity weak; early heading. Other characters include erect panicle branches; pendulous spikelets; occasional primary awns present; lemma is cream and of moderate length without hairs on the back; hairs on the base of grains are few and short and the basal scar is intermediate. 'Riel' shows resistance to leaf (crown) rust, conferred by Pc 38 and Pc 39, and to stem rust, conferred by Pg2, Pg13 and possibly Pg9.

#### Origin

This variety arose from controlled pollination of 'RL3057' by

'Otana'. It was bred by Dr. RIH McKenzie and Dr. PD Brown of the Agriculture Canada Research Station of Winnipeg, Canada. 'RL3057' arose from a complex series of crosses of 'Kent', Pendek', 'Rodney', 'Kelsey', 'Harmon', 'Rosen's Mutant', 'CI6792' and an accession of *A. sterilis* L. The F<sub>2</sub> and F<sub>4</sub> were grown at Gore, New Zealand and the F<sub>3</sub> and F<sub>5</sub> were grown at Glenlea, Manitoba, Canada. 'Riel', an F<sub>5</sub>, was bulked in 1979 and first sold in Canada in 1987.

#### Varieties used for comparison

'Algerian', and 'Minhafer' being commonly grown varieties in Australia, and 'Cluan', 'Cleanleaf' and 'Nobby' being recently released oat varieties.

#### **Comparative Growing Trials**

All characteristics described below are from comparative growing trial conducted at the Queensland Wheat Research Institute, Toowoomba, during 1991. The trial was sown 12 July 1991 in single rows, 13m long, 0.75m apart with 5 replicates. Measurements shown are from 20 specimens selected at random.

Reactions to leaf and stem rusts have been determined from controlled environment inoculations of seedlings with races 216, 264 and 384 of *P. coronata* and race 20 of *P. graminis* f. sp. *avenae*. Adult plant responses were determined in rust nurseries at Gatton in 1990 and Toowoomba in 1991.

(* = variety used for o	comparison)					
	'Riel'	*'Algerian'	*'Cleanleaf'	*'Cluan'	*'Minhafer'	*'Nobby
VEGETATIVE GROV	/TH HABIT (scale: 1	=erect, 9=prostrate)				
	5	7	1	3	2	8
HEADING (50% eme	rgence)					
,	early	late	early	late	early	late
LEAF COLOUR						
	blue-green	green	blue-green	blue-green	green	green

TABLE OF COMPARISON OF OAT VARIETIES—Continued

	'Riel'	*'Algerian'	*'Cleanleaf'	*'Cluan'	*'Minhafer'	*'Nobby'
AWNS (primary)						
	few	present	present	rare	rare	few
BASAL SCAR						
	intermed.	oblique	intermed.	flat	intermed.	intermed.
FLAG LEAF WIDT	TH .					
mean	28.0 mm	17.3 mm	26.0 mm	39.5 mm	25.1 mm	21.8 mm
range	23-33	14-19	23-30	33-43	19-32	19–28
std dev	2.93	1.16	1.97	2.74	3.14	2.46
FLAG LEAF LENG	ath					
mean	27.7 cm	30.4 cm	20.1 cm	34.3 cm	22.0 cm	31.4 cm
range	21-35	24-35	16-32	26-42	17–28	23-41
std.dev	3.28	2.89	4.09	4.84	2.92	3.88
RACHILLA LENGT	гн					
mean	2.62 mm	2.10 mm	2.31 mm	2.42 mm	2.28 mm	2.12 mm
range	2.3-2.9	1.9-2.3	1.9-2.8	2.1-2.7	1.7-2.6	1.8-2.4
std.dev	0.15	0.12	0.19	0.16	0.21	0.15
AWN LENGTH						
mean	32.1 mm	32.7 mm	25.4 mm	24.0 mm	20.5 mm	29.3 mm
range	27–36	30-36	22-29	19–27	16–27	20-35
std. dev	2.35	1.76	2.16	2.37	2.45	3.77
REACTIONS TO L	EAF RUST—races 2	64, 384				
	R	S	R	R	S	R
REACTIONS TO S	STEM RUST—races 1	, 20, 22				
	MR-MS	S	R	MR	VS	MR

#### **LETTUCE**

Lactuca sativa

Variety: 'Impact'. See fig. 10 in colour section

Application No. 91/128

Application Received: 16 December 1991

Applicant: Arthur Yates & Co. Pty Ltd, of Milperra, New

South Wales

#### Description—see also comparison tables

'Impact' is a 'Salinas' type of crisphead lettuce resistant to known isolates of *Bremia lactucae* in Australia, possessing the *Dm* genes 1 and 3 for resistance to *Bremia*. It is a medium maturing variety producing a firm, round, well-covered head. There is no anthocyanin in the foliage; wrapper leaves are darkgreen; at the 3–4 true leaf stage leaves are erect, lobed, narrow elliptical and medium to dark green; seed is white.

#### Origin

The breeder is Mr Dan Trimboli of Arthur Yates & Co. Pty Ltd. 'Impact' arose from the controlled pollination of 'Jackpot' by 'Narromar'. The resultant progeny was backcrossed 5 times to 'Jackpot'. Prior to backcrossing on each occasion, the progeny was screened in vitro for resistance to an Australian isolate of *Bremia lactucae*. Subsequent to the completion of backcrossing, 10 resistant plants were selfed in October 1988. From these 14 resistant plants were again selfed and the progeny screened for homozygosity for resistance to mildew. Field nurseries identified phenotypically acceptable plants over two seasons.

#### Varieties used for comparison

'Jackpot' being a parent variety and the closest known variety.

#### **Comparative Growing Trials**

All characteristics described are from comparative growing trials conducted at Narromine, New South Wales in autumn 1990.

Varieties were seeded in February and transplanted into the field in March 1990. Plants were spaced 36 cm within a row and 50 cm between rows on 75 cm beds. Kerb herbicide was applied subsequent to transplanting and Ridomil MZ was applied twice during the latter half of the growing period. Measurements are from 50 plants chosen at random from each variety. Identification of *Dm* genes to *Bremia lactucae* were determined by assay at the Horticultural Research Institute, Wellesbourne, England in 1990 and 1991.

#### Agronomy

'Impact' is suitable for culture in coastal areas of Australia and California and inland areas of New South Wales wherever 'Jackpot' is grown during autumn and spring periods.

#### **Table of Comparison of Lettuce Varieties**

(\*=variety used for comparison)

	'Impact'	*'Jackpot
MATURITY (no. of day	ys from transplant)	
mean	65.2	67.7
range	65–69	64-70
standard error		0.27
PLANT DIAMETER		
mean	45.5 cm	46.5 cm
range	43-47	44-50
standard error		0.237
HEAD HEIGHT		
mean	12.4 cm	12.9 cm
range	11–14	12-14.5
standard error		0.13
Dm genes to Bremia		
-	1,3,5/8	5/8

#### **XANTHOSTEMON**

#### Xanthostemon chrysanthus

Variety: 'Tropic Splendor'. See fig. 11 in colour section.

Application No. 91/126

Application Received: 10 December 1991

Applicant: Northolme Nursery Pty Ltd of Cairns,

Queensland

#### Description—see also comparison tables

This variety is an upright to bushy shrub of medium density with grey green (RHS 184A) and yellow green (146D) mottled waxy stems. Leaves are variegated with three colours: yellow (RHS 13C), pale green (RHS 136C) and medium green (RHS 139A). New growth is reddish with each leaf showing yellow green (RHS148A), orange-red (RHS 30D) and red (RHS 42D). Leaves are simple, entire and narrow elliptic to linear elliptic in shape, shorter and more broad than the normal form of *X. chrysanthus*.

#### Origin

'Tropic Splendor' arose from the sport of an unnamed seedling of *X. chrysanthus* in commercial stock (commercial name 'Golden Penda'). It was selected by Mr Kevin Holmes of Cairns, Queensland for development on the basis of variegated leaves and propagated from cuttings.

#### Varieties used for comparison

Seedlings of *X. chrysanthus* 'Golden Penda' being the closest known variety and the common source of commercial plants in Australia.

#### **Comparative Growing Trials**

All characteristics described below are from comparative growing trials conducted at Northolme Nursery from June 1989 to December 1990. Twenty measurements are from 10 potted specimens selected at random. Leaf measurements were taken from the 10th and 11th fully expanded leaf from the growing apex. Plants were grown in a mix of sand, composted sawdust and peanut shells under 50% shade. The ambient temperature and humidity regime applied throughout, which in Cairns ranges from 16 to 32C and 80 to 100% respectively.

### Table of Comparison of Xanthostemon Varieties

(\* = variety used for comparison)

	'Tropic Splendor'	*'Golden Penda'
MATURE LEAF LENGT	ГН	
mean	117.0 mm	128.55 mm
range	102-130	115-150
std. deviation	8.18	12.58
LEAF WIDTH		
mean	26.1 mm	23.9 mm
range	22-33	22-30
std. deviation	2.97	2.54
PETIOLE LENGTH		
mean	4.85 mm	6.15 mm
range	3-6	5-8
std. deviation	0.59	1.09

#### TABLE OF COMPARISON OF XANTHOSTEMON VARIETIES—Continued

	*'Golden Penda'	
MATURE LEAF C	OLOUR	
RHS No	139A, 136C, 13C	144A
STEM SURFACE	COLOUR	
RHS No	184A, 146D	185A, 152A

#### (b) Descriptions to be finalised

Descriptions for the Journal are being finalised for the following applications. The six month period for comment or formal objection will not begin until the full descriptions are finalised and published in the Journal. These varieties have provisional protection under Section 22 of the *Plant Variety Rights Act 1987*.

#### **ROSE**

### Rosa hybrida

Applicant: Select Roses BV, of Netherlands

Agent in Australia: Grandiflora Nurseries Pty Ltd, of

Cranbourne, Victoria

'Selstar' commercial synonym 'Selnessee'

Application No. 91/083 Accepted: 16 January 1992

Applicant: Select Roses BV, of Netherlands

Agent in Australia: Grandiflora Nurseries Pty Ltd, of

Cranbourne, Victoria

'Kimba' commercial synonym 'Selcuper'

Application No. 91/084 Accepted: 26 November 1991

#### **CANDYTUFT**

#### Iberis pruitii

Applicant: Mr Ian Boulter, Boulter's Nurseries, of

Monbulk, Victoria 'Candy Glow'

Application No. 91/110 Accepted: 2 January 1992

#### **AZALEA**

#### Rhododendron azalea

Applicant: Mr G Taylor, Burbank Nurseries, of Wyong,

New South Wales 'Sydney's Sesqui' Application No. 91/111

Accepted: 27 November 1991

#### COTTON

#### Gossypium hirsutum

Applicant: CSIRO Division of Plant Industry, of Narrabri,

New South Wales

'CS 50'

Application No. 91/113

Accepted: 10 December 1991

'CS 7S'

Application No. 91/114 Accepted: 10 December 1991

'Sicala 34'

Application No. 91/115 Accepted: 10 December 1991

'Siokra L23'

Application No. 91/116 Accepted: 10 December 1991

#### **ACMENA**

Acmena smithii

Applicant: TD & CM Hennessey, of Upper Caboolture,

Oueensland 'Lillyput'

Application No. 91/117 Accepted: 10 December 1991

#### DIEFFENBACHIA

Dieffenbachia hybrida

Applicant: Mr EJ Frazer, of Kenmore, Queensland

'Golden Sunset' Application No. 91/118 Accepted: 18 December 1991

#### **BEAN**

Phaseolus vulgaris

Applicant: Rogers NK Seed Company, of Boise, Indianna,

Agent in Australia: Northrup King Australia, of

Dandenong, Victoria

'.Iade'

Application No. 91/119 Accepted: 11 December 1991

#### ONION

Allium cepa

Applicant: Northrup King Australia, of Dandenong,

Victoria 'Orbex'

Application No. 91/120 Accepted: 18 December 1991

#### SOYBEAN

Glycine max

Applicant: Pioneer Hi-Bred Australia Pty Ltd, of

Toowoomba, Queensland

'PNR2'

Application No. 91/121 Accepted: 14 January 1992

'PNR3'

Application No. 91/122 Accepted: 14 January 1992

'PNR6'

Application No. 91/123 Accepted: 14 January 1992

'PNR7'

Application No. 91/124 Accepted:14 January 1992

#### 'PNR10'

Application No. 91/125 Accepted: 14 January 1992

#### ROSE

#### Rosa hvbrida

Applicant: SNC Meilland et Cie, of Antibes, France Agent in Australia: Mr J Oakes, HA Oakes & Son, of

Carrum Downs, Victoria

'Candy Meillandina' commercial synonym 'Meidanclar',

'Romantic Meillandina' Application No. 91/127 Accepted: 18 December 1991

#### **POTATO**

#### Solanum tuberosum

Applicant: UNIPLANT Saatzucht KG, of Germany Agent in Australia: Vecon Horticulture, of Devonport,

Tasmania 'Panda'

Application No. 91/129 Accepted: 28 January 1992

#### ROSE

#### Rosa hybrida

Applicant: SNC Meilland et Cie, of Antibes, France Agent in Australia: Mr J Neil, Australian Roses, of Silvan

South, Victoria 'Crimson Minijet' Application No. 91/130 Accepted: 15 January 1992

Applicant: SNC Meilland et Cie, of Antibes, France Agent in Australia: Mr J Neil, Australian Roses, of Silvan

South, Victoria 'Orange Minijet'

Application No. 91/131 Accepted: 15 January 1992

Applicant: Bear Creek Gardens, Inc. of California, USA Agent in Australia: Swane Bros. Pty Ltd of Dural, New

South Wales

'Sheer Bliss' commercial synonym: 'Jactro'

Application No. 92/001 Accepted: 15 January 1992

'White Simplicity' commercial synonym: 'Jacsnow'

Application No. 92/003 Accepted: 17 January 1992

'Class Act' commercial synonym: 'Jacare'

Application No. 92/004 Accepted: 17 January 1992

'Brigadoon' commercial synonym: 'Jacpal'

Application No. 92/005 Accepted: 17 January 1992

Applicant: Sam McGredy Roses International of New

Zealand

Agent in Australia: Swane Bros. Pty Ltd of Dural, New

South Wales

'Aotearoa' commercial synonym: 'Macgeney'

Application No. 92/002 Accepted: 15 January 1992

#### **SPATHIPHYLLUM**

Spathiphyllum wallisii

Applicant: Mr GM Leverett, of Heatherton, Victoria

'Caroline'

Application No. 92/006 Accepted: 4 February 1992

#### **Objections**

**Formal objections** (Section 20 of the PVR Act) to any of the above applications can be lodged by a person who:

- (a) considers their commercial interests would be affected by a grant of PVR to the applicant; and
- (b) considers that the provisions of Section 26 cannot be met.

A fee of \$200 is payable at the time of lodging a formal objection and \$70/hour will be charged if the examination of the objection by the PVR Office takes more than 2 hours.

**Comments:** Any person not falling into the above category may make comment on the eligibility of any of the above applications for PVR. There is no charge for this.

A person submitting a formal objection or a comment must provide supporting evidence to substantiate the claim. A copy of the submission will also be sent to the applicant and the latter will be asked to show why the objection should not be upheld.

All formal objections and comments relating to the above applications must be lodged with the Registrar by close of business on 30 SEPTEMBER 1992.

### **Applications Withdrawn**

The following applications have been withdrawn at the request of the applicant. Provisional protection no longer applies to the following varieties:

Name	Application No
'Esther'	89/083
'Whitsell'	89/085
'Staranlo'	91/001
'Stasilva'	91/003
'Stajured'	91/005
'Monola-31'	91/069
'Monola-32'	91/070

#### Corrigenda

#### **LECHENAULTIA**

Lechenaultia biloba

#### 'Autumn Blue'

In Vol 4 No 4, December 1991 p25

Application No 90/028 should read 89/028. Editor's error.

#### **AZALEA**

#### Rhododendron hybrid

#### 'Harlequin'

In Vol 4 No 4, December 1991, p14

Fig 11, The photograph of 'Harlequin' is incorrect. The correct photo of 'Harlequin' is published in this issue, Fig. 12.

#### **APPLE**

#### Malus domestica

#### 'Big Time'

In Vol 4 No 4, December 1991, p 6

The applicant's name should read: Chief Executive Officer of the Department of Agriculture, of South Perth, Western Australia. Editor's error.

#### **APPENDIX 1**

#### **Fees**

Basic PVR Fees	\$
Application	400
Examination of application	1400
Certificate of PVR	250
Total Basic Fee	2050
Annual Renewal Fee	250
Other Fees	
Variation to application	70
Copy of application	70
Lodging an objection	200
Copy of objection	70
Compulsory license	140
Transfer of rights	140
Issue of publications	
(first 10 pages, then 50c/page)	8
Back issues of PVJ	8
Other work relevant to PVR(per hour)	70

#### **Payment of Fees**

All cheques for fees should be made payable and sent to:

Plant Variety Rights Office DPIE GPO Box 858 Canberra. ACT 2601

The **application fee** (\$400) must accompany the application at the time of lodgement.

The *full* **examination fee** (\$1400) must be paid before the expiry of the 12th month from the date of acceptance of the application. The PVR Office will routinely invoice the applicant or their agent for the examination fee with the letter of acceptance. This will notify the applicant of their legal liability for the examination fee from the date of acceptance. At the end of the 11th month after acceptance of the application, should the examination fee not have been paid, a final statement (reminder) will be despatched to the applicant.

# Consequences of not paying fees when due

#### Application fee

Should an application not be accompanied by the prescribed application fee the application will be deemed to be 'non-valid' and neither assigned an application number nor examined for acceptance pending the payment of the fee.

#### **Examination fee**

Non-payment of the examination fee before the expiry of 12 months from the date of acceptance of an application will auto-

matically result at the end of 12 months in a refusal of the application. The consequences of refusal are the same as for applications deemed to be inactive (see 'inactive applications' below).

Field examinations and final examinations falling within the first 12 months will <u>not</u> be undertaken without prior payment of the examination fee.

Consideration of a request for an extension of the period of provisional protection from the initial 12 month period requires the prior payment of the examination fee.

#### Certificate fee

Following the successful completion of the examination, including the public notice period, the applicant will be required and invoiced to pay the certification fee. Payment of the certification fee is a prerequisite to granting PVR and issuing the official certificate by the PVR Office. Failure to pay the fee may result in a refusal to grant PVR.

#### Renewal fee

Should an annual renewal fee not be paid within 30 days after the due date the grant of PVR will be revoked under para. 35 (1) (b) of the Act. To assist grantees the PVR Office will invoice grantees or their Australian agents for renewal fees.

#### Inactive applications

An application will be deemed inactive if, after 24 months of provisional protection (or 12 months in the case of non-payment of the examination fee) the PVR Office has not received a completed application or has not been advised to proceed with the examination or an extension of provisional protection has not been requested or not granted or a certificate fee has not been paid. Inactive applications will be examined and, should they not fully comply with Section 26 of the PVR Act 1987, they will be refused. As a result provisional protection will lapse, priority claims on that variety will be lost and should the variety have been sold, it will be ineligible for plant variety rights on reapplication. Continued use of labels or any other means to falsely imply that a variety is protected after the application has been refused is an offence under Section 52 (2) (b) of the Act.

#### **APPENDIX 2**

# Organisations Offering to Undertake PVR Trials

The following organisations are interested in carrying out PVR trials on behalf of applicants—the PVR Office does not accept any responsibility and is publishing the list for the convenience of applicants.

lan Aberdeen, Valley Seeds Pty Ltd, RMB 1480, Alexandra Vic 3714; 057 976203

**Agrisearch**, PO Box 972 Orange NSW 2800; 063 624539; M J Hood (also at Shepparton, Moree, Ridgehaven, Mackay, Armidale and Innisfail).

**Agritech**, PO Box 549 Toowoomba QLD 4350; 076 384322; Mary Ann Law

**ANU Plant Culture Facility, Australian National University**, GPO Box 4, Canberra ACT 2601; 06 249 4158; Mr A S Carter

**Paul Armitage**, 2/84 Shady Grove, Forest Hill VIC 3136; (bh) 03 756 7233; (ah) 03 877 6539

**Keith Bodman**, Redlands Horticultural Research Station, PO Box 327, Cleveland QLD 4163; 07 286 1488

**Geoff Butler**, Australian Cultivar Registration Authority, National Botanic Gardens, GPO Box 1777, Canberra ACT 2601: 06 267 1802

Chivers Computing & Agriculture, 3/258 Koorang Rd Carnegie VIC 3163; 03 5697538; Ian Chivers.

**Colourwise Nursery**, PO Box 162, Glenorie, NSW, 2157; ph O45 666 177, fax 045 666 219; Ian Collins

Colourwise Nursery Queensland, PO Box 14, Redlands Bay, QLD 4165; 07 206 8818; Stephen Collins

Jan Dekker, Tesselaar's Padua Bulb Nurseries, Monbulk Road, Silvan VIC 3795; 03 737 9305

**Dr. John Doran**, CSIRO, Division of Forestry & Forest Products, PO Box 4008, Queen Victoria Terrace, Canberra ACT 2600

**John Fennel**, Department of Primary Industry Tasmania, PO Box 303, Devonport, TAS 7310; 004 240 233

Flemings Nurseries Pty Ltd, Flemings Lane, Monbulk VIC 3793; 03 7566105; Liz Darmody

**Dr Roger Kirkham**, Department of Agriculture and Rural Affairs, Potato Research Station Private Bag, Healesville VIC 3630; 059 629218

Agrisearch Services Pty Ltd, PO Box 972, Orange, NSW, 2800; 063 624539, MJ Hood; PO Box 1387, Shepparton VIC 3630; 058 212021, Les Mitchell, David McDonald; also at Ridgehaven, SA; Narrabri, NSW; Toowoomba, Mackay and Innisfail, QLD.

**Graeme McGregor**, Department of Agriculture and Rural Affairs, Potato Research Station, Private Bag, Healesville VIC 3630; 059 629218

Dr Geraldine McGuire, PO Box 3230, Loganholme, QLD 4127; 07 801 2929

**Dr Neville Mendham**, Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart TAS 7001; 002 202 598

**University of Western Australia**, School of Horticulture, Murdoch WA 6150; 09 3322810; Prof John Considine.

Navy Bean Marketing Board, PO Box 252, Kingaroy QLD 4610; 071 621408/621666; Mr Kerry Heit.

Paradise Plants, RMB 2117, Kulnura, NSW, 2250; 043 76 1330; lan Paananen

Plant World Explorations, PO Box 1210, Bowral NSW 2576; 048 61 1934; Dr Maciej Hempel

Phytotech Australia Pty Ltd, 12 Konandon Terrace, Edwardstown, SA 5039; Mr NM Cuthbertson.

Radcliffe and Till, 42 Moss St West Ryde NSW 2114; 02 8046973; Sharon Till.

**Dr Malcolm Ryley**, QLD Department of Primary Industries, Tor Street, Toowoomba QLD 4350; 076 314200

**Robert Boden & Associates**, 36 Carstensz Street, Griffith ACT 2603; 06 295 7720; Robert Boden.

Scholefield Robinson Horticultural Services Pty Ltd, PO Box 145, Kingswood, SA 5062; O8 373 2488, or 364 2071; Dr P Scholefield/Dr B Robinson

Australian Turf Grass Research Institute, PO Box 190 Concord West NSW 2138; O2 7361233; Ian McIver/Alexandra Shakesby.

**Turfgrass Technology**, PO Box 416 Seaford VIC 3198; 03 786 3300; Terry Woodcock, Michael Rubinson, J Neylan.

**University of Western Sydney**, Hawkesbury, Bourke St, Richmond NSW 2753; 045 701333; Robert Spooner-Hart.

**Rob Van Der Staay**, PO Box 41, Moonah TAS 7009; 002 284 622

**Jim Webb**, 86 Johnson Street, Wagga Wagga NSW 2650. State Departments of Agriculture and CSIRO may do trials on a fee for service basis for some varieties.

#### **Overseas**

**GPL International**, Lavsenvaenget 18 (Postbox 29) DK Odense V Denmark: J H Selchau

**M. Rene Royon**, Conceil en Licences, 128 Les Bois de Font Merle, 06250, Mougins, France.

**Genesis**, Corporate Marketing Consultancy, 6 New Rd, North Runcton, Kings Lynnn, Norfolk, United Kingdom, ph: 00553 84 1977, fax: 0553 84 0996; PM Dealtrey.

#### **Photographic Services**

**Hugh Elgar & Margie Bond**, Uki Photography, 7 Sunrise Place, Uki via Murwillumbah NSW 2484

**Avon Colour Studio**, Clegg Rd, Mt Evelyn, Victoria 3796; 03 736 2715; Ron Moodycliffe

#### **Electrophoretic Identification/Authentication**

Institute of Plant Sciences, The Manager, Seed Services, Dept of Agriculture, Burnley Gardens, Swan St, Burnley Vic 3121; Mr Alan Williams 03 810 1570

#### **APPENDIX 3**

# PLANT VARIETY RIGHTS ADVISORY COMMITTEE (PVRAC)

Members of the PVRAC were appointed in accordance with S45 of the Plant Variety Rights Act 1987.

Dr Mick Lloyd (Chair) Registrar Plant Variety Rights GPO Box 858 CANBERRA ACT 2601

Dr Kevin Boyce
Principal Officer, Seed Services
Plant Services Division
South Australian Department of Agriculture
GPO Box 1671
ADELAIDE SA 5001
Representative of breeders.

Dr Brian Hare Director of Research Pacific Seeds PO Box 337 TOOWOOMBA QLD 4350 Representative of breeders. Mr Rodney Field WMR Box 758 ESPERANCE WA 6450

Representative with appropriate qualifications and experience.

Dr David Godden
Department of Agricultural Economics
University of Sydney
NSW 2006
Representative of consumers.

Mr Edgar (Ben) Swane Director Swane Bros P/L Galston Road DURAL NSW 2158 Representative of producers.

Dr Robert Boden
Consultant in Conservation & Natural Resource
Management
36 Carstensz St
GRIFFITH ACT 2603
Representative with appropriate qualifications and
experience.

#### **APPENDIX 4**

#### LETTERS TO THE EDITOR

The editor of the Plant Varieties Journal will accept for publication, 'letters to the editor'.

Letter to the editor should aim to inform readers about plant varieties. The subject matter can be about breeding, genetics, new propagation methods, results of cultivar trials, trends in the market place, legal issues or injustices caused by PVR.

Readers are encouraged to continue to write letters to the Registrar on any matter concerning PVR. Letters to the Registrar in the normal course of office business would, of course, not be considered for publication in the Journal. Letters to the editor should be, therefore, clearly addressed to 'The Editor'.

Provision of information about plant varieties in general will be complementary to the Journal's main functions of:

- informing the public about plant variety rights and new plant varieties in the PVR scheme
- providing an opportunity for both objections and comments about varieties for which rights have been applied.

#### Style and length of letters to the editor

Letters should be typewritten, double-spaced, concise, informative and not more than than 1000 words in length. References should use the Oxford (number) system of citations to literature. Figures, tables and captions to figures and tables should all be provided on separate sheets. The list of references to publications cited in the text should be numbered in the order they appear in the text. Only the name of the author, initials, date and abbreviated journal title, volume no., issue and first page of article referred to should be given in the reference list. For example:

1. Smith, JT (1986). PI Var. J. 3(2): 23

For convenience, letters for publication may be submitted on disc. The preferred format is Microsoft Word for Windows.





COMMONWEALTH DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY



- Seed Companies
- Nurseries
- Importers

Do you want exclusive rights t market your new plant variety

Contact: The Registrar PVR Office, DPIE GPO Box 858 Canberra ACT 260 Telephone: (06) 272 4228

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