AUSTRALIA

Plant Varieties Journal

Volume 1 Number 3 SEPTEMBER 1988

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Subscription —

Available from the Australian Government Publishing Service, GPO Box 84, Canberra, ACT, 2601.

ISSN 1030–9748

Typeset and Printed in Australia by CPP Communications Ltd., Fyshwick, A.C.T.

REGISTRAR'S REMARKS

This third issue of the "Plant Varieties Journal" marks the first anniversary of the PVR Office and the appointment of the PVR Advisory Committee.

It has been an exciting year and I believe we are well on the way to establishing PVR as a practical method for breeders to protect new plant varieties while ensuring that community interests are also considered.

I have appreciated the co-operation and willing assistance provided by private and public sector organisations as well as individual breeders who are working closely with the PVR Office in the development of a workable system.

We have discovered the difficulty of describing characteristics which breeders "know" to be different and identifying as many characteristics as possible to uniquely describe the variety. Yield is one of the main characteristics that many breeders aim to change, but this is often difficult to quantify in absolute terms. Close examination of the variety often reveals that more objective characteristics can be described such as increased number of peas in a pod or more pods per plant. This defines the identity of the variety in terms which are more definitive and less likely to be challenged.

The aim is to ensure that the new variety is different from other known varieties. This can be achieved by growing the new variety beside the closest known varieties and quantitatively describing their characteristics. It is often surprising how many differences can be found.

The extra work involved initially to *"know your variety"* is worth while in the long run to ensure that you are able to answer any challenges and enforce your PVR.

Kathryn Adams
Registrar of Plant Variety Rights

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PART 1 — ITEMS OF GENERAL INTEREST

IMPLEMENTATION OF PVR — PROGRESS

On 1 July 1988 regulations were proclaimed to include 43 genera and species in the PVR scheme. This is in addition to the original eight proclaimed in April 1988. Appendix 1 lists the genera and species currently eligible for PVR (to July 1988) and those proposed for inclusion in the future.

Since the June issue of the Journal twenty-six new applications have been received and several other breeders are seeking the advice of the PVR Office in completing their applications. New applications which have been accepted are listed in **PART 2**. They cover a range of genera and plant types including ornamentals, legumes and pasture grasses.

The development and improvement of application forms is continuing and will be an evolving process. The first variety submitted from each species provides new experience and greater understanding to add to the knowledge base.

AMENDMENTS TO THE PROPOSED SCHEDULE

New varieties are eligible for PVR if their genus or species is listed in the regulations under the *Plant Variety Rights Act 1987*.

The schedule at Appendix 1 provides advance notice of the inclusion of plants under PVR to allow potential applicants to plan their breeding programs. However the schedule may be varied if a valid need can be demonstrated. To allow time for adequate notice of any changes, submissions seeking an amendment can be made up to 5 months before the date of implementation.

The latin names of the genera and species in the schedule are important as they will be used in the regulations. The category of "plant group" has been included in the schedule for convenience.

PROPOSED AMENDMENTS TO THE SCHEDULE

Following the last edition of the Journal the PVR Advisory Committee has received applications to amend the schedule to include the genera *Arachis, Bothriochloa* and *Agapanthus* in January 1989 instead of July 1989.

As a result the PVR Advisory Committee is seeking comment on this proposal by 10 November 1988.

As no dissenting comment has been received following the call for comment on proposed amendments to the schedule in the June issue, the PVR Advisory Committee will recommend to the Minister that the following genera be included in the Regulations in January 1989 instead of March 1990: *Cyphomandra, Streptocarpus, Impatiens, Cyclamen, Begonia, Achimenes, Choysia, Limonium and Cuphea* and in July 1989 instead of March 1990: *Hemerocallis, Bougainvillea and Ilex.*

PROPAGATION FOR NON COMMERCIAL PURPOSES

In the June issue of the Journal the PVR Advisory Committee called for comment on the need to change the legislation relating to **propagation if the final product is to be sold** (S12 and S38 of the PVR Act — Appendix 4).

This was in response to submissions from the horticulture, forestry and ornamental plant industry sectors indicating that PVR will only assist breeders and stimulate plant breeding if it gives the grantee the sole right to propagate (or license others to propagate) plants of the variety where the final product (flower, fruit, timber) is to be sold. In these sectors vegetative propagation prevails and many plants can be grown in a short time from the original parent.

There is **NO INTENTION** to stop people propagating protected varieties for their own use or for their own consumption i.e. in gardens. However propagation **to sell** the product (e.g. fruit or flowers) would not be permitted without the approval of the grantee of PVR.

The closing date for submissions has been extended to **10 OCTOBER 1988**. If this does not provide time for a final submission, please send an interim reply and an indication of a final response date.

If you wish to discuss any aspect of this matter or obtain further information, please contact the Registrar on 062 716472.

THIS IS AN IMPORTANT ISSUE WHICH COULD AFFECT YOU. PLEASE RESPOND AS SOON AS POSSIBLE.

ACCEPTANCE OF APPLICATIONS

Applications for PVR must be made on the application forms available from the PVR Office. There are three parts to the form and each one must be **COMPLETED** before an application can be accepted.

The PVR Office is encouraging applicants to discuss potential applications as early as possible so that time schedules can be determined.

Before an application can be accepted it must comply with Sections 16 and 17 of the PVR Act (Appendix 2).

There is a difference between the date of lodging an application and the date of acceptance.

Date of lodging an application This is the date that the application is **received** at the PVR Office irrespective of the method of delivery (e.g. post, courier, by hand etc.). It is significant in:

- establishing priority of the application over other applications which may be lodged for the same or a similar variety.
- establishing the date to determine whether a variety has been sold before in Australia at all or overseas for 6 years or more.

Date of acceptance of an application When the PVR Office has determined that the application complies with sections 16 and 17 of the PVR Act, the applicant will be issued with a formal notification and date of acceptance of the

application. This will be soon after lodgment of the application and delays will only occur if the application is incomplete. If only minor points of clarification are required, the PVR Office will ask the applicant to supply the information. If there are major omissions, the application will be rejected.

This date is significant in:

- establishing a date for obtaining provisional protection
- establishing the date from which PVR will apply if rights are granted

Conditions for acceptance of an application include submission of completed application forms, a description sufficient to identify plants of the variety and particulars of the characteristics that distinguish the variety from other varieties. Ideally the description should be in a format to allow immediate publication in the Journal.

This is an evolving process. Many of the applications to date have sufficient information to be accepted, but further work is required to finalise the description for the Journal.

Therefore in **PART 2** there are two categories of applications that have been accepted — those with descriptions and those without. The latter descriptions will be published when they are finalised and the six months statutory period for objection will begin from that time.

Applicants providing a description ready for publication are therefore in a better position to have their application finalised more quickly.

Where an application is accepted on the basis of overseas test results and a further test growing in Australia is required prior to PVR being granted, a description may be published based on the overseas data, but the applicant will have to submit a variation (S19 of the Act) if the test growing in Australia does not confirm the overseas results.

In addition the overseas test results must include comparison with the closest known varieties available in Australia.

Provisional protection begins on the date the application is accepted irrespective of publication date.

For an application to be accepted the main requirements include:

- completion of the three part application form based on
  - test growing the variety in Australia
  - test growing the variety overseas and demonstration of equivalence (see section below) to a test growing in Australia; or
  - test growing overseas, to be followed by a test growing in Australia before PVR is granted.
- a comparison between the new variety and the closest known varieties based on:
  - a scientifically designed test growing to compare the characteristics listed in the objective description form for each variety **AND/OR**
  - a scientifically designed test growing to demonstrate specific differences which may or may not be included in part 3 e.g. controlled environment glass house trials, chemical analyses, isozyme characteristics etc. Advice on the suitability of the data should be sought from the PVR Office in advance.

Applicants should avoid using general or subjective words and statements such as "unique", "leaf length is different" or "the petals are a special pink. These are meaningless expressions and should be in objective terms e.g. "the leaf of the new variety is 1 cm longer than the closest known variety" or "the new variety has petals matching the Royal Horticulture Society colour chart RHS 37.

EQUIVALENT TEST GROWING

A test growing is the trial carried out by the applicant to determine that the new variety is different from the closest known varieties and that the characterisitics are uniform and stable.

For overseas test results to be accepted without further trials in Australia the applicant has to demonstrate that the test growing is equivalent to one in Australia (S23b) and the data available is sufficient to complete the Australian application form.

If a test growing in Australia would take more than 2 years the applicant has to demonstrate that the characteristics would **probably** be the same in Australia.

The risk that an applicant takes by not doing a test growing in Australia is that the description submitted for PVR may not be the same as when the variety is grown in Australia. Therefore PVR would only apply to a variety with the described characteristics and not to the variety in Australia.

To demonstrate that an overseas test growing is equivalent, the applicant has to show that:

- the environment (climate, soil, day length etc.) is the same as a location in Australia,
- previous research has indicated that varieties of that species grown at the overseas location exhibit the same characteristics at an Australian location,
- the varieties were grown in a controlled environment,
  OR
- some other evidence acceptable to the PVR Office.

Similar evidence would be required to demonstrate probable equivalence, but the data may be less conclusive e.g. when prior evidence shows that varieties of other species have the same characteristics in both locations and environmental conditions are similar etc.

POINTS FOR CLARIFICATION

Four Generations or Propagation Cycles. Previous issues of the Journal have indicated that a variety must have been grown for four generations or propagation cycles before it is eligible for PVR. This has caused some confusion. The important points to remember are that:

- this **does not apply** to varieties that have originated by controlled crossing of two parent varieties (i.e. hybrids), induced mutation, gene transfer, natural mutation which has occurred in cultivated plants or any other process where human intervention has resulted in a unique genotype.

- this **does apply** to varieties which have originated by introduction and selection and the initial material was not a cultivar. The purpose of the four generations or propagation cycles is to establish the variety as a cultivar and clearly identify the selective breeding activities.
- test growings to establish distinctness, uniformity and stability can be carried out during the four generations or propagation cycles.

Definition of Hybrid

There is some confusion about the definition of a hybrid. In general terms a hybrid is any variety which has originated from crossing parents of two different varieties. In most cases these hybrid varieties are able to reproduce normally. However, in some cases the cross results in **sterile hybrids** or hybrids where characteristics are lost or weakened after the first generation. The latter usually arise from inbred parents (homozygous — pure line).

It is important to distinguish between these two results of hybridisation. Both are eligible for PVR, but in the case of the sterile hybrid the advantages of PVR may be less as the variety cannot be reproduced without the parent material.

The inbred parents of a sterile hybrid can also be covered by PVR, but the grantee would have to make reasonable quantities available at a reasonable price as with any other variety. The originator would still not need PVR for the sterile hybrid as PVR (S38 1e — see Appendix 4) prevents another person making repeated use of a protected variety for the commercial production of another variety (in this case the sterile hybrid).

Sale of a Variety Prior to Application

For a variety to be eligible for PVR, plant or reproductive material cannot have been sold in Australia at all or overseas for 6 years or more with the consent of the breeder.

The definition of reproductive material in the Act is broad and includes:

- a seed of the plant (whether or not this is used for reproduction);
- a cutting from the plant; or
- any other part, or **product**, of that plant from which another plant can be produced (whether or not that plant will have the same characteristics as the parent)

This means that the only sale that could take place prior to application would be of a product which did not contain seed or vegetative propagating material (e.g. oil). Material is considered to be reproductive if there is any chance that a new plant could arise from it, regardless of the characteristics of the resultant plant.

Sale after Acceptance of Application but before Grant of PVR

During this period a grantee can sell plant or reproductive material (as defined above) for scientific purpose or to bulk up a stock of plants or seed. Provisional protection is retained under these conditions.

If an applicant sells plant or reproductive material for other purposes before PVR is granted, provisional protection will cease and the variety will not be protected until rights are granted (see para 1.11b in the June issue)

Sale after Grant of PVR

The situation changes once PVR has been granted. The Act specifically exempts the sale of food and other products if it does not involve the growing or reproduction of plants of the protected variety. These products can therefore be sold without reference to the grantee.

Therefore PVR gives the grantee the sole right to sell, or to licence others to sell, plants and reproductive material (used for that purpose) only and does not extend to the sale of the product.

Field Examination

Applicants are reminded that the PVR Examiner will want to examine your variety in the field at a time when differences between varieties can be observed. If you wish the examination to occur prior to formal application you will be charged for the visit, but the amount will be deducted from the examination fee if you proceed with the application.

Uniformity Provisions for Outcrossing Varieties

If an outcrossing species is inherently variable, this variation is recognised by the formula for uniformity which requires the number of off-types to be within 1.6 times the average for the varieties used for comparison. For measured characteristics the variance of the new variety should not be more than 1.6 times the average of the variance of the varieties used for comparison.

Scientifically designed trials

Information supplied in a PVR application must be supported by data from test plots designed using acceptable scientific principles.

The method used and the number of replicates is determined by the breeder depending on species, characteristics measured and individual preference.

The only requirements of the PVR Office are that trials should demonstrate:

- statistically significant differences between varieties for the distinguishing characteristics; and
- that the distinguishing characteristics meet the uniformity criteria (outlined in the instructions to applicants).

Variable characteristics in outcrossing varieties will require more replicates to demonstrate distinctness and uniformity than self-pollinating or vegetatively propagated varieties and breeders should seek the advice of a biometrician when designing their trials.

HORTICULTURAL RESEARCH AND DEVELOPMENT CORPORATION (HRDC)

The Minister for Primary Industries and Energy recently announced the membership of the new HRDC. Close links between the Corporation and the PVR Office will be maintained by the Registrar of PVR being the Government member.

This Corporation will focus R and D in an area which has great potential for further development in Australia.

PART 2 — MATTERS FOR PUBLIC NOTICE

APPLICATIONS ACCEPTED

a) Descriptions Finalised

'Yatsyn 1' sward at Courtenay New Zealand *(Photo supplied by applicant)*

Perennial Ryegrass
(Lolium perenne)

Variety **'Yatsyn 1'** Application No. 88/004

Applicants: **New Zealand Agriseeds Ltd**, of Christchurch, New Zealand

Diagnosis

This variety is distinct from all other known varieties in having the following combination of characters: a light green colour, medium width leaves, a medium-erect post-heading growth habit and fewer spikelets per spike.

Varieties used for comparison

'Ellett', 'Grasslands Nui' and 'Grasslands Ruanui'

Comparative Growing Trials

All characteristics described and comparisons are from comparative growing trials conducted at Courtenay (near Christchurch) in the Canterbury district, on the South Island of New Zealand in the 1982/83 and 1983/84 seasons. In 1982, 100 plants, each with 3 cloned replicates was used in a randomised block pattern of spaced plants with 60 cm spacing. In 1983, 200 plants with replicates were used in a randomised complete block design with 60 cm between blocks and 1 m between rows. Further trials, to assess for field tolerance to the diseases net blotch (*Drechslera dictyoides f.sp. perenne*) and crown rust (*Puccinia coronata*), were conducted at Hamilton, in Victoria, Australia in 1987.

Origin

This variety arises from the open crossing of four parent lines and is sustained through generations by open crossing of the progeny. The parent lines were selected from the polycross progeny testing of 154 lines from 1975 to 1978 at two sites in the Auckland district on North Island, New Zealand. The main criteria for selection were vegetative yield and crown rust (*Puccinia coronata*) resistance of their progeny. The four parent lines all originated at Mangere in Auckland district.

Parents are maintained by the applicant as vegetatively propagated cultures at Courtenay, New Zealand which enables re-isolation of the 'Yatsyn 1' variety at any time.

Morphology — See comparison tables.

'Yatsyn 1' is a semi-erect medium-green variety. Most of the distinguishing or stable characteristics are presented in the comparison tables. Those recorded but not included are:

degree of aftermath heading which is about the same as 'Ellett';

tiller density at heading which is higher than 'Ellett' but lower than 'Grasslands Ruanui';

stem length which is shorter than 'Grasslands Nui';

a high proportion (the same as 'Ellett') of immature leaves being folded in shoots rather than rolled;

and small leaf auricles.

Other characteristics were recorded but found to be unstable. These include the number of leaf nodes per stem, flag leaf inclination and anthocyanin pigmentation.

In addition to morphological data from growing trials, the applicant has submitted, as a distinguishing characteristic, prints of gel electrophoresis of seed protein extractions which

display a consistently different banding pattern to those of the other varieties (see photographs). The technique is as described by S E Gardiner and M B Forde in *Seed Science & Technology*, 1987, Volume 15, pages 663–674, using sodium dodecylsulphate and polyacrylamide gel.

Photographs of Electrophoretic Gels
(Photo supplied by applicant)

Agronomy

'Yatsyn 1' is best suited to moderate to high fertility soils with regular rainfall or irrigation. It is believed by the applicant to require an average annual rainfall greater than 600 mm in cooler areas of South-eastern Australia but greater than 850 mm in warmer areas. There was a high level of aftermath heading recorded 40 days after cutting. The observed field tolerance to net blotch has been moderate and to crown rust has been good.

a. 'Yatsyn 1' **b. 'Ellett'** **c. 'Grasslands Nui'**

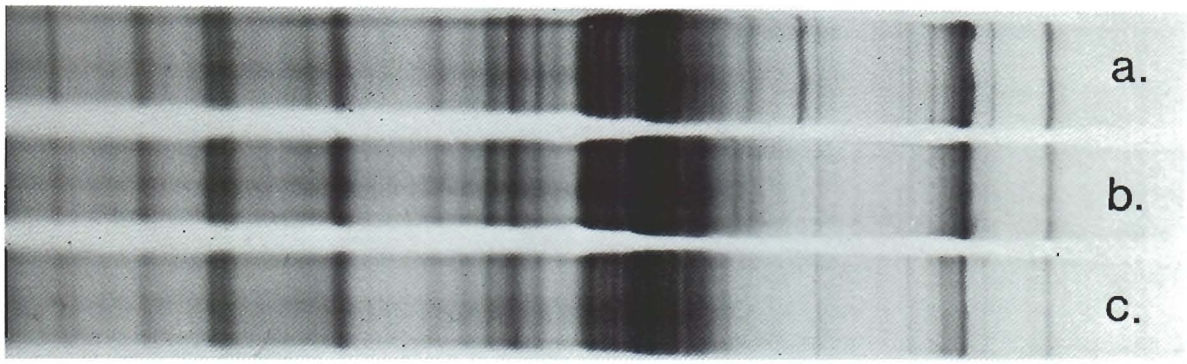

Table of Comparison with Closest Known Varieties

Varieties :	'Yatsyn 1'	'Ellett'	'Grasslands Nui'	'Grasslands Ruanui'
GROWTH HABIT (1 = prostrate — 5 = erect)				
# Early Spring	3.3	2.8	3.4	4.6
# Post-heading	3.6	3.2	3.3	3.3
* MATURITY (No. days from 1 October until 3 head tips visible per plant)				
Mean	31	31	32	34
90% range	20	13	15	11
Standard deviation	6.4	5.4	5.8	3.8
* LEAF COLOUR (2 yrs 1 = yellow green — 5 = dark green)				
	3.0, 3.0*	3.5, 3.6*	3.2 3.4*	3.3, 3.2*
TILLER LEAF * Length	21 cm	23 cm	24 cm	20 cm
Standard deviation	4.0	3.8	5.0	3.5
* Width	7.5 mm	7.3 mm	7.8 mm	5.9 mm
Standard deviation	1.0	1.0	1.2	0.8
FLAG LEAF * Length	18 cm	20 cm	22 cm	17 cm
Standard deviation	4.2	3.9	4.9	3.2
* Width	7.3 mm	7.3 mm	7.9 mm	5.9 mm
Standard deviation	1.1	1.1	1.3	0.9
SPIKE * Length	29.8 cm	31.0 cm	32.6 cm	25.9 cm
Std deviation	5.7	5.6	6.6	5.2
#No. Per Plant (1 = very few — 9 = very many)				
	4.5	4.2	5.6	5.3
SPIKELET #* Length	18.1 mm	18.4 mm	19.1 mm	15.7 mm
Std deviation	3.1	3.1	3.5	2.8
#* No. Per Spike	21	22	23	22
Std deviation	4.2	5.0	4.8	4.1
FLORET * Length	6.8 mm	6.4 mm	6.9 mm	6.4 mm
Std deviation	0.6	0.6	0.6	0.6
SEEDLING FLUORESCENCE	med-low	medium	low	low

Characteristics marked with * have met the UPOV standard for uniformity in the comparative growing trials.

Data is from 1982 trials unless marked with # indicating 1983 data.

Table of Comparison with Closest Known Varieties

Observed tolerances to net blotch (*Drechslera dictyoides f.sp. perenne*) and crown rust (*Puccinia coronata*).

Variety	'Yatsyn 1'	'Ellett' (two sets)	'Grasslands Nui'	'Kangaroo Valley'	'Victorian' (two sets)	'Martlet'
Net Blotch	moderately tolerant	low tolerance	tolerant	low tolerance	tolerant	moderately tolerant
	1.50	2.13^{h} 1.38^{l}	1.13	2.13	1.13^{h} 1.25^{l}	1.63
(1 = not affected to 3 = severely affected)						
Crown Rust	moderately tolerant	tolerant	moderately tolerant	tolerant	low tolerance	low tolerance
	0.25	0.25^{h} 0.00^{l}	0.25	0.00	3.00^{h} 2.25^{l}	1.75
(0 = not affected to 3 = severely affected)						

The above table shows results from a trial at Hamilton, Victoria in 1987, showing the effects observed by infection with field strains of diseases. The superscripts 'h' and 'l' indicate plots with high and low levels of *Acremonium loliae* endophyte. The figures are also published in the Victorian Department of Agriculture and Rural Affairs Research Report Series No. 59 of February 1988.

CHRISTMAS CACTUS
(Schlumbergera x reginae)

Variety **'Madame Butterfly'** Application No. 88/006

Applicant: **Andrew D Savio,** of Bayswater, Victoria.

Diagnosis

This variety is distinct from all other known varieties in having the following combination of characteristics: large white petals with 0.5 — 1.5 mm fuchsia borders, broad strongly dentate phylloclades with margins undulating in profile and the base rounded in outline.

Varieties used for comparison

'Hatherton Charm', being the closest in flower colour and size. The *Schlumbergera truncata* varieties 'White Christmas' and 'Gold Charm' are also used for comparison. Many characteristics distinguishing 'Madame Butterfly' from them also distinguish it from other known *S.truncata* varieties.

Comparative Growing Trials

'Madame Butterfly' has been grown alongside other varieties at Bayswater, near Melbourne, Victoria. All plants were grown in potting mix in unheated polyethylene greenhouses, under natural light with shading when rising over 20,000 lux. By 1987, there were about 300 flowering plants of 'Madame Butterfly' and over 20,000 in 1988 and the same number of other *Schlumbergera truncata* varieties in the same greenhouses. There were 50 plants chosen at random in 1988 for measurement and description.

Origin

This variety arises from the controlled pollination of *Schlumbergera orssichiana* by *Schlumbergera truncata* 'White Christmas' in 1982. The progeny seed was sown in 1983 and seedlings planted out in individual pots in 1984, flowering for the first time in 1985. Selection was finalised in 1986, based mainly on flowering characteristics.

Morphology — See comparison tables.

'Madame Butterfly' has a larger and coarser growth habit than that of *S. truncata* varieties and flowering (including flower bud initiation) is up to 4 weeks earlier.

Phylloclades, when fully grown, range from 48 — 56 mm (mean 54 mm, SD 1.5) long by 25 — 29 mm (mean 27 mm, SD 1.1) wide. All are about 3.0 mm thick and a uniform green closest to RHS 143C. They are oblongate, rounded basally and strongly dentate with 3 — 5 inward reflexing denticles each side. Margins are undulating giving a sinuate profile and causing denticles to protrude about 20° from the main blade. New phylloclades arise predominantly in 3's from the previous ones, forming a dense pendulous plant in the second year from propagation.

Blooms are zygomorphic and large, being about 20% visually larger than 'White Christmas'. Petal colour is predominantly an off-white matching RHS 155D with fuchsia coloured borders matching RHS 63A. The borders are softly delineated 0.5 — 1.5 mm wide, widening apically. Opened flowers are are 88 –97 mm (mean 92, SD 1.7) long by 87 — 99 mm (mean 97, SD 1.7) wide. Floral tubes range in length from 44 — 49 mm (Mean 45, SD 1.2). Measurements are according to those published in UPOV guidelines document TG/101/3. Stamen are numerous and unstable in number with pale yellow matching RHS 11B filaments. The stigma is composite with 8 — 10 locules and is coloured a deep fuchsia matching RHS 64B.

'Madame Butterfly' *(Photo supplied by applicant)*

'Madame Butterfly' (left) and **'Hatherton Charm'** (Right) *(Photo supplied by applicant)*

Table of Comparison with Closest Known Varieties

Varieties:	'Madame Butterfly'	'Hatherton Charm'	'White Christmas'	'Gold Charm'
GROWTH HABIT	semi-pendulous	semi-pendulous	upright	upright
PHYLLOCLADE PREDOMINANCE	3	2—3	2	2
FLOWERING DATES (Australian)	very early 20 April— 30 May	early 1 May— 5 June	medium 28 May— 20 June	med-late 1 June— 20 July
PHYLLOCLADE WIDTH	very broad	very broad	medium	medium
BASAL OUTLINE	rounded	straight	straight	straight
PROFILE	undulated	straight	straight	straight
DENTICLES	large curved in	large curved out	small curved out	small curved out
FLOWER SIZE	large	large	medium	medium
TYPE	open petal	open petal	open petal	open petal
MAIN PETAL COLOURS	white RHS 155D with fuchsia margins RHS 63A	white RHS 155B with fuchsia margins RHS 72D	white RHS 62D	gold RHS 26B, pink tube RHS 49A
PETAL SHAPE	broadly lanceolate	broadly lanceolate	oblanceol-ate	oblanceol-late
AT TIP	narrowly acute	broadly acute	narrowly acute	broadly acute

FLOWERING PERIODS

	APRIL	MAY	JUNE	JULY
'Madame B'	******	**********		
'Hatherton C'		**********	***	
'White Christmas'			**********	
'Gold Charm'			**********	**********

Setaria
(Setaria sphacelata)

Variety: **'Splenda'** Application No: 88/009

Applicant: **J B Hacker of CSIRO, Division of Tropical Crops and Pastures,** of St Lucia, Queensland.

Diagnosis

This variety is distinct from all other known varieties in having the following combination of characters: a robust growth habit, a late flowering period, broad leaves and stems with many nodes.

Varieties used for comparison

'Kazungula', 'Nandi' and 'Narok'. The variety 'Solander' is also distinguished but not in the main growing trials.

Comparative Growing Trials

Characteristics described and comparisons made are from spaced plant trials conducted at Lawes, South-eastern Queensland in 1981. There were 10 replicate plots of each variety and 12 plants per replicate. Further comparisons of leaf characteristics have been made from a spaced plant trial at Samford, near Brisbane, South-eastern Queensland and from a seed production stand at Murwillumbah in Northern New South Wales in 1988, from which there were 50 plants of each variety randomly selected.

Origin

This variety arises from controlled pollination between the botanical varieties var. *splendida* and var. *sericea* followed by selection in random crossing F_2 and F_3 generations for conformity to the var. *splendida* phenotype and for maximal seed production. Final selections were subjected to 2 further generations seed production to improve the stability of the population.

Vigorous aerial tillering at culm nodes of 'Splenda' following a seed harvest.
(Photo supplied by applicant)

'Splenda' experimental seed production area at Lawes showing broad leaves and robust habit.
(Photo supplied by applicant)

Morphology — See comparison tables.

This variety has been registered with the voluntary Register of Australian Herbage Plant Cultivars in 1982 (Reg. No. A-8a-4). A description, therefore, has already been published in the *Journal of the Australian Institute of Agricultural Science*, 1983, Volume 49, Number 4, pages 235- 236.

'Splenda' is a robust perennial forage grass with flowering culms up to or exceeding 2 m in height. Culms are thicker at the base than other varieties and have more nodes, in this characteristic resembling the near-sterile var. *splendida* parent. 'Splenda' is later flowering than other varieties.

In young growth 'Splenda' is leafy and tillers are broad and strongly flattened, the leaf sheaths often overlapping in a fan-shape and mostly reddened towards the base. The majority of plants are hairless but about 25% have long weak hairs on the upper leaf surface near the ligules and are villous along upper portions of leaf sheaths. Leaf laminae are bluish green in colour and broader than those of other cultivars.

In common with other *Setaria* herbage cultivars, the inflorescence is an elongated spike-like panicle, longer in 'Splenda' than in 'Kazungula'. Spikelets are small and indistinguishable from other varieties. The caryopsis is enclosed within fertile palea and lemma constituting the 'seed' which is also visually indistinguishable from other varieties.

The variety 'Solander' was not available for testing in 1981 and is consequently not included in the comparison table. 'Splenda' can be distinguished from 'Solander' by 'Splenda's later flowering, broader leaves, greater height, more numerous culm nodes and frost sensitivity.

Agronomy

'Splenda' combines the high vegetative yield of var. *splendida* with fertility approaching that of the 'Kazungula' type of *Setaria*. Yields of up to 80 kg cleaned seed per hectare have been attained under experimental conditions.

'Splenda' is adapted to the relatively high rainfall tropics and sub-tropics and has produced relatively high dry matter yields in trials in Oceania, particularly in Fiji and the Philippines. 'Splenda' is less frost tolerant than 'Narok or 'Solander' and leaves are killed by light frosts.

Base of 'Splenda' plant showing pigmentation and strongly flattened and overlapping leaf sheaths in juvenile tillers. *(Photo supplied by applicant)*

Table of Comparison with Closest Known Varieties

(All data from Lawes, QLD, 1981, unless otherwise indicated. Within rows, values with the same superscripts do not differ significantly within a 95% confidence limit).

Varieties :	'Splenda'	'Kazungula'	'Narok'	'Nandi'
DAYS TO 50% PLANTS FLOWERED	60	45	31	26
* DAYS TO FLOWERING				
Mean	58.6[a]	51.0[b]	35.5[c]	30.4[c]
Standard deviation	21.75	22.52	13.71	14.11
* LEAF WIDTH (max.)	14.6[a] mm	10.8[b] mm	11.2[b] mm	11.1[b] mm
Standard deviation	1.94	1.35	1.26	1.54
* HEIGHT	217[a] cm	208[b] cm	188[c] cm	175[d] cm
Standard deviation	21.12	15.62	17.09	17.78
* NODES PER CULM	11.2[a]	9.7[b]	8.3[c]	7.0[d]
Standard deviation	1.76	1.41	1.67	1.00
* BASAL INTERNODE DIAMETER	8.6[a] mm	7.8[b] mm	5.4[c] mm	4.4[d] mm
Standard deviation	4.41	3.61	3.08	2.89
* FLOWERHEAD LENGTH	270[a] mm	249[b] mm	257[ab] mm	214[c] mm
Standard deviation	46.4	39.7	58.5	39.9
GROWTH HABIT (Winter)	med-erect	medium	erect	med-erect
1 = prostrate 5 = erect	3.9[b]	2.8[c]	4.3[a]	3.6[b]
CULM STRENGTH	robust	robust	medium	slender
OXALATE CONCENTRATION	high	high	low	low
PLANTS WITH LONG HAIRS ON UPPER LEAF LAMINA NEAR LIGULE	(Data from Samford and Murwillumbah,1988) 26%	54%	10%	28%
PLANTS WITH VILLOUS LEAF SHEATHS	(Data from Samford and Murwillumbah,1988) 24%	64%	2%	0%
LEAF PREDOMINANCE OBSERVED ON PLANTS AT FLOWERING	cauline	cauline	basal	basal

* Characteristics which have met the UPOV standard for uniformity in the comparative growing trials.

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.

Accepted 23/08/88

LETTUCE
(Lactuca sativa)

Applicant: Arthur Yates & Co, Milperra, NSW
'Chifley' APPLICATION NO. 88/007
'Target' APPLICATION NO. 88/008

Accepted 26/8/88

ANNUAL RYEGRASS
(Lolium multiflorum)

Applicant: Valley Seeds Pty Ltd, Alexandra, Vic
'Progrow' APPLICATION NO. 88/010

SOYBEAN
(Glycine Max)

Applicant: Annand Robinson Co, Toowoomba, Qld
'A5939' APPLICATION NO. 88/011
'A5474' APPLICATION NO. 88/012

Accepted 31/8/88

POTATO
(Solanum tuberosum)

Applicant: Eurogrow Potatoes Ltd, Christchurch, New Zealand

'Morene'	**APPLICATION NO. 88/005**

CARNATION
(Dianthus caryophyllus)

Applicant: Royena Nurseries Aust Pty Ltd, Dingley, Vic

'Zornitza'	**APPLICATION NO. 88/013**
'Dana'	**APPLICATION NO. 88/014**
'Odile'	**APPLICATION NO. 88/015**
'Fantastic'	**APPLICATION NO. 88/016**
'Valya'	**APPLICATION NO. 88/017**
'Charodeyka'	**APPLICATION NO. 88/018**
'Neshka'	**APPLICATION NO. 88/019**
'Mechta'	**APPLICATION NO. 88/020**
'Zlatka'	**APPLICATION NO. 88/021**
'Rubin'	**APPLICATION NO. 88/022**
'Pirin'	**APPLICATION NO. 88/023**
'Zora'	**APPLICATION NO. 88/024**
'Victoria'	**APPLICATION NO. 88/025**
'Prolet'	**APPLICATION NO. 88/026**

COMMENT AND FORMAL OBJECTIONS

The PVR Office will accept comment from people who do not have a direct commercial interest in the above varieties but believe that these varieties are ineligible for PVR under S26 (Appendix 3 of this Journal) of the Act. Any submission must contain evidence to support the claim. This does not constitute a formal objection and there is no charge.

Formal objections (S20 of the Act) can be lodged against any of the above applications by a person who:

- considers their commercial interests would be affected by the grant of PVR to the applicant **AND**
- considers that the provisions of S26(1) cannot be met

A fee of $60 is payable at the time of lodging a formal objection and $50/hr will be charged if the examination of the objection by the PVR Office takes longer than 2 hours.

A person lodging a formal objection must provide supporting evidence to substantiate the claim. A copy will also be sent to the applicant who will be asked to demonstrate why the objection should not be upheld.

All comments or formal objections to the applications above must be lodged with the Registrar by close of business on **31 March 1989.**

PROVISIONAL PROTECTION

The following varieties have provisional protection under S22 of the *Plant Variety Rights Act 1987* since the last issue of the Journal:

'Yatsyn 1'	**APPLICATION NO. 88/004**
'Morene'	**APPLICATION NO. 88/005**
'Madame Butterfly'	**APPLICATION NO. 88/006**
'Chifley'	**APPLICATION NO. 88/007**
'Target'	**APPLICATION NO. 88/008**
'Splenda'	**APPLICATION NO. 88/009**
'Progrow'	**APPLICATION NO. 88/010**
'A5939'	**APPLICATION NO. 88/011**
'A5474'	**APPLICATION NO. 88/012**
'Zornitza'	**APPLICATION NO. 88/013**
'Dana'	**APPLICATION NO. 88/014**
'Odile'	**APPLICATION NO. 88/015**
'Fantastic'	**APPLICATION NO. 88/016**
'Valya'	**APPLICATION NO. 88/017**
'Charodeyka'	**APPLICATION NO. 88/018**
'Neshka'	**APPLICATION NO. 88/019**
'Mechta'	**APPLICATION NO. 88/020**
'Zlatka'	**APPLICATION NO. 88/021**
'Rubin'	**APPLICATION NO. 88/022**
'Pirin'	**APPLICATION NO. 88/023**
'Zora'	**APPLICATION NO. 88/024**
'Victoria'	**APPLICATION NO. 88/025**
'Prolet'	**APPLICATION NO. 88/026**

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The PVR Office supports wide dissemination of the information in the Journal and was not in favour of this change. AGPS have indicated, however, that an answer can usually be given within a day and that facsimile requests are allowable. It is unlikely that any requests to reproduce material from this Journal would be refused. If they are, the Registrar should be notified immediately.

PROPOSED SCHEDULE FOR INCLUDING GENERA/SPECIES IN THE PLANT VARIETY RIGHTS REGULATIONS

PLANT GROUP	APRIL 88	JULY 88	JAN 89	JULY 89	MARCH 90
STONE FRUIT		Prunus	All Stone Fruit		
CITRUS		All Citrus			
OTHER FRUIT	Malus (apple)	Fragaria (strawberry) Vitis (grape) Carica (paw paw) Rubus (raspberry) Persea americana (avocado)	Pyrus (pear) Actinidia (kiwifruit)		All Fruit
VEGETABLES	Phaseolus vulgaris (bean)	Solanum tuberosum (potato) Lycopersicon (tomato) Lactuca sativa (lettuce) Pisum (pea)	Allium cepa (onion) Daucus carota (carrot) Brassica oleracea (cabbage, cauliflower etc)	All vegetables	
NUTS	Macadamia	Prunus amygdalus (almond)	Juglans (walnut)	All nuts	
HERBAGE AND TURF GRASS	Phalaris	Lolium (ryegrass) Agrostis (bent) Festuca (tall fescue) Cynodon (bermuda grass) Zoysia Stenotaphrum	Dactylus (cocksfoot) Bromus Lotus Paspalum	All herbage and turf grasses	
OILSEEDS	Brassica sp (oilseeds) (rape, mustard etc)	Glycine max (soybean) Helianthus annuus (sunflower)	Sesamum indicum (sesame) Carthamus tinctorius (safflower) Linum usitatissimum (linseed)	All oilseeds	
PASTURE AND GRAIN LEGUMES		Trifolium (clover) Medicago Ornithopus (serradella) Stylosanthes	Lupinus Desmanthus Vigna (mungbean) Cicer arietinum (chickpea) Indigofera	All pasture and grain legumes	
GRAINS		Setaria Avena (oats) Panicum Pisum (pea) Zea mays (corn)	Hordeum (barley) Pennisetum (pearl millet) Sorghum		All grains
AUST. NATIVE ORNAMENTALS	Anigozanthus (Kangaroo paw)	Grevillea Chamelaucium (Geraldton wax) Lechenaultia Melaleuca Decaspermum Artanema	Macropidia (Black Kangaroo Paw) Piper Callistemon Thryptomene Telopea Dryandra	Boronia Banksia Verticordia Darwinia Pimelea	All native ornamentals
OTHER ORNAMENTALS	Rosa (Rose)	Orchids (all genera) Dianthus (carnation) Alstroemeria Schlumbergera (Zygocactus) Lilium (Lily) Metrosideros carminea Freesia Rhododendron Gerbera	Rhipsalis Kalanchoe Euphorbia (Poinsettia) Chrysanthemum Zantedeschia Cuphea Limonium Cyphomandra Streptocarpus Impatiens Cyclamen Begonia Achimenes Choysia	Hemerocallis Bougainvillea Ilex	All ornamentals
FORESTRY		Eucalyptus	Pinus Acacia Casuarina		All forestry
OTHER	Gossypium (cotton)		Duboisia	Humulus lupulus	All species
PROPOSED ADDITIONS			Arachis Bothriochloa Agapanthus		

SECTIONS 16 AND 17 OF THE PVR ACT

Form of application

16. An application for plant variety rights in respect of a plant variety shall be in writing in a form approved by the Secretary, shall be lodged with the Secretary in the prescribed manner and shall contain —

(a) the name of the person making the application;

(b) where the applicant is the breeder of the variety, a statement that the applicant is the breeder of the variety;

(c) where the applicant is not the breeder of the variety, the name and address of the breeder from whom the applicant derived the right to make an application and particulars of all relevant assignments and transmissions of the right to make the relevant applications;

(d) a description, or a description and photograph, of a plant of the variety sufficient to identify plants of that variety;

(e) particulars of the characteristics that distinguish the variety from other varieties;

(f) particulars of the manner in which the variety was originated;

(g) the name of the variety;

(h) particulars of any application for, or approval of a grant of, rights of any kind in respect of the variety in any other country;

(j) particulars of any tests carried out to establish that the variety is homogeneous and stable (including particulars of any cycle of reproduction or multiplication for the purposes of paragraph 3(2)(b));

(k) in the case of a plant variety originated outside Australia, particulars of any test growing of that variety carried out for the purpose of determining whether the variety will, if grown in Australia, have a particular characteristic;

(m) an address in Australia for the service of documents on the applicant for the purposes of this Act; and

(n) such other particulars (if any) as are prescribed.

Names of new plant varieties

17.(1) The name of a new plant variety shall consist of a word or words (which may be an invented word or words) with or without the addition of —

(a) a letter or letters not constituting a word;

(b) a figure or figures; or

(c) both a letter or letters not constituting a word and a figure or figures.

2. A new plant variety shall not have —

(a) a name the use of which would be likely to deceive or cause confusion, including a name that is the same as, or is likely to be mistaken for, the name of another plant variety;

(b) a name the use of which would be contrary to law;

(c) a name that comprises or contains scandalous or offensive matter; or

(d) a name, or name of a kind, that is, at the time when the application is made, prohibited by the regulations.

(3) The name of a new plant variety in respect of which an application is made shall comply with any recommendations of the International Code of Nomenclature for Cultivated Plants, as in force when the application is made, formulated and adopted by the International Commission for Nomenclature of Cultivated Plants of the International Union of Biological Sciences that are accepted by Australia.

(4) The name of a new plant variety in respect of which an application is made shall not consist of, or include —

(a) the name of a natural person living at the time of the application, other than a person who has given written consent to the name of the plant variety;

(b) the name of a natural person who died within the period of 10 years immediately preceding the application, other than a person who has given, or whose legal personal representative has given, written consent to the name of the plant variety; or

(c) the name of a corporation, organisation or institution, other than a corporation, organisation or institution that has given its written consent to the name of the plant variety.

SECTION 26 OF THE PVR ACT

Grant of plant variety rights

26.(1) Subject to this section, where an application for plant variety rights in respect of a plant variety is accepted —

(a) if the Secretary is satisfied that —

(i) there is such a plant variety;

(ii) the plant variety is a new plant variety;

(iii) the applicant is entitled to make the application;

(iv) the grant of those rights to the applicant is not prohibited by this Act;

(v) those rights have not been granted to another person;

(vi) there has been no earlier application for those rights that has not been withdrawn or otherwise disposed of;

(vii) the name of the variety would comply with section 17; and

(viii) all fees payable under this Act in relation to the application and the grant have been paid,

the Secretary shall grant those rights to the applicant; or

(b) if the Secretary is not so satisfied — the Secretary shall refuse to grant those rights to the applicant.

(2) The Secretary shall not grant, or refuse to grant, plant variety rights in respect of a plant variety unless a period of at least 6 months has elapsed since the giving of public notice of the application, or, if the application has been varied in pursuance of a request under sub-section 19(1) in a manner that the Secretary considers to be significant, a period of 6 months has elapsed since the giving of public notice of particulars of the variation, or of the last such variation, as the case requires.

(3) The Secretary shall not refuse to grant plant variety rights unless the Secretary has given the applicant for the rights a reasonable opportunity to make a written submission to the Secretary in relation to the application.

(4) Where an objection to the grant of plant variety rights has been lodged under section 20, the Secretary shall not grant the rights unless the Secretary has given the person who lodged the objection a reasonable opportunity to make a written submission to the Secretary in relation to the objection.

(5) Plant variety rights shall be granted to a person by the issue to that person by the Secretary of a certificate, signed by the Secretary or by the Registrar, in a form approved by the Secretary and containing such particulars of the plant variety to which the rights relate as the Secretary considers appropriate.

(6) Where plant variety rights are granted to persons who made a joint application for those rights, those rights shall be granted to those persons jointly.

(7) Where the Secretary refuses to grant plant variety rights in respect of a plant variety, the Secretary shall, within 30 days after refusing, give written notice of the refusal to the applicant for the rights setting out the grounds for the refusal.

SECTIONS 12 AND 38 OF THE PVR ACT

Plant variety rights

12.(1) Plant variety rights, in respect of a new plant variety, are —

(a) the exclusive rights to sell, including the right to license other persons to sell, plants of that variety;

(b) the exclusive right to sell, including the right to license other persons to sell, reproductive material of plants of that variety;

(c) the exclusive right to produce, including the right to license other persons to produce, plants of that variety for sale; and

(d) the exclusive right to produce, including the right to license other persons to produce, reproductive material of plants of that variety for sale.

(2) Plant variety rights in respect of a plant variety are subject to conditions imposed in respect of those rights by section 33 or under section 34.

Plant variety rights not to restrict sales for food, fibre, fuel, &c.

38.(1) Notwithstanding that plant variety rights subsist in respect of a plant variety, any person may —

(a) propagate, grow and use plants of that variety for purposes other than commercial purposes;

(b) sell plants of that variety for use as food or for another use that does not involve the growing of the plants or the production of plants of that variety;

(c) sell reproductive material of plants of that variety for use as food or for another use that does not involve the production of plants of that variety;

(d) sell with a farm or other place at which plants of that variety are grown any plants or reproductive material of plants of that variety at that place; or

(e) use, and do anything necessary or desirable for the purpose of using, plants or reproductive material of plants of the variety as an initial source of variation for the purpose of originating another new plant variety except where the person makes repeated use of plants or reproductive material of plants of the first-mentioned variety for the commercial production of the other variety.

(3) The right of a person under paragraph (1)(c) to sell reproductive material of plants of a plant

variety in respect of which plant variety rights subsist include —

(a) the right of the person to use plants, or reproductive material of plants, of that variety purchased or otherwise acquired by the person without any infringement of those plant variety rights to —

(i) produce reproductive material of plants for the sale; or

(ii) produce plants, or reproductive material of plants, from which reproductive material of plants for the sale may be derived; and

(b) the right of the person to use plants, or reproductive material of plants derived by the person from plants, or reproductive material of plants, of that variety, purchased or otherwise acquired by the person without any infringement of those plant variety rights to —

(i) produce reproductive material of plants for the sale; or

(ii) produce plants, or reproductive material of plants, from which reproductive material of plants for the sale may be derived.

(4) Without limiting the generality of paragraph (1)(c), for the purposes of that paragrah, the use of reproductive material of a plant by way of allowing it to sprout and then eating it, or using it in the preparation of food, before it has developed further shall not be taken to be a use that involves the production of a plant.

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PLANT VARIETY RIGHTS SCHEDULE OF FEES — 1988

FUNCTION	FEE ($)
APPLICATION	300
EXAMINATION OF APPLICATION	1000
COPY OF APPLICATION	50
VARIATION TO APPLICATION	55
*EXAMINATION OF OBJECTION	60
COPY OF OBJECTION	50
CERTIFICATE OF PVR	200
ANNUAL RENEWAL FEE	200
RE-EXAMINATION (IF REQUIRED)	600
COMPULSORY LICENCE	100
TRANSFER OF RIGHTS	100
PUBLICATIONS	HOURLY RATE

* HOURLY RATE = $50/hr; EXAMINATION OF OBJECTIONS EXCEEDING 2 HOURS WILL BE CHARGED AT THE HOURLY RATE FOR THE EXTRA TIME

R88/20750(2)
Cat. No. 88 14767